# Catalogue of the papers and correspondence of

# Dorothy Mary Crowfoot Hodgkin OM FRS

(1910-1994)

# **VOLUME I**

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Foreword

General Introduction

Section A: Biographical

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Section C: Oxford University

by Peter Harper and Paul Newman NCUACS catalogue no. 47/3/94

Title:

Catalogue of the papers and correspondence of Dorothy Mary Crowfoot Hodgkin OM FRS (1910-1994), biochemist

Compiled by:

Peter Harper and Paul Newman

Description level:

Fonds

Date of material:

1928-1993

Extent of material:

232 boxes, ca 2,600 items

Deposited in:

Department of Western Manuscripts, Bodleian Library, Oxford

Reference code:

GB 0161 D.M.C. Hodgkin papers

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NCUACS catalogue no. 47/3/94

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#### **FOREWORD**

The completion of this catalogue of the manuscript papers of Professor Dorothy Hodgkin OM is a significant event in the work of the National Cataloguing Unit for the Archives of Contemporary Scientists. Like all such large-scale cataloguing projects it has had a long gestation. Professor Hodgkin approached the NCUACS's Oxford-based predecessor organisation in 1981 for advice about her papers and visited its offices in 1983. Contacts were maintained after the scientific archives project was transferred to Bath in 1987 and in 1991 Professor Hodgkin gave permission for the NCUACS to catalogue her papers for deposit in the Bodleian Library, Oxford. The Unit's archivists made a number of visits to the Chemical Crystallography Laboratory, Oxford and Professor Hodgkin's home to survey the very substantial accumulations of papers in both locations. A detailed archival assessment of their quantity, nature and importance for a wide range of aspects of the history of science was prepared, and a funding proposal for submission to the Leverhulme Trust was developed. We were very fortunate to secure funding from the Trust for two years and Mr Paul Newman was appointed in 1992 to catalogue the papers. Professor Hodgkin has been supportive throughout with advice and encouragement and Mr Newman has met the challenge of his first encounter with scientific archives with great success.

The NCUACS would like to take this opportunity to record our gratitude to the Director of the Leverhulme Trust, Sir Rex Richards, and the Leverhulme Trustees for their support of the scientific archives work since the transfer of operations to Bath in 1987. This has taken the form of three major cataloguing projects: the papers of Sir John Kendrew (1987-1989), Sir David Phillips (1991-1994) and Professor Dorothy Hodgkin OM (1992-1994). The three collections are deposited in the Bodleian Library, Oxford where they form an indispensable corpus of material for the history of twentieth-century British science.

Peter Harper Archivist, NCUACS May 1994

#### GENERAL INTRODUCTION

#### **PROVENANCE**

The material was received at various dates between October 1991 and February 1994 from Professor Hodgkin and from the Chemical Crystallography Laboratory at Oxford University.

#### OUTLINE OF THE CAREER OF DOROTHY MARY CROWFOOT HODGKIN

Dorothy Mary Crowfoot was born in Cairo in 1910 and brought up in East Anglia. She was educated at the Sir John Leman School, Beccles and Somerville College, Oxford where she read chemistry 1928-32. Apart from two years research at Cambridge University after graduation she remained in Oxford for the rest of her career. Here for twenty-five years she combined teaching chemistry at Somerville, where her students included the future Prime Minister Margaret Thatcher, with research at the highest level. She became University lecturer and demonstrator in 1946 and University Reader in X-ray crystallography in 1956. From 1960 to official retirement in 1977 she was Wolfson Research Professor of the Royal Society. She also married and raised a family. In 1937 she married Thomas Lionel Hodgkin (died 1982); they had three children Luke Howard born 1938, Prudence Elizabeth born 1943 and John Robin Tobias born 1946.

Dorothy Hodgkin carried out her first research at Oxford in 1931-32 with H.M. Powell on the structure of thallium diakyl halides. She then went to Cambridge to work for two years with J.D. Bernal who had just been appointed to start research on the study of crystals by x-ray diffraction and had begun to look at biologically interesting molecules. The international success of his investigations led to increasing demands on his research, and Hodgkin joined him to make the first measurements on materials sent for analysis. The research included work on sterols, vitamin B1 and the protein pepsin, and Hodgkin wrote her thesis for the Ph.D. degree at Cambridge on the results of the research on sterols. On her return to Oxford she decided to concentrate on one crystal structure in detail and (with C.H. Carlisle) correctly analysed cholesterol iodide, the first complex organic molecule to be determined completely by x-ray crystallography. Early in the Second World War the successful tests with penicillin extracts on infected mice by Howard Florey and his team in Oxford led to urgent attempts to determine its chemical structure. Hodgkin and her coworkers accomplished this in three years with x-ray techniques, showing conclusively that the formula of penicillin included ß lactam and thiazolidine rings. This x-ray determination was of national importance at the time, and was to have a lasting effect on the development of antibiotics, since in

order to make synthetic drugs it is necessary to know the structure of the original material. She later elucidated the structure of cephalosporin C, an antibiotic closely related to penicillin.

After 1948 Hodgkin began work on the x-ray analysis of vitamin B12 which is essential to the life of red blood cells in the body - the inability to absorb sufficient vitamin B12 from the diet leads to pernicious anaemia. The red crystals of the anti pernicious anaemia factor were supplied by E.L. Smith of Glaxo Laboratories and after a lengthy step-by-step analysis lasting nearly ten years she and her team found the structure. The processing of data was aided by three of the first electronic computers located at Manchester University, the National Physical Laboratory, Teddington and the University of California, Los Angeles, and Hodgkin played a leading part in the campaign to provide computer facilities at Oxford University. After the success of the vitamin B12 work Hodgkin and her team refocused their research effort on the crystal structure of insulin - she had taken the first x-ray photographs of insulin crystals in 1935 - and were able to announce the three-dimensional structure of rhombohedral 2 Zn insulin in 1969. Research on insulin refinements continued into the 1980s.

Apart from her scientific research career at Oxford University, Hodgkin undertook a number of prominent public and professional responsibilities including in the UK, Chancellor of Bristol University, 1970-88, and President of the British Association for the Advancement of Science, 1977-78, and internationally, President of the International Union of Crystallography, 1972-75. Hodgkin's involvement in humanitarian and peace issues was given impetus by the Vietnam War. She became Vice-President of the Medical Aid Committee for Vietnam in 1965 and President in 1971. As President she visited North Vietnam in 1971 and 1974. Her second major commitment in the area of peace and international understanding was to the Pugwash movement (Pugwash Conferences on Science and World Affairs), which she served as President, 1976-88.

Hodgkin was elected FRS in 1947 (Royal Medal 1956, Copley Medal 1976; Tercentenary Lecture 1960, Bakerian Lecture 1972), and was awarded the Nobel Prize in Chemistry in 1964 for her determinations by x-ray techniques of the structures of important biochemical substances. In 1965 she became only the second woman to be appointed to the Order of Merit.

#### DESCRIPTION OF THE COLLECTION

The material is presented as shown in the List of Contents. Additional explanatory notes, information and cross-references are appended where appropriate to the separate sections, subsections and individual entries in the body of the catalogue. The following paragraphs are intended only to draw attention to items of particular interest.

Section A (Biographical) presents records of Hodgkin's career, honours and awards, 1928-90, including documentation of the award of the Nobel Prize and subsequent meetings of Nobel prizewinners. There are also family and personal correspondence, though papers relating to Hodgkin's parents and husband were retained in family hands, drafts of an unfinished autobiography, shorter autobiographical writings, articles and interviews, and many requests for biographical information for which Hodgkin often prepared careful and detailed replies.

Section B (Research) is by far the largest in the collection and comprises very extensive documentation of Hodgkin's research in x-ray crystallography including the major topics of insulin, penicillin and vitamin B12. It covers a period of sixty years from about 1928 to 1988. Most of the material was found in Hodgkin's box folders which were labelled by topic. The contents of these boxes included correspondence, drafts for reports and publications, notebooks, notes and data. Arrangement is chronological by topic. J.D. Bernal, with whom Hodgkin worked in Cambridge 1932-34, and very many of her later collaborators including C.W. Bunn (penicillin) and E.L. Smith (vitamin B12) are represented in the papers by correspondence, drafts, notes and data.

Section C (Oxford University) provides useful documentation of Hodgkin's university teaching in the 1940s and 1950s, her research group and tenure of the Wolfson Research Professorship of the Royal Society, 1960-77, the funding and administration of her research (Rockefeller Foundation, Department of Scientific and Industrial Research, Nuffield Foundation), and the provision of equipment and supplies including the use of computer facilities at other institutions in the UK and USA and their development at Oxford.

Section D (Publications, lectures and broadcasts) presents chronological sequences of material relating to Hodgkin's scientific publications, invitation and public lectures and broadcasts, and editorial correspondence arranged alphabetically by publisher or journal title. There are substantial assemblages of material relating to her Royal Society memoirs of J.D. Bernal and Kathleen Lonsdale. Not all Hodgkin's scientific publications are documented in this section. There are drafts for many scientific papers with the related research material in Section B, and Hodgkin's Nobel Lecture is to be found in Section A with other documentation of the Nobel Prize. Drafts for a number of non-scientific publications and lectures are to be found in Section G.

Section E (Societies and organisations) brings together documentation of Hodgkin's involvement with 16 British and international societies and organisations including Bristol University, the British Association for the Advancement of Science, the Institute of Physics, especially its X-ray Analysis Group established 1943, the International Union of Crystallography (IUCr) and the Royal Society. Her major commitments to Bristol University, where she was Chancellor for nearly twenty years, and

to the International Union, which she served as President and whose congresses she attended 1948-93, are particularly well documented. In respect of Bristol there is a substantial sequence of general papers and correspondence 1971-89, correspondence with Vice Chancellors A.W. Merrison and J.F.C. Kingman, Hodgkin's speeches at degree congregations, and material relating to the Department of Architecture closed by the University in 1984 despite Hodgkin's support for its efforts to remain open. Although there is some record of all the IUCr congresses Hodgkin attended from 1948, the bulk of the surviving material dates from Hodgkin's term as President, 1972-75, and includes general papers and correspondence and executive committee papers. The IUCr material reflects Hodgkin's interest in bringing Chinese scientists into the international crystallographic community. There is also material relating to scientific relations with China amongst the Royal Society papers.

Section F (Visits and conferences) presents a chronological sequence of material relating to Hodgkin's scientific visits and conferences, 1936-93, though the great bulk of the material is from the period after the award of the Nobel Prize in 1964. There is evidence of her interest in maintaining scientific contacts with the USSR and China during the Cold War, the first of many visits taking place in 1953 and 1959 respectively, and of visa difficulties in respect of visiting the USA during the same period. She also made frequent visits to Eastern Europe outside the USSR. India was another locus of valued scientific contacts and she made a number of extended visits, for example in 1974, 1978 and 1979. Not all Hodgkin's extensive travel is documented in this section. Records of her attendance at International Union of Crystallography congresses are to be found in Section E with other IUCr material. Visits which bear on Hodgkin's peace and humanitarian interests including Pugwash meetings and her visits to Vietnam are to be found in Section G. Some visits of particular biographical significance (including the award of the Nobel Prize and subsequent Nobel meetings) are to be found in Section A.

Section G (Peace and humanitarian interests) brings together documentation of the wide range of peace and humanitarian causes with which Hodgkin was involved. Her major commitments to the Medical Aid Committee for Vietnam and the Pugwash movement are particularly well documented. The activities of the Medical Aid Committee are recorded in general correspondence and papers, minutes and agenda and printed material; however the surviving material relating to Hodgkin's visits to Vietnam in 1971 and 1974 is disappointing in extent. The bulk of the Pugwash material dates from Hodgkin's Presidency, 1976-88, and includes general correspondence and papers, committee papers, conference, symposia and workshop papers, Hodgkin's addresses, and printed material. Of especial interest is the documentation of the Warsaw conference of 1982, which followed the imposition of martial law in Poland. Other organisations and topics represented in the section include the J.D. Bernal Peace Library, Palestine, Russian dissidents and Scientists Against Nuclear

Arms (SANA). The section also presents documentation of conferences attended by Hodgkin on peace and humanitarian issues, a number of her lectures and publications on these topics, and an extended chronological sequence of shorter correspondence with individuals and organisations, 1952-91.

Section H (Correspondence) presents an alphabetical sequence of Hodgkin's scientific correspondents including distinguished mentors and contemporaries such as J.D. Bernal, W.L. Bragg, J.W. Cornforth, P.P. Ewald, I. Fankuchen, H. Lipson, Kathleen Lonsdale, A.L. Patterson, Linus Pauling, M.F. Perutz, Robert Robinson, R.L.M. Synge and Dorothy Wrinch, and very many of the younger scientists from Britain and overseas who researched in various capacities in her laboratory such as G.G. Dodson, J.D. Dunitz and David Sayre. The sequence is noteworthy for the significant number of women scientists who trained in Hodgkin's laboratory including J. Glusker (née Pickworth) and B.W. Low. There is also an extended sequence of shorter scientific correspondence arranged chronologically 1933-91. Hodgkin kept together by topic much of the scientific correspondence relating to her principal research projects and this correspondence is to be found in Section B Research.

Section J (Non-print material) comprises photographs, photographic slides, sound recordings and film. There are photographs of Hodgkin, mostly undated, and with scientific colleagues including J.D. Bernal and I. Fankuchen, H.M. Powell and colleagues from Oxford laboratory, P.L. Kapitza and F.H.C. Crick, a photograph album recording Pugwash occasions, 1969-88, photographic slides for Hodgkin's lectures especially on insulin and vitamin B12 work and three sound recordings including the 1973 Nobel Guest Lecture and her Chancellor's Address to the Bristol University Education Department in 1974.

The bibliography was compiled for the catalogue from Hodgkin's own incomplete lists (D.108) and a search of the abstract literature. Following the example of Hodgkin's own lists it includes in the numbered sequence her Ph.D. thesis. References in the catalogue are to this bibliography in the form *Bibliog*. ...

There is also an index of correspondents.

#### LOCATIONS OF OTHER MATERIAL

Papers of Hodgkin's parents John Winter and Grace Mary Crowfoot are retained in family hands.

Papers of Hodgkin's husband Thomas Lionel Hodgkin are in the Rhodes House Library, Oxford and in family hands.

Papers of Thomas Hodgkin (1798-1866) are in the Library of the Wellcome Institute for the History of Medicine, London.

A photograph album recording Hodgkin's eightieth birthday celebrations is retained in family hands.

Videotape interviews of Hodgkin are held in the Archives of the Biochemical Society and the Library of the Royal College of Physicians, London.

Two models showing the crystal structure of vitamin B12 and two models made by Hodgkin to show the structure of pig insulin at a resolution of 2.8 Angstroms are held by the Science Museum, London.

Drawings of Hodgkin's hands by Henry Moore and a portrait of her by Bryan Organ are held by the Royal Society, London.

A portrait by Maggi Hambling was commissioned for the National Portrait Gallery, London.

D.M.C. Hodgkin NCUACS 47/3/94

#### **ACKNOWLEDGEMENTS**

We owe a first duty of thanks to Professor Hodgkin for making her papers available for cataloguing and for information and advice particularly about family and biographical matters.

We also owe a great debt of gratitude to Professor Judith Howard whose advice on the very extensive research materials was indispensable to the successful cataloguing of them.

Timothy E. Powell of the NCUACS at Bath has helped at all stages of the project with advice and information.

Hazel Gott has earned much gratitude for the patience and skill she has brought in the processing and revising of the catalogue.

Peter Harper Paul M. Newman BATH 1994

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	A.156-A.181	FAMILY AND PERSONAL
	A.182-A.220	MISCELLANEOUS BIOGRAPHICAL ITEMS

A.221, A.222

PRESS CUTTINGS

### **AUTOBIOGRAPHICAL AND BIOGRAPHICAL**

#### Autobiographical writings

A.1-A.9 Sloan Foundation Science Book Series.

Hodgkin was asked to write a scientific autobiography by the Alfred P. Sloan Foundation, New York as part of its Science Book Series. She devoted a considerable amount of time to this from the mid 1980s, but the book remained unfinished.

book remained unfinished

A.1-A.8 Manuscript and typescript drafts. Eight folders.

Photocopies only. Originals retained by Hodgkin and her family.

A.9 Correspondence with the Sloan Foundation 1979-82, 1984-88.

A.10-A.18 Shorter autobiographical writings.

A.10 'The Dual Role of Women.' 8pp. typescript re Hodgkin's childhood and

early scientific career.

Folder also includes manuscript notes and exercise book inscribed 'D.

Hodgkin. Sudan notes. Feb. 1982' found with typescript.

A.11 'Dorothy Hodgkin - Early Education.'

Article in L'Umile Pianta, the official publication of the Charlotte Mason

College Association, Spring 1985.

A.12 '1917-1987.'

Manuscript and typescript drafts of article written by Hodgkin for Soviet

Weekly on the 70th anniversary of the Russian Revolution; letter, 1987.

The article is an account of Hodgkin's first visit to the USSR in 1953 (see

also F.7).

A.13 'Chemistry in Oxford, 1928-1960.'

Transcript of seminar discussion in which Hodgkin took the leading part,

describing her experience as a member of the Chemistry Department

during this period.

The folder also includes shorter manuscript drafts, correspondence, 1987-

89.

A.14	'Penicillin.'
	8pp. typescript of lecture by Hodgkin on her role in penicillin research, nd.
A.15-A.18	Miscellaneous shorter autobiographical notes and drafts, nd. Four folders.
A.19-A.23	Cvs, lists of honours, statements of research interests, short biographical notes, entries for biographical directories, etc. Five folders.
Articles and intervie	ws
A.24	Typescript of untitled article in Ringier Swiss Illustrated (in German), 1956.
	'The crowded life of a crystallographer', New Scientist, 8 September 1960.
	'The Chemistry-Minded Mother', Time, 6 November 1964.
A.25	3pp. untitled typescript for <i>Contemporary British Chemists</i> . Includes correspondence 1969-70.
A.26	'Insulin in 3-D', New Scientist, 21 August 1969.
	'Women of Achievement', Woman's Journal, October 1971.
A.27	Article in Japanese journal, 1972.
A.28	'Wir sprachen mit Dorothy Crowfoot-Hodgkin', <i>Therapeutische Berichte</i> , February 1973.
A.29	Article in journal of the Council of Scientific and Industrial Research, India, 1975.
A.30	'Structures of life', Chemistry in Britain, April 1977.
	Folder also includes correspondence, 1975-77, and transcript of interview on which article was based.
A.31	'Impact Interview with Dorothy Crowfoot Hodgkin', Journal of Chemical Education, [1977].
	The interview is a published version of the interview on which the article for <i>Chemistry in Britain</i> (A.30) was based.

A.32	10pp. typescript of article by M.F. Perutz on 'Forty Years Friendship with Dorothy', 1980.
A.33	'Profiles in Chemistry. Dorothy Crowfoot Hodgkin: Nobel Laureate', Journal of Chemical Education, February 1982.
	'Wizard with Crystals. Dorothy Crowfoot Hodgkin', in <i>The Lady Laureates</i> , by O.S. Opfell, 1986.
	17pp. proof, with manuscript additions and corrections by Hodgkin
A.34	Transcript of interview with L. Wolpert, with manuscript additions and corrections by Hodgkin, 1987; proof; review.
	The interview was published as 'Finding What's There' in A Passion for Science, eds. L. Wolpert and A. Richards, 1989.
A.35	Transcript of interview, to be published as part of <i>Heroines</i> , by L. Tuttle, with manuscript additions and corrections by Hodgkin, 1987.
A.36	Typescript draft, manuscript revised draft by Hodgkin of biographical entry in W. & R. Chambers <i>Dictionary of Scientists</i> . Includes correspondence, 1989.
A.37	14pp. typescript for article in <i>Shell Times</i> on 'Dorothy Crowfoot Hodgkin. Unravelling the complexities of insulin, penicillin and vitamin B12', 1990.
A.38	'Ein Leben in der Wissenschaft', Naturwissenschaftliche Rundschau, 1990.
A.39	9pp. typescript of paper on 'Leadership and Gender in Science : D.C. Hodgkin and the Oxford School of Chemical Crystallography' by P.G. Abir-Am; related research proposal.
	The paper was given at a session on Great Women Chemists at the American Chemical Society Meeting, Boston, 1990, which Hodgkin attended (see F.162).
A.40	'Chemistry's crystal seer', New Scientist, 23 May 1992.
	Proof of Hodgkin's entry in <i>The Dictionary of Nobel Laureates in Chemistry</i> ; letter, 1993.
A.41	Undated articles, transcripts of interviews.

A.42-A.48 Correspondence re interviews 1956-91.

A.42 1956, 1958, 1964-69.

A.43 1970-74.

A.44 1975-79.

A.45 1980, 1982-85.

A.46 1986-87.

A.47 1988-89.

A.48 1990-91, nd.

## Requests for biographical information 1964-92

Hodgkin was often very generous with her time, providing detailed information in her replies. From 1988 the replies are typed on the back of the letters.

A.49 1964-65, 1967-68.

A.50 1970, 1972-76.

A.51 1977-79.

A.52 1980-81, 1985-87.

A.53 1988-89, 1991-92, nd.

## CAREER, HONOURS AND AWARDS

A.54 Letter from Hodgkin's school chemistry teacher, C. Deeley, *re* books for Hodgkin's first year at Oxford, 5 October [1928].

A.55	Testimonial written for Hodgkin by S.M. Fry, Principal of Somerville College, Oxford, 9 March 1931.
A.56	Appointment as Research Fellow, Somerville College, Oxford 1933.
A.57	University Demonstrator, Oxford University. Includes correspondence <i>re</i> salary. 1945-51.
A.58-A.61	Election to the Fellowship of the Royal Society 1947.
A.58	Notification of election to Fellowship.
A.59-A.61	Letters of congratulation.
A.59	A-G.
A.60	H-M.
A.61	N-Z.
A.62	Governor of Royal Holloway College 1947.
	Hodgkin was nominated as a Governor by the Hebdomadal Council, Oxford University, but her nomination was disallowed by a regulation in the College's Deed of Foundation stipulating that Governors should be men.
A.63	Reader in X-ray Crystallography, Oxford University 1955.
A.64	Foreign Member of the Netherlands Academy of Science 1956. Includes letters of congratulation.
A.65	Royal Medal of the Royal Society 1956. Includes letters of congratulation.
A.66	Foreign Honorary Member of the American Academy of Arts and Sciences 1958.
A.67	Hon. D.Sc. Leeds University 1959. Includes letters of congratulation.

A.68, A.69	Wolfson Research Professor of the Royal Society 1960.
	See also C.57-C.66
A.68	Correspondence with the Royal Society.
A.69	Correspondence with University Registry, Oxford University.
	Letters of congratulation.
A.70	Honorary Member of the American Society of Biological Chemists 1961.
A.71	Hon. D.Sc. Manchester University 1961. Includes presentation address.
A.72	Hon.D.Sc. Cambridge University 1961.
	Honorary Visiting Professor, University of Ghana 1962.
A.73-A.91	Nobel Prize for Chemistry 1964.
	There is evidence that Hodgkin was nominated for the Nobel Prize for Chemistry as early as 1957. She was awarded the Nobel Prize in 1964 'for her x-ray determinations of the structure of biologically important substances'.
A.73	Communication from the Nobel Committee for Chemistry to W.N. Lipscomb acknowledging receipt of his nomination of Hodgkin for the Nobel Prize for Chemistry for 1957.
A.74, A.75	Letters of congratulation, 1964.
A.74	A-M.
A.75	N-Z.
A.76	Manuscript and typescript drafts of Hodgkin's speech of thanks on the occasion of the Nobel Award ceremonies.
A.77-A.79	Hodgkin's Nobel Lecture on 'The x-ray analysis of complicated molecules' ( <i>Bibliog.</i> 90, 1964).

A.77	Preprint; proof of lecture, including Presentation Speech by G. Hägg.
A.78	22pp. typescript draft, with manuscript additions and corrections by Hodgkin.
A.79	Correspondence re publication of lecture in <i>Science</i> and in <i>Angewandte Chemie</i> , 1965-66.
A.80	Background material. Includes manuscript and typescript drafts of speech given by Hodgkin at a student celebration for the Nobel prizewinners at Stockholm, photograph.
A.81	Articles arising from Nobel award. In English, German and Dutch.
A.82-A.87	Meetings of Nobel Prize winners.
A.82	20th meeting of Nobel Prize winners, Lindau, West Germany, 29 June - 3 July 1970.
	Hodgkin gave a lecture on the 'Structure of Insulin'.
	Correspondence re arrangements. Includes summary of lecture.
	Programme.
A.83	75th anniversary of the Nobel Foundation, Stockholm, 7-13 December 1975.
	$\label{lem:correspondence} \mbox{\it Correspondence} \ \mbox{\it re} \ \mbox{\it arrangements.} \ \mbox{\it Includes provisional list of participants.}$
	Newspaper article (in Swedish).
A.84	30th meeting of Nobel Prize winners, Lindau, West Germany, 30 June - 4 July 1980.
	Hodgkin gave a lecture on 'History and the x-ray analysis of protein crystals'.
	Letter re arrangements.
	Programme.
	1p. ?summary of lecture.

A.85, A.86

33rd meeting of Nobel Prize winners, Lindau, West Germany, 27 June - 1

July 1983.

Hodgkin gave a lecture on 'Scientists in search of peace.'

A.85

Correspondence re arrangements.

Programme.

A.86

Manuscript and typescript drafts of lecture.

A.87

36th meeting of Nobel Prize winners, Lindau, West Germany, 30 June - 4

July 1986.

Correspondence re arrangements.

A.88-A.91

Nominations 1966-90. Four folders.

A.88

1966-67, 1969-70.

A.89

1971-72, 1974, 1976.

A.90

1977-78.

A.91

1980, 1984, 1986, 1989-90.

A.92

Honorary Fellow of the Ghana Academy of Sciences 1965.

A.93-A.97

Order of Merit 1965.

Hodgkin was only the second woman to be appointed to the Order of

Merit; the first was Florence Nightingale, in 1907.

A.93

Letters of congratulation.

A.94

List of members of the Order of Merit, 1966.

A.95

75th Anniversary of the Order of Merit, 17 November 1977.

Includes invitations, order of service for members, typescript re history of

the Order of Merit.

A.96	85th Anniversary of the Order of Merit, 23 June 1987.
	Includes photographs, list of members of the Order of Merit, newspaper article, photocopy of journal article.
A.97	Miscellaneous correspondence 1981, 1989, 1991.
A.98	Hon. D.Sc. Sussex University 1965.
A.99	Member of the Yugoslav Academy of Sciences and Arts 1965.
	Visiting Professor, Massachusetts Institute of Technology 1965.
	Honorary Fellow, Girton College, Cambridge 1965.
A.100	Isabella d'Este Prize 1965.
	Hodgkin was provisionally awarded the prize, subject to the condition that she should be able to receive it personally from the President of Italy. She was unable to travel at that time and therefore could not accept the award.
A.101	President of the Oxford and District Branch of the Association for Science Education 1966.
	Hon. D.Sc. University of East Anglia 1966.
A.102	Honorary Member of the Society for Analytical Chemistry 1966.
A.103	Corresponding Member in England of the Puerto Rico Academy of Arts and Sciences 1966.
	'Daughter of Mark Twain' 1966, 1972.
A.104	Hon. D.Sc. Hull University 1966.
A.105	Founder Member of the Institution of Computer Science and Cybernetics 1967.
	Honorary Fellow of the Royal Institute of Chemistry 1967.
A.106	Hon. D.Sc. University of Kent 1967.

A.107	Hon. D.Sc. Reading University 1968.
	Hodgkin was unable to accept the proposed degree because commitments in New Zealand prevented her from receiving it.
	Honorary Fellow of the Royal Australian Chemical Institute 1968.
A.108	Hon. D.Sc. Harvard University 1968.
A.109	Diploma of the Deutsche Akademie der Naturforscher Leopoldina 1968.
	Hon. D.Sc. Exeter University 1968.
A.110	Honorary degree Zagreb 1969.
A.111	Honorary Fellow of the Royal Society of Edinburgh 1970.
A.112	Hon. D.Sc. Sheffield University 1970.
A.113-A.116	Chancellor of Bristol University 1970.
	See also E.5-E.46.
A.113	Appointment.
A.114	Letters of congratulation 1970-71.
A.115	Installation. Includes programme, speech given by Hodgkin.
A.116	Newspaper and magazine articles.
A.117, A.11	Foreign Associate of the National Academy of Sciences, Washington D.C. 1971.
A.117	Notification of election.
A.118	Letters of congratulation.
A.119	Baly Medal of the Royal College of Physicians 1971.

A.120	Honorary Fellow of the Indian Academy of Sciences 1972.
	Honorary degree University of Pennsylvania 1972.
	Hodgkin was invited to receive a degree but declined 'on account of the actual time, and the feelings I have at the moment connected with the present state of the world and University functions.'
A.121	Hon. D.Sc. Brown University 1973.
A.122	Honorary Member of the Royal Irish Academy 1974.
A.123	Honorary Fellow of the Royal College of Physicians 1974. Includes letters of congratulation.
A.124	Hon. D.Sc. Yale University 1974.
	Hodgkin was initially unable to accept the proposed degree because of a prior engagement in the USSR. The visit to the USSR was subsequently postponed, however (see F.88, F.89).
A.125	President of the Oxford and District Branch of the British Diabetic Association 1974.
	Honorary Vice-President of the London International Youth Science Fortnight 1974.
A.126	Member of the Norwegian Academy of Science and Letters 1976.
A.127, A.128	Foreign Member of the USSR Academy of Sciences 1976.
A.127	Notification of election.
A.128	Letters of congratulation.
A.129	Honorary Member of the Indian Women Scientists' Association 1976.
A.130, A.131	Copley Medal of the Royal Society 1976.
A.130	Notification of award.

A.131	Letters of congratulation.
A.132	Gold Medal of the Royal Society of Medicine 1977. Includes letter of congratulation, correspondence <i>re</i> Gold Medal Lecture (see also D.147).
A.133	Hon. D.Sc. University of Massachusetts 1977.  Hodgkin was invited to receive a degree but declined because of 'serious
	outstanding work I am trying to complete during this year.'
A.134	President of the British Association for the Advancement of Science 1977.
	Hodgkin held the post for one year. See also D.148, D.149, E.54-E.56.
A.135	Retirement from Wolfson Research Professorship of the Royal Society 1977.
	Professor Emeritus, Oxford University 1977.
	Election to Fellowship of Wolfson College, Oxford 1977.
A.136	Longstaff Medal of the Chemical Society 1978.
A.137	Hon. D.Sc. Council for National Academic Awards 1978.
	Hon. D.Sc. Bath University 1978.
	Honorary Member of the Section of Endocrinology of the Royal Society of Medicine 1978.
A.138	Honorary degree Open University 1979.
	Hon. D.Sc. Warwick University 1979.
A.139	Honorary Fellow of the Bangladesh Physical Society 1980.
	Honorary Fellow of the Royal Society of Chemistry 1980.
A.140, A.141	70th birthday 1980.
	A birthday luncheon was held at Somerville College, Oxford.
	Letters and messages of congratulation.

A.140	A-O.
A.141	R-Z.
A.142	Corresponding member of the Bavarian Academy of Sciences 1981.
	Honorary Fellow of Newnham College, Cambridge 1981.
	Honorary Member of the Manchester Literary and Philosophical Society 1981. See also D.156-D.158.
A.143	Kreeger-Wolf Professor North Western University 1981-82.
	Hodgkin was invited to be a Visiting Professor for one quarter during the 1981-82 academic year, but declined the invitation.
A.144	Lomonosov Gold Medal of the USSR Academy of Sciences 1983. Includes letter of congratulation, manuscript and typescript drafts of Hodgkin's 'Report on a visit to the Soviet Union from Feb. 28 - March 10, 1983'.
A.145	Foreign Member of the Austrian Honour Award for Science and Arts 1983. Includes photographs.
A.146	Visiting Professorship, York University 1984, 1987, 1990
A.147	Dimitrov Peace Prize, Bulgaria, 1984. Includes letter of congratulation, programme for Hodgkin's visit to Bulgaria.
A.148	75th birthday 1985.
	Letters of congratulation.
A.149	Member of the International Academy of Science 1985.
A.150	Hon. LL.D. Dalhousie University 1986.
A.151, A.152	International Lenin Peace Prize 1987.
A.151	Notification of award, visit to Moscow, prize money.

A.152 Letters of congratulation.

A.153 Hon. D.Sc. Oxford University 1987. Includes letters of congratulation.

A.154 Resignation as Chancellor of Bristol University 1988.

A.155 Hon. D.Sc. St. Andrews University 1990.

#### **FAMILY AND PERSONAL**

#### **Family**

A.156, A.157 Diana Royle (Dilly), sister. 1979-90, nd

A.156 1979-80, 1983-88, 1990.

A.157 Nd.

A.158 Edward Hodgkin, brother-in-law. 1975-89, nd

A.159 Elizabeth Hodgkin, daughter. 1967-88, nd

A.160-A.162 Miscellaneous shorter family correspondence, in chronological order.

1943-92, nd.

A.160 1943.

Letter from Hodgkin to her mother re her progress in the penicillin

research.

1955.

Letters from Sir Frederic and Lady Hamilton re gift of £500 to Hodgkin.

Lady Hamilton was the sister of Hodgkin's mother-in-law, also called Dorothy Hodgkin. Consequently Hodgkin is referred to as 'Dorothy junior'.

Hodgkin used the money to publish archaeological work of her father in Samaria.

A.161

1957, 1960-79.

A.162

1980-92, nd.

A.163

Manuscript notes re family tree.

#### Personal correspondence

A.164

Renfrew Christie

1985-87

Christie was a South African who had been imprisoned for his anti-

apartheid activities.

A.165

Maria Kostova

1984-86

Kostova was a Bulgarian teacher of English whom Hodgkin had known for many years. The correspondence relates to a visit to England.

A.166

James Moxon

1986-87, nd

Moxon was a friend of Hodgkin and her husband from their time in Ghana.

A.167

Elizabeth Murray

1949-86, nd

Murray was a friend of Hodgkin's from Somerville College Oxford, who led the expedition to Spain in 1936 (see A.189-A.195). She later became Principal of Bishop Otter College, Sussex.

A.168

Francis Pagan

1966-80, nd

Pagan was the son of the woman with whom Hodgkin boarded while attending the Sir John Leman School, Beccles. He was researching for a proposed biography of Hodgkin.

A.169

Galina Shemetova

1979, nd

Shemetova was a Russian friend of Hodgkin's daughter, Elizabeth. The correspondence mostly relates to her application for a visa to visit the Hodgkin family.

A.170

Elspeth Stanford

1979-89, nd

A.171

E.N. ('Buzzer') Wurr

1980-89, nd

Wurr was a contemporary of Hodgkin's from school.

A.172-A.181

Miscellaneous shorter personal correspondence, in chronological order.

1950-92, nd.

A.172

1950-51, 1960-61, 1964-69.

A.173

1970-75.

A.174

1976-79.

A.175

1980-82.

A.176

1983-84.

A.177

1985-87.

A.178

1988.

A.179

1989-90.

A.180

1991-92.

A.181

Nd.

#### MISCELLANEOUS BIOGRAPHICAL ITEMS

A.182-A.186

In chronological order.

A.182

Typescripts of accounts of visits to Russia (later the USSR), 1892, 1899, 1923, and 1925 'as Delegate to the Bicentenary of the Russian Academy

of Science.' Probably same author (unidentified).

A.183

Typescript 'circular' letter sent from British consulate in Leningrad, 1931.

Includes general impressions of Soviet Union, account of visit by British party including Lady Astor and G.B. Shaw. Author and recipient

unidentified.

Typescript extracts [?from letters sent by J. Pickworth], which form a A.184 record of the progress of vitamin B12 research in Hodgkin's laboratory in Oxford, July 1954 - June 1955. 'PNEU. The Journal of Parents National Education Union', July/August/ A.185 September 1975. Includes article re Hodgkin's attendance at a PNEU school in 1918. Includes Calendar, probably from Hodgkin's laboratory, 1976. A.186 appointments. A.187-A.220 By topic. Appeals, charities, donations. A.187, A.188 1985-91, nd. Two folders. A.189-A.195 Archaeological and architectural interests. The material mostly relates to an expedition to Spain in 1936 which Hodgkin made with friends from Somerville College Oxford. expedition was led by Elizabeth Murray (see also A.167). The material includes correspondence, postcards, photographs, manuscript notes, drawings. Seven folders. Archives and museum objects. A.196-A.198 Correspondence re Hodgkin's manuscripts, 1973-92. A.196 Correspondence and papers re manuscripts of other members of the A.197 Hodgkin family, 1969-89. Correspondence re deposit of insulin models in the Science Museum, A.198 London, 1991. A.199-A.201 Autographs. Letters requesting Hodgkin's autograph, signed photograph, etc.

1955-82, nd. Three folders.

A.202, A.203

Finances.

1947-89. Two folders.

A.204

Health.

1976-90, nd.

Includes Hodgkin's account of her rheumatoid arthritis, from which she suffered from the late 1930s.

A.205-A.209

Photographs and portraits.

A.205

Correspondence with the National Portrait Gallery, *re* photograph for the National Photographic Record, 1965-69.

Correspondence with the National Portrait Gallery, Maggi Hambling and others *re* portrait of Hodgkin by Hambling, 1984-88.

Letter from Henry Moore and correspondence *re* Moore's drawings of Hodgkin's hands for the Royal Society, 1978, 1989.

Correspondence with Graham Sutherland and others *re* portrait of Hodgkin by Sutherland intended for the Royal Society, 1978-80. Sutherland died before the portrait was completed.

A.206-A.209

Miscellaneous shorter correspondence re portraits and photographs. Four folders.

A.210

Political interests.

1984-89.

A.211-A.214

Requests for Hodgkin's advice, opinions on a variety of topics.

From 1989 Hodgkin's replies are typed on the back of the letters.

1947-91. Four folders.

A.215

Schools.

Correspondence principally with and *re* Hodgkin's school, the Sir John Leman School, Beccles, 1951-93.

Includes a little correspondence *re* Crowfoot County Primary School, opened by Hodgkin's father in 1952, and with the Borough of Beccles, 1965-73.

A.216-A.220

Social invitations.

1965-91. Five folders.

**PRESS CUTTINGS** 

A.221, A.222

1955-91. Two folders.

SECTION B

RESEARCH

B.1-B.991

This section comprises very extensive documentation of Hodgkin's research in x-ray crystallography including the major topics of insulin, penicillin and vitamin B12. It covers a period of sixty years from about 1928 to 1988.

Most of the material was found in Hodgkin's box folders which were labelled by topic. The contents of these boxes included correspondence, drafts for reports and publications, notebooks, notes and data. The material has been arranged in chronological order by topic. At the end of the chronological sequence of topics there is some miscellaneous material followed by large format items.

J.D. Bernal, with whom Hodgkin worked in Cambridge 1932-34, and very many of her later collaborators including C.W. Bunn (penicillin) and E.L. Smith (vitamin B12) are represented in the papers by correspondence, drafts, notes and data.

The material is presented as follows:

B.1-B.19

**EARLY WORK** 

B.20-B.48

CHOLESTEROL

B.49

**GENINS** 

B.50-B.53

TOAD POISONS

B.54-B.61

SEX HORMONES

B.62-B.81

THEORY, APPARATUS, TECHNIQUES

B.82-B.288

**INSULIN** 

B.289, B.290

STEROLS

B.291-B.295

**TOBACCO VIRUSES** 

B.296-B.313

**PROTEINS** 

B.314-B.316

BENZPYRENE

B.317-B.336

CALCIFEROL

B.337, B.338

**FATTY ACIDS** 

B.339-B.471	PENICILLIN
B.472-B.500	GRAMICIDIN
B.501, B.502	LACTOGLOBULIN
B.503-B.505	FERRITIN
B.506-B.828	VITAMIN B12
B.829-B.847	NITROSO COMPOUNDS
B.848-B.851	PURPUROGALLIN
B.852, B.853	LUMISTEROL
B.854-B.870	MIROESTROL/BROMOMIROESTROL
B.871-B.875	FERROVERDIN
B.876	AGRAVIDE
B.877-B.896	PILOTY COMPOUNDS
B.897, B.898	SPORIDESMIN
B.899-B.928	CEPHALOSPORIN C
B.929	FORMAZAN
B.930, B.931	SUPRASTEROL II
B.932-B.938	THIOSTREPTON
B.939-B.982	MISCELLANEOUS
B.983-B.991	LARGE FORMAT

EARLY WORK	ca 1928-32
B.1-B.4	Notebooks  Four hardback chemistry notebooks, probably undergraduate, used for notes on techniques, preparations, properties, nd. Include some loose items.
B.5	'Crystallography'  Exercise book, dated July 1931, from the short time Hodgkin spent at Heidelberg during the summer vacation between the third and fourth years of her degree. Hodgkin studied methods of measuring crystals with a
B.6-B.11	goniometer and of drawing crystals under V. Goldschmidt.  Manuscript notes.  Nd. Probably undergraduate.
B.6	'Electrochemistry'
B.7	'Molecular structure', 'structure of crystals'. Includes notes on x-ray diffraction.
B.8	'Chemical Kinetics'.
B.9	'Colloids'. Includes notes on 'Methods of determining size of particles by X rays'.
B.10	'Stereochemistry'.
B.11	'Quantum Theory', 'Chemistry of the Photographic Plate', 'Thermodynamics', 'Specific Heat of Solids'.
B.12-B.18	Essays  Nd. Probably undergraduate.
B.12	'The relation between the thermal stability and the chemical stability of a molecule'.  'The relation between the chemical reactivity and the thermal stability of molecules'.

B.13	'The criteria of Chemical Combination'.
B.14	Answer to question on 'Hydrolysis of a salt of a strong base and a weak acid'.
B.15	'Chemiluminescence'.
B.16	'The Hydration of lons'.
B.17	'Chain Reactions'.
B.18	'The Nature, Properties and Uses of Alloys'.
	Untitled draft found attached to the preceding but on unrelated topic, ?1928,
B.19	'The Crystallographic Properties of some Alkyl Thallium Compounds'. Thesis submitted for Final Honour School of Chemistry (Part II) and B.Sc. Degree. [1932].
CHOLESTEROL	1933-71
CHOLESTEROL	1933-71 Cholesterol iodide was Hodgkin's first x-ray analysis of an organic structure.
CHOLESTEROL B.20	Cholesterol iodide was Hodgkin's first x-ray analysis of an organic
	Cholesterol iodide was Hodgkin's first x-ray analysis of an organic structure.  X-ray films, annotated by Hodgkin and J.D. Bernal, of crystals of
B.20	Cholesterol iodide was Hodgkin's first x-ray analysis of an organic structure.  X-ray films, annotated by Hodgkin and J.D. Bernal, of crystals of cholesterol bromide, cholesterol dibromide and cholesterol chloride, 1933.  Box of x-ray films, annotated by Bernal, of crystals of cholesterol iodide,
B.20 B.21	Cholesterol iodide was Hodgkin's first x-ray analysis of an organic structure.  X-ray films, annotated by Hodgkin and J.D. Bernal, of crystals of cholesterol bromide, cholesterol dibromide and cholesterol chloride, 1933.  Box of x-ray films, annotated by Bernal, of crystals of cholesterol iodide, etc. [1933].  'Chiefly Cholesterol'. Contents of box folder so labelled, divided into ten
B.20 B.21	Cholesterol iodide was Hodgkin's first x-ray analysis of an organic structure.  X-ray films, annotated by Hodgkin and J.D. Bernal, of crystals of cholesterol bromide, cholesterol dibromide and cholesterol chloride, 1933.  Box of x-ray films, annotated by Bernal, of crystals of cholesterol iodide, etc. [1933].  'Chiefly Cholesterol'. Contents of box folder so labelled, divided into ten for ease of reference.  Manuscript drafts, notes and data re Hodgkin's Ph.D. thesis, 'X-ray

B.34, B.35	Contents of envelope divided into two for ease of reference.
	'X-ray crystallography and the chemistry of the sterols. Part I' (with J.D. Bernal and I. Fankuchen), <i>Bibliog.</i> 30, 1940.
	Manuscript draft, incomplete, including 4pp. by Bernal.
B.36	Contents of untitled folder.
	Typescript copy of 'An X-ray Study of i-Cholesterol and Related Compounds' by F.O. Bell, probably sent to Hodgkin for information, nd.
	Correspondence 1941, 1943, re work by Hodgkin and C.H. Carlisle on cholesteryl iodide.
B.37, B.38	'The crystal structure of cholesteryl iodide', Bibliog. 39, 1945.
B.37	15pp. manuscript draft by Hodgkin.
B.38	44pp. typescript draft, with manuscript additions and corrections by Hodgkin.
B.39	'Cholesterol'. Contents of folder so inscribed.
	Letter from Hodgkin to S. Abrahamsson, dated 18 October 1962, <i>re</i> her early research on cholesterol, with 3pp. manuscript draft from her Ph.D. thesis and two x-ray photographs.
	X-ray photographs and film. Some dated 1931, 1935 and 1962.
	Manuscript notes and data.
B.40-B.42	'1-cholesterol'. Contents of folder so inscribed.
B.40	'Crystal and molecular structure of $6\beta$ -bromoacetyl and $6\beta$ -chloroacetyl $3,5$ $\alpha$ -cyclo- $5$ $\alpha$ -cholestane (i-cholesteryl bromoacetate and chloroacetate)' (in collaboration), <i>Bibliog.</i> 119, 1971.
	20pp. typescript draft, with manuscript additions and corrections, not by Hodgkin.
B.41	Correspondence re i-cholesterol 1967, 1971.

B.42	'Listing of the Structure Factors for i-cholesterol bromoacetate'. Computer printout, nd.
B.43	Manuscript data, probably for Fourier analysis of cholesteryl bromide, nd.
	'Trial Fourier Analysis of Cholesteryl Bromide', nd.
	Handdrawn cholesteryl iodide projection, nd.
B.44-B.48	Exercise books, nd.
B.44	Data re dibromo cholesterol.
B.45	'Cholesteryl bromide'. Patterson data.
B.46	Data re cholesterol chloride.
B.47	Patterson data for dibromo cholesterol chloride, dibromo cholesterol bromide, cholesterol chloride and cholesterol chloride hydrochloride.
B.48	'Cholesteryl chloride'. Patterson data.
GENINS	1934
B.49	'Genins'. Contents of folder so inscribed.
	'X-ray crystallographic measurements of some genins derived from digitalis' (with J.D. Bernal), latest bibliographical reference 1934. Not listed in <i>Bibliog</i> .
	5pp. typescript.
	Manuscript notes, data, handdrawn projections and sketches by Hodgkin and Bernal
TOAD POISONS	1935-36

Hodgkin was given specimens of bufagin and cinobufagin to examine by H. Jensen.

B.50	'A note on the X-ray Crystallography of the Toad Poisons, Bufagin and Cinobufagin, and of Strophanthidin', <i>Bibliog.</i> 13, 1935.
	4pp. typescript, with extensive manuscript additions and corrections by Hodgkin.
B.51, B.52	Manuscript notes and data, manuscript notes from the literature $\it re$ toad poisons, 1935. Two folders.
B.53	'The molecular weight of cinobufagin' (with H. Jensen), Bibliog. 20, 1936.
	4pp. typescript draft; 3pp. manuscript draft by Hodgkin.
SEX HORMONES	1935-36
	The first x-ray crystallographic examination of a member of this series was undertaken by J.D. Bernal in 1932.
B.54, B.55	Manuscript notes and data <i>re</i> sex hormones by Hodgkin and J.D. Bernal, manuscript notes from the literature, sketches of crystals. A few pages dated 1935. Two folders.
B.56, B.57	'X-ray crystallographic data on the sex hormones, oestrone, androsterone, testosterone and progesterone and related substances' (with J.D. Bernal), <i>Bibliog.</i> 19, 1936.
B.56	26pp. typescript, with manuscript additions and corrections by Hodgkin and Bernal.
B.57	30pp. manuscript draft, with manuscript additions and marginal comments by Bernal.
	Tables; legends to figures.
B.58	'X-ray crystallographic examination of Testosterone', nd. Not listed in Bibliog.
	3pp. typescript draft; 3pp manuscript draft by Hodgkin.
B.59-B.61	Three exercise books, used for notes on sex hormones by Bernal.
B.59	'Pregnandiol'.

Untitled [cover missing]. B.60 B.61 'Oestron'. 1935-60 THEORY, APPARATUS, TECHNIQUES Contents of untitled binder. B.62-B.65 'The interpretation of Weissenberg Photographs in relation to crystal B.62 symmetry', Bibliog. 12, 1935. Proof copy; figures, annotated by Hodgkin. B.63, B.64 Tables of manuscript data. Two folders. Manuscript data, calculations, sections, by Hodgkin and J.D. Bernal. B.65 'Charts. Apparatus. Techniques. Early papers, mainly 1940s'. Contents B.66-B.74 of box folder so labelled. Manuscript notes from the literature, not by Hodgkin, latest bibliographical **B.66** reference 1936. Contents of envelope, re delivery of Cu Anode Research Tube. Includes B.67 delivery notice, dated 17 March 1937, instructions for use, chart. Letter from W.L. Bragg, 1937. Attached is a typescript copy of 'Structure-B.68 Factor Fields for the Plane-Groups C3m H3m C6m', by Bragg and H. Lipson. 'A Machine for the Calculation of Structure Factors in X-Ray B.69 Crystallography', by A.D. Booth. Nd, latest bibliographical reference 1943. 3pp. typescript.

Photographs; blueprints.

B.70	'Comments on the Wooster-Martin Weissenberg Two-Circle X-Ray Goniometer'.
	1p. typescript, not by Hodgkin, 1944.
	Typescript notes <i>re</i> the Buerger Equi-Inclination Weissenberg Goniometer, by E.G. Cox; letter from Cox, dated 11 February 1947.
B.71	Contents of envelope sent to Hodgkin, 1949.
	'An Integrating Weissenberg-Apparatus'.
	2pp. typescript.
	Plans; photographs.
B.72, B.73	'Papers on technique from Bill Cochran - 1950s'. Contents of folder so inscribed, divided into two for ease of reference.
	Miscellaneous typescripts, manuscript notes <i>re</i> experiments, photographs, stereographic projection, including typescript and manuscript notes by Hodgkin <i>re</i> practical course in Chemical Crystallography. One item dated 1953.
B.74	'X-Ray Crystallographic Apparatus, Labyrinth Radiation Traps'.
	Third Angle Projection, 1958.
B.75	'Proposals for New Beevers-Lipson Strips', by L.J. Comrie and G.B. Hey, 1945.
	4pp. typescript; 1p. table.
B.76	Contents of untitled binder.
	Manuscript notes, data, manuscript notes from the literature. Latest bibliographical reference 1947.
B.77	'X-ray analysis and molecular structure', [?1949]. Not listed in Bibliog.
	17pp. typescript, with manuscript additions and corrections by Hodgkin.
B.78	'Formfactor Tables and Atomic Scattering Factors'. Contents of folder so inscribed.
	11pp. typescript, latest bibliographical reference 1960.

B.79

'Weissenberg Photographs'. Contents of folder so inscribed.

1p. typescript; typescript data. Nd.

B.80

'Operating Instructions for the Nonius Integrating Weissenberg'.

1p. typescript, nd.

'X-ray tubes'.

1p. typescript, nd.

'Patterson Synthesis'.

2pp. typescript, nd.

'Graphical Methods of Evaluating X-ray Diagrams'.

1p. typescript, incomplete, nd.

B.81

'Patterson Fourier series in working out crystal structures'.

2pp. manuscript draft by Hodgkin, nd.

Miscellaneous manuscript notes by Hodgkin.

INSULIN

1935-88

Hodgkin's research on this topic began in 1935 when she took the first x-ray photographs of rhombohedral crystals of insulin, given to her by Robert Robinson, Waynflete Professor of Chemistry at Oxford. The structure of insulin proved to be much more complicated than was first imagined and, with a molecular weight of 5780, the measurements and calculations needed to show the arrangement of the atoms present were lengthy and difficult. Thus it was not until 1969 that Hodgkin and her team were able to reveal the three-dimensional structure of rhombohedral 2 zinc insulin. Hodgkin's research on insulin refinements continued into the 1980s.

For overviews of Hodgkin's insulin research, see for example D.38, F.53.

The material, which is substantial, covers the period 1935-88, although the bulk dates from the 1950s onwards. There is an extensive correspondence with colleagues and others including letters of congratulation 1969 arising from the announcement of the three-dimensional structure, drafts for reports and publications, notebooks, notes and data.

The material is presented as follows:

B.82-B.132 Correspondence

B.133-B.204 Drafts for reports and publications

B.205-B.212 Notebooks

B.213-B.284 Data

B.285-B.288 Miscellaneous

### Correspondence 1935-83

There is an extensive correspondence with colleagues and others which was kept together by Hodgkin in box folders.

The correspondence is presented as follows:

B.82-B.104 Correspondence with individuals

In alphabetical order

B.105-B.132 Miscellaneous shorter correspondence

In chronological order

### Correspondence with individuals

B.82, B.83 T.L. Blundell 1970-81, nd

From the late 1960s Blundell was one of Hodgkin's principal collaborators

in the insulin research.

B.82 1970, 1973-75. Includes correspondence re scientific visits to Poland and

India by Blundell, letter to Blundell from G.H. Snyder.

B.83 1976-78, 1981, nd. Includes outline of research project proposed by

Blundell on 'X-ray analysis of protein hormones: insulin and growth

hormones'.

B.84 D. Brandenburg 1971, 1973, 1975-76

B.85-B.88 A.S. Brill 1962-71, nd.

Most of the correspondence from 1962-64 is photocopied correspondence between Brill and J. Schlichtkrull (see B.100, B.101), sent to Hodgkin for

information.

B.85	1962.	
B.86	1963.	
B.87	1964.	
B.88	1965-66, 1968, 1971, nd. Includes Hodgkir Kendrew commenting on draft of paper by Br commenting on Brill's conclusions.	
B.89	A.C. Chibnall	1942-46, 1962, 1974-75
B.90	R.B. Corey	1946, 1954-56
B.91, B.92	G.G. Dodson	1964-82, nd
	From the mid 1960s Dodson was one of Hod in the insulin research. The sequence inclu correspondence with others.	gkin's principal collaborators des a little of Dodson's own
B.91	1964, 1971, 1973, 1975.	
B.92	1976, 1978-79, 1982, nd.	
B.93	J.T. Edsall	1976-77, 1981
B.94	P.T. Grant	1967-69, 1971
	re cod insulin data and samples.	
B.95	H. Gutfreund	1943-44, 1948-51, 1956, nd
	re crystallisation experiments with insulin sa	mples.
	Includes correspondence re lactoglobulin.	
B.96	B.W. Low	1970-72
B.97, B.98	M.G. Rossman	1962-70, nd

B.97 1962-63, 1965-66. **B.98** 1967, 1969-70, nd. 1975, 1978-83 K. and N. Sakabe B.99 The Sakabes were Japanese crystallographers who corresponded with Hodgkin jointly. Includes photocopies of letters sent by the Sakabes to R. Fourme in Paris. 1957-77 J. Schlichtkrull B.100, B.101 Schlichtkrull was based at NOVO Research Institute, Copenhagen. He devised the method by which the crystals of native insulin were grown for the x-ray analysis that led to Hodgkin's elucidation of the threedimensional structure of insulin. See also B.85-B.87 for photocopied correspondence between Schlichtkrull and A.S. Brill, sent to Hodgkin for information. See also B.199, B.200, B.203, B.220, B.221. B.100 1957-58, 1963, 1965, 1968. B.101 1973-75, 1977. 1969-77, 1982, nd B.102 D.F. Steiner Includes correspondence re Hodgkin's visits to USA, May 1969, December 1972. See also F.45, F.72. 1968, 1971, 1977-78 W.A. Wooster B.103 Principally re construction of insulin models. Includes correspondence arising from invasion of Czechoslovakia by Warsaw Pact forces in 1968, when Wooster was attending a symposium in Prague. 1966, 1968-69, 1971-72 B.104 H. Zahn

Miscellaneous shorter correspondence

B.105 1935.

B.106	1937-39.
B.107	1940-42. Includes letters 1940, 1941, not obviously related to insulin work.
B.108	1945, 1947, 1949-50. Includes correspondence <i>re</i> First International Congress of Biochemistry, Cambridge, 19-25 August 1949. Hodgkin was asked to contribute a paper on insulin.
B.109	1951-52, 1954-55, 1958-59.
B.110	1963-65.
B.111	1966. Includes 1p. typescript draft re preparation of crystals.
B.112	1967.
B.113	1968.
B.114	1969 January-August. Includes letters of congratulation arising from announcement of elucidation of the three-dimensional structure of insulin.
B.115	1969 September. Includes letters of congratulation (see B.114), correspondence arising from article <i>re</i> insulin in <i>New York Times</i> , letter enclosing <i>Newsweek</i> article <i>re</i> insulin research by Hodgkin's group.
B.116	1969 October-December.
B.117	1970 January-April.
B.118	1970 May-December.
B.119	1971 January-May.
B.120	1971 June-December.
B.121	1972 January-June.

B.122	1972 July-November.
B.123	1973 January-May.
B.124	1973 June-December.
B.125	1974.
B.126	1975.
B.127	1976.
B.128	1977 January-May. Includes typescript by D. Eisenberg <i>re</i> J.D. Bernal written for textbook and sent to Hodgkin for comment.
B.129	1977 June-December.
B.130	1978-80.
B.131	1981, 1983.
B.132	Nd.
Drafts for reports an	d publications 1935-88

### Drafts for reports and publications 1935-88

A chronological sequence of drafts for reports and publications by Hodgkin and her collaborators, mostly kept together by her in box folders.

There is also some related material such as correspondence, notes and data.

B.133-B.136 Contents of untitled binder.

B.133

'X-ray Single Crystals Photographs of Insulin', Bibliog. 11, 1935.

8pp. manuscript draft.

1p. manuscript draft re 'programme of research'.

B.134-B.136	Manuscript notes and data. Include 'Chibnall's insulin', expenditure, Fourier series, recrystallisation experiments. Three folders.
B.137, B.138	'The crystal structure of insulin. I. The investigation of air-dried insulin crystals', <i>Bibliog.</i> 23, 1938.
	34pp. manuscript draft. Two folders.
B.139	'Report for the Rockefeller Trustees on the work in progress in the Department of Crystallography, Oxford, 1941-2 assisted by a grant from the Rockefeller Foundation.'
	26pp. typescript, incomplete, $\it re$ the research of Hodgkin's group on insulin and cholesterol iodide.
B.140	'Some observations on peptide chain models in relation to crystallographic data for gramicidin B and insulin' (with P.M. Cowan), <i>Bibliog.</i> 57, 1953.
	6pp. typescript, with manuscript additions and corrections by Cowan.
B.141	'A speculation on insulin.' Contents of folder so inscribed.
	'A speculation on insulin' (with B. Oughton), Bibliog. 65, 1956.
	10pp. typescript.
	Manuscript notes and data, not by Hodgkin.
B.142	'A speculation on insulin' (with B. Oughton), Bibliog. 65, 1956.
	10pp. typescript, with manuscript additions and corrections by Hodgkin.
B.143	'Insulin crystallising exp[erimen]ts - early.' Contents of folder so inscribed.
	Letter from H. Gutfreund, 1956; reprint, 1955.
	Manuscript notes, not by Hodgkin.
	4pp. typescript re 'Crystallisation of insulin experiments', nd.
B.144	Contents of untitled folder.
	3pp. manuscript draft; manuscript notes, manuscript notes from the literature, latest bibliographical reference 1960.

B.145	4pp. typescript, incomplete, [of preliminary report] <i>re</i> pig insulin crystals, latest bibliographical reference 1960.
	Handdrawn figures.
B.146	'Various heavy atom derivatives.' Contents of folder so inscribed.
	Manuscript notes, not by Hodgkin, 1961-62.
B.147	'X-ray crystallographic studies on zinc insulin crystals' (in collaboration), <i>Bibliog.</i> 99, 1966.
	6pp. typescript; 10pp. manuscript draft.
B.148	'A Report on Recent Calculations on Rhombohedral Insulin Crystals Containing Lead' (in collaboration), <i>Bibliog.</i> 100, 1967.
	10pp. typescript; 10pp. typescript, with manuscript additions and corrections by Hodgkin; legends to figures.
B.149	'The structure of rhombohedral 2 zinc insulin crystals' (in collaboration), Bibliog. 110, 1969.
	12pp. manuscript draft.
B.150, B.151	Contents of untitled folder, divided into two for ease of reference.
	Manuscript notes from the literature, latest bibliographical reference 1969; manuscript notes.
B.152	Untitled lecture on insulin.
	11pp. manuscript draft, [?late 1960s].
	Manuscript notes.
B.153	Manuscript notes ?for lecture to celebrate the fiftieth anniversary of the isolation of insulin [1971].
B.154-B.161	'Insulin: the structure in the crystal and its reflection in chemistry and biology' (in collaboration), <i>Bibliog.</i> 139, 1972.
	137pp. typescript including legends to tables, tables. Eight folders.

B.162, B.163	Manuscript draft <i>re</i> 'studies on insulin action' by G.G. Dodson; manuscript notes, manuscript notes from the literature by Dodson, latest bibliographical reference 1972. Two folders.
B.164	'EMR Report' 'Neutron Studies on Insulin', by S.A. Mason, February 1973.
	10pp. typescript; table.
B.165-B.167	'Insulin - notes for paper. Old notes on A and B chains.'
	Manuscript notes, May 1974 - January 1977. Three folders.
B.168	Contents of untitled folder.
	'Work in China on the Structure and function of insulin', Bibliog. 150, 1975.
	7pp. manuscript draft.
	Manuscript notes; manuscript data $\emph{re}$ 'corresponding $\rho$ sections', Peking and Oxford.
B.169	'The Structure of Insulin in 4-Zinc Insulin' (in collaboration), <i>Bibliog.</i> 152, 1976.
	7pp. typescript, includes legends to figures.
B.170	'Insulin notes. Some useful for write up.' Contents of folder so inscribed.
	Manuscript notes and data, not all by Hodgkin, manuscript notes from the literature, latest bibliographical reference 1976.
B.171	'The insulin lecture.'
	32pp. typescript, transcribed from tape, with extensive manuscript additions and corrections, not by Hodgkin. [?1978].
B.172, B.173	'Insulin. Biochem[ical] Soc[iety].' Contents of folder so inscribed.
B.172	'Insulin' (in collaboration), Bibliog. 166, 1983.
	5pp. typescript draft; 3pp. manuscript draft.
	Typescript references, legends to figures; manuscript references.

B.173	Manuscript notes and data.
	Brief correspondence re publication.
B.174	'Transmission of conformational change in insulin' (in collaboration), Bibliog. 167, 1983.
	22pp. typescript.
B.175-B.189	'The crystal structure of insulin. VI. The structure of 2 Zn pig insulin crystals at 1.5Å resolution' (in collaboration), <i>Bibliog.</i> 171, 1988.
B.175-B.179	75pp. typescript including references, figures. Five folders.
B.180-B.183	Manuscript drafts. Four folders.
B.184-B.188	Manuscript notes and data, by Hodgkin and G.G. Dodson, handdrawn figures. Five folders.
B.189	Correspondence 1978, 1982, nd.
B.190	'Progress report on the structure of insulin' (in collaboration), nd.
	1p. typescript.
	'X-ray crystallographic studies on zinc insulin molecules' (in collaboration), nd.
	1p. typescript draft; 1p. manuscript draft.
B.191	'Water in insulin crystals', nd.
	3pp. typescript, with manuscript additions and corrections by Hodgkin.
	'Protein and solvent structure in 2 Zn insulin' (in collaboration), nd.
	2pp. typescript.
B.192	'The crystallography of insulin', nd.
	4pp. typescript, with manuscript additions and corrections by Hodgkin.
	5pp. manuscript draft; manuscript notes.

B.193	Untitled typescript $\it re$ 'the hydrogen bonding in the 2 Zn insulin structure refined to 1.5Å resolution', nd.
	14pp. typescript; tables.
B.194	Manuscript notes, probably for lecture on history of insulin research, nd.
B.195, B.196	Miscellaneous shorter notes and drafts, nd. Two folders.
B.197-B.201	'Paper writing material.'
B.197	'Paper writing material. Ramachandran plots. York structure plots.' Contents of folder so inscribed.
	Handdrawn graphs, plots; manuscript notes.
B.198-B.200	'Insulin. Paper writing material.' Contents of folder so inscribed.
B.198	Manuscript notes and data, manuscript notes from the literature; typescript data; photographs of crystals, x-ray photographs.
B.199, B.200	Correspondence, mostly with J. Schlichtkrull <i>re</i> samples, 1958-71. See also B.100, B.101, B.203.
B.199	1958, 1963, 1965-67.
B.200	1968-71, nd.
B.201	'Insulin paper writing material.' Contents of folder so inscribed.
	Manuscript notes and data; manuscript notes $\it re$ Hodgkin's collaborators on insulin.
	'Positions of alpha-carbon atom of the insulin dimer.'
	1p. typescript.
	'Cod insulin.'
	3pp. typescript.

B.202, B.203	'Background material.' Contents of folder so inscribed.
B.202	Manuscript notes and data, manuscript notes from the literature, not all by Hodgkin; x-ray photographs.
B.203	Correspondence with J. Schlichtkrull, 1957-58, 1979. See also B.100, B.101, B.199, B.200.
B.204	'Background.' Contents of folder so inscribed.
	Photocopy of letter from C.H. Best to I. Pavel <i>re</i> 50th anniversary of N. Paulescu's publication of paper on the secretion of the pancreas.
	'Parallele entre les travaux de Paulesco et ceux de Banting et Best.'
	4pp. typescript.
Notebooks 1937-67	
B.205	Notebook, inscribed 'Cholesterol Chloride Hydrochloride. Insulin.'
	Manuscript data. One page dated May 1937.
B.206	Untitled exercise book.
	Manuscript data re wet Zn insulin [1937].
B.207	Untitled exercise book.
	Manuscript data, including measurements from films, preliminary calculations for maps. Includes some data <i>re</i> lactoglobulin. One page dated November 1938.
B.208	Notebook, inscribed 'Insulin. M.M. Aitken. 1957-9.'
	Miscellaneous manuscript notes and data, not by Hodgkin.
B.209	Notebook, inscribed 'M.M.H.[arding]. Insulin. Exp[erimental] Work from Jan 1959.'
	Manuscript notes and data, by Harding; loose x-ray film, manuscript notes.

B.210 Notebook, inscribed 'General Notes (esp. Hartree curves).'

Handdrawn graphs, manuscript data. Includes some work re gramicidin.

One page dated August 1967.

B.211 Untitled notebook.

Manuscript raw intensity data re wet Zn insulin, nd.

B.212 Notebook, inscribed 'Wet 2 Zinc Insulin.'

Manuscript calculations from data, nd.

Data 1940-85

The material consists of handwritten and computer generated data, in the form of tables, maps, sections, mostly kept in folders and identified by title.

There is also some related material such as correspondence and notes.

B.213 'Insulin early recryst[allisation] exp[erimen]ts.' Contents of folder so

inscribed.

Manuscript and typescript data, brief manuscript notes re recrystallisation

method, 1940.

B.214, B.215 'Insulin. 1st Pattersons. Wet and dry beef insulin.' Contents of folder so

inscribed, divided into two for ease of reference.

Manuscript notes and data, manuscript notes from the literature; handdrawn Patterson maps and sections, mostly *re* zinc insulin, including 'The Patterson Harker map computed for Dr. Dorothy Crowfoot from data for "wet" insulin - x, y in 60ths and z in 30ths. Dorothy Wrinch 1947.'

B.216 'Insulin phosphate.' Contents of folder so inscribed.

Manuscript notes and data, including 'Barbara [Low]'s measurements', 'F<sup>2</sup> values', 'trial parameters for "chain structure", 'tests on heavy atom effects', 'densities of Zn insulin crystals'. A few pages dated 1949, 1951.

B.217-B.219 Contents of untitled folder, divided into three for ease of reference.

Manuscript data *re* insulin phosphate, zinc insulin, wet and dry insulin, including handdrawn maps, 'Fourier calcs.', 'Patterson points for Wrinch model', 'Point structures'. Manuscript notes, manuscript notes from the literature, latest bibliographical reference 1951.

B.220, B.221	'Cubic insulin. Monoclinic insulin.' Contents of folder so inscribed, divided
	into two for ease of reference.
	Manuscript data, not by Hodgkin, with manuscript notes and correspondence <i>re</i> 'Schlichtkrull's visit March 25th 1958' (see also B.100, B.199, B.203); x-ray film. 1958-60.
B.222	'Hg Scattering.' Contents of folder so inscribed.
	Manuscript data, not by Hodgkin. A few pages dated May 1959 - October 1960.
B.223	Contents of untitled folder.
	X-ray films; manuscript data from films, not by Hodgkin; letter to Hodgkin re 2 Zn insulin, July 1959.
B.224	'4 Zn Ins[ulin]. Hg A. July 1959.' Contents of folder so inscribed.
	Manuscript data, calculations, graphs, not by Hodgkin.
B.225	Contents of untitled folder.
	Manuscript data re 'intensity distribution and Wilson Scale', 4 Zn insulin, not by Hodgkin, July 1959.
B.226	'2 Zn Insulin 3 D Data. October 1959.' Contents of folder so inscribed.
	Manuscript data, not by Hodgkin.
B.227	Contents of untitled folder.
	Computer printout data <i>re</i> '2 Zn insulin sharpening constants Dec 1959'; manuscript data <i>re</i> intensity distribution, sharpening functions, not by Hodgkin, November 1959.
B.228	'Insulin. S[tructure] F[actor]s on helical structures. B. Oughton's calculations.' Contents of folder so inscribed.
	Manuscript notes and data, by Oughton and Hodgkin, handdrawn 'transform of end-on projection of 4 chains in hexagonal close-packing'. [?1950s].
B.229	Contents of untitled folder.

Manuscript data re '4 Zn Hg<sub>4</sub> Companion', not by Hodgkin, April 1960.

B.230	Contents of untitled folder.
	Computer printout data <i>re</i> 'insulin Patterson rotation', March 1962; manuscript data, includes 'correlation of uranyl acetate with Hg', not by Hodgkin.
B.231, B.232	'2 Zn Ins[ulin] Projection. Fouriers.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript and computer printout data <i>re</i> Pattersons and Fouriers, various hands, some pages dated March-September 1962.
B.233	Contents of untitled folder.
	Manuscript data ?re E C Scaling, 2 Zn, 4 Zn, UO <sub>2</sub> insulin, not by Hodgkin, October 1962.
B.234	Contents of untitled folder.
	Manuscript data, not by Hodgkin. Includes 'Trial Structure Phases', 'Trial Phase Calculations'. July 1963.
B.235, B.236	'Translation Function.' Contents of folder so inscribed.
B.235	'The General Translation Function Program', by M.G. Rossman.
	9pp. typescript, dated 19 April 1963.
B.236	Manuscript data, computer printout data, October 1963.
B.237-B.239	'Sayre Function.' Contents of folder so inscribed, divided into three for ease of reference.
	Manuscript data, not by Hodgkin; computer printout data, mostly <i>re</i> 2 Zn insulin. Various dates, 1963-70.
B.240	Contents of untitled folder.
	Manuscript data, not by Hodgkin; computer printout date re monoclinic insulin, derivative P21 insulin hko projection, April 1964.
B.241	'2 Zn insulin data for Wilson Plot.' Contents of folder so inscribed.
	Manuscript data, not by Hodgkin, computer printout data, September 1964 - November 1965.

B.242	'4 Zn insulin. 6Å Patterson. 3.2Å Patterson.' Contents of folder so inscribed.
	Handdrawn sections, November 1964; computer printout data, February 1965.
B.243, B.244	'Early attempts at cadmium and zinc free projections.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript data, not by Hodgkin; computer printout data, March 1965.
B.245, B.246	'Wilson Plot. Cod Insulin. Final Summary.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript data, including handdrawn Wilson Plots, not by Hodgkin; computer printout data. Various dates July 1965 - September 1972.
B.247, B.248	'Pb Ins[ulin] Diffractometer. Scaling and Wilson Plot Dec 1965 and 2.5Å data.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript data, handdrawn graphs and sections, not by Hodgkin; computer printout data. Various dates November 1965 - August 1967.
B.249	Handdrawn Fouriers and Pattersons with brief manuscript notes, January 1966.
B.250, B.251	'Insulin. 2-fold axis. Intensities. Pattersons.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript notes and data, not all by Hodgkin. One page dated March 1967. Computer printout data, February 1966.
B.252	Handdrawn insulin maps, January 1968. One roll.
B.253, B.254	'Larry's Refinement.' Contents of folder so inscribed, divided into two for ease of reference.
	Computer printout data, August 1968; 1p. manuscript notes <i>re</i> planning of research.
B.255	Contents of untitled folder.
	Manuscript notes, handdrawn positions, various hands, re Zn insulin refinements. 1969-71.

'Water molecules. Useful.' Contents of folder so inscribed, divided into B.256-B.258 three for ease of reference. Manuscript data, with manuscript notes intercalated, 1974-81; correspondence 1978, 1980-81, nd. Handdrawn maps, October 1975. One roll. B.259 'A chain old maps.' Contents of folder so inscribed, divided into two for B.260, B.261 ease of reference. Handdrawn maps, mostly with manuscript notes and data attached, April 1977 - October 1981. Calculation of absolute intensities. Glasgow Symposium.' B.262 'Insulin. Contents of folder so inscribed. Manuscript data, manuscript notes, not all by Hodgkin. Various dates, ?1950s - ?1980. The folder was probably put together for a symposium held in Glasgow in September 1980 to mark the 80th birthday of the x-ray crystallographer, J.M. Robertson. See also F.134. 'A chain tables.' Contents of folder so inscribed, divided into two for ease B.263, B.264 of reference. Manuscript data, handdrawn maps, some with manuscript notes attached. A few maps dated March 1981. Letter, June 1981. Computer generated maps, January 1985. Handdrawn map, April 1981. One roll. B.265 'Insulin. Doubtful Calculations. Fly's eye.' Contents of folder so inscribed. B.266 Manuscript data, handdrawn maps, sections, including 'Peak system which might represent vectors due to structure within one molecule from projection 1) - dry insulin (cf. Wrinch) but which cannot do so from projection 2) - wet insulin', nd. '2 Zn Insulin.' Contents of folder so inscribed. B.267

Manuscript data, not by Hodgkin, including 'film factors', 'uncertain

reflections', nd.

B.268, B.269	'Water molecules. Tables. Latest variants.' Contents of envelope so inscribed, divided into two for ease of reference.
	Photocopied manuscript data, not by Hodgkin, with manuscript data by Hodgkin intercalated, nd.
B.270, B.271	'Insulin. General phosphate. Herman field figures, etc.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript data, sketches, various hands, including 'Patt[erson] function cos cos', 'Patterson Insulin hol', 'Patterson Insulin okl Field Figures', 'Patterson Field Figures Insulin Rhombic', 'Insulin S.F.G. for strong reflections', nd.
B.272	Handdrawn ?Fourier refinement, probably insulin, nd.
B.273, B.274	'Original Zn insulin intensity measurements?' Contents of folder so inscribed, divided into two for ease of reference.
	Computer printout data, including 'F $^2$ Data for wet zinc-insulin'; manuscript and typescript data, including 'Wet insulin - rhombohedral', 'Wet Zinc Insulin. Table of $\Sigma$ F (hikl) for Pxyo series', nd.
B.275	'Insulin structure factor graphs.' Contents of folder so inscribed.
	$\label{lem:manuscript} \textbf{Manuscript data}, \textbf{handdrawn sections}, \textbf{handdrawn 'Reciprocal lattice of dry insulin'}, \textbf{nd}.$
B.276-B.278	Handdrawn Zn insulin maps, nd. Three folders.
B.279	Miscellaneous handdrawn insulin maps, sections, found together, nd. One roll.
B.280	'Chinese' handdrawn maps, not by Hodgkin, nd. One roll.
B.281	'Insulin atomic positions in six molecules in hexamer projected along trigonal axis.'
	Computer generated diagram, nd. One roll.
B.282-B.284	Miscellaneous data. Three folders.

#### Miscellaneous

B.285 Examples of x-ray films, 1957.

B.286-B.288 Models.

B.286, B.287 'Drawings of Sections for Making Insulin Balsa Models.' Contents of

envelope so inscribed, 1969. Two folders.

B.288 'Photographs. Insulin.' Contents of folder so inscribed.

Photographs of insulin model.

STEROLS ca.1936-42

The x-ray investigation of the sterols was begun by J.D. Bernal in 1932 and had as its object the determination of the position of calciferol in the main

sterol series. (See also B.317-B.336).

B.289 'Old sterol notes and Harry[Carlisle]'s dibenzyl'. Contents of folder so

inscribed.

Manuscript notes, data, Patterson and Fourier analyses, 1936. Some items

in J.D. Bernal's hand.

'Report of Preliminary Investigations.'

6pp. typescript draft; 6pp. manuscript draft, not by Hodgkin.

B.290 'X-ray crystallography and sterol structure.' Not listed in Bibliog. [?1942].

57pp. typescript. Incomplete.

TOBACCO VIRUSES ca.1939-51

B.291 'Tables of Virus Data.' Examination answer book so labelled by J.D.

Bernal.

Manuscript data, by Bernal.

'Plant Viruses. X-Ray Data.'

9pp. typescript, nd. Latest bibliographical reference 1939.

'A comparison of x-ray measurements on air-dried tobacco necrosis B.292, B.293 protein crystals with electron microscope data' (with P.M. Cowan), Bibliog. 52, 1951. 7pp. typescript, with manuscript additions and corrections [by Cowan]; B.292 figures. 6pp. typescript; 3pp. typescript. 2pp. manuscript draft, untitled, not by Hodgkin. B.293 Letter, 1949; manuscript notes and data. 'Tobacco Necrosis Protein (Rothamsted Strain).' 1p. typescript, nd. 'Physical properties of virus solutions.' B.294 6pp. manuscript draft, nd. Refers to work by J.D. Bernal and I. Fankuchen, 'who have put this so far unpublished paper in my hands'. Tables, lists of figures, legends; 1p. manuscript draft, 1p. typescript draft B.295 by J.D. Bernal. Loose manuscript and typescript pages by Hodgkin and Bernal, nd. ca.1939-74 **PROTEINS** The x-ray analysis of protein crystals began when the first x-ray diffraction photographs of single pepsin crystals were taken by J.D. Bernal in 1934. At this time Hodgkin was working in Cambridge as Bernal's research student, and together they published a note on pepsin (Bibliog. 7, 1934).

'Proteins.' Contents of folder so inscribed.

2pp. typescript, re projects being carried out on protein crystals. [?1939].

'Protein Crystals.'

B.296

1p. typescript by Hodgkin, nd.

'Research Programme submitted for a Beit Medical Research Fellowship.'

2pp. typescript, by D.P. Riley, nd.

B.297	Untitled report submitted to the Department of Scientific and Industrial Research, by D.P. Riley, 1940.
	31pp. typescript, re methaemoglobin, insulin, lactoglobulin.
	The report refers to work carried out in collaboration with Hodgkin.
B.298	'The correlation of X ray data on air-dried insulin with vector models: a correction and an apology.'
	1p. typescript, with manuscript additions and corrections by Hodgkin.
	This followed Hodgkin's paper 'A review of some recent work on protein crystals', <i>Bibliog.</i> 31, 1941.
B.299	Contents of untitled binder.
	Manuscript notes and data, manuscript notes from the literature <i>re</i> proteins, tobacco necrosis virus derivative, haemoglobin. One page dated 1944.
B.300, B.301	'Proteins.' Contents of folder so inscribed.
B.300	Letter from R.L.M. Synge, dated 1 May 1944, with 9pp. typescript, 'Proteins and Evolutionary Theory'.
	Letter from A.P. Tulinsky, dated 24 September 1957. Handdrawn figures and mounted photograph attached.
B.301	Typescript copy of English summary of 'Zur Deutung der Röntgendiagramme gewisser Eiweißstoffe I', by K. Schiff-Dornberger, 1949.
	Miscellaneous shorter manuscript notes and drafts by Hodgkin, nd.
B.302-B.305	'Proteins.' Contents of folder so inscribed.
B.302	Correspondence 1966-67.
B.303	'Some characteristics of protein crystals', Bibliog. 127, 1971.
	12pp. typescript draft.
B.304	17pp. manuscript draft, with manuscript references and legends to figures.

B.305	'Towards the X-ray analysis of proteins', nd. Not listed in Bibliog.
	2pp. typescript.
	2pp. typescript re history of research on protein structure, nd.
B.306	'Some Ancient History of Protein X-Ray Analysis' (with D.P. Riley), <i>Bibliog.</i> 106, 1968.
	23pp. typescript.
B.307-B.309	'Problems in the x-ray analysis of proteins', Bibliog. 145, 1974.
B.307	14pp. typed copy of transcript of lecture.
B.308	21pp. manuscript draft.
B.309	Manuscript notes, manuscript notes from the literature, including 1p. manuscript copy by Hodgkin of letter from [Federov] to Nikolai Aleksandrovich [?] re x-rays, dated 2 October 1912.
	Figures.
B.310, B.311	'Protein Crystals', nd. Not listed in Bibliog.
B.310	13pp. typescript.
B.311	22pp. manuscript draft.
B.312	Miscellaneous shorter manuscript drafts, manuscript notes from the literature, nd.
B.313	Mounted x-ray photographs and figures, with legends, probably for exhibition, nd.

1940-42 BENZPYRENE 'The elimination of 3:4-benzpyrene from the animal body, after B.314 subcutaneous injection. (2) Changed benzpyrene' (with J.G. Chalmers), Bibliog. 33, 1942. 1p. typescript draft of abstract. 3pp. typescript draft of part of paper, 'Crystallographic examination of BPX, 6-hydroxy-benzpyrene and 4-hydroxy-benzpyrene'; 5pp. manuscript draft. Letter from Hodgkin to J.G. Chalmers dated 18 September 1941. 'Report on the crystallographic examination of "BPF" and 6-hydroxy-3:4-B.315 benzpyrene'. 3pp. typescript draft; 2pp. manuscript draft. This report was probably written at the same time as the preceding, but was not published. Manuscript notes, data and drawings, mostly re crystals of 'BPF' and 'BPX', B.316 1940-42. 1941-56 CALCIFEROL The first x-ray crystallographic study of calciferol (vitamin D2) was undertaken in 1932 by J.D. Bernal. In 1948 Hodgkin and J.D. Dunitz resolved the conflict between the early crystallographic and chemical evidence on the structure of calciferol by the complete x-ray analysis of a calciferol derivative (Bibliog. 44), but such was the complicated atomic arrangement in crystals of calciferol itself that it was not until 1976 that xray methods had advanced far enough for the arrangement to be established. Correspondence re obtaining sample of calciferol, 1941-42. B.317 Handdrawn projections. One with [?J.D. Dunitz's] manuscript inscription B.318 '3:iodo 4:nitro benzoate of calciferol : 1st Fourier projections on (010) June 1947'. One roll.

B.319-B.323	'Calciferol Intensities and F values.' Contents of folder so inscribed.
B.319	'Work on 4-iodo; 5-nitro benzoate of calciferol done at Cal Tech during the period September, 1948 - September, 1949.'
	2pp. typescript of report [?by J.D. Dunitz].
	Manuscript notes and data.
B.320-B.323	Manuscript tables of data, nd. Four folders.
B.324-B.331	'Calciferol.' Contents of box so labelled.
B.324-B.326	'Calciferol.' Contents of folder so inscribed.
B.324	Correspondence 1950, 1962.
	'Calciferol iodo nitrobenzoate - October 1950. Structure viewed normal to a (one molecule only being shown)'. By J.D. Dunitz.
B.325	'Calciferol Final Refinements.'
	2pp. typescript notes, 1962.
	1p. typescript notes re calciferol nitro-iodobenzoate, 1962.
	Printout data, 1962.
B.326	'The crystal structure of a calciferol derivative' (in collaboration), <i>Bibliog.</i> 86, 1963.
	Manuscript and typescript drafts.
	Figures.
B.327, B.328	Manuscript data <i>re</i> calciferol 4-iodo-5-nitrobenzoate. One page dated 2 July 1953. Two folders.
B.329, B.330	'The crystal structure of a calciferol derivative' (in collaboration), <i>Bibliog.</i> 86, 1963.
B.329	22pp. typescript.

B.330	27pp. typescript, with manuscript additions and corrections, not by Hodgkin.
B.331	'The structure of Calciferol - Vitamin D'.
	2pp. typescript, nd.
	Manuscript notes and data, some by J.D. Dunitz, nd.
B.332, B.333	'Calciferol. 1st 3-D Fourier Projections.'
	Contents of folder so inscribed, divided into two for ease of reference.
	Handdrawn projections and three-dimensional Fourier; manuscript data; 1p. typescript data; brief correspondence 1956, 1962.
B.334	'Calciferol'. Contents of folder so inscribed.
	Handdrawn Harker section, Patterson projection and Patterson-Fourier projection [by J.D. Dunitz], nd. One roll.
B.335	Handdrawn full three-dimensional observed Fourier, nd. One roll.
B.336	Handdrawn full three-dimensional calculated Fourier, nd. One roll.
FATTY ACIDS	1942-43
B.337, B.338	'Fatty Acids'. Contents of folder so inscribed.
B.337	'X-ray crystallographic examination of fatty acids obtained from Mona wax' (with C.H. Carlisle), nd. Not listed in <i>Bibliog</i> .
	3pp. typescript, incomplete.
	'Report on samples of Paraffin Wax Mixtures. March 31st 1943.'
	5pp. typescript.
	Correspondence 1942-43.
B.338	Manuscript notes, data, shorter drafts re fatty acids, nd.
	Two x-ray films, nd.

#### **PENICILLIN**

1942-89

Early in the Second World War the successful tests with penicillin extracts on infected mice by Howard Florey and his team in Oxford led to urgent attempts to determine its chemical structure. Hodgkin and her coworkers accomplished this in three years with x-ray techniques. Since the research had been carried out under conditions of wartime secrecy, it was not until 1949 that Hodgkin and her collaborators' work was finally published in *The Chemistry of Penicillin* (Bibliog. 46). Research on penicillin refinements continued after the war.

Professor Hodgkin explained the scientific importance of the penicillin analysis in a letter to the compilers of this catalogue (July 1991): 'The usual way of establishing the structure of an organic natural product was by synthesis following experiments in degradation which suggested different possible structures. This proved impossible in the case of penicillin because the structure is unstable in the presence of the reagents needed to make  ${\bf B}$  lactams. Much later routes to produce stable  ${\bf B}$  lactams were discovered and put to the synthesis of penicillin. Other physical methods and particularly spectroscopic methods were inconclusive which left x-ray methods as the best evidence of the penicillin structure. There was considerable hesitation in accepting x-ray evidence at first; now it is commonly used first to find organic structures.'

The documentation of the penicillin research is of particular interest because of the importance of the molecule to medical science and the demonstration of the power of x-ray techniques in the solution of its structure by Hodgkin and her coworkers. Furthermore the enormous technical developments after the Second World War - especially the use of the electronic computer to process data - meant that the variety of methods pioneered in the analysis of penicillin were not in fact used again.

The material, which is substantial, covers the period 1942-89, although the bulk dates from the last years of the Second World War and the period immediately afterwards. There is an extensive correspondence with colleagues, drafts for reports and publications, reports of work of colleagues in other laboratories sent to Hodgkin for information or circulated officially, notebooks, data, and illustrative material probably prepared for a penicillin display at the Science Museum, London as part of an exhibition to mark the postwar International Congress of Pure and Applied Chemistry.

The material is presented as follows:

B.339-B.367 Correspondence

B.368-B.413 Reports and drafts

B.414-B.431 Notebooks

B.432-B.463 Data

B.464-B.471 Illustrative material

### Correspondence 1942-89

There is an extensive correspondence with colleagues and others which was kept together by Hodgkin in box folders.

The correspondence is presented as follows:

B.339-B.356 Correspondence with individuals and organisations

In alphabetical order

B.357-B.367 Miscellaneous shorter correspondence

In chronological order

# Correspondence with individuals and organisations

Principally letters to Hodgkin.

B.339 W.T. Astbury 1943-46

B.340 W.L. Bragg 1944-45

B.341-B.344 C.W. Bunn 1942-49

Bunn, who worked in research departments of Imperial Chemical Industries Limited, was one of Hodgkin's principal collaborators in her work on penicillin. His letters concern the 'fly's eye' technique, preparation of monograph (*Bibliog.* 46).

B.341 1942, 1944.

B.342 1945.

B.343 1946. Includes table of the final atomic co-ordinates of sodium penicillin

B.344 1947-49. Includes 1p. typescript on 'Intensities given by "fly's eye" patterns'.

B.345 G.L. Clark 1946-47

re preparation of monograph (Bibliog. 46).

B.346, B.347	A.H. Cook 1943-47
	re samples sent to Hodgkin for crystallographic examination.
B.346	1943.
B.347	1944-47.
B.348	Design Research Unit 1950
	re three-dimensional contour model of penicillin for 1951 Festival of Britain.
B.349	Imperial Chemical Industries Limited 1944-47
	Principally with I.C.I. (Dyestuffs) Limited, Manchester, re samples sent to Hodgkin for crystallographic examination.
B.350	D. McLachlan 1946
	re research on penicillin structure and possible joint publication.
B.351, B.352	Medical Research Council 1943-47, 1949
	re samples sent to Hodgkin, awarding of grants, use of equipment. Includes 1p. manuscript draft on 'Notes for the Medical Research Council'.
B.351	1943-45.
B.352	1946-47, 1949.
B.353	Merck and Co., Inc. 1947, 1949
B.354	Office of Scientific Research and Development, 1944-48, nd. Washington, DC.
	re provision of samples for Hodgkin, publication. The principal correspondent is H.T. Clarke.
B.355	United States Department of Agriculture 1943-44, 1946-47
	Principal correspondents are R.D. Coghill, R.T. Milner, N.C. Schieltz.

B.356	Wellcome Chemical Research Laboratories 1943-45
	$\it re$ Hodgkin's x-ray examination of penicillic acid. The correspondent is S. Smith.
	Miscellaneous shorter correspondence 1942-89
B.357	1942-43.
B.358	1944.
B.359	1945.
B.360	1946-47. Includes request for help in setting up penicillin display at the Science Museum, London, as part of an exhibition to mark the International Congress of Pure and Applied Chemistry,[?1947]. See also B.463-B.471.
B.361	1948-49. Includes correspondence <i>re</i> publication of monograph <i>The Chemistry of Penicillin</i> , to which Hodgkin and her collaborators contributed a chapter ( <i>Bibliog.</i> 46, 1949).
B.362	1958-59.
B.363	1961-63.
B.364	1964-65, 1967.
B.365	1970-72, 1986, 1989, nd.
B.366, B.367	Papers and correspondence re patent case.
	Beecham Pharmaceuticals sought a written statement from Hodgkin supporting its view on the crystallisation behaviour of ampicillin, 1977-78.
B.366	1977.
B.367	1978. Includes 4pp. typescript, 'Report on Hydrates of Ampicillin'.

# Reports and drafts 1943-63

B.368 'Report on the crystallographic investigation of insulin and penicillin 1942-3.'

18pp. typescript, incomplete.

B.369-B.383 'C.P.S. [Committee for Penicillin Synthesis] Reports. Penicillin. 1940s -

secret. Bunn and D.C. papers and letters.' Contents of box folder so

labelled.

B.369, B.370 Reports, June 1943 - April 1944.

B.369 'X-Ray Crystallographic Measurements on certain Degradation Products of

Penicillin.' 'PEN.85.' (With B.W. Low).

6pp. typescript, dated 23 June 1943.

'Crystallographic measurements on the sodium salt of penicillin.' 'PEN.96.'

(With B.W. Low).

2pp. typescript, nd.

'Derivatives of the aldehyde from penicillin.' 'PEN.98.' (With B.W. Low).

1p. typescript, nd.

'Crystallographic Comparison of Derivatives of synthetic <u>r</u>- and <u>d</u>- $\beta\beta$ -dimethylcystine with those of penicillamine.' 'PEN.101.' (With B.W. Low).

2pp. typescript, dated 4 October 1943.

'Crystallographic measurements bearing on the structure of penillo-l

aldehyde.' 'PEN.112.' (With B.W. Low).

3pp. typescript, dated 18 November 1943.

'Some comparative measurements on compounds belonging to the different

penicillin series.' 'PEN.117.' (With B.W. Low and G.M.J. Schmidt).

4pp. typescript, dated 2 January 1944.

'A Report on some samples of "penicillic" acids provided by I.C.I.'

2pp. typescript, dated 7 January 1944.

'Some comparative measurements on penicillic acids from various sources.'

(With B.W. Low).

3pp. typescript, dated 3 March 1944.

B.370

'X-ray crystallographic measurements in the penicillin series. I.' (With B.W. Low and G.M.J. Schmidt).

2pp. typescript, dated 19 April 1944.

'Crystallographic Comparison of Derivatives of synthetic  $\underline{r}$  and  $\underline{d}$  BB dimethyl cysteine with those of penicillamine.' (With B.W. Low).

2pp. typescript, nd.

5pp. manuscript draft *re* need for 'a central calculating service for the use of x-ray crystallographers', with reference to the penicillin work, nd.

B.371 'The Structure of Penicillin.' 'C.P.S. 508.' (With B.W. Low).

10pp. typescript, dated 29 May 1945.

B.372 'The Structure of Penicillin.' (With B.W. Low).

11pp. manuscript draft of preceding.

B.373 'The structure of penicillin' (in collaboration).

3pp. typescript, dated 1 May 1946.

'The structure of penicillin.'

2pp. typescript, nd.

B.374 'X-Ray Crystallographic Measurements on certain Degradation Products of

Penicillin.' (With B.W. Low).

7pp. typescript, with manuscript additions and corrections by Hodgkin, nd.

B.375 Report of meeting, attended by Hodgkin, of the Penicillin Chemists'

Conference, 29 October 1943.

Letters from C.W. Bunn, 1945. With handdrawn maps.

2pp. typescript on 'Nomenclature', nd.

1p. typescript on Racemic penicillamine acetone compound, nd.

B.376 Handdrawn figures, x-ray photograph.

B.377-B.380

Duplicate copies of 'Pen' reports, not by Hodgkin, issued in a limited number by the Secretary to the Research Panel of the Penicillin Conference and Chemical Committee. The reports form part of a numbered sequence, and some are printed on standard forms, over-printed 'Property of the Therapeutic Research Corporation of Great Britain Limited'.

B.377

'Penicillic Acid, and Optically Active Acid from Penicillin.' 'PEN.69'.

2pp. typescript, dated 15 February 1943.

'Further Studies on the Degradation of Pencillin.' 'PEN.79.'

6pp. typescript, dated 19 May 1943.

'Penillic Acid.' 'PEN.81'.

2pp. typescript, dated 9 June 1943.

'Penicillin.' 'PEN.83.'

8pp. typescript, dated 18 June 1943.

'Penillic acid and Penillamine.' 'PEN.86.'

2pp. typescript, dated 10 July 1943.

B.378

'Studies on the degradation of penicillin Part III.' 'PEN.87.'

2pp. typescript, nd.

'Studies on the degradation of penicillin. Part IV.' 'PEN.88.'

3pp. typescript, dated 30 July 1943.

'The Absorption Spectra of Penicillin and its derivatives.' 'PEN.89.'

6pp. typescript, dated 4 August 1943, with figures.

B.379

'The Degradation of Penicillin.' 'PEN.90.'

2pp. typescript, dated 16 August 1943.

'A Discussion of the Structure of Penicillinic Acid and its Derivatives.' 'PEN.91.'

9pp. typescript, dated 14 August 1943.

'Crystalline Salts of Penicillin.' 'PEN.94.'

3pp. typescript, dated 2 September 1943.

'Further studies on the degradation of penicillin. V.' 'PEN.97.'

3pp. typescript, dated 16 September 1943.

'Penicillin.' 'PEN.99.'

7pp. typescript, dated 29 September 1943.

'Further studies on the degradation of Penicillin VI.' 'PEN.100.'

5pp. typescript, dated 4 October 1943.

B.380

'Penicillin.' 'PEN.102.'

2pp. typescript, dated 19 October 1943.

'Further studies on the degradation of penicillin VII.' 'PEN.103.'

3pp. typescript, dated 23 October 1943.

'Penicillin.' 'PEN.105.'

1p. typescript, dated 25 October 1943.

'Addendum to Pen.106'.

1p. typescript, dated 27 October 1943.

'Further Studies in the Degradation of Penicillin VIII.' 'PEN.109.'

2pp. typescript, dated 8 November 1943.

'Penicillin.' 'PEN.110.'

2pp. typescript, dated 8 November 1943.

'Further Studies in the Degradation of Penicillin IX.' 'PEN.111'.

2pp. typescript, dated 17 November 1943.

'Penicillin.' 'PEN.113'.

4pp. typescript, dated 25 November 1943.

'Penicillin'. 'PEN.114'.

5pp. typescript, dated 11 December 1943.

B.381, B.382

Typescript copies of C.P.S. reports, not by Hodgkin, 1944-45.

B.381

'Microscopic Crystallographic Properties of Crystalline Penicillin Sodium'. 'C.P.S.178'.

2pp. typescript, dated 24 February 1944; photographs.

'Preparation of the Potassium Salt of Penicillin G'. 'C.P.S.189'.

1p. typescript, dated 8 May 1944.

'Report on Penicillin'. 'Structure'. 'C.P.S.190'.

2pp. typescript, dated 7 February 1944.

'Penicillin. Interim Report on Structural Studies in Progress'. 'C.P.S.227'.

5pp. typescript, dated 14 August 1944.

'Polymorphic Forms and Hydrates of the Sodium Salt of Penicillin F'. 'C.P.S.303'.

3pp. typescript, dated 5 October 1944.

B.382

'Monthly Progress Report'. 'C.P.S.332'.

4pp. typescript, dated 10 November 1944.

'Polymorphic Forms and Hydrates of Penicillin'. 'C.P.S.373'.

11pp. typescript, dated 18 December 1944.

'Biosynthesis of Penicillin'. 'C.P.S.377'.

6pp. typescript, dated 6 January 1945; figures.

B.383

Typescripts by Hodgkin's colleagues in the Dunn School of Pathology Oxford (E.P. Abraham and E.B. Chain) and the Dyson Perrins Laboratory Oxford (W. Baker and R. Robinson), at ICI (C.W. Bunn and A. Turner-Jones) and at Leeds University (W.T. Astbury), 1943, 1945, 1946 and nd.

B.384

'Miscellaneous'. Contents of folder so inscribed.

'Some comparative measurements on compounds belonging to the different penicillin series.'

4pp. typescript, with manuscript additions and corrections by Hodgkin,[?1943]; tables.

	'The structure of penicillin' (in collaboration).
	3pp. typescript, dated 1 May 1946.
	'Dihydropenillic acid.'
	1p. typescript, nd.
B.385-B.391	'Penicillin Chapter. (Rockefeller copy).' Contents of folder so labelled.
B.385-B.387	'The X ray Crystallographic Investigation of the Structure of Penicillin' (in collaboration), <i>Bibliog.</i> 46, 1949.
	103pp. typescript. Three folders.
B.388-B.391	Tables; legends to figures; figures; manuscript notes; photographs, including x-ray photographs. Four folders.
B.392-B.396	'Mss. of penicillin chapter. Spare copy'. Contents of folder so inscribed.
B.392-B.394	'The X ray Crystallographic Investigation of the Structure of Penicillin' (in collaboration), <i>Bibliog.</i> 46, 1949.
	97pp. typescript, with manuscript additions and corrections by Hodgkin. Three folders.
B.395, B.396	Typescript and manuscript tables, some with accompanying notes; legends to figures. Two folders.
B.397-B.401	'Penicillin. Schieltz ${\sf F}_5$ okl. Some expts. and old data. Draft of penicillin paper.' Contents of box folder so labelled.
B.397-B.400	'The X ray Crystallographic Investigation of the Structure of Penicillin' (in collaboration), <i>Bibliog.</i> 46, 1949.
	Manuscript and typescript drafts. Four folders.
B.401	Manuscript notes, manuscript notes from the literature, including Sir Alexander Fleming's paper in <i>Brit. J. Exp. Path.</i> , 1929.
	2pp. manuscript draft re Hodgkin's progress on penicillin.

B.402, B.403	'Penicillin MSS. Original Tables etc.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript and typescript tables, legends to figures; shorter manuscript drafts.[1949].
B.404	'The X ray Analysis of the structure of penicillin', Bibliog. 55, 1952.
	22pp. manuscript draft.
B.405-B.407	Contents of untitled folder.
B.405	'The x-ray analysis of the structure of penicillin', Bibliog. 55, 1952.
	5pp. typescript, with manuscript additions and corrections by Hodgkin; figures, table.
	Letter re future publication, 1948.
	3pp. untitled manuscript draft re progress of penicillin research.
B.406	1p. manuscript notes re progress of x-ray analysis of penicillin.
	Manuscript list of names, with addresses.
	Pamphlet on 'The Story of Penicillin'.
	Reprint by E.B. Chain and H.W. Florey on 'Penicillin', sent to Hodgkin by Chain.
B.407	Shorter manuscript drafts, notes; manuscript calculations re protein crystals, nd.
B.408-B.412	'Penicillin V'. Contents of box folder so labelled.
B.408-B.411	Contents of untitled folder.
B.408	'The crystal structure of phenoxymethylpenicillin' (with S. Abrahamsson and E.N. Maslen), <i>Bibliog.</i> 83, 1963.
	27pp. typescript, with manuscript additions and corrections by Hodgkin.
	'Report on Paper 62/119.' 2pp. typescript comments.

Figures with manuscript corrections; manuscript table. B.409 Fourier calculations. Computer printouts, 1960. Two folders. B.410, B.411 'The crystal structure of phenoxy methyl penicillin' (with S. Abrahamsson B.412 and E.N. Maslen), Bibliog. 83, 1963. 21pp. typescript, with manuscript additions and corrections by Hodgkin. Typescripts, not by Hodgkin, 1943, 1945, nd. B.413 **Notebooks** Exercise book, inscribed 'Rubidium Penicillin II. [010] 2nd Layer. 3rd B.414 Layer'. Manuscript data. One page dated '11.7.44'. Untitled exercise book, with contents list inside front cover. B.415 Manuscript data re potassium penicillin, rubidium penicillin II, 'Final Fourier Summation Pot[assium] Penicillin II. First stages.' One page dated '2.3.45'. B.416 Untitled exercise book, with contents list inside front cover. Manuscript data re potassium penicillin, rubidium penicillin, 'Error synthesis', 'Line synthesis'. Two pages dated '27.3.45' and '9.5.45'. Untitled notebook. B.417 Manuscript data re potassium penicillin, rubidium penicillin, 'Structure Factor calculations.' A few pages dated between 'March 31st 1945' and 'July 18th 1946'. Untitled exercise book, with contents list inside front cover. B.418 Manuscript data re potassium penicillin, rubidium penicillin, 'Final stage 2 dimensional Rb Penicillin Projection - Addition of Further Terms'. One page dated '8.4.45'.

B.419	Untitled exercise book, with contents list inside front cover.
	Manuscript data <i>re</i> 'Potassium Penicillin (hol) projection', 'B section of Rb Pen Projectn'. One page dated '18.10.45'.
B.420	Untitled notebook.
	Manuscript notes, data, graphs, projections <i>re</i> potassium penicillin, rubidium penicillin. One page dated '26 Oct. 1945'.
B.421	Untitled notebook.
	Manuscript data and structure factor calculations $re$ potassium penicillin, rubidium penicillin, nd.
B.422	Untitled exercise book.
	Manuscript data and calculations <i>re</i> potassium penicillin, rubidium penicillin, 'Interatomic distances', 'Fourier series', nd.
B.423	Untitled exercise book.
	Manuscript data, some not by Hodgkin, $\it re$ rubidium penicillin, 'Patterson-Harker', nd.
B.424	Untitled exercise book, with contents list inside front cover.
	Manuscript data <i>re</i> potassium penicillin, rubidium penicillin, sodium penicillin, intensity data', 'Patterson projection', nd.
B.425	Untitled exercise book, with contents list inside front cover.
	Manuscript data <i>re</i> potassium penicillin, rubidium penicillin, '2nd Patterson projection', 'Fourier', nd.
B.426	Exercise book, inscribed 'Sodium Penicillin II [010] [100]'.
	Manuscript data, nd.
B.427	Exercise book, inscribed 'Sodium Penicillin II [010]'.
	Manuscript data, nd.

Exercise book, inscribed 'Sodium Penicillin [100]'. B.428 Manuscript data, not by Hodgkin, nd. B.429 Untitled exercise book. Manuscript data re 'amino derivative of penicillin', 'penicillamine okl reflections', lactoglobulin, nd. Exercise book, inscribed 'Penicillin'. B.430 Manuscript data, not by Hodgkin, re rubidium penicillin, penicillamimic acid, 'Patterson-Harker', nd. Untitled notebook. B.431 Manuscript data, not by Hodgkin, re methyl penicillin sulphuride. Some loose manuscript notes, nd. Data The material is chiefly manuscript data, projections, maps, graphs found in Hodgkin's envelopes and folders. There is also some later computergenerated material. Contents of untitled binder divided into five for ease of reference. B.432-B.436 Manuscript notes and data re work on various penicillin-related compounds, including crystallisation. The material covers the period 1942-45 but was not found in chronological order. 'Calcs. of angles. Penicillin.' Contents of folder so inscribed. B.437 Handdrawn graphs; sketches; manuscript data. Includes 'Potassium Penicillin photographed for okl reflections', dated 6 September 1945, 'B lactam ring angles', 'Thiazolidine ring angles', 'Rubidium benzyl penicillin'. Manuscript tables, found together and divided into eight folders for ease B.438-B.445 of reference. Include tables headed 'Atomic factors', 'Structure Factor calculations', 'Scattering factors', 'hkl values', 'parameters', 'Final calculations'. A few tables are dated 1946. 'Plots of final str[ucture] Penicillin'. Contents of folder so labelled. B.446

Includes 'Potassium benzylpenicillin coordinates' dated 25 November 1946.

B.447	Contents of untitled folder.
	'okl reflections', figures, 'Patterson section', 'Model based on latest projections', <i>re</i> potassium benzylpenicillin, rubidium benzylpenicillin, sodium benzylpenicillin. One item dated '1.3.47'.
B.448	Computer generated P-bromo-penicillin V vector maps, 1962. One roll.
B.449, B.450	Contents of untitled folder, divided into two for ease of reference.
	Computer printouts $re$ P-bromo penicillin V. Include 'anisotropic refinement round', 'final $ F_o $ ', 'final shifts, variances, positions'. 1964.
B.451	Manuscript data, not all in Hodgkin's hand, re potassium penicillin, nd.
B.452	'(hko) sections. Potassium penicillin'. Contents of envelope so inscribed, nd.
B.453	'(hol) sections. Potassium penicillin'. Contents of envelope so inscribed, nd.
B.454	'(okl) sections. Potassium penicillin'. Contents of envelope so inscribed, nd.
B.455, B.456	'Penicillin. Parameter curves. Calculation of bond distances.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript data, handdrawn graphs.
B.457	'Plotting and parameter charts. Structure factor graphs'. Contents of folder so inscribed, nd.
B.458	'Experiments with Na Penicillin'. Contents of folder so inscribed.
	Handdrawn maps, manuscript data, not by Hodgkin, nd.
B.459	'P-bromo-pen V. Final ISO.' Handdrawn maps, nd. One roll.
B.460	Sodium penicillin. Handdrawn Patterson and Fourier projections, nd. One roll.

'P-bromo-penicillin V  $(\rho_{\rm o}\text{-}\rho_{\rm c})_{\rm 1}$ . Calculated at end of Iso#5.' One roll so B.461 labelled. Computer generated difference synthesis, nd. Computer generated 'KPMPEN Vector Map', nd. One roll. B.462 Illustrative material This material was probably prepared for an exhibition held at the Science Museum, London, to mark the International Congress of Pure and Applied Chemistry,[?1947]. See also B.360. 'Exhibition blurbs, summaries etc.' Contents of folder so inscribed. B.463-B.465 Miscellaneous shorter typescript and manuscript drafts re the x-ray B.463 crystallographic investigation of the structure of penicillin. Typescript legends to figures and tables. B.464 Manuscript notes re history of penicillin research. Miscellaneous illustrative material. B.465 Photographs, figures, diagrams, some with accompanying captions. 'Penicillin'. Contents of folder so inscribed, divided into five for ease of B.466-B.470 reference. X-ray photographs, miscellaneous illustrative material, captions, handdrawn projections. B.471 Material mounted on card.

'Stages in the X ray analysis of the salts of benzylpenicillin.'

X-ray powder photographs, with captions.

1p. typescript.

GRAMICIDIN	1943-67
	Crystals of gramicidin S were first brought to Hodgkin from Moscow by R.L.M. Synge.
B.472-B.474	'Gramicidin S 1940s'. Contents of folder so inscribed.
B.472, B.473	Letters from R.L.M. Synge, 1943-48.
B.472	1943-45.
B.473	1946-48, nd. Includes 3pp. typescript ' "Gramicidin S": the sequence of the amino-acid residues', by Synge et al.
B.474	Letters from F. Sanger, 1945.
	Letters from T.S. Work, 1947, nd.
B.475-B.479	'N-Acetyl Gramicidin S'. Contents of folder so inscribed.
B.475	'Proposals For Further Work On Gramicidin and Gramicidin S'.
	1p. typescript, by R.L.M. Synge,[?1944].
B.476	Three manuscript translations by R.L.M. Synge of Russian papers on gramicidin S, 1954.
B.477	'Gramicidin S sulphate'.
	1p. typescript, nd.
	'Gramicidin S flavianate'.
	1p. typescript, nd.
B.478	Untitled exercise book.
	Manuscript data and calculations, nd.

B.479	'Final List of Cell Dimensions etc.'.
	Manuscript notes and data, not by Hodgkin, nd.
	'Correlation tables'.
	Manuscript data $\it re$ dry acetyl gramicidin S and wet iodo acetyl gramicidin S.
B.480-B.484	'Gramicidin S'. Contents of folder so inscribed.
B.480	Letters to Hodgkin, 1944-56, nd.
B.481	'Summary of information on gramicidin S and proposals for further work'.
	2pp. typescript, probably not by Hodgkin, July 1944.
	'A note on the x-ray crystallography of gramicidin S' (with G.M.J. Schmidt).
	2pp. typescript, dated 26 July 1944.
B.482, B.483	'A crystallographic study of some derivatives of gramicidin S' (with B.M. Oughton and G.M.J. Schmidt), <i>Bibliog.</i> 68, 1957.
B.482	Manuscript drafts.
B.483	16pp. typescript of earlier version of paper, with manuscript additions and corrections[?by Schmidt].
B.484	Manuscript notes, data and sketches, manuscript notes from the literature, nd.
B.485	Notebook labelled 'Gramicidin S' on front cover.
	Handdrawn projections pasted into notebook; manuscript data. A few loose notes, projections enclosed at front, one note dated 1945.
B.486	'Gramicidin S'. Contents of folder so inscribed.
	Correspondence 1945, 1965, 1968.

B.487-B.491	'Gramicidin'. Contents of box so labelled.
B.487	'Adsorption experiments with gramicidin and related substances : the heterogeneity of tyrocidine', latest bibliographical reference 1947. Not listed in <i>Bibliog</i> .
	17pp. typescript [?not by Hodgkin].
B.488	'An x-ray crystallographic study of certain peptides', Bibliog. 54, 1952.
	1p. typescript draft; 2pp. manuscript draft, 'An x-ray analytical study of certain crystalline peptides'.
B.489	'Some observations on peptide chain models in relation to crystallographic studies on gramicidin B and insulin' (with P.M. Cowan), <i>Bibliog.</i> 57, 1953.
	5pp. typescript of 'Some observations on peptide chain models in relation to crystallographic data for gramicidin B and insulin', with manuscript additions and corrections by Hodgkin and [?Cowan].
	Figures.
B.490	Manuscript notes, sketches and data, nd.
B.491	X-ray photographs, nd.
B.492	'Gramicidin S'. Contents of box so labelled.
	'Gramicidins'.
	1p. typescript, nd.
	'Derivatives of Gramicidin S'.
	1p. typescript data, nd.
	Manuscript notes and data, nd; 1p. manuscript notes from the literature, bibliographical reference 1948.
B.493, B.494	'Gramicidin S'. Contents of folder so inscribed.
B.493	Letters from R.L.M. Synge, 1951, 1954-55.
	2pp. manuscript translation by Synge of Russian paper on gramicidin S.
	Typescript copy of 'Preliminary Report on the Testing of Molecular Models for Gramicidin S with the Crystallographic Data', by E.S. Komorowski and M.M. Harding, 1967; handdrawn figures attached.

B.494	Manuscript notes and data, manuscript notes from the literature, handdrawn projections.
B.495	4pp. untitled typescript, with tables. Latest bibliographical reference 1957.
B.496	'A note on the x-ray crystallography of gramicidin S and gramicidin S flavianate' (with G.M.J. Schmidt), nd. Not listed in <i>Bibliog</i> .
	3pp. typescript; table.
B.497	Mounted x-ray photographs, typed captions probably for exhibition, nd.
B.498	Manuscript notes and data, manuscript notes from the literature, nd.
B.499	Miscellaneous handdrawn illustrative material, graphs, sketches, maps, nd. One roll.
B.500	X-ray photographs, gramicidin S, nd.
LACTOGLOBULIN	1946, 1947
	Hodgkin took the first x-ray photographs of this protein with D.P. Riley in the mid 1930s. They published the results of this work in 1938 ( <i>Bibliog</i> . 25). However all the material presented here is of a later date.
	20). 1.0.10.0. 4 4
B.501	'The crystal structure of β-lactoglobulin' (with D.P. Riley), latest bibliographical reference 1946. Not listed in <i>Bibliog</i> .
B.501	'The crystal structure of β-lactoglobulin' (with D.P. Riley), latest
B.501	'The crystal structure of ß-lactoglobulin' (with D.P. Riley), latest bibliographical reference 1946. Not listed in <i>Bibliog</i> .
B.501	'The crystal structure of β-lactoglobulin' (with D.P. Riley), latest bibliographical reference 1946. Not listed in <i>Bibliog</i> .  19pp. typescript, with manuscript marginal comments by Hodgkin.
B.501	'The crystal structure of ß-lactoglobulin' (with D.P. Riley), latest bibliographical reference 1946. Not listed in <i>Bibliog</i> .  19pp. typescript, with manuscript marginal comments by Hodgkin.  Table of 'Principal crystallographic data for lactoglobulin'.
	'The crystal structure of ß-lactoglobulin' (with D.P. Riley), latest bibliographical reference 1946. Not listed in <i>Bibliog</i> .  19pp. typescript, with manuscript marginal comments by Hodgkin.  Table of 'Principal crystallographic data for lactoglobulin'.  1p. manuscript sketch by Hodgkin.
	'The crystal structure of ß-lactoglobulin' (with D.P. Riley), latest bibliographical reference 1946. Not listed in <i>Bibliog</i> .  19pp. typescript, with manuscript marginal comments by Hodgkin.  Table of 'Principal crystallographic data for lactoglobulin'.  1p. manuscript sketch by Hodgkin.  'Notes on Wet Tabular Lactoglobulin'.
	'The crystal structure of β-lactoglobulin' (with D.P. Riley), latest bibliographical reference 1946. Not listed in <i>Bibliog</i> .  19pp. typescript, with manuscript marginal comments by Hodgkin.  Table of 'Principal crystallographic data for lactoglobulin'.  1p. manuscript sketch by Hodgkin.  'Notes on Wet Tabular Lactoglobulin'.  4pp. typescript, by K. Dornberger, nd.

#### **FERRITIN**

1948-58

This protein was isolated in 1937. Hodgkin first published work on ferritin in 1950 (*Bibliog.* 48).

B.503, B.504

'Ferritin'. Contents of box folder so labelled.

B.503

Manuscript and typescript notes, data and sketches, 1948.

B.504

Typescript copy of 'The structures of ferritin and apoferritin: some preliminary x-ray data', by P.M. Harrison, nd. Latest bibliographical reference 1958.

Part of the work was carried out under Hodgkin's supervision.

B.505

'Wet Ferritin'. Handdrawn map, 1957. One roll.

## **VITAMIN B12**

1948-84

Hodgkin's research on this topic began in 1948 when E.L. Smith of Glaxo Laboratories gave her red crystals of a newly isolated anti-pernicious anaemia factor, named vitamin B12. Hodgkin and a varying group of young crystallographers carried out their analysis by the parallel investigations of four different crystal structures, dry B12, wet B12, the selenocyanide derivative of B12 (Se CN), and a hexacarboxylic acid or the 'red fragment' of B12. The crystal structures of the four B12 derivatives were then the most complicated ones which had been solved in any detail by x-ray analysis.

See A.184 for a record of the progress of the vitamin B12 research in Hodgkin's laboratory, July 1954 - June 1955. See B.554 for a later overview by Hodgkin of the vitamin B12 research.

In the course of the research Hodgkin's group collaborated closely with Smith at Glaxo, J.G. White at Princeton, and A.R. Todd at Cambridge; it was Todd who announced the solution of the structure of vitamin B12 in 1955. In view of the size of the molecule and the extensive calculations involved, the use of early electronic computers at the University of California, Los Angeles (K.N. Trueblood), Manchester University and the National Physical Laboratory, Teddington proved extremely important.

Hodgkin's research on vitamin B12 continued into the 1980s with work on the dimethyl-benzimidazole-cobamide (DMBC) coenzyme, factor V1a, neovitamin B12, and monocarboxylic acid.

The material, which is substantial, covers the period 1948-84, although the bulk dates from 1950s and the early 1960s. There is an extensive correspondence including Smith, White, Todd and Trueblood, drafts for reports and publications, notebooks, a large number of research folders, and data.

The material is presented as follows:

B.506-B.555 Correspondence

B.556-B.628 Drafts for reports and publications

B.629-B.635 Notebooks

B.636-B.792 Research folders

B.793-B.826 Data

B.827, B.828 Miscellaneous

## Correspondence 1948-84

There is an extensive correspondence with colleagues and others which was kept together by Hodgkin in box folders.

The correspondence is presented as follows:

B.506-B.545 Correspondence with individuals

In alphabetical order

B.546-B.555 Miscellaneous shorter correspondence

In chronological order

## Correspondence with individuals

B.506 H.A. Barker 1959-61, 1963

re crystallisation and study of the DMBC coenzyme.

B.507, B.508 K. Bernhauer 1958-73, nd

re factor V1a, B12 monoacid.

B.507 1958-59, 1961, 1964-67.

B.508 1969, 1973, nd.

B.509, B.510	R. Bonnett	1963-73, nd
B.509	1963-64, 1968.	
B.510	1970, 1973, nd.	
B.511	D.W.J. Cruickshank	1955-57
	re calculations performed on electronic computer at Manchester. See also H.59.	t the University of
B.512, B.513	A. Eschenmoser	1963-75, nd
	re metal free corrin, cobalt (II) complex.	ä
B.512	1963-65.	
B.513	1967-72, 1974-75, nd.	
B.514	J. Fieldhouse	1969
	re construction of models of vitamin B12.	
B.515	K.A. Folkers	1958-64
	re the DMBC coenzyme. In 1948, Folkers' team was crystals of vitamin B12.	the first to isolate
B.516	J. Glusker (née Pickworth)	1955-56, 1979-83
	Glusker was one of Hodgkin's early collaborators in vita	amin B12 research.
B.517	A.W. Johnson	1953-68
	Includes correspondence re publications, 1954-55. At was working on vitamin B12 with A.R. Todd at Cambrid	that time Johnson dge University.
B.518, B.519	P.G. Lenhert	1959-70, nd
	Lenhert came to Oxford from the USA as a postdoctoral with Hodgkin on the DMBC coenzyme.	fellow and worked

1959-65.

B.518

1966-70, nd. B.519 1963-84, nd B.520, B.521 F.H. Moore Moore collaborated with Hodgkin on the B12 monoacid and factor V1a. B.520 1963, 1969-70, 1972-74. B.521 1979-80, 1983-84, nd. 1967-71, 1979, 1984 B.H. O'Connor B.522 O'Connor collaborated with Hodgkin on the B12 monoacid and factor V1a. Includes research report, 1967. J.H. Robertson 1952, 1954-58, 1964 B.523 Robertson was one of Hodgkin's early collaborators in vitamin B12 research. Includes typescript of 'The structure of vitamin B12: The X-ray analysis of air-dried crystals of the selenocyanate derivative.' By Hodgkin, Robertson and J.S. Rollett, 1964. Not listed in Bibliog. 1948-66, nd E.L. Smith B.524-B.531 Smith worked on vitamin B12 from 1938 and was one of the first to isolate crystals in 1948, supplying crystals to Hodgkin for x-ray analysis. The correspondence includes reports re vitamin B12 nomenclature. 1948-49. Includes correspondence re first samples sent to Hodgkin and B.524 typescript copy of draft by Smith on 'The presence of cobalt in the antipernicious anaemia factor.' B.525 1950-52. B.526 1953-54. 1955. B.527

1956.

B.528

B.529	1957-59. Includes typescript copy of draft by Smith on 'Biochemical functioning of vitamin B12.'
B.530	1960-61.
B.531	1962-64, 1966, nd.
B.532	A.R. Todd 1952-58, 1964
	Includes cutting from <i>New York Times re</i> Todd's announcement of the solution of the structure of vitamin B12, 1955, and correspondence <i>re</i> publication.
B.533-B.536	K.N. Trueblood 1953-63, 1971-72, nd
	Trueblood was an early collaborator on vitamin B12 and worked at UCLA, where calculations for Hodgkin's work were processed by an electronic computer.
B.533	1953-54.
B.534	1955.
B.535	1956-59.
B.536	1961-63, 1971-72, nd.
B.537	K. Venkatesan 1962, 1964-65
	re factor V1a.
B.538	F. Wagner 1961, 1964, 1967-69
B.539	T.N.M. Waters 1965-69, 1972, 1979, nd
B.540-B.543	J.G. White 1950-59
	White, who worked at Princeton University, was one of the early collaborators in vitamin B12 research.
B.540	1950-51, 1954.

B.541	1955. Includes typescript copy of draft by White on 'The Molecular Structure of Vitamin B12', dated August 1955.
B.542	1956.
B.543	1957-59.
B.544	B.T.M. Willis 1971, 1979-80, 1983
	re the monoacid of vitamin B12.
B.545	R.B. Woodward 1956, 1964
	Miscellaneous shorter correspondence
B.546	1950-56.
B.547	1957. Includes reports and correspondence re vitamin B12 nomenclature.
B.548	1958-59.
B.549	1960-61.
B.550	1962-63.
B.551	1964.
B.552	1965-69.
B.553	1970-73.
B.554	1974-76, 1979. Includes 5pp. typescript by Hodgkin <i>re</i> progress of the vitamin B12 investigations, 1975.
B.555	1980-84, nd.

## Drafts for reports and publications 1950-84

Drafts for research reports and publications by Hodgkin and her collaborators mostly kept together by her in box folders.

There is also some related material such as correspondence, notes and data.

B.556-B.567

'Antipernicious anaemia factor.' Contents of box folder so labelled.

B.556

'Crystallographic measurements on the antipernicious anaemia factor' (with M.W. Porter and R.C. Spiller), *Bibliog.* 49, 1950.

7pp. typescript, with manuscript additions and corrections by Hodgkin.

7pp. manuscript draft.

1p. typescript notes re 'crystal morphology'.

B.557

'On the Molecular Structure of Vitamin B12' (in collaboration), latest bibliographical reference 1953. Not listed in *Bibliog.* under this title but may be an earlier version of *Bibliog.* 59.

8pp. typescript.

'The Crystal Structure of Vitamin B12 - Part I' (with J.M. Broomhead), nd. Not listed in *Bibliog*.

2pp. typescript.

'The X-ray crystallographic study of the structure of Vitamin B12', nd. Not listed in *Bibliog*.

2pp. typescript.

Untitled 2pp. manuscript draft.

B.558

'Conversion of Vitamin B12b into Vitamin B12', by V. Petrov et al.

3pp. typescript, latest bibliographical reference 1950.

'A crystalline nucleotide-free degradation product of vitamin B12', by A.R. Todd et al.

5pp. typescript, latest bibliographical reference 1954.

B.559-B.561	Shorter manuscript and typescript drafts, manuscript notes, data and calculations, manuscript notes from the literature. Some pages dated 1948-49. Three folders.
B.562	X-ray photographs and film, 1948; photographs of crystals; figures.
B.563-B.565	Manuscript data, not all by Hodgkin. Includes 'Structure factors', 'B12 CNS', 'F <sub>(hko)</sub> values', 'Sign determination', 'Asymmetric synthesis', 'okl reflections', 'Density of Factor A', 'Red fragment formula', computer printout. Some pages dated 1952. Three folders.
B.566, B.567	Correspondence 1948-54.
B.566	1948-52. Includes abstract of report by Clara Brink, International Fellow 1951, re x-ray analysis of vitamin B12.
B.567	1953-54, nd.
B.568-B.573	'B12 publications.' Contents of folder so inscribed.
B.568	'On the Molecular Structure of Vitamin B12' (in collaboration), latest bibliographical reference 1953. Not listed in <i>Bibliog</i> .
	6pp. manuscript and typescript draft, with manuscript additions and corrections by Hodgkin and J.H. Robertson.
B.569	'The X-ray Crystallographic Study of the Structure of Vitamin B12', published in French as 'Étude cristallographique par les rayons X de la structure de la vitamine B12', <i>Bibliog.</i> 60, 1955.
	13pp. typescript.
B.570	'The structure of vitamin B12' (with A.W. Johnson and A.R. Todd), <i>Bibliog.</i> 64, 1955.
	22pp. typescript, with manuscript additions and corrections by Hodgkin.
B.571	'The structure of vitamin B12 from X-ray analysis', nd. Not listed in Bibliog.
	2pp. typescript.
	'La radiocristallochimie : formule stereochimique de la vitamine B12', by C. Stora, 1959.

20pp. typescript, in French.

B.572	Shorter manuscript and typescript drafts, brief manuscript notes and data, manuscript notes from the literature.
B.573	Correspondence re publications 1954-56.
B.574, B.575	Contents of untitled folder.
	Typescript drafts, manuscript notes and data, one page dated 1954. Two folders.
B.576-B.578	Contents of untitled folder.
B.576	'The crystal structure of the hexacarboxylic acid derived from B12 and the molecular structure of the vitamin' (in collaboration), <i>Bibliog.</i> 61, 1955.
	6pp. typescript, with manuscript additions and corrections by Hodgkin.
	'The crystal structure of a cobalt containing degradation product of B12 and its bearing on the molecular structure of the vitamin.'
	7pp. manuscript draft.
B.577	'Some observations on the crystal structure of a chlorine substituted vitamin B12' (with M.J. Kamper), <i>Bibliog.</i> 62, 1955.
	6pp. typescript, with manuscript additions and corrections by Hodgkin.
	'X-ray analytical evidence on the structure of vitamin B12' 'Hamburg paper', latest bibliographical reference 1955. Not listed in <i>Bibliog</i> .
	7pp. typescript.
B.578	Letter from A.W. Johnson, 1955.
	Manuscript notes and data.
B.579-B.583	'The structure of vitamin B12. II. The crystal structure of a hexacarboxylic acid obtained by the degradation of vitamin B12' (in collaboration), <i>Bibliog.</i> 71, 1959.
B.579-B.582	90pp. typescript, with manuscript additions and corrections. Includes tables and appendices. Four folders.

Manuscript draft of appendix, entitled 'On the intensity anomalies on the B.583 hexacarboxylic acid photographs', by A. Vos, with manuscript additions and corrections by Hodgkin; manuscript data. B.584 'Molecules in crystals', Bibliog. 75, 1961. 8pp. typescript, incomplete, of Royal Society Tercentenary Lecture, 1960. See also D.126. B.585-B.590 'B12 coenzyme.' Contents of box folder so labelled. 'The structure of the 5,6-dimethyl-benzimidazolyl-cobamide coenzyme : an B.585 x-ray crystallographic study' (with P.G. Lenhert), Bibliog. 77, 1961. 8pp. typescript, with manuscript additions and corrections by Hodgkin. 'The X-ray Crystallographic Investigation of the 5,6-Dimethyl-benzimidazolecobamide coenzyme' (with P.G. Lenhert), Bibliog. 80, 1961. 8pp. typescript, with manuscript additions and corrections by Lenhert. Glaxo Laboratories reports sent to Hodgkin by E.L. Smith, 1960-63. B.586-B.588 B.586 'Vitamin B12-dependent Metabolic Reactions Part 3.' 8pp. typescript, dated 26 August 1960. 'Partial Synthesis of B12 Coenzyme and Analogues. Isolation and Structure of B12 coenzymes.' 9pp. typescript, dated 15 January 1962. 'Partial Synthesis of B12 Coenzyme and Analogues Part 2.' B.587 15pp. typescript, dated 29 June 1962. 'Partial Synthesis of B12 Coenzyme and Analogues Part 3. A Practical B.588 Synthesis of Coenzyme B12.' 9pp. typescript, dated 29 June 1962. 'Vitamin B12-dependent Metabolic Reactions.'

5pp. typescript, dated 1 February 1963.

B.589	Correspondence 1959, 1961.
	X-ray film and photographs, photographs of crystals, sent to Hodgkin, 1959.
B.590	Manuscript notes, manuscript notes from the literature, manuscript data $re$ bond lengths, handdrawn maps. One page dated 1962.
B.591	'The structure of vitamin B12. IV. The x-ray analysis of air-dried crystals of B12' (in collaboration), <i>Bibliog.</i> 81, 1962.
	38pp. typescript, with manuscript additions and corrections, not by Hodgkin.
B.592	'The structure of vitamin B12. V. The structure of the air-dried crystals of vitamin B12' (in collaboration), <i>Bibliog.</i> 82, 1962.
	38pp. typescript, with manuscript additions and corrections, not by Hodgkin.
B.593	'The determination of the crystal structure of factor V1a' (with D. Dale and K. Venkatesan), <i>Bibliog.</i> 85, 1963.
	7pp. typescript.
B.594-B.601	'Wet B12. P. Galen Lenhert.' Contents of folder so inscribed.
B.594-B.601 B.594, B.595	'Wet B12. P. Galen Lenhert.' Contents of folder so inscribed.  'The structure of vitamin B12. VI. The structure of crystals of vitamin B12 grown from and immersed in water' (in collaboration), <i>Bibliog.</i> 87, 1964.
	'The structure of vitamin B12. VI. The structure of crystals of vitamin B12
	'The structure of vitamin B12. VI. The structure of crystals of vitamin B12 grown from and immersed in water' (in collaboration), <i>Bibliog.</i> 87, 1964.
B.594, B.595	'The structure of vitamin B12. VI. The structure of crystals of vitamin B12 grown from and immersed in water' (in collaboration), <i>Bibliog.</i> 87, 1964. 43pp. typescript. Two folders.  Computer printouts. Include 'Planes', 'Angles and Distances for Wet B12', 'Fourier Sections', 'Molecular Axes'. Some pages dated 1959-62. Two
B.594, B.595 B.596, B.597	'The structure of vitamin B12. VI. The structure of crystals of vitamin B12 grown from and immersed in water' (in collaboration), <i>Bibliog.</i> 87, 1964.  43pp. typescript. Two folders.  Computer printouts. Include 'Planes', 'Angles and Distances for Wet B12', 'Fourier Sections', 'Molecular Axes'. Some pages dated 1959-62. Two folders.  Manuscript data, not all by Hodgkin. Includes 'Atomic positions', 'B12 cell dimensions', 'calculation of atomic shifts', 'atomic coordinates of wet vitamin B12', 'interatomic distances', 'temperature factor graphs'. Some

'Notes on the Molecular Geometry and Chemical Reactivity in Connection B.602 with the B12 Vitamins', Bibliog. 88, 1964. 13pp. typescript, with manuscript additions and corrections by Hodgkin. Tables. B.603, B.604 'Vitamin B12 and the porphyrins', Bibliog. 89, 1964. 8pp. typescript, with manuscript additions and corrections, not by B.603 Hodakin. 13pp. typescript, incomplete. B.604 16pp. manuscript draft. Letter re publication. 'The Structure of the Corrin Nucleus from X-ray Analysis', Bibliog. 94, 1965. B.605 11pp. typescript, with manuscript additions and corrections by Hodgkin. 'Vitamin B12', Bibliog. 95, 1966. B.606 14pp. typescript; legends to figures, references. 'Neutron Diffraction of B12.' Contents of folder so inscribed. B.607-B.609 The material relates to a research report on 'A neutron diffraction study of vitamin B12' submitted to the Atomic Energy Research Establishment, Harwell. The correspondence dates the submission of the report to 1966. Two 4pp. typescripts, with manuscript additions and corrections; figures; B.607 manuscript notes. Correspondence 1960-78. B.608, B.609 B.608 1960, 1965-66. B.609 1967, 1970, 1972, 1978.

B.610 'The crystal and molecular structure of 2,3,7,13,18-hexamethyl-8,12diethylcorrole' (with H.R. Harrison and O.J.R. Hodder), Bibliog. 118, 1970. 9pp. typescript. 'Cobyric acid. A.201 Paper.' Contents of folder so inscribed. B.611 'The structure of vitamin B12. IX. The crystal structure of cobyric acid, factor V1a' (in collaboration), Bibliog. 122, 1971. 20pp. typescript, with manuscript additions and corrections by Hodgkin. Letter re publication. B.612-B.615 Contents of untitled folder. 'The crystal structure of lodo-Co(II)cobyrinic acid heptamethyl ester' (by B.612 E.D. Edmond), 1971. 16pp. typescript, with manuscript additions and corrections by Hodgkin. Shorter manuscript drafts, manuscript notes from the literature, manuscript B.613, B.614 notes and data. Two folders. B.615 Correspondence 1968-71, 1973, nd. 'The crystal structure of lodo-Co(II)cobyrinic acid heptamethyl ester' (with B.616 E.D. Edmond),[1971]. Not listed in Bibliog. 14pp. manuscript and typescript draft, incomplete, with manuscript additions and corrections by Hodgkin; legends to figures. 'Metal Free Corrin Paper.' Contents of folder so inscribed. B.617 16pp. untitled typescript draft, incomplete, of 'The crystal structure of lodo-Co(II)cobyrinic acid heptamethyl ester',[1971]. Manuscript notes, manuscript notes from the literature.

B.618

'Neovitamin B12.' Contents of folder so inscribed.

'Results and Discussion'.

10pp. manuscript draft. This forms part of 'Further refinement of the crystal structure of neovitamin B12' (with E.D. Edmond and H. Stoeckli-Evans), *Bibliog.* 138, 1972.

'Crystallographic Investigation.'

2pp. typescript, nd.

'Neovitamin B12'.

8pp. manuscript and typescript draft by R. Bonnett et al, nd. Latest bibliographical reference 1970.

Hodgkin is listed as an author, but her name has been crossed out.

Letter from R. Mason, 1968.

B.619, B.620

'Corrin bromide.' Contents of folder so inscribed.

B.619

'Crystal and molecular structure of 8,12 diethyl 2,3,7,13,17,18 hexamethylcorrole hydrobromide' (with B.F. Anderson and T.J. Bartczak), *Bibliog.* 147, 1974.

9pp. typescript, with manuscript additions and corrections by Hodgkin; tables.

B.620

Correspondence re publication 1972-73. Includes referee's reports.

B.621-B.626

'The Structure of Vitamin B12. The neutron diffraction analysis of the predominant monocarboxylic acid isomer obtained by mild acid hydrolysis of cyanocobalamin' (in collaboration),[?1984]. Not listed in *Bibliog*. under this title but is probably a version of *Bibliog*. 169.

B.621-B.624

49pp. typescript. Includes tables, figures. Four folders.

B.625

11pp. typescript, with manuscript additions and corrections by Hodgkin.

B.626

10pp. manuscript draft, incomplete; manuscript legends to figures.

B.627

'The investigation of the structure of the O-monoacid of B12 by X-ray and neutron diffraction',[?1984]. Not listed in Bibliog.

3pp. typescript, with manuscript additions and corrections by Hodgkin.

4pp. manuscript draft; manuscript legends to figures.

Correspondence 1980, 1983.

B.682

'B12 Nomenclature.'

2pp. typescript, with manuscript additions by Hodgkin, nd.

### **Notebooks**

B.629

Untitled notebook.

Manuscript data re 'hko', 'okl reflections', October 1952. 'Structure Factor Comparison - Oxford data, John White's data', August 1955.

B.630

Untitled notebook.

Manuscript notes and data by J.H. Robertson re 'Interpretation of the wet B12 Fourier' and 'Interpretation of the B12-Se CN (Dry) Fourier', February 1953.

Manuscript notes and data by Hodgkin re B12 Se CN co-ordinates, June-July 1956.

B.631

Notebook, inscribed 'J. Pickworth' inside front cover.

Manuscript notes and data, mostly re crystals and analysis of x-ray photographs. A few pages dated between October 1953 and April 1954. There are some loose pages, with manuscript notes and data by Pickworth, Hodgkin and J.H. Robertson.

B.632

Notebook, inscribed 'J. Pickworth I' 'Thesis. Crystallographic Studies on the Structure of Vitamin B12 and Related Compounds' inside front cover.

Manuscript notes and data, including charts, handdrawn projections and graphs pasted into notebook; loose x-ray photographs. Indexed. A few pages dated between October 1953 and April 1954.

B.633

Notebook, inscribed 'J. Pickworth IV' 'B12.  $C_{63}$   $H_{97}$   $O_{20}$   $N_{14}$  P Co 12  $H_2O$  5:6 dimethylbenzimenazole N- $\alpha$ -D ribofinanoxide (2 or 3)-phosphate' inside front cover.

Manuscript notes and data *re* 'first three-dimensional Fourier', 'Three-dimensional Fourier or Cobalt Phases Alone', handdrawn sections, 'Suggested Atomic Positions from 3-dimensional Fourier', 'Cobalt Atom Parameters', 'Patterson Projection', 'Calculated 3 dimensional Patterson', 'Absorption Corrections', 'Anomalous Intensities from Weissenberg Photos *re* lack of symmetry'. Two pages dated June, July 1954.

B.634

Notebook used for manuscript 'Record of Photographic Data' re DMBC coenzyme, not by Hodgkin, August 1960 - February 1961.

B.635

Notebook, inscribed 'Eric Edmond Linacre College Co-l Corrin' inside front cover.

Manuscript notes and data, manuscript notes from the literature, computer printouts, x-ray film, July 1969 - December 1971.

#### Research folders 1948-81

There are a large number of research folders, usually identified on the cover by title. These titles have been used in the catalogue entries where appropriate. The folders may include notes, data, calculations, x-ray films and correspondence.

B.636

'B12: Chemistry.' Contents of folder so inscribed.

X-ray film, dated November 1948; manuscript notes and references by J.H. Robertson 1953-54; letter to Robertson from K. Lonsdale, 1954.

B.637

'B12: Summary.' Contents of folder so inscribed.

Manuscript notes and data, manuscript notes from the literature, references, mostly by J.H. Robertson. Includes 3pp. notes on 'Vitamin B12', dated '14.10.49', from Cambridge University (unidentified hand) and notes by Robertson from lecture on 'Recent Advances on Vitamins' given by K.A. Folkers, and dated '21.5.51'.

B.638

'B12 (Wet). Intensities from the b-axis.' Contents of folder so inscribed.

Manuscript data, not by Hodgkin. One page dated February and April 1951.

B.639	Contents of untitled folder.
	'Structure Factors'. Manuscript data, not by Hodgkin, March 1951.
B.640	'B12 : General Summary.' Contents of folder so inscribed.
	Manuscript 'collected B12 data', by J.H. Robertson; typescript 'Notes for Mrs Hodgkin's paper on B12 at Stockholm', May 1951; 'Unit Cell Dimensions of B12 Derivatives'; 'Refractive Indices.'
B.641	'B12 (Wet). Correlations of b and c axis intensities.' Contents of folder so inscribed.
	Manuscript data, not by Hodgkin, May 1951.
B.642-B.644	'F hkl values Oxford and Princeton' 'B12 (dry) "Refinement" of the (hol) projection.' 'Intensity data dry B12.' Contents of folder so inscribed, divided into three for ease of reference.
	Manuscript data, not all by Hodgkin. A few pages dated between June 1951 and November 1955.
B.645	'B12 (Dry). Fourier projection.' Contents of folder so inscribed.
	Handdrawn projection; computer printout data; manuscript data, by J.H. Robertson, dated 1 October 1951.
B.646, B.647	'CN Se-B12. Oscillations : a-axis.' Contents of folder so inscribed, divided into two for ease of reference.
B.646	X-ray films. One dated December 1951.
B.647	Manuscript data, various hands.
B.648	'B12 (dry): Miscellaneous, from June[?Broomhead]'s Notebooks. F hkl figures.' Contents of folder so inscribed.
	Manuscript notes and data, various hands, <i>re</i> three-dimensional Fourier, Weissenberg photographs, cell dimensions, structure factors; manuscript notes from the literature, latest bibliographical reference 1951.

B.649 'CN Se-B12 (dry). Correlation of the c-axis layer lines.' Contents of folder so inscribed. Manuscript notes and data, by J.H. Robertson. One page dated 31 May 1952. 'B12 (dry and wet). CN Se-B12 (dry and wet). Absolute scale and temp. B.650-B.653 factors.' Contents of folder so inscribed, divided into four for ease of reference. Manuscript notes, data and calculations, not all by Hodgkin. A few pages dated between May 1952 and November 1955. 'Absolute Intensity Scale for Anthracene.' Folder so inscribed. Pasted B.654 inside front cover is a 'Diary and Summary', by J.H. Robertson, which begins, 'about 1st July[1952] Dorothy suggested use of Anthracene crystals to check Wilson scaling on B12.' Manuscript notes and data, by J.H. Robertson, July 1952. 'Studies of Pleochroism.' Contents of folder so inscribed. B.655 Manuscript notes, by J.H. Robertson, re crystals of CN Se B12, dry B12, July 1952. 'Factor A.' Contents of folder so inscribed. B.656 Manuscript notes, by J.H. Robertson; x-ray film, July 1952-April 1954. 'CN Se-B12. c-axis projections.' Contents of folder so inscribed, divided B.657, B.658 into two for ease of reference. Manuscript notes and data, by J.H. Robertson, October 1952 - July 1953; handdrawn contours; computer printouts, October 1952. 'Benziminazoles.' Contents of folder so inscribed. B.659 Manuscript notes and data, not by Hodgkin; x-ray film, 1952. Contents of untitled folder, divided into five for ease of reference. B.660-B.664 Computer printout data from the National Physical Laboratory, Teddington re CN Se three-dimensional Fourier analysis, February-March 1953.

B.665

'B12-Se CN (dry). Parameters.' Contents of folder so inscribed.

Manuscript data and handdrawn graphs by J.H. Robertson; manuscript

notes by Hodgkin. June 1953, August 1954.

B.666

Contents of untitled folder.

Manuscript notes and data *re* recrystallisation of vitamin B12, B12 degradation products; manuscript notes from the literature; manuscript notes and data *re* penicillin, miroestrol, aureomycin, phalloidine. A few

pages dated between October 1953 and March 1956.

B.667, B.668

'B12-Se CN. Results of 3-dim[ensional] F[ourier] calculation.' Contents of

folder so inscribed, divided into two for ease of reference.

Manuscript data and sketches by J.H. Robertson. One page dated

November-December 1953.

B.669-B.673

Loose papers found with the preceding.

Manuscript notes and data, mostly by J. Pickworth, re 'reinvestigation of intensities', 'oscillation photo measurements', 'electron distributions', 'revised co-ordinates for 26 atoms', '1st Fourier. B12 Fragment. Inner Ring', 'B12 Fragment. Additional atomic intensities', 'B12 Fragment'. A few items

dated between July 1954 and February 1955. Five folders.

B.674

'B12. Red Fragment.' Contents of folder so inscribed.

Manuscript notes and data, by J.H. Robertson; x-ray film. One page dated

April 1954.

B.675-B.677

Contents of untitled folder, divided into three for ease of reference.

Manuscript notes, data and drafts, various hands; 4pp. typescript re 'Intensity measurements', 'Selecting atomic positions'. Several items dated

between August 1954 and August 1957.

B.678

'Vitamin B12 Fragment. Atomic Parameters.' Contents of folder so

inscribed.

Manuscript data, by J. Pickworth, re 'cobalt atom parameters', 'hol Patterson proj[ection]', 'structure from Fourier 1'; handdrawn figures. One

page dated 23 September 1954.

B.679-B.687	'Co-ordinates.' Contents of folder so inscribed, divided into nine for ease of reference.
	Manuscript data, various hands, June 1955-July 1959; computer printout data, April 1958 - April 1960.
B.688, B.689	'B12 (Dry). Intensity Data.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript notes and data, one page dated September 1955; letter from J.H. Robertson, dated 3 July 1955; letter from K.N. Trueblood, nd.
B.690, B.691	'B12 (Wet). Harker Sections.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript notes and data, various hands; computer printout data. March 1956.
B.692-B.694	'CN Se-B12 (Dry). Collected Intensities.' Contents of folder so inscribed, divided into three for ease of reference.
	Manuscript notes and data, by J.H. Robertson. One page dated April 1957.
B.695-B.699	Loose papers found with preceding.
B.695-B.699	Loose papers found with preceding.  Manuscript notes and data, various hands, re 'correlated intensities', 'measured intensities', 'B12 Fragment', 'corrected intensities', a few pages dated March 1957; two Glaxo Laboratories reports, sent to Hodgkin by E.L. Smith, re 'Extension of Project on Antimetabolites of Vitamin B12' and 'Vitamin B12-dependent Metabolic Reactions', 1961. Five folders.
B.695-B.699 B.700	Manuscript notes and data, various hands, re 'correlated intensities', 'measured intensities', 'B12 Fragment', 'corrected intensities', a few pages dated March 1957; two Glaxo Laboratories reports, sent to Hodgkin by E.L. Smith, re 'Extension of Project on Antimetabolites of Vitamin B12' and
	Manuscript notes and data, various hands, re 'correlated intensities', 'measured intensities', 'B12 Fragment', 'corrected intensities', a few pages dated March 1957; two Glaxo Laboratories reports, sent to Hodgkin by E.L. Smith, re 'Extension of Project on Antimetabolites of Vitamin B12' and 'Vitamin B12-dependent Metabolic Reactions', 1961. Five folders.
	Manuscript notes and data, various hands, re 'correlated intensities', 'measured intensities', 'B12 Fragment', 'corrected intensities', a few pages dated March 1957; two Glaxo Laboratories reports, sent to Hodgkin by E.L. Smith, re 'Extension of Project on Antimetabolites of Vitamin B12' and 'Vitamin B12-dependent Metabolic Reactions', 1961. Five folders.  'CN Se-B12. C-axis oscillation photos.' Contents of folder so inscribed.
B.700	Manuscript notes and data, various hands, <i>re</i> 'correlated intensities', 'measured intensities', 'B12 Fragment', 'corrected intensities', a few pages dated March 1957; two Glaxo Laboratories reports, sent to Hodgkin by E.L. Smith, <i>re</i> 'Extension of Project on Antimetabolites of Vitamin B12' and 'Vitamin B12-dependent Metabolic Reactions', 1961. Five folders.  'CN Se-B12. C-axis oscillation photos.' Contents of folder so inscribed.  Manuscript notes and data, various hands. One page dated April 1957.
B.700 B.701-B.707	Manuscript notes and data, various hands, <i>re</i> 'correlated intensities', 'measured intensities', 'B12 Fragment', 'corrected intensities', a few pages dated March 1957; two Glaxo Laboratories reports, sent to Hodgkin by E.L. Smith, <i>re</i> 'Extension of Project on Antimetabolites of Vitamin B12' and 'Vitamin B12-dependent Metabolic Reactions', 1961. Five folders.  'CN Se-B12. C-axis oscillation photos.' Contents of folder so inscribed.  Manuscript notes and data, various hands. One page dated April 1957.  'Black cobalt correspondence'. Contents of folder so inscribed.

B.703	12pp. manuscript draft.
B.704	Tables.  Typescript pages, with corrections.
B.705, B.706	Handdrawn and computer generated Fourier maps, computer printout data and structure factors, <i>re</i> black cobalt, nd. Two folders.
B.707	Manuscript notes and data ?re Fourier analysis of black cobalt, nd.
B.708	Contents of untitled folder.
	Manuscript notes, data and calculations, not all by Hodgkin. Includes 'Weights of peaks in Patterson for P2 <sub>1</sub> 2 <sub>1</sub> 2 <sub>1</sub> '; computer printout data <i>re</i> airdried B12; letter to K.N. Trueblood from J.G. White, May 1957; letter to Hodgkin from J.G. White, February 1959.
B.709	'B12 (dry). To find the Co position. Comparison of F's (and Fouriers) for 4 different Co positions. John White's work?' Contents of folder so inscribed.
	Computer printout data re 'Air Dried B12. Param. set for SF5 23 Oct 1957.' Photograph of 'hko projection 2 Phases from Co alone White's data.'
B.710	Contents of untitled folder.
	Manuscript data re 'water molecules', 'B12 Se CN water molecules', 'Amide groups, Spring 1959'.
B.711	'DMBC Coenzyme.' Contents of folder so inscribed.
	Computer printout data, July, October 1959; manuscript data,[by D. Dale], re 'intensities observed', 'directives tape', 'comparison between Vitamin B12 and DMBC coenzyme', October 1959; photograph of crystals.
B.712-B.715	'DMBC Coenzyme Intensity Data.' Contents of folder so inscribed, divided into four for ease of reference.
	Manuscript data, not by Hodgkin, [1960] - August 1961.
B.716	'DMBC Coenzyme F <sup>2</sup> On A Relative Scale.' Contents of folder so inscribed.
	Computer printout data, March 1961.

B.717-B.719	'DMBC Raw Intensities.' Contents of folder so inscribed, divided into three for ease of reference.
	Computer printout data, [March 1961].
B.720-B.723	'DMBC Coenzyme Intensity Ratios and Intensity Correlation.' Contents of folder so inscribed, divided into four for ease of reference.
	Computer printout data, March-August 1961.
B.724	'DMBC Coenzyme Sharpened F <sup>2</sup> .' Contents of folder so inscribed.
	Computer printout data, 14 April 1961.
B.725	'First DMBC Struc[ture] Factor Calculation.' Contents of folder so inscribed.
	Computer printout data, 18 April 1961.
B.726, B.727	'DMBC Coenzyme misc. distance-angles calcs. and molecular axes calcs.' Contents of folder so inscribed, divided into two for ease of reference.
	Computer printout data, 9 June 1961 - July 1963.
B.728	'Second DMBC Structure Factor Calculation and distance-angles from SF Coordinates.' Contents of folder so inscribed.
	Computer printout data, 14 June 1961.
B.729	'DMBC Misc. Materials.' Contents of folder so inscribed.
	Computer printout data <i>re</i> 'adenine angles and distances', 'third DMBC structure factor calculation June 30 1961', 'DMBC Coenzyme Fourier Peak Shapes July 6 1961'.
B.730, B.731	'DMBC 3rd Structure Factor Calc. and Distance-Angles from SF Coordinates.' Contents of folder so inscribed, divided into two for ease of reference.
	Computer printout data, 3-5 July 1961; handdrawn diagrams showing distance angles.
B.732, B.733	'DMBC 4th Structure Factor Calculation and distance-angles from SF coordinates.' Contents of folder so inscribed, divided into two for ease of reference.

Computer printout data, 11-12 July 1961.

B.734, B.735 'DMBC 5th Structure Factor Calculation and distance-angles from SF coordinates.' Contents of folder so inscribed, divided into two for ease of reference. Computer printout data, 25-30 July 1961; handdrawn 'plots of scalefactor analysis'. 'DMBC Intensities Unscaled But Sorted For Intensity Ratios.' Contents of B.736-B.739 folder so inscribed, divided into four for ease of reference. Computer printout data, July-August 1961. 'Sixth DMBC Structure Factor Calculation.' Contents of folder so inscribed, B.740, B.741 divided into two for ease of reference. Computer printout data, handdrawn diagrams from the data, 9-14 August 1961. 'DMBC.' Contents of folder so inscribed. B.742 Computer printout data re 'DMBC distance angles', 25 October 1961; manuscript data, not by Hodgkin, re distance-angle calculations. 'Seventh DMBC Structure Factor Calculation (Amide Groups Included).' B.743, B.744 Contents of folder so inscribed, divided into two for ease of reference. Computer printout data, handdrawn diagrams from the data, 11-23 July 1962. 'The DMBC Structure Factor Calculation (Amide Groups C<sub>37</sub>-N<sub>40</sub> and C<sub>49</sub>-B.745, B.746 N<sub>52</sub> Omitted). Fourier For Amide Groups and Cobalt.' Contents of folder so inscribed, divided into two for ease of reference. Computer printout data, computer generated Fourier sections, 14-15 July 1962. 'DMBC Hydrogen Atoms.' Contents of folder so inscribed, divided into four B.747-B.750 for ease of reference. Computer printout data, manuscript data, not by Hodgkin, re structure factor calculations, atomic coordinates, 'DMBC methyl groups rotated to improve inter atomic distances', 'H atoms trial calculation', 24 July - 6 August 1962.

B.751	'DMBC Coenzyme Constants and Directives.' Contents of folder so inscribed.
	Computer printout data, 14-20 August 1962.
B.752, B.753	'Adenosine removed. Fractional water removed.' Contents of folder so inscribed, divided into two for ease of reference.
	Computer printout data re structure factors, 17-20 August 1962.
B.754	'Final DMBC Dist-Angles, and Molecular Axes, also 7th and 8th coordinate shifts.' Contents of folder so inscribed.
	Computer printout data, 29-30 August 1962.
B.755-B.758	Contents of untitled folder, divided into four for ease of reference.
B.755	Letter from B.H. O'Connor, of the University of Western Australia, re neutron refinement of the B12 monoacid structure, 1967; photocopied manuscript notes and data, by O'Connor; letter from O'Connor, 1969.
B.756	Photographs of crystals.
B.757, B.758	Handdrawn 'Sections from Fourier UWA/F9.' Two folders.
B.759, B.760	(D
	'Papers and correspondence o monoacid.' Contents of folder so inscribed, divided into two for ease of reference.
B.759	divided into two for ease of reference.  Correspondence 1967, 1976-79, nd.
	divided into two for ease of reference.
B.759	divided into two for ease of reference.  Correspondence 1967, 1976-79, nd.  Manuscript notes and data, typescript data, handdrawn sections. One
B.759 B.760	divided into two for ease of reference.  Correspondence 1967, 1976-79, nd.  Manuscript notes and data, typescript data, handdrawn sections. One page dated 1981.
B.759 B.760	divided into two for ease of reference.  Correspondence 1967, 1976-79, nd.  Manuscript notes and data, typescript data, handdrawn sections. One page dated 1981.  Contents of untitled folder.

B.762, B.763	'Corroles.' Contents of folder so labelled, divided into two for ease of reference.
B.762	Correspondence 1969-70, 1972.
B.763	Manuscript data, not all by Hodgkin.
B.764-B.792	Undated research folders.
B.764, B.765	'NC Se-B12 (Dry). Co and Se Structure Amplitudes.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript data, by J.H. Robertson.
B.766	'NC Se-B12 (Dry). Interpretation of the Patterson.' Contents of folder so inscribed.
	Manuscript data, by J.H. Robertson; handdrawn Harker Section.
B.767	'CN Se-B12 : b-axis intensities. (Weiss).' Contents of folder so inscribed.
	Manuscript notes and data, by J.H. Robertson.
B.768-B.772	'B12-Se CN (dry). F-calculations.' Contents of folder so inscribed, divided into five for ease of reference.
	Manuscript data, by J.H. Robertson.
B.773	'B12-Se CN (dry). Fourier 2.' Contents of folder so inscribed.
	Manuscript notes and data, various hands.
B.774	'B12-CN Se. Reciprocal Lattice Nets.' Contents of folder so inscribed.
	Manuscript notes, data and graphs, by J.H. Robertson.
B.775	'CN Se-B12 (dry). a-axis Weissenberg Intensity Measurements.' Contents of folder so inscribed.
	Manuscript notes and data, by J.H. Robertson.

B.776	'B12 (Wet). Harker sections at $x=\frac{1}{2}$ $y=\frac{1}{2}$ $z=\frac{1}{2}$ .' Contents of folder so inscribed.
	Manuscript notes and data, various hands; computer printout data.
B.777	'CN Se-B12 (dry). C-axis Weissenberg Intensities. Measurements and Corrections.' Contents of folder so inscribed.
	Manuscript data, by J.H. Robertson.
B.778	$^{\circ}$ 3-dimensional Patterson (const. x). B12 fragment. Contents of envelope so inscribed, found with the preceding.
	Handdrawn Patterson sections.
B.779	'B12. Spectroscopy.' Contents of folder so inscribed.
	Manuscript notes, graphs and data, by Hodgkin and J.H. Robertson.
B.780, B.781	'Fourier 2.' Contents of folder so inscribed, divided into two for ease of reference.
	Photographs of projections, each bearing manuscript inscription.
B.782	'Princeton drawings.' Contents of folder so inscribed.
	Figures, some with manuscript annotations.
B.783	'B12 (Wet). Attempt to place (hol) values on Abs Scale, by Wilson Method.' Contents of folder so inscribed.
	Manuscript data, various hands.
B.784	'B12 (Wet). Intensities from the c-axis.' Contents of folder so inscribed.
	Manuscript data, various hands.
B.785, B.786	'Wet B12. Collected Intensity Data. $F^2$ values.' Contents of folder so inscribed, divided into two for ease of reference.
	Manuscript data, by J.H. Robertson.

B.787-B.789 'Wet B12. Structure Factors.' Contents of folder so inscribed, divided into three for ease of reference.

Manuscript data, by J.H. Robertson.

'B12 (dry). Intensity data and cell dimensions.' Contents of folder so inscribed.

Manuscript notes and data, not by Hodgkin.

B.791 'Graphs and reciprocal lattices. Dry dichlor. B12. Comparison of F's for dry B12 Oxford and Princeton and dry dichlor. B12.' Contents of folder

so inscribed.

Manuscript data, graphs, various hands.

B.792 'B12 (Wet). a-axis intensities.' Contents of folder so inscribed.

Manuscript data, by J.H. Robertson.

Data

B.790

This consists of handwritten and computer generated data, in the form of tables, maps, sections.

B.793 'CN Se-B12 (dry). Fourier Projection (hko). Signs from Co and Se. Jan.

'52.' Handdrawn, by J.H. Robertson. One roll.

B.794-B.805 Loose material found together and divided into twelve folders for ease of reference. Presented in order found.

Manuscript data, various hands, computer printout data, including 'Structure Factor Calculations', 'Absolute F² values. Vit. B12 Fragment', 'Observed F Values', 'Sharpened F² Values', 'Sin  $\Theta$  Values', 'Maximum Values', 'hko projection', 'proposed structure', 'values of products of cos and sin values  $2\pi hx$ ,  $2\pi ky$ ,  $2\pi lz$  and calculations of  $A_{oks}$  and  $B_{oks}$ '. A few

pages dated February 1953, April-December 1954, August 1956.

B.806-B.811 Loose material found together and divided into six folders for ease of reference. Presented in order found.

Manuscript data and handdrawn graphs, various hands, computer printout data, including 'Vitamin B12 Fragment. 2nd Fourier', 'Co Structure Factor Calculation', 'measured intensities', 'corrected intensities', 'correlated absolute F<sup>2</sup> values'. A few pages dated 1954.

B.812	'Sections at constant Z. B12 Patterson -3 dimensional. Dry.' Handdrawn, various hands, [?1950s]. One roll.
B.813	'CN Se-B12 (dry). Fourier-Proj (hko).' Handdrawn, not by Hodgkin, [?1950s]. One roll.
B.814	'B12 (Wet) hko Fourier Projection. Signs from Co only.' Handdrawn, by J.H. Robertson, [?1950s]. One roll.
B.815	'B12-Se CN. V.C. Diagram, based on Co and Se positions.' Handdrawn, [?1950s]. One roll.
B.816	'Wet B12 P3 x=0.' Handdrawn map, [?1950s]. One roll.
B.817	'Molecular Axes. R. Sparks. 6.5.60.' Handdrawn, with annotation ?by K.N. Trueblood dated 29 August 1960. One roll.
B.818	Computer generated sections from three-dimensional 'DMBC Difference Fourier. Phases of 5th Structure Factor Calculation.' 25 July 1961. One roll.
B.819	Handdrawn 'I cobyric ester' sections, 1974. One roll.
B.819 B.820-B.822	Handdrawn 'I cobyric ester' sections, 1974. One roll.  Loose papers <i>re</i> B12 monoacid, found together and divided into three folders for ease of reference.
	Loose papers re B12 monoacid, found together and divided into three
	Loose papers re B12 monoacid, found together and divided into three folders for ease of reference.  Manuscript data, brief manuscript notes, computer printout data; handdrawn neutron Fourier maps, including 'plot from first neutron diffraction positions of last side chain in w.[?ater]', 'B12 monoacid from neutron map by F.H. Moore', 'old positions', 'neutron diff. diff. map'. A few
B.820-B.822	Loose papers <i>re</i> B12 monoacid, found together and divided into three folders for ease of reference.  Manuscript data, brief manuscript notes, computer printout data; handdrawn neutron Fourier maps, including 'plot from first neutron diffraction positions of last side chain in w.[?ater]', 'B12 monoacid from neutron map by F.H. Moore', 'old positions', 'neutron diff. diff. map'. A few pages dated July 1979 - November 1980.
B.820-B.822	Loose papers re B12 monoacid, found together and divided into three folders for ease of reference.  Manuscript data, brief manuscript notes, computer printout data; handdrawn neutron Fourier maps, including 'plot from first neutron diffraction positions of last side chain in w.[?ater]', 'B12 monoacid from neutron map by F.H. Moore', 'old positions', 'neutron diff. diff. map'. A few pages dated July 1979 - November 1980.  Contents of untitled folder.  Handdrawn 'O monocarboxylic acid neutron scattering', 'plot'. September
B.820-B.822 B.823	Loose papers re B12 monoacid, found together and divided into three folders for ease of reference.  Manuscript data, brief manuscript notes, computer printout data; handdrawn neutron Fourier maps, including 'plot from first neutron diffraction positions of last side chain in w.[?ater]', 'B12 monoacid from neutron map by F.H. Moore', 'old positions', 'neutron diff. diff. map'. A few pages dated July 1979 - November 1980.  Contents of untitled folder.  Handdrawn 'O monocarboxylic acid neutron scattering', 'plot'. September 1981, September 1983.  Computer generated sections from 'B12 Difference Map from 11.92%

#### Miscellaneous

B.827, B.828

Loose notes and data. Two folders.

#### NITROSO COMPOUNDS

1949-70

Most of Hodgkin's work on the nitroso compounds was directed towards the solution of the structure of nitrosobenzene. This was finally achieved in 1969 by L. Brehm and O.J.R. Hodder.

B.829

Contents of untitled folder.

Letter, 1949; manuscript data, not by Hodgkin.

B.830, B.831

'The crystal structure of the dimer of para-bromonitrosobenzene' (with C.

Darwin), Bibliog. 51, 1950.

B.830

Two 4pp. typescripts.

Correspondence, nd.

B.831

Typescript data.

Photographs of maps.

B.832

'Crystal Structure Determination of the trans Dimer of Nitroso-Methane' (with H. Dietrich), latest bibliographical reference 1955. Not listed in *Bibliog*.

14pp. typescript. Includes tables, figures.

B.833-B.835

'Trans-nitrosomethane dimer'. Contents of folder so inscribed.

B.833

'Crystal structure determination of the trans dimer of 1-nitroso-2-methyl-propane/nitroso-iso-butane' (with H. Dietrich), latest bibliographical reference 1957. Not listed in *Bibliog*.

15pp. typescript; 2pp. manuscript tables.

B.834	'The crystal structure of the trans dimer of nitroso methane' (with H. Dietrich), latest bibliographical reference 1958. Not listed in <i>Bibliog</i> .
	9pp. typescript, with manuscript additions and corrections by Hodgkin; 1p. manuscript draft.
B.835	Manuscript notes and data.
B.836-B.842	Contents of untitled folder.
B.836, B.837	'The crystal structure of the trans dimer of nitroso-iso-butane' (with H. Dietrich), latest bibliographical reference 1958. Not listed in <i>Bibliog</i> .
B.836	11pp. typescript; 11pp. typescript, with manuscript additions and corrections by Hodgkin.
B.837	Tables.
B.838	Computer printout data re 'Nitrosomethane Transdimer', 1959.
B.839	'The crystal structure of the trans dimer of nitroso methane' (with H. Dietrich), nd. Not listed in <i>Bibliog</i> .
	5pp. manuscript draft.
	'The crystal structure determination of the trans dimer of nitroso-methane', by H. Dietrich.
	5pp. manuscript draft by Hodgkin.
B.840	Shorter manuscript drafts including 'X-ray crystallographic measurements on trans 1:4 dichloro 1:4 dinitroso cyclohexane'.
B.841, B.842	Manuscript data, not by Hodgkin. Includes 'Okl Intensity Data', 'Atomic shift from difference Fourier', 'Sharpened F <sup>2</sup> values', nd. Two folders.
B.843, B.846	'Azoxy Fenzene. Nitroso benzene.' Contents of box so labelled.
B.843	Untitled draft <i>re</i> the trans dimer of nitroso-iso-butane. Latest bibliographical reference 1959.
	11pp. typescript, with manuscript additions and corrections by Hodgkin and [?].

Letter, 1959; 8pp. typescript of 4-4<sup>1</sup>-dibromoazobenzene crystal data. B.844 Manuscript notes, data; computer printout. Nd. Two folders. B.845, B.846 B.847 'Nitrosobenzene'. Contents of folder so inscribed. Correspondence 1967, 1969-70; brief manuscript notes, not by Hodgkin, on the crystal structure of nitrosobenzene. 1950-52 **PURPUROGALLIN** Purpurogallin is an oxidation product of pyrogallol and work on its structure determination began in Oxford in 1948. 'Purpurogallin.' Contents of box folder so labelled. B.848-B.851 'First Report of the work done by Clara Brink in the Laboratory of Chemical B.848 Crystallography in Oxford during her holding of the Ohio State International Fellowship 1950-51.' 4pp. typescript. Manuscript notes and data, handdrawn maps, not all by Hodgkin. A few B.849-B.851 pages dated 1951-52. Three folders. 1952 LUMISTEROL Lumisterol was selected for study as one of the group of compounds found during the photochemical transformation of ergosterol to calciferol. 'Lumisterol'. Contents of box folder so labelled. B.852, B.853 'A crystallographic examination of the structure of lumisterol' (with D. Sayre), Bibliog. 56, 1952. 14pp. typescript, with manuscript additions and corrections by Hodgkin B.852 and ?Sayre. B.853 11pp. typescript. 1p. manuscript draft; manuscript notes and data.

B.861-B.863

### Research

MIROESTROL/BROMOMIROESTROL 1956-71		
	X-ray analysis was used to determine the structure of the miroestrol, in the form of its monobromo-derivative.	plant oestrogen,
B.854-B.869	'Bromomiroestrol. Miroestrol'. Contents of box so labe	lled.
B.854-B.859	'Miroestrol'. Contents of folder so inscribed.	
B.854	'X-ray Crystallographic Determination of the Structure of (with J.S. Rollett and N.E. Taylor), <i>Bibliog.</i> 73, 1960.	Bromomiroestrol'
	11pp. typescript, incomplete, with manuscript additions a Hodgkin; letter attached, dated 19 May 1959, from N.E.	nd corrections by . Taylor.
	7pp. typescript.	
	Both versions differ substantially from the published paper	per.
B.855-B.857	Correspondence, mostly with The National Institute Dairying (G.S. Pope) and the National Research Develope (J.C. Cain), <i>re</i> miroestrol, 1956-60.	for Research in ment Corporation
B.855	1956-57.	
B.856	1958.	
B.857	1959-60, nd.	
B.858	Minutes of meetings, attended by Hodgkin, held at the Non miroestrol. 31 July 1958, 11 September 1958.	NRDC about work
B.859	Shorter manuscript notes and drafts re miroestrol, brom	nomiroestrol, nd.
B.860	Correspondence 1958-59, 1961, 1970-71.	
B.861-B.866	'Bromomiroestrol'. Contents of folder so inscribed.	

'The x-ray crystallographic determination of the structure of bromomiroestrol' (with J.S. Rollett and N.E. Taylor), *Bibliog.* 73, 1960.

B.861	22pp. typescript, with tables.
B.862	18pp. typescript and manuscript draft, with manuscript additions and corrections by Hodgkin.
B.863	17pp. typescript and manuscript draft, with manuscript additions and corrections by Hodgkin.
B.864	Correspondence 1959-60.
	Shorter typescript and manuscript drafts $re$ bromomiroestrol, monobromomiroestrol.
B.865	Typescript notes and data $re$ bond lengths and deviations, bromomiroestrol positions, nd.
B.866	Manuscript data and tables, nd.
B.867	'Comparison of observed and calculated structure amplitudes'.
	Table.
	Manuscript notes and data, nd.
B.868, B.869	X-ray films, bromomiroestrol, nd. Two folders.
B.870	'The x-ray crystallographic determination of the structure of bromomiroestrol' (with J.S. Rollett and N.E. Taylor), <i>Bibliog.</i> 73, 1960.
	27pp. typescript, with manuscript additions and corrections by Hodgkin and [?Taylor].
FERROVERDIN	1956-73
B.871	'Ferroverdin. Fourier projection along $\rm b_{\rm H^{\text{-}}}100$ as zero electron density.' 1956. One roll.
B.872, B.873	'Ferroverdin'. Contents of folder so inscribed.
B.872	Correspondence 1969-70, 1973. Includes correspondence <i>re</i> publications on the structure of ferroverdin ( <i>Bibliog.</i> 111, <i>Bibliog.</i> 142, <i>Bibliog.</i> 143).

B.873 Manuscript notes and data, manuscript notes from the literature.

B.874, B.875 Handdrawn three-dimensional Fourier map. Incomplete. Two folders.

AGRAVIDE 1957

B.876 'Molecular Weight of Lagosin and Agravide'.

1p. typescript, dated 2 May 1957. Hodgkin's name appears at the bottom of the original typescript but has been crossed out and replaced by that

of N.E. White.

'Agravide'.

1p. typescript, nd.

'Agravide cell dimensions'.

Manuscript data, not by Hodgkin, nd.

X-ray films, nd.

#### **PILOTY COMPOUNDS**

1957-64

In 1902 O. Piloty isolated two compounds of the composition 1:4 dichloro-1<sup>1</sup>:4<sup>1</sup>-dinitrosocyclohexane which he formulated as cis and trans isomers. Hodgkin and her collaborators began the x-ray analysis of both isomers in the 1950s, although no paper was published until 1982 (*Bibliog.* 164).

B.877-B.880 Contents of untitled folder.

B.877 Correspondence 1957, 1959-60.

B.878 Manuscript and typescript drafts, nd.

B.879 Manuscript notes and data, nd. Include 1p. headed 'cis 1:4 dichloro 1<sup>1</sup>4<sup>1</sup>

dinitroso cyclohexane'.

B.880 Handdrawn figures, maps, various hands.

B.881-B.883 'CC/52 Cis Piloty Compound'. Contents of folder so inscribed.

B.881

'Cis Piloty Compound'.

3pp. manuscript draft, not by Hodgkin, nd.

'List of calculated and observed structure factors'.

Manuscript and typescript data, nd.

Letter, 1961.

B.882, B.883

Computer printouts *re* Fourier analysis of cis Piloty compound, nd. Two folders.

B.884-B.887

'CC/52 Trans Piloty Compound'. Contents of folder so inscribed.

Manuscript notes, manuscript and typescript data, computer printouts, handdrawn Fourier projection and difference map, *re* structure factors, Fourier synthesis, difference synthesis of trans-1:4 dichloro-1<sup>1</sup>4<sup>1</sup>-dinitrosocyclohexane, 1961. Four folders.

B.888

Contents of untitled folder.

Handdrawn Fourier projection and difference map re trans Piloty compound, 1961.

'A note on the Piloty compounds: cis and trans isomers of 1:4 dichloro-1<sup>1</sup>4<sup>1</sup>-dinitrosocyclohexane' (in collaboration), latest bibliographical reference 1963. Not listed in *Bibliog*.

10pp. manuscript draft.

B.889-B.891

'Cis Piloty Compound'. Contents of folder so inscribed.

Manuscript notes and data; handdrawn Fourier projections and difference maps; computer printouts. 1961, 1964. Three folders.

B.892

Contents of untitled folder.

'A Note on the Piloty Compounds: cis and trans isomers of 1:4 dichloro-1<sup>1</sup>:4<sup>1</sup>-dinitrosocyclohexane' (in collaboration), latest bibliographical reference 1963. Not listed in *Bibliog*.

8pp. typescript.

B.893-B.895

'Piloty'. Contents of folder so inscribed.

Manuscript data, includes 'Bond lengths', 'hol Intensity Data'; x-ray film; handdrawn Patterson projections, Wilson plots. Nd. Three folders.

B.896

Notebook.

Inscribed 'Terrence J. Harper' inside front cover and 'cis 1-4 dichloro-1-4 dinitroso cyclohexane' on first page.

**SPORIDESMIN** 

1959

Crystals of sporidesmin, a substance from the fungus *Sporidesmium bakeri*, were given to Hodgkin for x-ray analysis by R.L.M. Synge.

B.897, B.898

'Sporidesmin.' Contents of folder so inscribed.

B.897

Manuscript notes, data, mostly not by Hodgkin, x-ray films. Includes 'Inactivated Sheep Poison from Fungus', 'Dick Synge's crystals', 'Facial Eczema Toxin'. March-November 1959.

B.898

1p. typescript draft, probably by Hodgkin, untitled, dated 8 May 1959.

Letters from R.L.M. Synge, August-October 1959.

Reprint 1959.

#### **CEPHALOSPORIN C**

1959-73

Cephalosporin C, an antibiotic related to the penicillins, was first isolated by G.G.F. Newton and E.P. Abraham in 1955. Soon after this Hodgkin made the first crystallographic measurements on the sodium salt of cephalosporin C.

B.899-B.902

'Cephalosporin C correspondence with National Research and Development Corporation'. Contents of folder so inscribed.

Correspondence re funding, reports 1959-66.

B.899

1959.

B.900

1960-61.

B.901

1962.

B.902

1963, 1965-66.

B.903-B.909	'Cephalosporin C'. Contents of box so labelled.
B.903-B.905	Patent specifications on cephalosporin C, 1960-61. Three folders.
	Include provisional and complete specifications, schedules of patents and patent applications.
B.906-B.909	Research reports for the NRDC, 1960-63. Four folders.
	Include typescript copy of 'The x-ray analysis of the structure of cephalosporin C', by Hodgkin and E.N. Maslen, <i>Bibliog.</i> 76, 1961.
B.910	'The x-ray analysis of the structure of cephalosporin C', by Hodgkin and E.N. Maslen, <i>Bibliog.</i> 76, 1961.
	18pp. typescript, with manuscript additions and corrections by Hodgkin.
	2pp. manuscript data.
B.911-B.916	'N.R.D.C. Reports on Cephalosporin C. Patents'. Contents of box so labelled.
B.911-B.913	Patent specifications on cephalosporin C, 1960-64. Three folders.
	Include provisional and complete specifications, schedule of patents and patent applications.
B.914-B.916	Research reports for the NRDC, 1961-64. Three folders.
B.917-B.925	'Cephalosporin C'. Contents of folder so inscribed.
	The contents relate to the paper 'Crystal and molecular structure of a synthetic compound related to the penicillins and cephalosporins, 3-benzyl 7-t-butyl 2,2-dimethyl-8-oxo-4-thia-1 aza- $6\alpha H$ -bicyclo[4.2.0] octane- $3\beta$ , $7\alpha$ -dicarboxylate' (with B.F. Anderson and K. Vijayan), <i>Bibliog</i> . 141, 1973.
B.917-B.920	Manuscript and typescript drafts. Four folders.
B.921	Correspondence 1969, 1972.
B.922	Manuscript notes and data, nd.

Cephalosporin Final Co-ordinates and Mean Plane B.923 'V. Kalyani. Calculations'. Manuscript and typescript data, nd. 13pp. typescript, incomplete and untitled, re 'the irradiation of 5-acetyl-3H-B.924 pyrazole(I)', with manuscript additions and corrections by Hodgkin, nd. B.925 'Cephalosporin C'. 28pp. typescript, not by Hodgkin, nd. Envelopes of x-ray films, nd. B.926, B.927 '[001] Preliminary Weissenberg Oscillation'. B.926 '[100] Preliminary Weissenbergs Oscillation Photos'. B.927 'okl new photos'. '1kl new data'. 'Degradation of Ceph C 5kl'. 1p. typescript re molecular weight of cephalosporin methyl ester, nd. B.928 1p. manuscript notes, nd. 1960 **FORMAZAN** 1p. manuscript notes from the literature, 1960. B.929 Manuscript data. Letter from J.M. Robertson, 1960. 13pp. typescript, untitled, [?by D. Dale]; computer printout of 'Niformazan

Final Distances', nd.

#### SUPRASTEROL II

1961-63

Suprasterol II is one of at least ten isomers ultimately produced by the ultraviolet irradiation of ergosterol. The molecular structure of suprasterol II was investigated through the x-ray analysis of a derivative supplied by J.W. Cornforth.

B.930, B.931

'Suprasterol'. Contents of box so labelled.

B.930

'The crystal structure of suprasterol II' (with C.P. Saunderson), *Bibliog.* 78, 1961.

6pp. typescript, with manuscript additions and corrections by Hodgkin.

5pp. typescript.

B.931

'The crystal and molecular structure of suprasteryl II 4-iodo-5 nitrobenzoate' (with C.P. Saunderson), latest bibliographical reference 1963. Not listed in *Bibliog*.

12pp. typescript.

1p. manuscript notes, not by Hodgkin.

### THIOSTREPTON

1965-72

The antibiotic thiostrepton was first isolated in 1954. A great part of its chemical structure was determined by Hodgkin and her collaborators by x-ray crystallographic techniques, the results of which were published in 1970 (*Bibliog.* 113).

B.932-B.937

'Thiostrepton'. Contents of folder so inscribed.

B.932

'Consolidated report of work done on Thiostrepton during the period November 1965 to February 1967 by Dr. M.A. Viswamitra, at the Chemical Crystallography Laboratory, Oxford'.

2pp. typescript; table of crystal data.

'Thiostrepton (monoclinic form)'.

4pp. typescript, by B.F. Anderson, dated 20 November 1968.

B.933

'The structure of thiostrepton' (with B.F. Anderson and M.A. Viswamitra),

Bibliog. 113, 1970.

'First Draft'. 7pp. typescript, with manuscript additions and corrections by

Hodgkin; 7pp. typescript, with abstract.

3pp. manuscript draft, not by Hodgkin.

B.934-B.936

Correspondence 1965-72.

B.934

1965-68.

B.935

1969.

B.936

1970-72.

B.937

Manuscript notes and handdrawn projections, nd.

'A brief summary of information on the chemistry of thiostrepton'.

2pp. typescript notes, nd.

B.938

Handdrawn Pattersons and difference maps, probably for future

publication, nd. One roll.

#### **MISCELLANEOUS**

B.939-B.957 Research folders

B.958-B.974 N

Notebooks and binders

B.975-B.982

Notes and data

#### Research folders

B.939-B.945

'Wolfenden Problems.' Contents of folder so inscribed.

B.939, B.940

'XII. Crystal Structure'.

B.939

Proof of chapter by Hodgkin. Latest bibliographical reference 1935.

B.940	Typescript and manuscript draft of corrections to be made, nd.[?1950s].
B.941	'The crystal structure of pentaborane. ${\rm B_5H_9}$ ', nd. Latest bibliographical reference 1952.
	Two 3pp. typescripts of problems.
	'The Structure of Pentaborane', nd. Bibliographical reference 1952.
	Two 3pp. typescripts of problems.
	2pp. typescript of problems.
B.942	Shorter manuscript drafts re pentaborane.
B.943, B.944	Manuscript notes and data, not all by Hodgkin, re Patterson analysis of pentaborane. Two folders.
B.945	Computer printouts re 'DH Problem', 'Two-Dimensional Projection', 1962.
B.946	Contents of untitled folder.
	'The Crystallographic Investigation of Complex Organic Compounds', latest bibliographical reference 1945. Not listed in <i>Bibliog</i> .
	8pp. typescript and manuscript draft, with manuscript additions and corrections by Hodgkin.
B.947, B.948	Contents of untitled folder.
	'X-ray crystallographic studies of compounds of biochemical interest', Bibliog. 45, 1948.
	44pp. typescript, divided into two for ease of reference.
B.949, B.950	'Hg <sub>2</sub> (NO <sub>3</sub> ) <sub>2</sub> ·2H <sub>2</sub> O.' Contents of folder so inscribed.
	Fourier projections, printouts, manuscript data, not by Hodgkin, for Patterson analysis, 1957-59. Two folders.
B.951	'Fourier Peak Heights and Shapes.' Contents of folder so inscribed.
	Computer printouts 1959, 1962.

B.952

Contents of untitled folder.

'Report on specimens received from Dr. F.I.G. Rawlins, The National

Gallery, sent by Dr. Iv A.M. de Wild.'

3pp. typescript; 1p. typescript data.

See also H.194.

B.953

'The error fourier file'. Contents of folder so inscribed.

Computer printouts, nd.

B.954-B.957

Contents of untitled folder.

Tables of manuscript data, nd. Four folders.

B.954

'Table of 1000 cos  $2\pi nx$ '.

B.955

'Table of 1000 cos  $2\pi nx$ '.

B.956

'1000 sin 2πnx'.

B.957

'1000 sin 2πnx'.

#### Notebooks and binders

B.958, B.959

Contents of untitled binder divided into two for ease of reference.

Manuscript notes, data, sketches *re* crystals and ?crystallisation of cholesterol, tribomobarbaloin, thiophthene, spartein sulphate, azoxy benzene, tetramethyl haematoporphyrin, 1933. Some notes by J.D. Bernal.

B.960-B.962

Contents of untitled binder divided into three folders for ease of reference.

Manuscript notes, data, sketches re crystals and crystallisation. Very

miscellaneous, 1935-37.

B.963-B.965

Contents of untitled binder divided into three folders for ease of reference.

Manuscript notes, data, sketches re crystals and crystallisation of ferritin,

insulin, penicillin, calciferol, sterols, 1945-50.

B.966-B.968 Contents of untitled binder, divided into three for ease of reference.

Manuscript notes, data, sketches, manuscript notes from the literature re crystals and crystallisation of vitamin B12, ferroverdin, cephalosporin,

penicillin, insulin, gramicidin, 1946-66.

B.969 Exercise book.

Manuscript data. One page dated 'June 18th 1946'.

B.970 Notebook.

Manuscript notes, manuscript notes from the literature, very miscellaneous. A few loose items, including x-ray film from study of acoric acid. One

page dated 1962; latest bibliographical reference 1965.

B.971 Notebook.

Manuscript notes and data, manuscript notes from the literature re vitamin

B12, insulin, nd. Latest bibliographical reference 1965.

B.972 'Ergometrine'. Exercise book so inscribed.

Manuscript data re ergometrine methiodide and lactoglobulin, nd.

B.973 Exercise book.

Manuscript data [for Patterson analysis], nd.

B.974 Exercise book.

Manuscript data, nd.

#### Notes and data

B.975-B.978 Manuscript notes, manuscript notes from the literature, 1937-[?1980s].

Four folders.

B.979, B.980 Manuscript and typescript data, mostly unidentified. Two folders.

B.981 Unidentified handdrawn sections, nd. One roll.

B.982

Unidentified ?Fourier refinement, nd.

#### LARGE FORMAT

Maps, projections etc. kept by Hodgkin (with the exception of B.990) in portfolios.

B.983

'Dry B12.'

Original handdrawn Fourier maps, molecular projection plots, various hands, re wet and dry B12. 1955-56.

B.984

Untitled.

Vitamin B12 fragment. Includes handdrawn projections, Fourier and Patterson maps. One item dated 1956.

B.985

'Dry B12'.

Very miscellaneous. Includes handdrawn Fourier maps, projection of 'John White's coordinates'. Various dates 1956-62.

B.986

'O Monoacid'. '[illegible]'. 'Red nitroso cpd.'.

Miscellaneous illustrative material, 1959-66.

B.987

'Factor V1a'.

Computer generated difference maps, 1962-63; computer generated vector maps, 1962; 'Phase Fourier', 1962; handdrawn 'Heavy Atom Fourier', 1964; computer generated 'Factor 51a Final Map'; [?Full]'Anomalous Dispersion Fourier'.

B.988

'Insulin.'

Handdrawn Patterson and Fourier maps, various hands, re 4 Zn insulin and 2 Zn insulin, heavy atom positions. 1958-65.

B.989

'2 Zn insulin (old) and UO2 insulin plotted on scale 1Å = 1cm.'

Handdrawn and computer generated Patterson and Fourier maps, 1958-60; diffraction data, 1966; original handdrawn L-cystine three-dimensional Patterson. Includes work by M.J. Adams ?re insulin fragment (dithizone), 1962.

B.990 Unlabelled ring binder.

Handdrawn insulin Pattersons, various hands, May-October 1962.

B.991 'Acetyl gramicidin S.'

Handdrawn Pattersons and Fouriers. Mostly the work of G.M.J. Schmidt.

SECTION C	OXFORD UNI	VERSITY	C.1-C.182
	C.1-C.3	SUB-FACULTY	OF CHEMISTRY
	C.4-C.23	TEACHING	
	C.24-C.56	HODGKIN'S RI	ESEARCH GROUP
		C.24-C.31	Research, technical and secretarial staff
		C.32-C.34	Accommodation
		C.35-C.52	Visitors to laboratory
		C.53-56	Miscellaneous
	C.57-C.66	WOLFSON RE SOCIETY	SEARCH PROFESSORSHIP OF THE ROYAL
	C.67-C.108	FUNDING AND	ADMINISTRATION OF RESEARCH
		C.67-C.82	The Rockefeller Foundation
		C.83-C.96	Department of Scientific and Industrial Research/Science Research Council
		C.97-C.100	The Nuffield Foundation
		C.101-C.104	The Squibb Institute for Medical Research
		C.105	The Wagman Foundation
		C.106-C.108	The British Diabetic Association
	C.109-C.143	EQUIPMENT A	ND SUPPLIES
		C.109-C.127	Correspondence with suppliers and government ministries
		C.128-C.139	Computing
		C.140-C.143	Neutron Diffraction
	C.144-C.172	ACCOUNTS	
C.173-C.178		SOMERVILLE	COLLEGE
	C.179-C.182	MISCELLANEC	ous

#### SUB-FACULTY OF CHEMISTRY

nd.

C.1 Reports by Hodgkin on periods of office as University Demonstrator in Chemical Crystallography, ?1946-50, 1950-54.
C.2, C.3 Miscellaneous papers and correspondence, includes material re future of crystallography department.
C.2 1969-74.

#### **TEACHING**

C.3

There is only a small amount of material *re* teaching. There are four binders of lectures material, probably in use in the 1940s and 1950s, although only a few items are dated. There is also duplicated material for practical classes.

Hodgkin gave up her teaching commitments in 1960 when she became Wolfson Research Professor of the Royal Society.

C.4-C.7 Contents of binder divided into four for ease of reference. Two items are dated 1941 and 1951; latest bibliographical reference 1956.

Manuscript notes on the literature; manuscript drafts on 'Intensity of x-ray reflections' and 'The interpretation of Weissenberg Photographs'; typescript drafts on 'Crystallography', 'Crystallography in biology' and 'Crystallography in geology'.

Contents of binder divided into four for ease of reference. A few items are dated between 1946 and 1949; latest bibliographical reference 1958.

Manuscript notes on the literature; lecture plans; manuscript draft of lecture from course on 'The structure of organic molecules'.

Contents of binder divided into five for ease of reference. A few items are dated between 1947 and 1959.

Manuscript notes on the literature; manuscript lecture notes; manuscript drafts on 'Crystallography in biology' and 'Chemical problems'.

Typescript draft on 'X-ray analysis and molecular structure'.

C.8-C.11

C.12-C.16

C.17 Contents of binder. One item is dated 1958.

Manuscript notes on the literature.

C.18 'Old lecture notes'. Contents of folder so inscribed. A few items are dated

between 1951 and 1954.

Manuscript notes on the literature; manuscript lecture notes.

C.19-C.23 'Teaching problems in x-ray analysis'. Contents of folder so inscribed

divided into five for ease of reference. A few items are dated between

1936 and 1947.

Manuscript notes; paginated duplicated typescripts of instructions for x-ray crystallography practical course, Part II Physics and Part II Metallurgy.

#### HODGKIN'S RESEARCH GROUP

The material covers the period 1945-80, although no formal research group was established until 1960 on Hodgkin's appointment as Wolfson Research Professor of the Royal Society.

#### Research, technical and secretarial staff

C.24-C.30	General papers and correspondence 1949-77.
0.24-0.00	delicial papero ana comespendente

C.24 1949-50, 1958.

C.25 1961-62.

C.26 1964-67.

C.27 1968-69.

C.28 1971-72.

C.29 1973-75.

C.30 1976-77, nd.

C.31

Lists of members of research group, 1959-71.

Manuscript notes on research group, nd.

# Papers and correspondence re accommodation of group, 1961-74

At the beginning of this period the group was housed in the Chemical Crystallography Laboratory. The group was then split between rooms in the Crystallography Laboratory and in the Departments of Physiology and Pharmacology. In 1970 the group moved to the new Laboratory of Molecular Biophysics.

C.32

'Equipment, furnishings and surveying'. Contents of folder so inscribed, 1961, 1966, 1970-73.

C.33

Architects' plans for room in Pharmacology Department, 1961. Includes

brief correspondence, 1961-62.

C.34

General papers and correspondence, 1966-74.

#### Visitors to laboratory

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Requests to visit/work with Hodgkin, 1945-80.

C.35	1945-47.	C.44	1970.
C.36	1948-49.	C.45	1971.
C.37	1950-55.	C.46	1972.
C.38	1956-59.	C.47	1973.
C.39	1961-63.	C.48	1974.
C.40	1964-65.	C.49	1975.
C.41	1966.	C.50	1976-80.
C.42	1967-68.	C.51	nd.
C.43	1969.		

C.52

Curricula vitae, brief biographical details of visitors to laboratory.

#### Miscellaneous

C.53 Correspondence with University Chest, 1969-77.
 C.54 Correspondence re use of computer at the Rutherford Laboratory, Harwell by D. Sayre, 1972-73.
 C.55 Exercise book recording letters written by Hodgkin and members of her group, identified by initials, 1974-76.
 C.56 Miscellaneous administrative papers and correspondence, 1945, 1971-77. Includes correspondence re accommodating Hodgkin in the Chemical Crystallography Laboratory following her retirement.

# WOLFSON RESEARCH PROFESSORSHIP OF THE ROYAL SOCIETY

Hodgkin was appointed Wolfson Research Professor of the Royal Society in 1960. The post was funded by the Isaac Wolfson Foundation, and the Royal Society invited nominations from all Fellows (see A.68, A.69). The Royal Society provided funding for the formal establishment of Hodgkin's research group, and continued to finance research and to pay for salaries until her retirement in 1977.

C.57-C.63 Papers and correspondence, mostly with the Royal Society, 1961-82.

C.57 1961, 1964-68.

C.58 1969.

C.59 1970.

C.61 1972.

C.60

C.62 1973-74.

C.63 1975-77, 1982.

1971.

C.64 Miscellaneous accounts.

C.65, C.66 Reports.

C.65 1960-70.

C.66 1971-75, 1977.

#### **FUNDING AND ADMINISTRATION OF RESEARCH**

### The Rockefeller Foundation 1941-64

The Rockefeller Foundation provided funding for Hodgkin's early work on insulin, her work on penicillin and gramicidin S, and for the purchasing of new equipment. It also helped to fund Hodgkin's group on her appointment as Wolfson Research Professor in 1960.

C.67-C.72 General papers and correspondence 1941-64.

C.67 1941-44.

C.68 1945-46.

C.69 1947-48.

C.70 1949-50, 1955.

C.71 1957-58.

C.72 1959-64, nd.

C.73-C.77 Correspondence with Gerard R. Pomerat, Assistant Director, and later Associate Director, for the Natural Sciences of The Rockefeller Foundation. 1946-63.

C.73 1946-47.

C.74	1948-49.		
C.75	1952-55.		
C.76	1956-58.		
C.77	1959-60, 1962-63.		
C.78, C.79	Correspondence with University Registry and The University Chest re Rockefeller grant 1957-64.		
C.78	1957-60.		
C.79	1961-64.		
C.80	Accounts 1957-63.		
C.81	Reports, typescripts and manuscript drafts. 1941-45, nd.		
C.82	Miscellaneous unidentified manuscript notes and drafts.		
Department of Scientific and Industrial Research (DSIR)/Science Research Council (SRC) 1948-76			
	In 1965 the SRC took over functions of the DSIR in respect of university science research funding.		
C.83-C.86	Correspondence and reports re DSIR funding 1948-65.		
C.83	1948-56.		
C.84	1957-59.		
C.85	1960-63.		
C.86	1964-65.		

C.87-C.92 Correspondence with SRC 1965-76.

C.87 1965-66.

C.88 1967.

C.89 1968-69.

C.90 1970-71.

C.91 1972-73.

C.92 1974-76.

C.93-C.95 Reports for SRC.

C.93 1966-69, 1971.

C.94 1972.

C.95 1973, nd.

C.96 Miscellaneous manuscript notes, statements of account 1967-75.

## The Nuffield Foundation 1949-59

C.97-C.99 Papers and correspondence, mostly re support for vitamin B12 research.

C.97 1949-51.

C.98 1952-56.

C.99 1957-59, nd.

C.100 Reports 1949-56, nd.

### The Squibb Institute for Medical Research 1962-69

C.101-C.103

Correspondence re support for thiostrepton research.

C.101

1962-64.

C.102

1965-66.

C.103

1967-68.

C.104

Reports 1966, 1969.

### The Wagman Foundation 1969-70

C.105

Correspondence re support for insulin research.

#### The British Diabetic Association 1970-76

C.106, C.107

Papers and correspondence re support for insulin research.

C.106

1970-73.

C.107

1974-76, nd.

C.108

Reports 1972-76, nd.

# **EQUIPMENT AND SUPPLIES**

# Correspondence with suppliers and government ministries

C.109	Unicam Instruments Ltd.	1937-68
C.110	Organon Laboratories.	1938-39
C.111	The Solus Electrical Co. Ltd.	1940-48

C.112, C.113	Hilger and Watts Ltd.	1941-73
C.112	1941, 1956-58.	
C.113	1960-73.	
C.114	The British Drug Houses Ltd.	1942, 1950
C.115	Metropolitan-Vickers Electrical Co. Ltd.	1945
C.116	Ministry of Supply.	1945, 1949-50
C.117	Eli Lilly and Co.	1946-49, 1954
C.118	Imperial Chemical Industries Ltd.	1947-49, 1958
C.119-C.121	Board of Trade, Customs and Excise, re importing equip	ment. 1948-67
C.119	1948.	
C.120	1949, 1967.	
C.121	Correspondence re importing Weissenberg goniometer,	1957-58.
C.122	National Research Development Corporation.	1955-56
C.123	Joyce, Loebl and Co. Ltd.	1956-63
C.124	Research and Control Instruments Ltd.	1961-62
C.125	Labquip.	1971
C.126	Enraf-Nonius Ltd.	1973
C.127	Miscellaneous papers and correspondence.	1936-71

# Computing

The material relates to Hodgkin's role in bringing an electronic computer to Oxford. She was chairman of the Computation Committee of the Board of Faculty of Physical Sciences, which revealed, in 1947, the urgent need for additional computational facilities at Oxford, and there is some correspondence re the search for financial support in establishing a computing unit.

There is also material *re* calculations carried out for Hodgkin in respect of her research on vitamin B12 and penicillin at the National Physical Laboratory, Teddington, at the University of California at Los Angeles and at the University of Manchester.

C.128-C.136

General papers and correspondence 1944-76.

C.128	1944-45.	C.133	1952-54.
C.129	1946.	C.134	1955.
C.130	1947.	C.135	1956-59.
C.131	1948-49.	C.136	1964-76.
C.132	1950-51.		

C.137-C.139

Appointment of Director of University Computing Unit 1956.

C.137, C.138

Letters of application, references. 2 folders.

C.139

Miscellaneous papers and correspondence.

# **Neutron Diffraction**

The material relates to the use of neutron diffraction facilities at the Atomic Energy Research Establishment at Harwell for Hodgkin's studies of organic crystal structures. There is material *re* funding by the SRC, and some correspondence *re* the use of facilities at the Institut Max von Laue-Paul Langevin at Grenoble.

Papers and correspondence 1967-73.

C.140

1967.

C.141

1968-69.

C.157

# **Oxford University**

C.142 1970-71. C.143 1972-73. **ACCOUNTS** C.144-C.165 Statements of account, invoices. C.144 1961, 1964-1965 June. C.145 1965 July-December. C.146 1966. C.147 1967 January-May. C.148 1967 June-December. C.149 1968 January-June. C.150 1968 July-December. C.151 1969 January-May. C.152 1969 June-December. C.153 1970 January-June. C.154 1970 July-December. C.155 1971 January-June. C.156 1971 July-December.

1972 January-June.

C.158	1972 July-December.
C.159	1973 January-June.
C.160	1973 July-December.
C.161	1974 January-June.
C.162	1974 July-December.
C.163	1975.
C.164	1976.
C.165	1977, 1981.
C.166	Accounts Book, 1970-76.
C.167-C.172	Order Books November 1964 - September 1972.
C.167	November 1964 - January 1966.
C.168	February 1966 - May 1967.
C.169	February 1967 - March 1968.
C.170	June 1967 - November 1968.
C.171	December 1968 - May 1971.
C.172	June 1971 - September 1972.

#### **SOMERVILLE COLLEGE**

Hodgkin was made a Fellow of the College in 1935 (Honorary Fellow 1977).

For lecture on 'Crystallography and chemistry in the first hundred years of Somerville College', see D.150-D.153.

C.173-C.176

General papers and correspondence 1949-91.

C.173

1949, 1965, 1967, 1970.

C.174

1972-74.

C.175

1976-77, 1985-91.

C.176

nd.

C.177

Somerville College Appeal.

Papers and correspondence 1975, 1988-89.

C.178

Miscellaneous drafts, manuscript notes. Includes 3pp typescript draft by Hodgkin, 'Janet Vaughan. The Retiring Principal of Somerville'.

#### **MISCELLANEOUS**

C.179, C.180

Oxford Enzyme Group 1970-86.

This group, of which Hodgkin was a founder member, was established in 1970 under the chairmanship of R.E. Richards in order to discuss and coordinate research in enzyme chemistry at Oxford.

C.179

Papers and correspondence 1970-71. Includes report by Hodgkin dated June 1971.

C.180

Papers and correspondence 1972-73, 1976, 1986.

Includes transcript of seminar held at Nuffield College, Oxford, on 'Academic Breakthroughs', dated 24 January 1986, in which R.E. Richards discusses the formation of the Enzyme Group and its function within Oxford scientific research.

C.181 Oxford University Independence Fund.

Papers and correspondence re fees for overseas students, 1967, 1970, nd.

C.182 Molecular Biophysics Group.

Correspondence *re* establishment of Molecular Biophysics Group, 1956, 1963-65.

Draft by H.A. Krebs on 'Molecular biophysics at Oxford'.

'Molecular biophysics'. Typescript of lecture given by Hodgkin to commemorate the opening of the new department.

Catalogue of the papers and correspondence of

# Dorothy Mary Crowfoot Hodgkin OM FRS

(1910-1994)

# **VOLUME II**

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SECTION D

PUBLICATIONS, LECTURES AND BROADCASTS

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D.1-D.125

**PUBLICATIONS** 

D.1-D.105

Drafts

Reprints

D.106, D.107

D.108, D.109 Lists of publications

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Invitations to lecture

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**BROADCASTS** 

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**ADDENDUM** 

Publications material received too late to present in main

chronological sequence at D.1-D.105.

#### **PUBLICATIONS**

#### **Drafts**

**D.8** 

A chronological sequence of material relating to publications, or to the intention to publish. Where applicable reference has been made to the bibliography compiled for the catalogue and reproduced on pp.298-312. References take the form Bibliog. ...

'The structure of some hydrocarbons related to the sterols' (with J.D. D.1 Bernal), Bibliog. 10, 1935.

1p. typescript only; 2 photographs.

'X-ray single crystal photographs of insulin', Bibliog. 11, 1935. **D.2** 

> 7pp. typescript, with manuscript additions and corrections by Hodgkin and marginal comments by J.D. Bernal.

'The interpretation of Weissenberg Photographs in relation to crystal D.3-D.5

symmetry', Bibliog. 12, 1935.

Manuscript and typescript drafts; manuscript notes. 3 folders.

'A note on the x-ray crystallography of the toad poisons, bufagin and **D.6** cinobufagin, and of strophanthidin', Bibliog. 13, 1935.

7pp. and 6pp. typescript drafts with manuscript additions and corrections by Hodgkin.

'Summary of x-ray work on crystals in organic compounds'. **D.7** 

> Not a publication but refers to work which formed the basis of D.2 and D.6 and was found with them.

4pp. typescript.

'X-ray crystallography and the chemistry of the sterols', Bibliog. 15, 1936.

2pp. typescript, 'Summary' (of Hodgkin's Ph.D. thesis). Unpublished but listed by Hodgkin with her published papers.

D.9	'The crystal structure of insulin: I The investigation of air-dried insulin crystals', <i>Bibliog.</i> 23, 1938.
	14pp. typescript, incomplete, with manuscript additions and corrections by Hodgkin.
D.10	'The molecular weight of fichtelite', Bibliog. 27, 1938
	4pp. typescript with manuscript additions by Hodgkin.
D.11-D.14	'The crystal structure of creatine monohydrate' (with H. Mendel), <i>Bibliog.</i> 58, 1954.
D.11	Manuscript and typescript drafts, with manuscript additions and corrections by Hodgkin.
D.12, D.13	Notes, diagrams, tables. 2 folders.
D.14	Brief correspondence.
D.15	'A crystallographic examination of the structure of morphine' (with M. Mackay), <i>Bibliog.</i> 63, 1955.
	15pp. typescript, with manuscript additions and corrections by Hodgkin.
D.16	'The structure of Vitamin B12. Part I. An outline of the crystallographic investigation of Vitamin B12' (in collaboration), <i>Bibliog.</i> 70, 1957.
	43pp. typescript, with manuscript additions and corrections by Hodgkin.
D.17-D.21	'The structure of Vitamin B12. Part II. The crystal structure of a hexacarboxylic acid obtained by the degradation of Vitamin B12' (in collaboration), <i>Bibliog.</i> 71, 1959.
D.17	Typescript drafts, incomplete, with manuscript additions and corrections by Hodgkin.
D.18	Manuscript notes and drafts, incomplete.
D.19	Data.

D.20	Figures.
D.21	Brief correspondence.
D.22	'J.D. Bernal', <i>Bibliog.</i> 79, 1961.
	6pp. typescript; letter.
D.23	'The structure of Vitamin B12. Part IV. The x-ray analysis of air-dried crystals of Vitamin B12' (in collaboration), <i>Bibliog.</i> 81, 1962.
	39pp typescript, with manuscript additions and corrections by Hodgkin.
	2pp. notes.
	Brief correspondence <i>re</i> parts III, IV and V of this series of papers on the structure of vitamin B12.
D.24	'The crystal structure of phenoxymethyl-penicillin' (with S. Abrahamsson and E.N. Maslen), <i>Bibliog.</i> 83, 1963.
	3pp. and 4pp. typescripts, incomplete. Manuscript additions by Hodgkin.
D.25	'The relative position of independent molecules within the same asymmetric unit', <i>Acta crystallogr.</i> , <b>17</b> , 1964. Not listed in <i>Bibliog</i> .
	15pp. typescript by Hodgkin, M.M. Harding, E. Coller, M.G. Rossman and D.M. Blow. Hodgkin does not appear as an author of the published paper.
D.26	'Die Röntgen - Strukturanalyse einiger biochemisch interessanter Moleküle', <i>Bibliog.</i> 93, 1965.
	14pp. typescript.
D.27-D.31	'The structure of the corrin nucleus from x-ray analysis', <i>Bibliog.</i> 94, 1965.
D.27	12pp. and 11pp. typescripts, with manuscript additions and corrections by $\operatorname{Hodgkin}$ ,
	3pp. typescript of 'Postscript'.
	1p. manuscript draft.

D.28	Manuscript notes; data.
D.29, D.30	Figures. 2 folders.
D.31	Brief correspondence.
D.32	'Vitamin B12', Bibliog. 95, 1965.
	17pp. manuscript draft; 14pp. typescript.
D.33	'The crystal structure of insulin II. An investigation of rhombohedral zinc insulins and a report of other crystalline forms' (in collaboration). <i>Bibliog.</i> 97, 1966.
	27pp. typescript, with manuscript additions and corrections by Hodgkin.
D.34, D.35	'The crystal structure of insulin III. Evidence for a 2-fold axis in rhombohedral zinc insulin' (in collaboration), <i>Bibliog.</i> 98, 1966.
D.34	21pp. typescript, dated 1963.
D.35	7pp. manuscript draft of section entitled, 'The translation function', dated '10.1.63', not by Hodgkin.
	'Comments and suggestions on insulin III', dated '4.8.64', not by Hodgkin.
	4pp. typescript of section on the translation function, headed 'Withdrawn', with marginal comments.
D.36	'A report on recent calculations on rhombohedral insulin crystals containing lead' (in collaboration), <i>Bibliog.</i> 100, 1967.
	8pp. typescript, with manuscript additions and corrections by Hodgkin.
D.37	'Crystalline modifications of ampicillin I. The trihydrate' (with D. Hall and M.N.G. James), <i>Bibliog.</i> 109, 1969.
	11pp. typescript.
D.38	'The crystal structure of insulin', Bibliog. 115, 1970.
	9pp. typescript, with additions and corrections by Hodgkin; figures.

D.39	'The crystal structure of insulin. IV. X-ray analysis of 2 zinc insulin crystals at 2.8Å resolution', 1970. Not listed in <i>Bibliog</i> .
	24pp. typescript, with note attached: 'This is an old (1970) account of the 2.8Å x-ray analysis of 2Zn insulin. This could perhaps be used as the basis for a paper.'
D.40	'Atomic positions in rhombohedral 2-zinc insulin crystals' (in collaboration), Bibliog. 120, 1971.
	2pp. typescript of summary entitled 'The crystal structure of insulin'.
D.41	Obituary of 'Professor J.D. Bernal', Bibliog. 121, 1971.
	$\ensuremath{6pp}.$ typescript, incomplete, with manuscript additions and corrections by Hodgkin.
	8pp. manuscript draft.
	Newspaper cutting of obituary.
	Brief correspondence.
D.42	'Some characteristics of protein crystals', Bibliog. 127, 1971.
	14pp. typescript, with manuscript additions and corrections by Hodgkin.
	See also F.46-F.48.
D.43	'The crystal structure of rhombohedral 2-zinc insulin' (in collaboration), Bibliog. 128, 1971.
	2pp. typescript; 9pp. data.
	The paper was given at a symposium by J.F. Cutfield. See also F.60-F.62.
D.44	'The structure of a protein hormone, insulin', <i>Contemp. Phys.</i> , 1971. Not listed in <i>Bibliog</i> .
	24pp. typescript by Hodgkin, T.L. Blundell, E. Dodson, G.G. Dodson and M. Vijayan. Hodgkin does not appear as an author of the published paper.
D.45	'The structure of large molecules', Bibliog. 135, 1972.

D.46	'The three dimensional atomic structure of insulin and its relationship to activity' (in collaboration), <i>Bibliog.</i> 136, 1972.
	25pp. typescript.
D.47	Not used.
D.48	'Chemical and biochemical studies of the tyrosine residues', latest bibliographical reference 1972. Not listed in <i>Bibliog</i> .
	10pp. typescript.
D.49	'Chemical and biochemical studies on the cystine disulphide groups', latest bibliographical reference 1972. Not listed in <i>Bibliog</i> .
	5pp. typescript, incomplete.
D.50	'The three-dimensional structure of insulin and its reflection in the processes of the ${\tt B}$ cell', latest bibliographical reference 1972. Not listed in ${\it Bibliog.}$
	13pp. typescript.
D.51	'The structure of ferroverdin I. Monoclinic ferroverdin crystals' (with Sofia Candeloro de Sanctis), <i>Bibliog.</i> 142, 1973.
	16pp. proof.
D.52	'The structure of ferroverdin II. Rhombohedral ferroverdin crystals' (in collaboration), <i>Bibliog.</i> 143, 1973.
	12pp. proof.
D.53, D.54	'Crystal and molecular structure of 8,12-diethyl-2,3,7,13,17,18-hexamethylcorrole hydrobromide' (with B. Anderson and T.J. Bartczak), <i>Bibliog.</i> 147, 1974.
D.53	10pp. typescript; figures; data.
D.54	Brief correspondence, includes referee's report.

D.55	'The crystal and molecular structure of rac-15-cyano-1,2,2,7,7,12,12-heptamethyl corrin hydrochloride' (with E.D. Edmond), <i>Bibliog.</i> 149, 1975.
	14pp. proof.
	Brief correspondence.
D.56	'Work in China on the structure and function of insulin', Bibliog. 150, 1975.
	3pp. typescript.
	Brief correspondence.
D.57-D.73	'Kathleen Lonsdale 1903-1971', Bibliog. 151, 1975.
	Hodgkin was invited by the Royal Society to write the memoir of the x-ray crystallographer, Dame Kathleen Lonsdale, on her death in 1971.
D.57, D.58	Typescript drafts, some incomplete, with manuscript additions and corrections by Hodgkin; reprint of memoir. 2 folders.
D.59	Manuscript notes; photographs.
D.60	Notebook.
D.60A	Exercise book.
D.61-D.67	Correspondence.
	Includes invitation from Royal Society to write memoir, extensive correspondence with Thomas Lonsdale, widower, requests for information and comments on drafts.
D.61	April-June 1971.
D.62	July-December 1971.
D.63	1972-73.
D.64	1974.

D.65	January-June 1975.
D.66	July-December 1975.
D.67	Requests for reprints of memoir.
D.68	Obituaries, biographical articles about Lonsdale.
D.69-D.73	Lonsdale's own material.
D.69, D.70	Miscellaneous notes, drafts, articles and photographs. 2 folders.
D.71	Autobiographical notes.
D.72, D.73	Correspondence (photocopies).
D.72	1927-31, 1942-43.
	The wartime correspondence includes letters written while Lonsdale was in prison for refusing to register for civil defence duties.
D.73	1949-52, 1959, 1968.
D.74	'The structure of insulin in 4-zinc insulin' (in collaboration), <i>Bibliog.</i> 152, 1976.
	14pp. typescript; 4pp. typescript; letter.
D.75	'Growing points and sticking points in x-ray analysis', 1977. Not listed in Bibliog.
	11pp. typescript.
	Correspondence.
D.76	'The molecular basis of insulin action', Bibliog. 155, 1977.
	11pp. typescript.
	Correspondence.

D.77, D.78	'Crystallographic measurements and the structure of protein molecules as they are', <i>Bibliog.</i> 156, 1979.
D.77	31pp. typescript; 15pp. typescript with manuscript additions and corrections by Hodgkin; 5pp. manuscript draft.
	Brief correspondence.
D.78	Manuscript notes.
D.79	'Sir Ernst Chain 1906-1979', Bibliog. 159, 1980.
	3pp. typescript of obituary; 5pp. manuscript draft; letter.
D.80-D.102	'John Desmond Bernal 1901-1971', Bibliog. 160, 1980.
	Hodgkin was invited by the Royal Society to write the memoir of the x-ray crystallographer, J.D. Bernal, on his death in 1971.
D.80	Manuscript and typescript drafts, many pages missing; figures.
	Reprint of memoir.
D.81-D.84	Hodgkin's notes and background material.
D.81	Manuscript notes.
D.82	Extracts from Bernal's diaries and notebooks.
D.83	Photographs.
D.84	'Eulogies to the Memory of Abraham Nunez Bernal', translated by V.V. Behar and sent to Bernal in 1940. This publication commemorates a Jewish martyr whose brother fled Spain in the seventeenth century to come to England, the first record of the name 'Bernal' in the British Isles.
D.85-D.90	Correspondence.
	Includes invitation from Royal Society to write memoir, requests for information and comments on drafts.

D.85	1971-73.	
D.86	1974-75.	
D.87	1976-79.	
D.88	1980-81, nd.	
D.89	Correspondence with Eileen Berna recollections by Bernal's former colle Bernal.	al, widow, 1971-81. Includes eagues, sent to Hodgkin by Eileen
	Photographs.	
D.90	Miscellaneous other correspondence,	1966-89.
D.91-D.102	Bernal's own material.	
D.91	Autobiographical.	
D.92	Bibliographical.	
D.93, D.94	Miscellaneous typescripts, transcripts	and articles. 2 folders.
D.95-D.102	Correspondence (photocopies).	
D.95	W.T. Astbury	1930-37
D.96	K. Boll-Dornberger	1961, 1962
D.97	W.L. Bragg	1930, 1934-40, 1942, 1965, 1967
D.98	I. Fankuchen	nd
D.99	A. Hutchinson	1923, 1927, 1937
D.100	M.F. Perutz	1937

D.101 O. Rosenheim 1932, 1933 1927-39, 1960-70 D.102 Miscellaneous correspondence 'H NMR study of the peptide antibiotic thiostrepton' (in collaboration), D.103 latest bibliographical reference 1981. Not listed in Bibliog. 29pp typescript. Figures. 'X-ray and neutron diffraction studies of the crystal and molecular structure D.104 of the predominant monocarboxylic acid obtained by the mild acid hydrolysis of cyanocobalamin', Bibliog. 168, 1984. 13pp. typescript, entitled 'A neutron diffraction analysis of the predominant monocarboxylic acid obtained by the mild acid hydrolysis of cyanobalamin', with manuscript additions and corrections by Hodgkin. 'Röntgenoskopie und Elektronenoskopie von dispersen Systemen, Faden, D.105 Filmen und Grenz schichten'. 2pp. typescript (in English) of review of article in German by W. Ostwald, [1930s]. 'The calculation of 3-dimensional structure factors and electron density for hexagonal and trigonal space groups', nd. Not listed in Bibliog. 9pp. typescript. Reprints Incomplete set of Hodgkin's reprints. Arranged chronologically. D.106 1932-66. D.107 1967-88.

## Lists of publications

Hodgkin's publications (to 1976). D.108

Reprints (to 1983).

Hodgkin's collaborators' publications: M.J. Adams, D.M. Blow, E. Dodson, D.109

G.G. Dodson, P. Eagles.

#### Editorial correspondence

Arranged alphabetically by publisher or journal title.

1942-47, 1959, 1961, 1973 D.110, D.111 Academic Press Correspondence re article entitled 'X-ray crystallography and sterol D.110 structure' which Hodgkin wrote for Vitamins and Hormones, Volume II, Bibliog. 38. 1942-47. Miscellaneous shorter correspondence. 1959, 1961, 1973. D.111 1946-48, 1959, 1991 D.112 Annual Review of Biochemistry Hodgkin contributed a chapter on x-ray crystallography for the 1948 Annual Review, Bibliog. 45, and agreed to write an introductory chapter to the 1993 Annual Review. Correspondence.

1934, 1949-51, 1961, 1963 D.113, D.114 The Chemical Society

Brief correspondence re referees' reports, 1934, 1961, 1963. D.113

Correspondence re Annual Reports on the Progress of Chemistry, 1949-D.114

51.

1966-67 D.115 The Clarendon Press

Hodgkin was asked to advise on an edition of 'Data for Biochemical

Research'.

D.125

# Publications, lectures and broadcasts

1956-57, 1964, 1966, 1971 D.116 Nature Correspondence re letters on vitamin B12, 1956-57. Correspondence re writing obituaries, 1964, 1971. Correspondence re permission to reproduce figures, 1966. 1971, 1977 D.117 The Royal Society Letter re publication, 1971. Correspondence re submission of paper to the Royal Society by Hodgkin on behalf of D. Rogers, 1977. D.118 Not used. D.119-D.125 Miscellaneous shorter correspondence 1934-91. Invitations to write, requests for advice. D.119 1934, 1937. D.120 1944-49. D.121 1951, 1956-59. D.122 1960-61, 1964-67. D.123 1970-74. D.124 1976-78.

1980-81, 1983-91.

#### **LECTURES**

For Hodgkin's lectures on non-scientific topics, see G.158, G.160, G.167-G.171. For her Nobel Prize lecture, see A.77-A.79.

#### **Drafts**

D.126

'Molecules in crystals', [Royal Society] Tercentenary Lecture, Beveridge Hall, University of London, 23 July 1960. *Bibliog.* 75.

17pp. typescript; 27pp. manuscript draft; newspaper cutting re lecture.

Founders' Memorial Lecture, Girton College, Cambridge, 1962.

2pp. manuscript draft.

Letter re arrangements.

Lecture on x-ray techniques and the structure of large molecules, 1965.

9pp. typescript, with manuscript additions and corrections by Hodgkin.

D.127

'X-rays and organic chemistry', Humphry Davy Lecture, Royal Institute of Chemistry, 22 November 1968.

Correspondence re arrangements.

16pp. typescript, incomplete.

Correspondence re publication of lecture.

D.128-D.133

'Botany and crystallography', The Chemical Society Hugo Müller Lecture, Swansea, 3 February 1969; London, 13 February 1969; Canterbury, 12 March 1969; Reading, 17 March 1969.

D.128

16pp. typescript.

Manuscript notes.

D.129

Correspondence with The Chemical Society re arrangements.

Brief correspondence re possible publication of lecture.

D.130

Correspondence re arrangements for Swansea lecture.

Brief correspondence arising.

D.131	Correspondence re arrangements for London lecture.	
	Brief correspondence arising.	
D.132	Correspondence re arrangements for Canterbury lecture.	
	Brief correspondence arising.	
D.133	Correspondence re arrangements for Reading lecture.	
	Brief correspondence arising.	
D.134	'Birkbeck, Science and History', The First Bernal Lecture, Birkbeck College, London, 23 October 1969. <i>Bibliog.</i> 112.	
	Brief correspondence re arrangements.	
	Reprint; 'Introductory remarks by Lord Blackett'.	
	Brief correspondence arising.	
D.135	'X-ray analysis and the structure of insulin', 1971.	
	9pp. typescript.	
D.136-D.139	'Insulin : chemistry and biochemistry', The Bakerian Lecture of the Royal Society, London, 15 June 1972. <i>Bibliog.</i> 144.	
D.136	25pp. typescript; 21pp. typescript, with manuscript additions and corrections by Hodgkin.	
	Summary of lecture.	
D.137	26pp. manuscript draft; 6pp. manuscript draft.	
D.138	Manuscript notes.	
D.139	Correspondence re arrangements.	
	Brief correspondence arising.	

D.140, D.141	'Cecil Frank Powell', Bristol, 1972.
D.140	<ul><li>15pp. typescript; 13pp. manuscript draft; manuscript notes.</li><li>Brief correspondence <i>re</i> arrangements.</li><li>Photograph of Powell sent to Hodgkin by Isobel Powell, widow.</li></ul>
D.141	Miscellaneous background material.
D.142	John Snow Memorial Lecture, Association of Anaesthetists, Bristol, 28 September 1973.
	2pp. manuscript draft; manuscript notes.
	Menu, with list of past lecturers.
	Correspondence re arrangements.
	Brief correspondence arising.
D.143, D.144	'Varieties of insulin', The Sir Henry Dale Lecture, Society for Endocrinology, London, 30 May 1974. <i>Bibliog.</i> 146.
	Hodgkin also received the Dale Medal for 1974 on the same occasion.
D.143	17pp. typescript; 2pp. proof of biographical sketch of Hodgkin.
D.144	Correspondence re arrangements.
	Correspondence arising, re publication of lecture.
D.145	'What should we learn : problems and experiences', Bristol Education Department, 30 October 1974.
	11pp. typescript, with manuscript additions and corrections by Hodgkin.
D.146	'The structure of insulin and its biological activity', The Banting Memorial Lecture, British Diabetic Association, Guildford, September 1976.
	3pp. typescript; 5pp. manuscript draft.
	Correspondence re arrangements.
	$Correspondence \ arising, includes \ correspondence \ re \ publication \ of \ lecture.$

D.147	'Insulin molecules - answers and questions', Gold Medal Lecture, Royal Society of Medicine, 15 February 1977.
	13pp. typescript; 3pp. manuscript draft.
	Correspondence arising re publication of lecture.
	See also A.132.
D.148, D.149	'Discoveries and their uses', Presidential Address, British Association for the Advancement of Science Annual Meeting, Bath, 4 September 1978.
D.148	14pp. typescript; 20pp. typescript, with manuscript additions and corrections by Hodgkin.
	Manuscript notes; background material.
D.149	Correspondence arising.
	See also E.54-E.56.
D.150-D.153	'Crystallography and chemistry in the first hundred years of Somerville College', James Bryce Memorial Lecture, Somerville College, Oxford, 2 March 1979.
D.150	15pp. typescript; 22pp. manuscript draft.
D.151	Manuscript notes.
D.152	Correspondence re arrangements.
	Brief correspondence arising.
D.153	Miscellaneous background material.
D.154, D.155	'Microcosm : the world as seen by John Desmond Bernal', J.D. Bernal Memorial Lecture, Royal Irish Academy, Dublin, 28 October 1980.
D.154	17pp. typescript, with manuscript additions and corrections by Hodgkin; 1p. abstract.
	References; figures; photographs.

D.155	Correspondence re arrangements.		
	Correspondence arising, includes transcript of interview with Radio Eireann re Bernal.		
D.156-D.158	'Moments of discovery', The Dalton Lecture, Manchester Literary and Philosophical Society, February 1981. <i>Bibliog.</i> 163.		
D.156	16pp typescript; 13pp. typescript, with manuscript additions and corrections by Hodgkin.		
D.157	16pp. manuscript draft; manuscript notes.		
D.158	Correspondence re arrangements.		
	Brief correspondence arising.		
D.159	'Insulin in crystals', Ottawa, 17 August 1981.		
	8pp. typescript; 7pp. manuscript draft.		
D.160	Speech at Women of the Year Luncheon, London, 17 October 1983.		
	3pp. manuscript draft.		
	Letter re arrangements; programme, list of guests.		
	Letter arising.		
D.161, D.162	'Marie Curie', Service of Commemoration to mark the 50th Anniversary of the death of Marie Curie, Westminster Abbey, 3 July 1984.		
D.161	Typescript and manuscript drafts.		
D.162	Correspondence re arrangements.		
	Correspondence arising; souvenir brochure; photographs.		

D.163 'New frontiers in biomolecular research', Inauguration of the Krebs Institute

for Biomolecular Research, Sheffield, 21 April 1989.

3pp. typescript.

Correspondence re arrangements, includes programme.

Brief correspondence arising.

D.164 'Crystallographic investigation of complex organic compounds', nd.

10pp. manuscript draft, heavily amended by Hodgkin.

'Insulin, its structure and biological activity', nd.

7pp. typescript.

D.165 Miscellaneous untitled drafts.

D.166, D.167 Miscellaneous unidentified lecture notes. 2 folders.

#### Invitations to lecture

D.168 1942, 1948, 1950, 1956-57.

D.169 1961-64.

D.170 1965 January-August.

D.171 1965 October-December.

D.172 1966 January-June.

D.173 1966 July-December.

D.174 1967 January-June.

D.175 1967 July-December.

D.176 1968 January-June.

D.177	1968 July-December.
D.178	1969 January-April.
D.179	1969 June-November.
D.180	1970 January-June
D.181	1970 July-December.
D.182	1971.
D.183	1972 January-July.
D.184	1972 August-November.
D.185	1973.
D.186	1974.
D.187	1975.
D.188	1976 January-May.
D.189	1976 September-December.
D.190	1977.
D.191	1978.
D.192	1979.
D.193	1980, 1982-85.
D.194	1987-88, 1990.

#### **BROADCASTS**

D.195 'Schools Broadcast'.

Manuscript draft, nd.

D.196-D.198 Correspondence

Most correspondence is with the BBC, chiefly about radio interviews. There is also some material relating to ITV, overseas television companies

and independent film companies.

D.196, D.197 Correspondence with BBC.

D.196 1959-60, 1965-69.

D.197 1971-74, 1977-78, 1984-86, 1988, nd.

D.198 Correspondence with other companies, 1948, 1969, 1971, 1975-77, 1984,

1988-90.

#### **ADDENDUM**

Publications material received too late to present in main chronological

sequence at D.1-D.105

D.199 'Memories of Sir Lawrence Bragg', Bibliog. 172, 1991.

4pp. manuscript draft, not all in Hodgkin's hand; 4pp. typescript.

4pp. typescript by J.D. Dunitz on 'Encounters with Bragg'.

Correspondence; review.

D.200 'Angles on crystal faces. Appreciation: 'Tiny' Powell', Bibliog. 173, 1991.

Photocopy of newspaper cutting.

Two typescript drafts, with manuscript additions and corrections.

SECTION E	SOCIETIES A	ND ORGANISATIONS E.1-E.193
	E.1	AMERICAN SOCIETY FOR X-RAY AND ELECTRON DIFFRACTION
	E.2-E.4	BIRMINGHAM UNIVERSITY REVIEW BODY
	E.5-E.46	BRISTOL UNIVERSITY
	E.47-E.57	BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE
	E.58, E.59	BRITISH CRYSTALLOGRAPHIC ASSOCIATION
	E.60, E.61	BRITISH SOCIETY FOR SOCIAL RESPONSIBILITY IN SCIENCE
	E.62	CANADIAN BIOCHEMICAL SOCIETY
	E.63-E.67	CHEMICAL SOCIETY
	E.68	COUNCIL FOR SCIENCE AND SOCIETY
	E.69	DEPARTMENT OF EDUCATION AND SCIENCE
	E.70	INDIAN ACADEMY OF SCIENCES
	E.71-E.99	INSTITUTE OF PHYSICS
	E.100-E.176	INTERNATIONAL UNION OF CRYSTALLOGRAPHY
	E.177	ROYAL INSTITUTION
	E.178	ROYAL IRISH ACADEMY
	E.179-E.193	ROYAL SOCIETY

# AMERICAN SOCIETY FOR X-RAY AND ELECTRON DIFFRACTION

1944-49

E.1

Circulars re meetings, 1944, 1947, 1949.

#### BIRMINGHAM UNIVERSITY REVIEW BODY

1972-73

The Review Body, to which Hodgkin was appointed, was established 'to consider the role, constitution and functioning of the University of Birmingham and to make recommendations to Council for any desirable change' (E.4). The Review Body reported in September 1972.

E.2

Brief correspondence, November 1972 - February 1973.

'Presentation of the Report of the Review Body by its Chairman the Rt. Hon. Jo Grimond, M.P.'

E.3

Manuscript notes by Hodgkin.

E.4

Background material. 1 box.

#### **BRISTOL UNIVERSITY**

1970-89

Hodgkin was elected Chancellor of Bristol University in 1970 and played an active role both within the University and in the city of Bristol. She retired in 1988.

For material re her appointment and retirement see A.113-A.116, A.154.

The material is presented as follows:

E.5-E.19	General papers and correspondence
E.20-E.26	Correspondence with the Vice-Chancellor
E.27-E.31	Drafts of speeches at degree congregations
E.32-E.39	Department of Architecture
E.40-E.44	Appeals
E.45, E.46	Miscellaneous

General papers and correspondence		1971-89
E.5	1971.	
E.6	1972.	
E.7	1973.	
E.8	1974.	
E.9	1975.	
E.10	1976.	
E.11	1977-81.	
E.12	1982.	
E.13	1983.	
E.14	1984-85.	
E.15	1986.	
E.16	1987.	
E.17	1988 January-June.	
E.18	1988 July-December.	
E.19	1989, nd.	

# Correspondence with the Vice-Chancellor

1970-90

Sir Alec Merrison was Vice-Chancellor when Hodgkin became Chancellor; he was succeeded by Sir John Kingman in 1984.

E.20 1970-72.

E.21 1973-75.

E.22 1976-78.

E.23 1983-84.

E.24 1985-86.

E.25 1987.

E.26 1988-90.

# Drafts of speeches at degree congregations

1971-87

E.27, E.28 Manuscript and typescript drafts 1971-1987.

E.27 1971, 1981-82.

E.28 1983-85, 1987. Includes photograph of Hodgkin conferring honorary

degree on unidentified recipient.

E.29, E.30 Manuscript drafts, nd. 2 folders.

E.31 Miscellaneous shorter manuscript notes and drafts, nd.

#### **Department of Architecture**

1981-85

In 1981 cuts in university expenditure threatened with closure the Department of Architecture. Despite Hodgkin's support for the Department's efforts to remain open, it closed in 1984.

The general papers and correspondence also include some material re the establishment of the Bristol Centre for the Advancement of Architecture. The Centre, of which Hodgkin was a patron, was set up independently in the city as a response to the closure of the university department.

E.32-E.38 General papers and correspondence 1981-85.E.32 1981-1982 April.E.33 1982 July-October.

E.34 1982 November.

E.35 1982 December.

E.36 1983.

E.37 1984-85.

E.38 nd.

E.39 Manuscript notes by Hodgkin re Department of Architecture.

# Appeals 1979-88

Papers and correspondence *re* appeals by individuals to Hodgkin as Chancellor.

E.40 1979-1980 April.

E.41 1980 May-December, 1984.

E.42-E.44 1988. 3 folders.

# E.45 Correspondence re the Salvation Army, 1971-72. Hodgkin was Vice-President of the Bristol Salvation Army Men's Social Services Appeals Committee. E.46 International Centre for Child Studies, 1982-83, 1987. The Centre was established in 1982 in conjunction with Bristol University.. Hodgkin was a Patron. Brief correspondence. Newspaper articles re Centre.

# BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

1977-79

Hodgkin was President of the British Association for the Advancement of Science for the year 1977-78 and presided at the Annual Meeting held in Bath in September 1978.

For material re her appointment see A.134.

E.47-E.50 General papers and correspondence 1977-79, 1988.

E.47 1977 January-July.

E.48 1977 September-December.

E.49 1978 January-June.

E.50 1978 July - 1979, 1988, nd.

E.51-E.53 Miscellaneous Committee papers 1977-79.

E.51, E.52 Minutes 1977-78.

This incomplete sequence includes minutes of the General Committee, Policy Committee, Finance and Staff Committee and Council.

E.51 1977.

E.52 1978.

E.53 Membership lists of General Committee 1977-79.

E.54-E.56 British Association Annual Meeting, Bath, 4-8 September 1978.

E.54 Correspondence *re* arrangements.

Correspondence arising.

Memorabilia; photographs.

E.55 Final programme; addendum to final programme.

'Outline of President's and Officers' Engagements'.

E.56 Committee papers.

E.57 Miscellaneous papers re general policy.

# **BRITISH CRYSTALLOGRAPHIC ASSOCIATION (BCA)**

1980-91

The British Crystallographic Association was established in 1982. Hodgkin was invited to become Vice-President at its foundation and served on the Council of the BCA from 1982.

E.58, E.59 Miscellaneous papers and correspondence 1980-91. Include minutes of meetings held to discuss the formation of the BCA.

E.58 1980-81.

E.59 1982, 1984, 1989-91, nd. Includes manuscript notes *re* penicillin research for BCA meeting.

#### BRITISH SOCIETY FOR SOCIAL RESPONSIBILITY IN SCIENCE

1968-73

The Society was founded in 1969 in the belief that the development of science 'should depend upon the social choices of the community and the personal choices of the scientist' (E.60).

E.60, E.61

Miscellaneous papers and correspondence 1968-73.

E.60

1968-69, 1971.

E.61

1972-73, nd.

#### CANADIAN BIOCHEMICAL SOCIETY

1988

E.62

Results of Survey of Women Faculty by the Society's Equal Opportunities Committee 1977-88.

#### CHEMICAL SOCIETY

1947-91

Hodgkin became a Fellow of the Chemical Society in 1931, becoming a Life Fellow in 1971. In 1972 the Chemical Society amalgamated with the Royal Institute of Chemistry, later becoming the Royal Society of Chemistry.

Hodgkin was Vice-President of the Chemical Society 1969-72.

E.63-E.67

General papers and correspondence 1947-91.

E.63

1947, 1966-67. Includes correspondence *re* possible participation of Chinese scientists in Chemical Society Symposium, 1967.

E.64

1968-70.

E.65

1971-72.

E.66

1973-74.

E.67

1977-78, 1982, 1991. Includes Newsletter for women members of the Royal Society of Chemistry *re* The Dorothy Hodgkin Symposium on 'Crystallography', 9 April 1991.

## **COUNCIL FOR SCIENCE AND SOCIETY**

1973-75

The Council for Science and Society was established in 1973 with the aim of promoting 'the study of, and research into, the social effects of scientific and technological development, and to disseminate the results to the public'. Hodgkin served on the Council 1973-75.

E.68

General papers and correspondence 1973-75.

Includes reprint of article in *Nature* on 'A Corporate Conscience for the Scientific Community?' and a list of Council members.

#### DEPARTMENT OF EDUCATION AND SCIENCE

1982-83

E.69

Papers and correspondence *re* funding for higher education, level of financial support for students and limitations on student numbers in universities, 1982-83. Includes correspondence with Margaret Thatcher, Prime Minister, and Sir Keith Joseph, Secretary of State for Education.

Manuscript and typescript notes; newspaper cutting.

### INDIAN ACADEMY OF SCIENCES

1983-85

Hodgkin was made a Foreign Member of the Academy in 1972.

E.70

Brief correspondence 1983-84, 1988; list of members of Council.

Newsletters 1984-85.

#### **INSTITUTE OF PHYSICS**

1941-80

Hodgkin was a member of the Institute of Physics for many years, and was particularly associated with the work of the Institute's X-ray Analysis Group.

The material is presented as follows:

E.71, E.72

General papers and correspondence

E.73-E.98

X-ray Analysis Group

E.99

Crystallography Group

## General papers and correspondence

1941-73

E.71

1941, 1943-46, 1949, 1952.

E.72

1969, 1971, 1973. Includes brief correspondence re publication.

#### X-ray Analysis Group

1943-69

The X-ray Analysis Group was established in 1943 to 'provide a meeting ground for those interested in the theory and practical applications of X-ray diffraction' (E.73). Hodgkin was elected to the committee in 1944; she also sat on the Fourier Service Panel, which discussed methods of crystallographic calculations.

Conferences were held regularly by the Group, and material relating to them is to be found in the chronological sequence of papers and correspondence below.

E.73-E.88

General papers and correspondence 1943-69.

E.73

1943-44.

E.74

1945 January-August.

E.75

1945 October-December. Includes minutes of the first meeting of the Barker Committee which met to discuss the publication of the Barker Index, reference tables which would facilitate the identification of the surface of a crystal in conjunction with measurement and geometrical analysis.

E.76	1946 January-May.
E.77	1946 June-July. Includes extensive correspondence <i>re</i> conference on 'X-ray analysis during the war years'.
E.78	1946 August-December.
E.79	1947.
E.80	1948 January-March.
E.81	1948 April-November. Includes correspondence <i>re</i> crystallographic nomenclature, report on the collection of crystallographic data.
E.82	1949.
E.83	1950 March-July. Includes list of members of the X-ray Analysis Group.
E.84	1950 September-November.
E.85	1951.
E.86	1952. Includes Institute of Physics Bulletin on the celebration of the fortieth anniversary of the discovery of x-ray diffraction.
E.87	1953. Includes material <i>re</i> International Tables for Crystal Structure Determination.
E.88	1966-67, 1969.
E.89-E.97	Committee papers 1943-53.
E.89	1943-44. Includes minutes of the first meeting of the Committee of the X-ray Analysis Group (which Hodgkin did not attend).
E.90	1945.

E.91	1946.
E.92	1947.
E.93	1948.
E.94	1950.
E.95	1951.
E.96	1952.
E.97	1953.
E.98	Manuscript notes by Hodgkin re X-ray Analysis Group.

## Crystallography Group

E.99

Newsletters 1979-80.

#### INTERNATIONAL UNION OF CRYSTALLOGRAPHY (IUCr)

1947-1993

The International Union of Crystallography, inspired by pre-Second World War international co-operation between crystallographers, held its first Congress and General Assembly at Harvard University in 1948. The aims of the IUCr, as laid out in its statutes (E.123), were: to promote international co-operation in crystallography; to promote the publication of crystallographic research and of crystallographic works; to facilitate the standardisation of methods and of units in crystallography; and to form a focus for the relationship of crystallography to other sciences, through the IUCr's membership of the International Council of Scientific Unions.

Hodgkin was a participant in every Congress from 1948 to 1993. At the Kyoto Congress in 1972 she was elected President of the Union, a post she held until the Amsterdam Congress three years later. As President Hodgkin acted as chairman of the General Assembly and of the Executive Committee, as the legal representative of the Union, and as the supreme representative of the IUCr in dealing with other bodies. She served on the Executive Committee of the IUCr from 1969 until 1978, after which she was not eligible for re-election.

The bulk of the material dates from Hodgkin's Presidency and from the period that immediately followed. There is also a record of her attendance at IUCr Congresses. The material is presented as follows:

E.100-E.120 General papers and correspondence

E.121-E.152A Congresses

E.153-E.168 Executive Committee

E.169-E.176 Miscellaneous

## General papers and correspondence

1971-86, 1993

This chronological sequence includes photocopied material  $\it re$  IUCr commissions sent to Hodgkin for information.

E.100 1971-72.

E.101 1973 January.

E.102 1973 February.

E.103 1973 March-April.

E.104 1973 May.

E.105 1973 June-July.

E.106 1973 August-September.

E.107 1973 October-December.

E.108 1974 January-February.

E.109 1974 March-June.

E.110 1974 July-December.

E.111	1975 January.
E.112	1975 February-March.
E.113	1975 April-June.
E.114	1975 July-September.
E.115	1975 October-December.
E.116	1976 January-May.
E.117	1976 August-November.
E.118	1977 January-July.
E.119	1977 September-December.
E.120	1978-86, 1993.
Congresses	1948-90
E.121-E.124	First General Assembly and International Congress of the IUCr, Harvard University, 28 July - 3 August 1948.
	Hodgkin gave a paper on 'Recent Work on Complex Organic Compounds'.
E.121	Correspondence re arrangements, August 1947 - April 1948.
	Provisional list and final list of non-American participants.
	Programme.
E.122	Abstracts of papers given at Congress.

E.123

General Assembly.

Delegates to the General Assembly were nominated by the National Academies of countries adhering to the IUCr; all crystallographers could attend the Congress.

Agenda; notes on the agenda.

Minutes.

Appendices. These are reports by the Provisional Commissions that had been set up to investigate areas of particular crystallographic importance. Hodgkin was a member of the Commission on Crystallographic Data (E.173).

E.124

Photograph of delegates (identified by key).

Newspaper article.

E.125, E.126

Second General Assembly and International Congress of the IUCr,

Stockholm, 27 June - 3 July 1951.

Hodgkin gave a paper on 'The examination of the crystal structure of

vitamin B12'.

E.125

List of participants.

'General Information'.

E.126

Programme.

Abstracts of papers given at Congress.

E.127

Third General Assembly and International Congress of the IUCr, Paris, 21-

28 July 1954.

Letter re arrangements.

Agenda for the General Assembly; notes on the agenda.

E.128

Fourth General Assembly and International Congress of the IUCr, Montreal,

10-17 July 1957.

Brief correspondence re arrangements.

Fifth General Assembly and International Congress of the IUCr, Cambridge, E.129 England, 15-24 August 1960. Hodgkin chaired a session on Proteins and Related Compounds. A paper on 'X-ray studies on the structure of insulin', which she co-authored, was also given. Letter re arrangements, with attached letters of invitation to Chinese and Russian crystallographers. Circular re revision of By-Laws. Programme. E.130 Sixth General Assembly and International Congress of the IUCr, Rome, 9-18 September 1963. Brief correspondence re arrangements. Letter arising, re non-participation of East German crystallographers. Seventh General Assembly and International Congress of the IUCr, E.131 Moscow, 11-22 July 1966. Hodgkin gave a paper at the Congress, after which she and her husband, Thomas, travelled through central Asia. Correspondence re arrangements. Includes itinerary of journey through central Asia. Correspondence arising. Eighth General Assembly and International Congress of the IUCr, Stony E.132 Brook, New York, August 1969. Correspondence re arrangements. Includes correspondence re possible Chinese participation. Ninth General Assembly and International Congress of the IUCr, Kyoto, 26 E.133, E.134 August - 7 September 1972. Before the Congress Hodgkin visited China (F.68-F.71); she gave a special lecture at Kyoto on 'Crystallographic Work on Insulin in China'. Correspondence re arrangements. Includes letter and questions sent to E.133 Hodgkin re interview, with her manuscript notes.

Correspondence arising, October 1973.

E.134	'Agenda for Joint Meeting of Old and New Members of Executive Committee'. With manuscript notes by Hodgkin.
	3pp. manuscript draft by Hodgkin; manuscript notes ?re history of the IUCr.
	Newsletter. Includes interview with Hodgkin.
E.135-E.141	Tenth General Assembly and International Congress of the IUCr, Amsterdam, 7-15 August 1975.
	The congress marked the end of Hodgkin's Presidency of the IUCr.
E.135-E.138	Correspondence <i>re</i> arrangements, April 1973 - July 1975. Includes correspondence <i>re</i> writing a history of the IUCr and <i>re</i> organising a special session of the congress to mark the thirtieth anniversary of the founding meeting in London.
E.135	1973 April, 1973 October - 1974 January.
E.136	1974 May-December.
E.137	1975 January-March.
E.138	1975 May-July.
E.139	Correspondence arising, August 1975 - February 1976. Includes notes on a report of the congress, correspondence <i>re</i> election of new officers of the IUCr.
E.140	'Agenda and Appendices to the Agenda of the Tenth General Assembly'.
E.141	2pp. manuscript draft by Hodgkin, probably of Presidential address.
E.141	2pp. manuscript draft by Hodgkin, probably of Presidential address.  14pp. typescript by P.P. Ewald on 'The Development of the "New Crystallography" and of its Union'.
E.141 E.142-E.148	14pp. typescript by P.P. Ewald on 'The Development of the "New

E.142-E.145	Correspondence <i>re</i> arrangements, June 1974 - February 1978. Includes correspondence <i>re</i> possibility of holding the congress in India.
E.142	1974 June-December.
E.143	1975 January-March.
E.144	1975 April-August.
E.145	1978 January-February.
E.146	Programme.
E.147	Report; list of participants; memorabilia.
E.148	'Agenda and Appendices to the Agenda of the Eleventh General Assembly'.
E.149	Twelfth General Assembly and International Congress of the IUCr, Ottawa, 16-25 August 1981.
	Hodgkin presented the Congress Discourse at the Opening Ceremony. She spoke on 'Insulin in Crystals'.
	Letter re arrangements; programme.
E.150	Thirteenth General Assembly and International Congress of the IUCr, Hamburg, 9-18 August 1984.
	Letter of invitation only.
E.151	Fourteenth General Assembly and International Congress of the IUCr, Perth, Western Australia, 12-20 August 1987.
	Agenda of the General Assembly, with appendices.
E.152	Fifteenth General Assembly and International Congress of the IUCr, Bordeaux, 19-28 July 1990.
	Brief correspondence re arrangements.
	Programme.

E.152A

Sixteenth General Assembly and International Congress of the IUCr,

Beijing, September 1993.

One letter only, 1989, re IUCr Executive Committee's proposal to postpone the Congress until 1996 in the aftermath of the Tiananmen Square shooting in Beijing.

## **Executive Committee**

General papers and correspondence E.153-E.163

E.164-E.168 Minutes and agendas.

General papers and correspondence 1970-84. E.153-E.163

E.153 1970-71.

E.154 1972.

E.155 1973 January-June.

1973 July-November. E.156

E.157 1974 January-June.

E.158 1974 July-September.

1974 October-December. E.159

E.160 1975.

1976-77. E.161

E.162 1978-79.

E.163 1984, nd.

E.164-E.168 Minutes and agendas 1971-78.

E.164 1971, 1974.

E.165 1975.

E.166 1977.

E.167, E.168 1978. 2 folders.

#### Miscellaneous

E.169-E.172 Acta Crystallographica (the journal of the IUCr). Miscellaneous papers and

correspondence, 1947-75.

E.169 1947-50.

E.170 1971-72.

E.171 1973.

E.172 1975.

E.173 Brief correspondence only re Commission on Crystallographic Data and

Computing, of which Hodgkin was a member, 1950.

E.174, E.175 Correspondence re scientific relations with China, 1971-78.

E.174 1971-73.

E.175 1974-78.

E.176 Correspondence re the writing of an historical account of the foundation

of the IUCr, 1973-74.

Reprint of 'The International Union of Crystallography: Its Formation and

Early Development'. By Harmke Kamminga, 1989.

1979-80

## Societies and organisations

ROYAL INSTITUTION 1972-86

E.177 Miscellaneous papers and correspondence.

## ROYAL IRISH ACADEMY

E.178 Correspondence *re* visit to Dublin, December 1979, where Hodgkin gave a lecture on 'History and the x-ray analysis of protein'. While in Dublin she also presented a paper with J. Rotblat to the National Committee for the Study of International Affairs on 'Pugwash Conferences on Science and

World Affairs'.

ROYAL SOCIETY 1947-93

Hodgkin was elected to the Fellowship in 1947 (A.58-A.61).

E.179-E.182 General papers and correspondence 1958-92.

E.179 1958-70. Includes correspondence, 1968, re proposed Leverhulme Visiting

Professorship to Yugoslavia. Hodgkin was invited to apply.

E.180 1972-74, 1976.

E.181 1977-78.

E.182 1979-80, 1986-87, 1990, 1992.

E.183-E.185 British National Committee for Crystallography 1947-61.

The National Committee selected delegates to represent the Royal Society at the General Assembly of the IUCr and maintained contact between the Union and the Royal Society. Hodgkin sat on the Committee from 1947.

Minutes and agendas 1947-61.

E.183 1947-51.

E.184 1953, 1954.

E.185

E.186-E.188 Exchanges.

E.186, E.187 Papers and correspondence, mostly re visits by Russian and Chinese

scientists, 1965-90.

E.186 1965-78. Includes report of visit of Royal Society delegation to China,

1972.

1961.

E.187 1980-90.

E.188 Minutes and agendas of ad hoc meetings to consider the Royal Society's

relations with the Academia Sinica, 1965-66.

E.189-E.192 Nominations 1955, 1967-93. 5 folders.

#### SECTION F

#### **VISITS AND CONFERENCES**

F.1-F.179

This section presents a chronological sequence of material relating to Hodgkin's visits and conferences, 1936-93, though the great bulk of the material relates to the period after the award of the Nobel Prize in 1964. There is evidence of her interest in maintaining scientific contacts with the USSR and China during the Cold War, the first of many visits taking place in 1953 (F.7) and 1959 (F.14) respectively, and there is evidence of visa difficulties in respect of visiting the USA (F.9) during the same period. She also made frequent visits to Eastern Europe outside the USSR. India was another locus of valued scientific contacts and she made a number of extended visits, for example in 1974 (F.78-F.80) and 1978 (F.113-F.119).

Not all Hodgkin's travel is documented in this section. Records of her attendance at International Union of Crystallography congresses are to be found in Section E with other IUCr material. Visits and conferences which bear on her well-known peace and humanitarian interests are to be found in Section G. These include the Pugwash Conferences on Science and World Affairs and her visits to Vietnam in 1971 and 1974. Some visits of particular biographical significance (including the award of the Nobel Prize and subsequent Nobel meetings) are documented in Section A.

After the main chronological sequence there is a separate sequence of invitations declined (or with no evidence of acceptance), 1945-89.

There is also an addendum of material received too late to present in the main chronological sequence.

F.1

Visit to The Netherlands, November 1936.

Hodgkin visited The Netherlands, probably to speak to the Dutch Biochemical Society. The visit was arranged by J.D. Bernal and H.G.K. Westenbrink.

Letter re arrangements.

Letter arising.

F.2

Seventh International Congress of Genetics, Edinburgh, 23-30 August 1939.

Letter re arrangements, concerning the withdrawal of Russian scientists.

F.3-F.6

Symposia on Quantitative Biology, Long Island Biological Association, Cold Spring Harbor, Long Island, New York, 8-16 June 1949.

Hodgkin was invited to the symposium on amino acids and proteins to give a paper on 'X-ray analysis and protein structure.' *Bibliog.* 48.

F.3 Correspondence re arrangements. Programme Information re publication of papers. Manuscript draft, footnotes, bibliography of Hodgkin's paper. F.4 2pp. proof; brief correspondence re publication. Correspondence re reproducing figures from other articles. F.5 Miscellaneous background notes; photographs. Drafts of papers by Hodgkin, probably used as background material for F.6 symposium paper. F.7 Visit to USSR, 1953. Letter to Home Office, probably from Hodgkin and her husband, Thomas, re refusal to grant a visa to the Russian biochemist V.I. Oparin. The letter also refers to a visit made by the Hodgkins to the USSR earlier in the year. Manuscript draft of Hodgkin's report on the 'Last day in Moscow'. Folder also includes photographs of visit and theatre programme. See also A.12. F.8 Visit to Zürich, November 1956. Hodgkin was invited to give a lecture to the Department of Chemistry at the Laboratorium für organische Chemie. Correspondence re arrangements. Fourth International Congress of Crystallography, Montreal, 10-19 July F.9 1957. Hodgkin was invited by W.N. Lipscomb to the Congress to give a paper on protein structure, subsequently to be combined with a visit to Lipscomb's own department at the University of Minnesota. Visa problems, however, prevented her from visiting the USA at this time. See also H.135. Later that year arrangements were made for Hodgkin to visit the USA and in December she visited the University of Minnesota, UCLA and the California Institute of Technology (Linus Pauling).

Correspondence re arrangements. June-November 1956, July-December

1957.

F.10 Visit to Copenhagen, 4-6 November 1957.

Hodgkin was invited to give a lecture to the Danish Pharmaceutical Society

and to visit the NOVO Terapeutisk Laboratorium.

Correspondence re arrangements.

F.11 Visit to Scandinavia, 20-26 March 1958.

> Hodgkin was invited to give three lectures at The Technical University of Norway, Trondheim, on 20, 21 and 22 March. She then travelled to Sweden in order to give a lecture at the University of Uppsala on 24 March

and then a lecture in Stockholm on 25 March.

Correspondence re arrangements. Includes itinerary for visit to Uppsala.

F.12 Visit to Amsterdam, 6-10 May 1958.

> Hodgkin was invited by the Royal Netherlands Academy of Sciences and Letters to the celebration of the 150th anniversary of its foundation.

Correspondence re arrangements.

Correspondence arising.

Visit to Finland and USSR, May 1959. F.13

> Hodgkin was invited to give a paper at a conference in Leningrad, from where she and Thomas Hodgkin went on to Moscow. They had visited

Helsinki on their way to the USSR.

Correspondence re arrangements.

Correspondence arising.

F.14 Visit to China, September 1959.

Hodgkin was invited to visit China by the Chinese People's Association for

Cultural Relations with Foreign Countries.

Brief correspondence only, including letter from K. Lonsdale re contacts

with Chinese scientists.

F.15 Visit to USA, ?early 1960.

Hodgkin was invited to give a lecture to a symposium at the University of

Washington, Seattle.

Letter re arrangements.

F.16

Visit to USA, March 1961.

Hodgkin gave a lecture at Dartmouth College, New Hampshire, from where she travelled to the University of Chicago to give the Lee Lecture.

Correspondence re arrangements.

Letter arising, re offer of permanent professorship at the University of Chicago.

F.17

Fifth International Congress of Biochemistry, Moscow, August 1961.

Letter re arrangements.

6pp. draft, probably of paper on insulin given at conference.

F.18

Visit to East Berlin, March 1962.

Hodgkin was invited to a two-day colloquium to mark the opening of a new building for the Institut für Strukturforschung der Deutschen Akademie der Wissenschaften zu Berlin.

Correspondence re arrangements, in German.

F.19

Visit to USA, 25-31 March 1963.

Hodgkin visited the USA to participate in a symposium entitled 'Chemistry in Medicine', held at Brookhaven National Laboratory, Long Island, to celebrate the 80th birthday of Dr. Donald D. Van Slyke. From there she planned to go to Boston.

Correspondence re arrangements.

Correspondence arising re publication of symposium proceedings.

F.20

Visit to Zürich, June 1963.

Hodgkin was invited by the Zürich Chemical Society to give a lecture on her work on vitamin B12.

Correspondence re arrangements.

Letter arising.

F.21

Visit to Czechoslovakia, 21-28 September 1963.

Hodgkin was invited to visit the Slovak Academy of Sciences, Bratislava, and Prague. She travelled by car with Thomas Hodgkin from the International Congress of Crystallography in Rome, which took place on 8-18 September.

Correspondence re arrangements.

F.22

Visit to Algeria, 10-27 April 1965.

Hodgkin was invited by the University of Algiers to give seminars related to the work for which she won the Nobel Prize.

Correspondence re arrangements.

Correspondence arising.

F.23

Visit to Munich, 8-10 June 1965.

Hodgkin was invited to give a lecture at the Physikalisch-Chemisches Institut der Technischen Hochschule.

Correspondence re arrangements.

Letter arising.

F.24

Ninth Latin American Chemical Congress, Puerto Rico, 1-6 August 1965.

Hodgkin was invited to give a lecture, probably on the determination of the structure of vitamin B12.

Correspondence re arrangements.

Letter re publication of lecture.

F.25, F.26

Visit to Japan and China, September-October 1965.

Hodgkin was invited by the British Council to lecture in connection with the British Exhibition in Tokyo. She lectured at the Universities of Tokyo, Kyoto and Osaka on the subjects of vitamin B12 and X-ray analyses of complex organic molecules. See also H.173. Leaving Japan after one week, she travelled to China via Hong Kong, visiting Canton and Shanghai.

F.25

Correspondence *re* arrangements, including itineraries for visit to Japan and information for visitors. April-September 1965.

Correspondence arising, includes two letters re publication of lecture given F.26 in Tokyo on the subject of vitamin B12. Typescript of lecture on the 'X-ray analysis of large organic molecules'. given at Kyoto. Visit to Düsseldorf, 27-28 October 1965. F.27, F.28 Hodgkin lectured to the Arbeitsgemeinschaft für Forschung des Landes Nordrhein-Westfalen on 'The x-ray analysis of some biochemically interesting molecules'. Bibliog. 93. Correspondence re arrangements, in English and German. November F.27 1964, April-October 1965. Correspondence arising re translation of lecture into German and its F.28 publication. In English and German. Incomplete typescript of lecture. Visit to Massachusetts Institute of Technology, November 1965. F.29 Hodgkin was invited to lecture at M.I.T., spending a week there together with Thomas Hodgkin. Correspondence re arrangements. Letter arising. F.30 Visit to Ghana, December 1965. Hodgkin was invited to give the Aggrey-Frazer-Guggisberg Lectures at the University of Ghana. Correspondence re arrangements, extract of lecture. Correspondence arising. Visit to The Netherlands and West Germany, 7-15 March 1966. F.31, F.32 Hodgkin was invited to lecture to Dutch universities by the Organisation of Students in Science and Technology. This was directly followed by a lecture in Aachen to the Chemical Institute there on the subject of 'Crystallography and the Structure of Vitamin B12'.

Correspondence re arrangements for visit to The Netherlands. F.31 Correspondence arising. Correspondence re arrangements for visit to West Germany. F.32  $Correspondence \ arising, includes \ correspondence \ re \ publication \ of \ lecture.$ F.33 Visit to Switzerland, May 1966. Hodgkin was invited to lecture, probably on the structure of vitamin B12, to a conference on Stereochemistry held near Lucerne. Correspondence re arrangements. Visit to the USA and Canada, May 1966. F.34 Hodgkin gave the Harvey Lecture, entitled 'Some Observations on Crystallography, Chemistry, and Medicine', Bibliog. 102, to the Harvey Society of New York, and also lectured at the Rockefeller Institute. From there she went to Buffalo, and then on the Ottawa. Correspondence re arrangements. Draft of Harvey Lecture; proof. Visit to Paris, June 1966. F.35 Hodgkin was invited to represent the International Union of Crystallography at the celebration of the tercentenary of the foundation of the Academie des Sciences de l'Institut de France. Correspondence re arrangements. Letter arising. F.36 Visit to Yugoslavia, 9-12 November 1966. Hodgkin was invited to Zagreb to the celebration of the 100th Anniversary of the foundation of the Yugoslav Academy of Sciences and Arts. Correspondence re arrangements. Correspondence arising.

F.37	International Symposium on Conformation of Biopolymers, Madras, 18-21 January 1967.
	Hodgkin visited India to attend the symposium, but also toured extensively throughout the month of January, visiting the Universities of Delhi and Madurai, and lecturing at the National Chemical Laboratory, Poona, and at the Trombay Atomic Energy Establishment, Bombay.
	Correspondence re arrangements.
	Correspondence arising.
F.38-F.40	Gordon Research Conference on Coenzymes and Metabolic Pathways, Meriden, New Hampshire, USA, July 1967.
	Hodgkin was invited to chair the session on 'The Chemical Synthesis and Biosynthesis of B12'. Following the conference, she visited Yale University, Washington D.C., New York, Purdue University and Ottawa, returning to London on 16 July.
F.38	Correspondence <i>re</i> arrangements, includes itinerary. January 1966 - June 1967.
F.39	Correspondence re meeting at National Academy of Sciences, Washington D.C., about contacts with Chinese scientists. January-June 1967.
F.40	Correspondence arising, includes photograph of participants (identified) at conference.
F.41	International Union of Pure and Applied Chemistry, Corrin Symposium, University of Nottingham, 17-19 July 1967.
	Hodgkin gave a lecture entitled 'Developments in the crystallographic analysis of the cobalamins'.
	Correspondence re arrangements, includes programme of lectures.
F.42	Visit to Zürich, 16 September 1967.
	Hodgkin was invited to give a lecture at a Symposium arranged to celebrate the 80th birthday of L. Ruzicka. She probably lectured on 'Chemistry in Space'.
	Correspondence re arrangements.

F.43 Visit to West Germany, March 1968. Hodgkin was invited to a conference at Hirschegg, where she gave a paper on the insulin work of her team. Correspondence re arrangements. Correspondence arising. F.44 Fifth International Symposium on the Chemistry of Natural Products, London, 8-13 July 1968. Hodgkin was invited to serve as Vice-Chairman for the session devoted to 'Biosynthesis'. Letter of invitation only. F.45 Visit to USA, May 1969. Hodgkin attended the Lilly Research Laboratories meeting on proinsulin in Indianapolis, on the way giving a talk on the structure of insulin to a colloquium held at the University of Chicago. Correspondence re arrangements. Second International Conference 'de la Physique Théorique à la Biologie', F.46-F.48 Institut de la Vie, Versailles, 30 June - 5 July 1969. Hodgkin gave a paper on 'Some characteristics of protein crystals', Bibliog. 127, and contributed to various discussions at the conference. Correspondence re arrangements, in English and French. Includes draft F.46 abstract of Hodgkin's paper. February-March 1968, February-June 1969. Typescript of Hodgkin's discussion remarks at conference, amended by F.47 Hodgkin. Correspondence arising, re publication of paper. July 1969 - January F.48 1971. Visit to East Germany, October-November 1969. F.49, F.50 Hodgkin attended a meeting of the Deutsche Akademie der Naturforscher Leopoldina at Halle, where she was the Royal Society's official This was followed by a colloquium entitled representative. 'Röntgenkristallstrukturanalyse', held in Berlin in honour of the 60th birthday of K. Boll-Dornberger, where Hodgkin gave a paper on 'Recent

developments and results in X-ray analysis'.

Correspondence re arrangements, August-October 1968, February-F.49 September 1969. F.50 Memorabilia, includes programmes for both events. Correspondence arising, includes article (in German) on the Leopoldina meeting. Visit to Sudan, 11-29 March 1970. F.51 Hodgkin was invited by the University of Khartoum to act as an external examiner for the Department of Chemistry. While in Khartoum she lectured to the department on insulin. Correspondence re arrangements. Correspondence arising. Ghana Association for Development Studies Second U.K. Conference on F.52 Trade, Industry and Development, Cambridge, 3-5 April 1970. Hodgkin was invited to deliver a paper on 'The Role of Scientific and Technological Research in the Economic Development Programme of Ghana'. Invitation and programme only. Visit to Copenhagen, 19-21 April 1970. F.53 Hodgkin was invited by the Danmarks Farmaceutiske Højskole to give the Baggesgaard Lecture, on 'The structure of insulin', Bibliog. 130. While in Copenhagen she also visited the NOVO Terapeutisk Laboratorium and the Carlsberg Institute. Correspondence re arrangements, November 1969 - March 1970. Letter arising. Reprint of lecture. A.L. Patterson Memorial Lecture, Institute for Cancer Research, Fox Chase, F.54 Philadelphia, 29 April 1970. Hodgkin lectured on 'X-ray analysis and the structure of insulin'. Correspondence re arrangements; notice of lecture.

Letter arising.

F.55

IUPAC International Symposium on Macromolecules, Leiden, 31 August - 4 September 1970.

Hodgkin was invited to give a lecture covering problems in the field of the structure of biopolymers.

Correspondence re arrangements.

Correspondence re publication of paper; 2pp. manuscript draft.

F.56

Visit to Basel, 17 October 1970.

Hodgkin was invited to lecture on 'The Crystal Structure of Insulin', *Bibliog.* 115, at the first annual meeting of the Swiss Society of Crystallography.

Correspondence re arrangements.

Letter re publication of lecture; typescript.

F.57

Third International Conference 'de la Physique Théorique à la Biologie', Institut de la Vie, Versailles, 21-26 June 1971.

Hodgkin visited France to attend the conference having played a role in its organisation. The conference was originally scheduled for December 1969, and then March 1970.

Correspondence re arrangements, October 1969 - July 1970, March-April 1971.

F.58

Visit to USSR, September 1971.

Hodgkin visited the USSR with Thomas Hodgkin, spending time at the Academy of Sciences in Moscow.

Brief correspondence re arrangements.

F.59

Second International Symposium on Protein and Polypeptide Hormones, Liège, 28 September - 1 October 1971.

Hodgkin was invited to chair a session on conformational studies of peptide hormones and, together with T.L. Blundell, wrote a paper entitled 'Some Features of the Conformation of Insulin Molecules observed in 2 Zinc Rhombohedral Insulin Crystals'. At the last minute, however, she was forced to withdraw from the symposium owing to problems regarding a visit to Vietnam.

Correspondence re arrangements, January-September 1971.

7pp. typescript of paper.

F.60-F.62	Visit to USA and Canada, October 1971.
	Hodgkin was invited to attend a symposium at the Lilly Research Laboratories, Indianapolis, to celebrate the 50th anniversary of the discovery of insulin. In conjunction with the Lilly symposium she took part in a course on diabetes held at Indiana University School of Medicine, where she gave a paper on the structure of insulin. Hodgkin also declined an invitation to participate in a symposium on proteins held at Cold Spring Harbor, New York.
	In Canada Hodgkin gave a seminar to the National Research Council at Ottawa before attending a symposium on insulin action at the University of Toronto. This was followed by a lecture on the history of insulin research at the University of Calgary.
F.60	Correspondence re arrangements for visit to USA, February-September 1971.
	Letter arising.
F.61	Correspondence re arrangements for visit to Canada, March-October 1971.
F.62	Correspondence arising from visit to Canada, including correspondence republication of paper given at Toronto symposium.
F.63	Visit to Moscow, 12-19 December 1971.
	Hodgkin visited Moscow in order to participate in the 80th birthday celebrations of Academician N.V. Belov.
	Correspondence re arrangements.
	Letter arising.

F.64

Symposium on insulin, Royal College of Physicians, London, 11 May 1972.

Hodgkin gave a paper on the atomic arrangement of insulin in relation to its biological activity.

Correspondence *re* arrangements, includes correspondence *re* participation of Chinese scientists. September 1971 - May 1972.

F.65

Sixth Hungarian Diffraction Conference, Siófok, 28 May - 1 June 1972.

Hodgkin lectured on the crystal structure of insulin, and gave a similar lecture in Budapest, which she visited after the conference.

Correspondence re arrangements, includes programme and list of participants.

Correspondence arising.

F.66

Banting Memorial Lecture, Washington D.C., 24 June 1972.

Hodgkin was invited by the American Diabetes Association to deliver the Banting Memorial Lecture as part of the 50th anniversary celebrations of the discovery of insulin.

Correspondence re arrangements.

Typescript draft of lecture, on 'The structure of insulin', Bibliog. 137.

Correspondence arising.

F.67

Third Summer School on X-ray Crystal Structure Analysis, Poland, June-July 1972.

Correspondence re application for visa only.

F.68-F.71

Visit to China and Japan, August-September 1972.

Hodgkin, accompanied to China by Thomas Hodgkin, visited laboratories in Peking and Shanghai where she discussed the research being carried out there on the crystal structure and biological activity of insulin. They also visited Soo Chou, Nanking and the area around Canton, mostly for 'sight-seeing' purposes.

From China, Hodgkin went to Japan for the Ninth International Union of Crystallography Congress at Kyoto. Following the congress she visited Nagoya University, where she lectured on 'The Crystal Structure of Insulin'.

Documentation re the Ninth IUCr Congress is to be found at E.133, E.134.

F.68

Correspondence *re* arrangements for visit to China. Includes correspondence with Royal Society *re* official Royal Society visit to China earlier in the year. See also E.186.

F.69	Correspondence arising from visit to China.
	Letter written by Hodgkin, probably to the members of her laboratory, while staying near Canton.
	Photographs.
	Report, 'Visit to China 1972. By Dorothy and Thomas Hodgkin'.
F.70	Correspondence re arrangements for visit to Japan. Includes correspondence re Sino-Japanese scientific relations.
F.71	Correspondence arising from visit to Japan.
F.72	Visit to USA, 12-16 December 1972.
	Hodgkin was invited to receive the honorary degree of Doctor of Science of the University of Chicago. She also participated in a symposium entitled 'Molecular Aspects of Protein Structure', where she talked on 'The Structure of Crystalline Insulin'.
	Correspondence re arrangements.
	Letter arising.
F.73	Fourth International Conference 'de la Physique Théorique à la Biologie', Institut de la Vie, Versailles, 28 May - 2 June 1973.
	Correspondence re arrangements.
F.74	Symposium on Symmetry in Nature, Mexico City, June 1973.
	Hodgkin was invited to give a paper on 'Symmetry and Biology' at the symposium, which was organised by the American Association for the Advancement of Science.
	Correspondence re arrangements.
	Correspondence arising.

F.75

Symposium on the Structure of Biological Molecules, Stockholm, 9-11 July 1973.

Hodgkin was invited to give the Nobel Guest Lecture on 'Problems in the x-ray analysis of proteins', *Bibliog.* 145, at the symposium, and also to chair a session on viruses.

Correspondence *re* arrangements, February 1972, May-September 1972, January-June 1973.

Correspondence arising re publication of lecture.

14pp. typescript.

See also J.80

F.76

Symposium on 'Chemie und Biochemie des Insulins', Aachen, West Germany, 12-13 July 1973.

Hodgkin and her group were invited to give a presentation on 'Semisynthese von Insulin'.

Correspondence re arrangements, including correspondence re participation of Chinese scientists.

Letter arising.

F.77

First European Crystallographic Meeting, Bordeaux, 5-8 September 1973.

Hodgkin chaired a session on 'Structures d'Interêt Biologique'.

Correspondence re arrangements.

Letter arising.

F.78-F.80

Visit to India, February-March 1974.

Hodgkin was invited by the Indian Council for Cultural Relations to deliver the Azad Memorial Lecture for 1974. She combined this visit to India with a visit to Vietnam, travelling to Hanoi via Delhi and Calcutta in early February. Coming back to India at the end of February via the University of Dacca, Bangladesh, she visited the Saha Institute of Nuclear Physics in Calcutta, the University of Madras and the National Aeronautical Laboratory at Bangalore before travelling to New Delhi for the lecture. Entitled 'Wandering Scientists', *Bibliog.* 148, the lecture was an account of the parts played by different scientists in the history of research on proteins, penicillin, vitamin B12 and insulin.

Documentation re Vietnam visit is to be found at G.144.

F.78	Correspondence <i>re</i> arrangements, October 1973 - March 1974. Includes itinerary for visit to Delhi.
F.79	Correspondence arising, March-October 1974. Includes correspondence re offer of C.V. Raman Visiting Professorship at the University of Madras and correspondence re publication of lecture.
F.80	13pp. typescript draft of lecture.
	13pp. typescript, incomplete, amended; 3pp. manuscript.
	Miscellaneous notes.
F.81, F.82	Colston Symposium, University of Bristol, 2-4 April 1974.
	Hodgkin was invited to chair a session on the structure of fibrous biopolymers.
F.81	Correspondence <i>re</i> arrangements, includes programme. November 1972, February-March 1974.
F.82	Correspondence arising, includes correspondence <i>re</i> publication of Hodgkin's introductory remarks as part of the proceedings.
	Typescript drafts, amended.
	Proofs.
F.83	Visit to Hungary, [? June] 1974.
	Hodgkin attended the Second European Crystallographic Meeting at Keszelthy.
	Letter re arrangements only.
F.84	Visit to USA, November 1974.
	Hodgkin was invited by IBM to speak at Yorktown Heights, New York as a Distinguished Lecturer. She spoke on protein crystals, following this by a visit to Yale University, where she gave a talk on her visits to China and North Vietnam. Hodgkin then travelled to Cornell University, where she had offered to lecture on either insulin or vitamin B12. From Cornell she went to Boston, and then to Harvard University.
	Correspondence re arrangements, June-October 1974.

Correspondence arising.

F.85

Visit to Israel, May 1975.

Hodgkin was invited to lecture at the Weizmann Institute of Science,

Rehovot. She also visited Jerusalem and Haifa.

Letter re arrangements.

Itinerary.

F.86

Fifth International Conference 'de la Physique Théorique à la Biologie',

Institut de la Vie, Versailles, 16-21 June 1975.

Hodgkin gave a paper on gramicidin A and B.

Correspondence re arrangements.

Correspondence arising, includes note on Hodgkin's paper.

F.87

Wollforschung International, Aachen, West Germany, 2-11 September 1975.

Hodgkin was invited to give a lecture on insulin.

Correspondence re arrangements.

6pp. typescript of lecture; 2pp. manuscript.

F.88, F.89

Visit to USSR, 5-15 October 1975.

Hodgkin, as President of the International Union of Crystallography, was invited to Moscow to participate in the 250th Anniversary celebrations of the Academy of Sciences of the USSR, originally planned for May 1974.

F.88

Correspondence re arrangements, February 1974 - September 1975.

F.89

Correspondence arising, text of speech by Soviet Premier Leonid Brezhnev and report on 'The 250th Anniversary of the USSR Academy of Sciences'

by V.A. Kotelnikov.

F.90, F.91

Visit to USA, October 1975.

Hodgkin was invited to a conference on steroid hormones at the Medical Foundation of Buffalo Research Laboratories to celebrate the publication of the *Atlas of Steroid Structure*, dedicated to her, J.D. Bernal and I. Fankuchen. She gave the keynote address, probably on the early history of steroid structure. She then visited the University of Connecticut, where she gave an informal talk. Following this Hodgkin went to Harvard University to give the John T. Edsall Lecture on 'The Structure of Insulin in Crystals'.

F.90	Correspondence <i>re</i> arrangements, September-December 1974, May-October 1975.
F.91	Correspondence arising.
F.92-F.94	Visit to Italy, December 1975.  Hodgkin was invited to Modena to participate in the celebrations of the Eighth Centenary of the foundation of the University of Modena. She received the honorary degree of Doctor in Medicine and Surgery and gave a lecture to the medical school on 'The Structure of Insulin'.
F.92	Correspondence <i>re</i> arrangements, December 1973 - March 1974, September-November 1974.
F.93	Correspondence <i>re</i> arrangements, July-December 1975. Includes summary of lecture.
F.94	Correspondence arising.  Photographs of degree ceremony.
F.95, F.96	Workshop on the Crystallography of Molecular Biology, Erice, Sicily, 28 March - 10 April 1976.  Hodgkin chaired the session on 'Hormones' and gave the introductory paper. She was also invited to lecture at the Universities of Parma and Bologna but declined.
F.95	Correspondence <i>re</i> arrangements, includes programme, abstracts, August 1975 - March 1976.
F.96	Correspondence arising, includes correspondence <i>re</i> possibility of Hodgkin becoming Director of the Erice Crystallography School. March-December 1976.  Memorabilia.
F.97-F.100	American Chemical Society Centennial, New York, 4-9 April 1976.  Hodgkin was invited to give two papers at the meeting. The first, 'Growing Points and Sticking Points in X-ray Analysis', was given at a Symposium on Analyses of Crystals of Biochemical Importance. The second, on 'The Structure of Molecules in Crystals', was given at a Symposium on Milestones in Physical Chemistry.

F.97	Correspondence <i>re</i> arrangements, June 1975 - December 1975, March 1976. Includes programme.
F.98	Correspondence arising.
F.99	6pp. typescript of 'Growing Points and Sticking Points in X-ray Analysis'.
	12pp. manuscript of preceding.
	Abstracts of Hodgkin's papers.
	Abstracts of other papers given at symposium on crystal analysis.
F.100	Miscellaneous unidentified notes and diagrams.
F.101	Visit to Yugoslavia, May-June 1976.
	Hodgkin was invited to a conference of Yugoslav and Italian crystallographers held at Dubrovnik, where she gave a lecture. She travelled to Yugoslavia with Thomas Hodgkin and their daughter, Elizabeth, visiting southern Yugoslavia after the meeting.
	Correspondence re arrangements.
	Letter arising.
F.102	Ninth Congress, International Diabetes Federation, New Delhi, 31 October - 5 November 1976.
	Hodgkin chaired a workshop on the molecular basis of insulin action, and gave a paper on the structure of insulin.
	Correspondence re arrangements, June-October 1976.
	Brief correspondence arising.
	Reprint of paper.
F.103	V Congreso Iberoamericano de Cristalografía, Madrid, 10-17 December 1976.
	Hodgkin was invited to give a paper on insulin.
	Correspondence re arrangements.

F.104

Visit to USA, February 1977.

Hodgkin was invited to a meeting of the American Crystallographic Association at Monterey, California to receive the Fankuchen Award and to give a lecture. She then travelled to New York where she gave a lecture, as recipient of the award, at the Polytechnic Institute of New York.

Correspondence *re* arrangements, includes abstract of a lecture, probably on protein crystals and the work of I. Fankuchen.

Correspondence arising.

F.105

'Endocrinology '77', Sixth International Conference, London, 11-15 July 1977.

Brief correspondence re arrangements only.

F.106-F.109

Fourth European Crystallographic Meeting, Oxford, 30 August - 3 September 1977.

The meeting at Oxford coincided with Hodgkin's retirement from her chair, and within the meeting there was a function in her honour, to which former pupils and associates were invited. She also gave a lecture on 'Insulin 1935-1977'.

F.106

Correspondence *re* arrangements. April-May 1974, November 1974 - January 1975, October 1975 - February 1976, November 1976. Includes provisional programme.

F.107

Correspondence re arrangements. January-August 1977. Includes revised programme.

Letter arising.

F.108

Printed programme.

Supplements of abstracts and participants.

List of participants from USSR.

Information re travel to Oxford and registration.

F.109

Lists of Hodgkin's former pupils and associates, with addresses.

F.110

International Council of Scientific Unions General Committee meeting, Budapest, 6-9 September 1977.

Correspondence re arrangements, mostly re visa application.

F.111, F.112

Visit to China, December 1977.

Hodgkin visited China with G. Dodson, visiting the insulin groups in Peking and Shanghai, and discussing the possibility of China becoming a member of the International Union of Crystallography.

F.111

Correspondence re arrangements.

Miscellaneous notes by Hodgkin, includes names of Chinese scientists, itinerary.

F.112

Correspondence arising. Includes report sent to Hodgkin by Dietrich Brandenburg and Helmut Zahn of the Deutsches Wollforschungsinstitut, Aachen, entitled 'Visitors Glimpse at Scientific Research Institutes in China'. Also includes correspondence *re* future participation of Chinese scientists in international meetings.

F.113-F.119

Visit to India, January 1978.

Hodgkin visited India as President of the Symposium on Biomolecular Structure, Conformation, Function and Evolution held in Madras and as C.V. Raman Visiting Professor at the Universities of Madras and Bangalore. She gave the presidential address to the symposium and, at the Winter School on Current Trends in Biomolecular Structure which followed, gave a lecture on 'The refinement of the crystal structure of insulin'. While in Madras Hodgkin also gave a public lecture on 'Some experiences in X-ray analysis'.

Hodgkin was in India for a month, and received many invitations to lecture or to visit. Most were declined, but she spent some time in Bangalore, attended an Indian Pugwash Society workshop on 'Guidelines for International Scientific Cooperation for Development' in Delhi, and participated in a workshop on 'Chemical Evolution, Origin of Life and Evolution of Life Processes' at Hyderabad.

F.113, F.114

Correspondence *re* arrangements for visit to Madras. Includes correspondence with International Union of Crystallography *re* sponsorship of symposium.

F.113

November 1975 - April 1977.

F.114

June-December 1977.

F.115

Programme for symposium and Winter School with abstracts.

Information about Madras.

Lists of participants.

F.116	Two drafts of presidential address, entitled 'Biomolecular structure, conformation, function and evolution', <i>Bibliog.</i> 161. 'X-ray analysis and biological structures' is the title given in the correspondence.
F.117	Correspondence <i>re</i> visits to Bangalore, Delhi and Hyderabad. Includes programme for Hyderabad workshop.
F.118	Invitations declined.
F.119	Correspondence arising from Madras visit.  Memorabilia.
F.120	Insulin Symposium, London, 14-15 February 1978.
	Hodgkin was invited to chair two sessions of the symposium, arranged by the British Diabetic Association, the Society for Endocrinology and the Endocrine Section of the Royal Society.
	Correspondence re arrangements, includes programme.
	Correspondence arising.
F.121-F.123	Visit to USA, 29 May - 3 June 1978.
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	Hodgkin was invited to a conference entitled 'The Origins of Modern Biochemistry - A Retrospect on Proteins' held in New York and sponsored by the New York Academy of Sciences. She gave a paper on 'Contributions of x-ray crystallography to protein structure'. Hodgkin was also invited to the Mount Sinai Medical School, New York, to receive an honorary degree and to participate in its tenth anniversary symposium, where she lectured on the structure of insulin.
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F.121	Biochemistry - A Retrospect on Proteins' held in New York and sponsored by the New York Academy of Sciences. She gave a paper on 'Contributions of x-ray crystallography to protein structure'. Hodgkin was also invited to the Mount Sinai Medical School, New York, to receive an honorary degree and to participate in its tenth anniversary symposium, where she lectured on the structure of insulin.
F.121	Biochemistry - A Retrospect on Proteins' held in New York and sponsored by the New York Academy of Sciences. She gave a paper on 'Contributions of x-ray crystallography to protein structure'. Hodgkin was also invited to the Mount Sinai Medical School, New York, to receive an honorary degree and to participate in its tenth anniversary symposium, where she lectured on the structure of insulin.  Correspondence re arrangements, August 1977 - May 1978.
F.121 F.122	Biochemistry - A Retrospect on Proteins' held in New York and sponsored by the New York Academy of Sciences. She gave a paper on 'Contributions of x-ray crystallography to protein structure'. Hodgkin was also invited to the Mount Sinai Medical School, New York, to receive an honorary degree and to participate in its tenth anniversary symposium, where she lectured on the structure of insulin.  Correspondence <i>re</i> arrangements, August 1977 - May 1978.  Programme, provisional programme for biochemistry conference.
	Biochemistry - A Retrospect on Proteins' held in New York and sponsored by the New York Academy of Sciences. She gave a paper on 'Contributions of x-ray crystallography to protein structure'. Hodgkin was also invited to the Mount Sinai Medical School, New York, to receive an honorary degree and to participate in its tenth anniversary symposium, where she lectured on the structure of insulin.  Correspondence re arrangements, August 1977 - May 1978.  Programme, provisional programme for biochemistry conference.  Programme for Mount Sinai symposium.  Correspondence arising, includes correspondence re publication of lecture

F.124

International Symposium on 'Frontiers in Bioorganic Chemistry and Molecular Biology', Moscow and Tashkent, USSR, 25 September - 2 October 1978.

Hodgkin was invited to give a paper and later to contribute her paper, on 'The geometry of A-chains in insulin', to a published collection of papers from the symposium.

Correspondence re arrangements, includes programme.

Correspondence arising.

F.125-F.127

Visit to USA, October-November 1978.

Hodgkin was in the USA as Visiting Fellow, Dartmouth College, New Hampshire while Thomas Hodgkin was Visiting Professor. While in the USA she gave four lectures as Mead-Swing Lecturer at Oberlin College, Ohio, visited the University of Illinois, and was Venable Lecturer at the University of North Carolina. She lectured there and gave a seminar on the structure of insulin.

At Dartmouth College Hodgkin was also Dreyfus Lecturer, lecturing on 'Experiences in Structure Analysis: Proteins, Penicillin and Vitamin B12' and on 'The Structure of Insulin in Crystals'.

F.125

Correspondence re arrangements with Dartmouth College, includes biographical note and notice of lecture.

Correspondence arising.

F.126

Correspondence re arrangements with the University of North Carolina.

Letter arising.

Biographical note, notice of lecture, list of previous Venable Lecturers.

F.127

Correspondence re visits to Oberlin College and the University of Illinois.

F.128

Visit to India, January-February 1979.

Hodgkin travelled widely in India, and gave an Academy lecture on 'Structure of insulin in crystals' at the Indian Institute of Science, Bangalore. She had been invited to attend a symposium in Bangladesh prior to her visit to India, but probably did not attend.

Letter re arrangements.

Letter arising.

F.129

Third European Symposium on Vitamin B12 and Intrinsic Factor, Zürich, 5-8 March 1979.

Hodgkin gave the Plenary Lecture, on 'New and Old Problems in the Structure Analysis of Vitamin B12', *Bibliog.* 157.

Copy of the newspaper 'Chemische Rundschau', giving programme of lectures.

Typescript draft of Hodgkin's lecture; reprint.

F.130

2nd International Insulin Symposium, Aachen, West Germany, 4-7 September 1979.

Letter re arrangements.

Letter arising.

Programme; supplement.

F.131

Visit to India and Bangladesh, November 1979.

Hodgkin visited Delhi, North Bengal University, the Bhabha Atomic Research Centre near Bombay, and the University of Dacca. She was also interviewed by All India Radio.

Correspondence re arrangements; miscellaneous notes.

Correspondence arising.

F.132

Visit to USA, April 1980.

Hodgkin gave the Fae Golden Kass Lecture at Radcliffe College, Mass., entitled 'The Discovery of the Structure of Penicillin and Vitamin B12'. She then went to Airlie, Virginia, to participate in a Symposium on Interaction between Iron and Proteins in Oxygen and Electron Transport. There Hodgkin gave a talk on M.F. Perutz at a banquet held in his honour.

Letter re arrangements for Symposium, includes programme.

Notice of lecture at Radcliffe College.

Correspondence arising.

F.133 International Conference on Water and Ions in Biological Systems, Bucharest, 25-27 June 1980.

Hodgkin attended the Conference as a representative of the Royal Society,

Hodgkin attended the Conference as a representative of the Royal Society, giving a special lecture entitled 'John Bernal and the structure of water'. She and Thomas Hodgkin had spent ten days in Romania prior to the Conference, combining a holiday with scientific visits.

Letter re arrangements.

Programme of Conference; programme of concert; itinerary.

Correspondence arising.

F.134 J.M. Robertson Symposium, Glasgow, 4-5 September 1980.

The Symposium was held in honour of J.M. Robertson's 80th birthday.

Programme; reprint of article on Robertson.

F.135, F.136 Visit to China, November-December 1980.

Hodgkin and T.L. Blundell were invited to China by the Institute of Biophysics, Peking, to give a series of lectures there on the structural chemistry of bio-macromolecules. This was followed by visits to Shanghai

and Canton.

F.135 Correspondence re arrangements, April-November 1980. Includes

correspondence re visit of the Japanese scientists, N. and K. Sakabe, to

China.

F.136 Information for visitors to China.

Information re translation of lectures.

Correspondence arising.

Brief report on visit.

F.137 Anglo-Chinese Symposium on proteins and nucleic acids, Oxford, 14-16

July 1982.

Hodgkin gave a paper on insulin.

Letter re arrangements; programme.

F.138

Visit to Israel and Jordan, April-May 1983.

Hodgkin was in Jordan to lecture and visit the archaeological site at Jerash. She returned to Israel to fulfil a scientific programme based at The Weizmann Institute of Science, Rehovot.

Correspondence re arrangements.

Itinerary re Rehovot visit.

Letter arising.

F.139

Visit to Bulgaria, May-June 1983.

Hodgkin visited Plovdiv, where she attended a symposium, probably on the subject of vitamin B12.

Letter re arrangements; 1p. manuscript notes re crystal growth.

F.140

Visit to USSR, June 1984.

Hodgkin was invited by the Institute of Bioorganic Chemistry to attend an International Symposium on 'Frontiers in Bioorganic Chemistry and Molecular Biology', to be held in Moscow and in Alma-Ata, Kazakhstan. After the Symposium she attended the opening sessions of the 16th Federation of European Biological Societies meeting in Moscow before returning to England.

Correspondence re arrangements, includes list of participants in Symposium.

F.141

Symposium on modern experimental and theoretical studies of crystal and molecular structure, Manchester, 11-13 September 1984.

The symposium was held to mark the retirement of D.W.J. Cruickshank.

Brief correspondence re arrangements.

F.142-F.145

Visit to USA, November 1984.

Hodgkin was invited to the Fox Chase Cancer Center, Philadelphia, to attend a symposium celebrating the 50th anniversary of the Patterson function. She lectured there, giving an account of her own use of the Patterson function.

Before the Patterson symposium Hodgkin probably attended a one-day meeting at Du Pont & Co., Wilmington, Delaware, to discuss future scientific developments in molecular biology. She was also invited to visit Harvard Medical School, but there is no evidence that she did so.

F.142	Letter <i>re</i> arrangements for Patterson symposium; magazine on the Fox Chase Cancer Center, includes programme of lectures at symposium.
	Correspondence arising <i>re</i> publication of lecture, includes printed version of Hodgkin's lecture.
	4pp. notes, probably by J. Glusker, dated '4/7/66'.
F.143	Draft of Hodgkin's lecture, 'Patterson and Pattersons', <i>Bibliog.</i> 170. Includes introduction by J. Glusker, photocopy of letter from A.L. Patterson to Hodgkin dated 13 March 1938.
F.144	References; figures for paper.
F.145	Correspondence <i>re</i> arrangements for visits to Du Pont and Harvard Medical School.
F.146	Visit to Brazil, ?1985.
	Hodgkin planned to spend some time in Rio de Janeiro, as a guest of the Brazilian Academy of Sciences.
	One letter only, 17 May 1985, re prospective visit to Brazil.
F.147	Thirtieth International Union of Pure and Applied Chemistry Congress, Manchester, 9-13 September 1985.
	Hodgkin, as an Honorary Fellow of the Royal Society of Chemistry, was invited to the Opening Ceremony and Inaugural Plenary Lecture.
	Brief correspondence re arrangements.
F.148	Visit to USSR, Japan and China, September-November 1985.
	Hodgkin travelled with Elizabeth Hodgkin, her daughter. They stayed in Moscow, and then took the Trans-Siberian Railway to Japan. Hodgkin visited Tsukuba while in Japan and then went alone to Peking, having been invited by the Academia Sinica. She also visited Shanghai and Fuzhou University.
	Correspondence re arrangements, February-September 1985.
	Brief correspondence arising; 1p. manuscript notes re Fuzhou visit.
F.149	Visit to Bulgaria, February 1986.
	Letter re visa only.

F.150

Visit to USA, May-June 1986.

Hodgkin was invited to attend a symposium on Insulin and the Insulin Receptor at the Medical Foundation of Buffalo, where she was the Ray A. and Robert L. Kroc Distinguished Lecturer, speaking on the structure of insulin. She then gave a seminar at The Upjohn Company, Kalamazoo, Michigan. This was followed by a symposium on Precision and Molecular Structures at the University of Washington, Seattle, where Hodgkin spoke on 'Water structure in insulin'.

Correspondence *re* arrangements, includes schedule of lectures for both symposia.

Correspondence arising, includes photographs from Buffalo visit.

F.151

Visit to USSR and China, September 1986.

Hodgkin was invited to attend an International School on the Structure of Biological Macromolecules at Pushchino, USSR. This was followed by an International Conference on Molecular Structure in Peking, where she gave the Plenary Lecture at the closing session.

Correspondence *re* arrangements, includes list of participants, programme for Peking Conference; manuscript and transcript of lecture, on penicillin.

Letter arising.

F.152

Visit to USA, March 1987.

Hodgkin was invited to give the Founders' Lecture at the Scripps Clinic, La Jolla, California. She gave two lectures, the first being on historical perspectives on x-ray crystallography, and the second on insulin. She then probably spent some time in Buffalo before attending the American Crystallographic Association Meeting at Austin, Texas.

Correspondence re arrangements.

Correspondence arising, includes photograph taken at Austin meeting.

F.153

Fourth International Conference on Water and Ions in Biological Systems, Bucharest, 24-28 May 1987.

Hodgkin was invited to lecture at the Conference, her lecture being entitled 'The distribution of water in 2 zinc insulin crystals'. She visited Warsaw prior to the Conference.

Correspondence re arrangements, includes programme.

'Instructions for Authors', contributions to volume of Conference Proceedings.

Manuscript draft of lecture, pages missing; manuscript notes.

Correspondence arising *re* publication of proceedings, manuscript draft foreword by Hodgkin.

F.154

Federation of European Biological Societies Advanced Lecture Course. Crystal Growth of Biological Macromolecules, Bischenberg, France, 19-25 July 1987.

Hodgkin was invited to give the opening lecture, on developments in biological crystallography.

Correspondence re arrangements.

Correspondence arising.

F.155

International Conference to Celebrate the 40th Anniversary of the Discovery of the Pi Meson, Bristol, 22-24 July 1987.

Letter re arrangements.

Conference bulletin, preliminary programme, final programme, list of participants; memorabilia.

Letter arising.

F.156

Visit to USA, 23-28 April 1988.

Hodgkin was invited to give the William J. Reddy Memorial Lecture at the University of Alabama at Birmingham. She spoke on 'A life in crystallography'.

Correspondence re arrangements, itinerary, notice of lecture.

Correspondence arising.

F.157

American Crystallographic Association Meeting, Philadelphia, 26 June - 1 July 1988.

Hodgkin was invited to participate in a special Nobel Symposium, along with six other Nobel Laureates, on the topic 'Methods and Applications in Macromolecular Crystallography'. Before this she gave the Jeanne Manery-Fisher Memorial Lecture on 'The x-ray analysis of the structure of insulin, 1935-1972 to the present' at the University of Ottawa.

Correspondence re arrangements, programme of meeting.

Correspondence arising.

Typescript and manuscript drafts of Hodgkin's lecture.

F.158

Summerschool on Crystallography and its Teaching, Tianjin, China, 15-24 September 1988.

Hodgkin was a member of the Honorary Committee and was invited to lecture at Tianjin University.

Brief correspondence re arrangements, includes programme, 'Travel Schedule'.

Memorabilia.

F.159

'25 Jahre Insulinsynthese', Aachen, 23-25 February 1989.

Hodgkin lectured on 'Memories of the structure analysis of insulin'.

Correspondence re arrangements, includes programme.

Correspondence arising re publication of lecture.

F.160

Symposium on Crystals and Chemistry, University of California at Los Angeles, 17-20 March 1989.

The symposium was held in honour of K.N. Trueblood.

Brief correspondence re arrangements; programme.

F.161

Conference on Insulin Structure, Chemistry and Biology, York, 29 August - 1 September 1989.

Hodgkin gave a special evening lecture at the conference, held to celebrate the 20th anniversary of the 2 zinc insulin crystal structure determination.

Programme of lectures; list of participants; photograph of participants.

F.162

Visit to USA, April 1990.

Hodgkin attended the 127th Annual Meeting of the National Academy of Sciences, Washington D.C. She then went to Boston to give a paper on 'My Life in Chemistry' at a Symposium on Women in Chemistry.

Correspondence re arrangements.

Correspondence arising.

Programme for NAS Meeting.

Abstracts of papers given at Boston Symposium. Includes paper by P.G. Abir-Am entitled, 'Leadership and Gender in Science. D.C. Hodgkin and the Oxford School of Chemical Crystallography'. See also A.39.

F.163

Sir Charles Frank 80th Birthday Symposium, Bristol, 15 April 1991.

List of participants; programme of lectures.

# Invitations declined

F.164

1945-59.

F.165

1960-69.

F.166

1970-74.

F.167

1975.

F.168

1976.

F.169

1977.

F.170

1978.

F.171

1979-80.

F.172

1981.

F.173

1982-83.

F.174

1984-89.

F.175

Miscellaneous unidentified material re visits.

#### **ADDENDUM**

Material received too late to present in the main chronological sequence.

F.176

Cobalamin '88. First International Symposium on Biomedicine and Physiology of Vitamin B12, London, 26-29 September 1988.

Hodgkin was invited to attend the symposium as a guest of The Children's Medical Charity. As President of the symposium, she gave the opening address, when she spoke about previous symposia on vitamin B12.

Brief correspondence re arrangements.

List of participants; two typescript drafts of the address, with manuscript additions and corrections by Hodgkin.

Brief correspondence arising.

F.177

Canadian International Development Agency / Third World Academy of Sciences Conference on 'The Role of Women in the Development of Science and Technology in the Third World', Trieste, Italy, 3-7 October 1988.

Brief correspondence re arrangements.

Newsletter.

F.178

Meeting on 'Crystallisation of Biological Macromolecules', King's College, London, 14 December 1989.

The meeting was organised by the Biological Structures Group of the British Crystallographic Association. Hodgkin was invited to give an introductory talk entitled 'Historical perspective'.

Correspondence re arrangements; programme.

F.179

International Symposium. Thomas Addison and his Diseases: 200 Years On, Padua, 20-21 May 1993 and London, 25-27 May 1993.

Hodgkin was a President of the Symposium, and attended the London session, where a special Presidential Symposium was held as a tribute to her.

Letters to Hodgkin re arrangements.

Programme: final programme.

Letter arising.

## SECTION G

## PEACE AND HUMANITARIAN INTERESTS

G.1-G.204

Hodgkin was interested in a wide range of peace and humanitarian causes and made a major commitment to a number of them. Of particular importance were her involvement with Vietnam peace and humanitarian organisations in the 1960s and 1970s and her involvement with the Pugwash movement, of which she was President from 1976 to 1988.

The material is arranged as follows:

G.1-G.156	ORGANISATIO	NS AND TOPICS
	G.1-G.6	J.D. Bernal Peace Library
	G.7, G.8	Greenpeace
	G.9-G.11	Institute for International Peace Studies
	G.12-G.21	Palestine
	G.22-G.94	Pugwash Conferences on Science and World Affairs
	G.95-G.105	Russian Dissidents
	G.106-G.110	Scientists Against Nuclear Arms (SANA)
	G.111-G.113	Society for Anglo-Chinese Understanding (SACU)
	G.114-G.156	Vietnam
G.157-G.165	VISITS AND C	ONFERENCES
G.166-G.171	LECTURES AN	ID PUBLICATIONS
G.172-G.204	MISCELLANEO	DUS

#### ORGANISATIONS AND TOPICS

### J.D.Bernal Peace Library

The J.D. Bernal Library was an educational trust established with the full support of Bernal, and inspired by his work. It opened in London in March 1968 as a centre for peace research. Its aim was set out in a publicity leaflet (G.3): 'by the dissemination and exchange of information and through prepared discussion, to make a contribution to solving the problems of peace confronting us.'

Hodgkin was a sponsor of the Library and, in 1971, was elected to the Chair of the Library Board.

G.1-G.3	General papers and correspondence, 1967-81.
G.1	1967-70.

G.2 1971-73, 1976, 1980-81.

G.3 nd.

**G.6** 

G.4 The J.D. Bernal Peace Library Board.

Minutes and agendas, 1967-72.

G.5 'J.D. Bernal Peace Library. Report of a Conference on Chemical and Biological Warfare', February 1968.

'Tribute to John Desmond Bernal in his Seventieth year, by artists and scientists.'

'Newsletter', 1971, 1976-77, nd.

J.D. Bernal Peace Library Conference on 'The Meaning of the U.K. Aid Programme', 20-21 June 1969.

Conference papers.

## Greenpeace

The material relates to a Greenpeace campaign against the expansion of the nuclear power programme in the United Kingdom as an answer to the 'greenhouse effect'.

Hodgkin was one of a group of over 100 scientists who signed a declaration issued by Greenpeace which appeared in the national press.

G.7 Papers and correspondence, 1989.

G.8 Background material.

### Institute for International Peace Studies

The Institute was based at the University of Notre Dame, Indiana, USA. A statement of purpose (G.11) described it as: 'a center for multi-disciplinary research and teaching on the critically important questions of peace, justice and violence in contemporary society'. Much of the material relates to the search for a Peace Fellow from the United Kingdom to join an international group on an M.A. course in Peace Studies.

Hodgkin became a member of the International Advisory Board for the Institute in 1986, visiting Notre Dame in October of that year to attend the inaugural meeting of the Advisory Board.

G.9, G.10 General papers and correspondence 1986-89.

G.9 1986 June-September.

G.10 1986 October - 1989, nd.

G.11 Background material.

Manuscript notes by Hodgkin.

Photograph of members of the Advisory Board (identified in G.10).

#### **Palestine**

The material is arranged as follows:

G.12, G.13 Friends of Birzeit University.
 G.14-G.16 International Commission of Inquiry into Israeli Crimes Against the Lebanese and Palestinian Peoples.
 G.17, G.18 Newspaper cuttings.
 G.19-G.21 Miscellaneous papers and correspondence.

### Friends of Birzeit University

Birzeit University was an independent Palestinian university near Jerusalem. The Friends of Birzeit University organisation was a charity established 'to uphold Birzeit's academic work and to uphold its right to academic freedom' (G.12). Hodgkin was a sponsor from 1985.

General papers and correspondence 1980-91.

G.12 1980-87.

G.13 1988-91, nd.

International Commission of Inquiry into Israeli Crimes Against the Lebanese and Palestinian Peoples, Nicosia, 15-16 August 1982

The Commission was established in response to reports arising from the invasion of Lebanon by Israel in June 1982. Hodgkin was a member of the Presidential Committee of the Commission.

G.14 List of participants; programme; list of statutes.

'Findings and conclusions of the commission.'

Manuscript notes by Hodgkin.

G.15, G.16 Reports, testimonies. 2 folders.

Newspaper cuttings 1970-89

G.17 1970-79.

G.18 1980-89.

### Miscellaneous papers and correspondence 1974-90

G.19 1974-79.

G.20 1980-83.

G.21 1984-85, 1988-90, nd.

# Pugwash conferences on science and world affairs

The Pugwash movement had its origins in the Russell-Einstein Manifesto, issued in July 1955. This called for a conference of international scientists to discuss the dangers of conflict that had arisen from scientific work, with particular reference to the then recently developed hydrogen bomb. The first conference was held in July 1957 in the Canadian town of Pugwash, Nova Scotia, thus giving the movement its name. The conferences became annual events, widening in scope to include development and environmental issues. This paralleled a significant increase in the number of participants.

Hodgkin first attended a Pugwash conference in 1962, but did not involve herself in the movement to any great degree until hesitantly agreeing (G.93) to her election as President at the Madras conference in 1976 (G.39, G.40). From the mid 1960s Hodgkin had been committed to the problem of the war in Vietnam, thus precluding major non-scientific commitments elsewhere. She held the post of President until 1988, and the material documenting her activities here is extensive. Of particular interest is the documentation of the Warsaw conference of 1982 (G.54), which followed the imposition of martial law in Poland.

As President, Hodgkin attended most Council and Executive Committee meetings and presided over the opening sessions of the annual conferences, as well as presiding over and giving the closing address at the final plenary sessions. Typescript or manuscript drafts survive for many of these.

The material is arranged as follows:

G.22-G.35 General papers and correspondence.

G.36-G.66 Conferences.

G.67-G.80 Symposia and workshops.

G.81-G.83 Executive Committee.

G.84-G.87 British Pugwash Group.

G.88-G.94 Miscellaneous.

# General papers and correspondence 1962-92

G.22	1962, 1969, 1975-77.
G.23	1978.
G.24	1979.
G.25	1980.
G.26	1981.
G.27	1982.
G.28	1983.
G.29	1984.
G.30	1985.
G.31	1986.
G.32	1987 January-August.
G.33	1987 September-December.
G.34	1988-92. Includes correspondence <i>re</i> detaining of the Romanian physicist, I. Ursu and Hodgkin's efforts to secure his release.
G.35	nd.

#### Conferences 1957-90

'Proceedings of the First Pugwash Conference on Science and World G.36 Affairs. Pugwash, Nova Scotia, Canada, 7-10 July 1957. Published on the occasion of the 25th Anniversary of Pugwash 1982."

> 'The Third Pugwash Conference - September 1958. By Professor Dame Kathleen Lonsdale.'

The third conference was held at Kitzbühel, Austria.

Correspondence 1965-66 re 1966 conference, held at Addis Ababa, Ethiopia.

Hodgkin did not attend this conference, but attempted to organise a special session of the Pugwash Conference in Ghana, in order to attract Chinese scientists in view of the special relations which then existed between China and Ghana. Plans for this were cancelled, however, after the fall of the government of Kwame Nkrumah.

17th Pugwash Conference, Ronneby, Sweden, 3-8 September 1967.

Registration form.

"Current Conflicts and their 'Final Report of Working Group 7. Resolution".'

25th Pugwash Conference, Madras, India, 13-19 January 1976. G.39, G.40

> The Conference marked Hodgkin's formal assumption of the office of President of Pugwash.

G.39 Correspondence re arrangements.

Brief correspondence arising.

'Opening Speech by the President of Pugwash.' G.40

> 'Welcoming Address made to the Prime Minister of India, Mrs. Indira Gandhi by the President of Pugwash.'

Press release. Includes text of Hodgkin's concluding remarks.

Newspaper cuttings.

Memorabilia.

G.38

G.37

G.41-G.43	27th Pugwash Conference, Munich, West Germany, 24-29 August 1977.
G.41	Correspondence re arrangements.
	Correspondence arising.
	Typescript of Hodgkin's closing address.
G.42	Conference papers.
G.43	Newspaper and magazine articles (in German and French).
G.44	28th Pugwash Conference, Varna, Bulgaria, 1-5 September 1978.
	Letter re arrangements.
	Typescript of address by Hodgkin.
	Correspondence arising.
G.45	29th Pugwash Conference, Mexico City, 18-23 July 1979.
	Minutes of 50th and 51st Sessions of the Pugwash Council.
G.46-G.51	30th Pugwash Conference, Breukelen, The Netherlands, 20-25 August 1980.
G.46	Typescript of 'Statement' by Hodgkin.
	Typescript of Hodgkin's closing address.
	Brief correspondence with Radio della Svizzera Italiana re interview Hodgkin gave about the conference. Includes manuscript notes by Hodgkin re questions asked in correspondence.
	Manuscript notes.
G.47	52nd and 53rd Sessions of the Pugwash Council. Minutes and agendas.
	List of participants at conference.
G.48-G.51	Conference papers. 4 folders.

G.52, G.53	31st Pugwash Conference, Banff, Canada, 28 August - 2 September 1981.
G.52	Brief correspondence re arrangements.
	Programme.
	Manuscript and typescript drafts of Hodgkin's closing remarks.
	Newspaper articles.
G.53	Conference papers.
G.54	32nd Pugwash Conference, Warsaw, 26-31 August 1982.
	Correspondence <i>re</i> arrangements, mostly <i>re</i> refusal of many Pugwash members to attend the conference, following the imposition of martial law in Poland.
	Brief correspondence arising.
	Personal statement to the Press by Hodgkin $\it re$ 'the events of August 31st in Warsaw'.
	Newspaper cuttings, including letter from Hodgkin and M.M. Kaplan, secretary general of Pugwash, to <i>The New York Times</i> , headed 'The Warsaw Pugwash Conference Did Not "Cower" to the Soviets'.
G.55-G.57	33rd Pugwash Conference, Venice, 26-31 August 1983.
G.55	'Remarks by Professor Dorothy Hodgkin at the closing session.'
	'Report of the Secretary General for 1982-1983.'
	List of participants; list of commissioned papers.
	Manuscript notes.
	Letter arising.
G.56, G.57	Conference papers. 2 folders.
G.58	34th Pugwash Conference, Björkliden, Sweden, 9-16 July 1984.
	Brief correspondence re arrangements.
	Minutes of the 63rd Session of the Pugwash Council. Includes programme

and analysis of geographical distribution of participants for 35th

Conference.

G.59, G.60	35th Pugwash Conference, Campinas, Brazil, 9-14 July 1985.
G.59	Programme; list of commissioned papers; list of participants.
	Minutes of the 64th and 65th Sessions of the Pugwash Council.
	'Report of the Secretary General for 1984-85.'
G.60	Conference papers.
G.61	36th Pugwash Conference, Budapest, 1-6 September 1986.
	Letter re arrangements.
	Programme; lists of commissioned papers; lists of participants; photograph.
	Minutes of the 67th Session of the Pugwash Council.
G.62-G.64	37th Pugwash Conference, Gmunden am Traunsee, Austria, 1-6 September 1987.
G.62	Brief correspondence re arrangements.
	Agendas for the 68th, 69th and 70th Sessions of the Pugwash Council; nominations for new Pugwash Council; list of council decisions.
	Programme; list of participants.
	Manuscript notes.
G.63, G.64	Conference papers. 2 folders.
G.65	38th Pugwash Conference, Dagomys, USSR, 29 August - 3 September 1988.
	Programme; list of participants.
	Statement of the Pugwash Council on 'Global Problems and Common Solutions'.
	'Messages of Goodwill for the Conference.'
	Manuscript draft of Hodgkin's closing speech.

G.66 39th Pugwash Conference, Cambridge, Massachusetts, 23-28 July 1989.

List of commissioned papers; list of working group topics.

40th Pugwash Conference, Egham, Surrey, 15-20 September 1990.

Statement of the Pugwash Council - 'Towards a Secure World in the 21st Century'; list of participants.

## Symposia and workshops 1969-88

Smaller groups met at workshops and symposia to discuss particularly topical problems of international affairs. The material, arranged by year, mostly consists of agendas and lists of participants, with some scattered correspondence.

G.67 1969, 1973, 1978-79.

G.68, G.69 1980. 2 folders.

G.70 1981.

G.71 1982.

G.72 1983.

G.73 1984.

G.74-G.77 1985. 4 folders.

G.78 1986.

G.79 1987.

G.80 1988.

## **Executive Committee 1977-88**

The Executive Committee approved and implemented decisions of Council, which was responsible for Pugwash policy. It could also act in matters of policy when so authorised (see G.83). Hodgkin, as President, was a permanent member.

G.81	General papers and correspondence 1978-81, 1985-87, nd.
G.82, G.83	Minutes and agendas, agenda items 1977-88.
G.82	1977-85.
G.83	1986-88, nd.
	British Pugwash Group 1979-91
	Hodgkin was a member of the Executive Committee from 1980 to 1987.
	General papers and correspondence.
G.84	1979-82.
G.85	1983-85.
G.86	1986-87.
G.87	1988-91.
	Miscellaneous 1965-90
G.88	'Pugwash Newsletter' 1965, 1967, 1974, 1982-90. 1 box.
G.89	Newspaper cuttings 1970-88.
G.90	Papers and correspondence <i>re</i> award of the Antonio Feltrinelli Prize to the Pugwash Movement, 1987. Includes manuscript and typescript drafts of Hodgkin's acceptance speech, 'Hope for the Future'.
G.91, G.92	Olympia Prize of the Alexander S. Onassis Public Benefit Foundation, awarded to the Pugwash Movement, 1987, 'for contributions to the preservation of nature or to the safeguarding of our cultural inheritance'.
G.91	Correspondence.

Typescript of Hodgkin's acceptance speech, with manuscript additions and G.92 corrections. Programme of events; background material. Unidentified manuscript notes and drafts by Hodgkin, nd. G.93 Printed and duplicated background material. 1 box. G.94 Russian dissidents Papers and correspondence re dissident scientists and others, 1972-88. G.95 1972-73. G.96 1974. G.97 1975. G.98 1976-77. G.99 1978. G.100 1979-81. G.101 1982. G.102 1983. G.103 1984. G.104 1985.

1986-88, nd.

G.105

## Scientists against nuclear arms (SANA)

The purpose of SANA, as stated at its inaugural conference (G.107), was 'to promote and coordinate the activities of scientists aimed at assisting groups and individuals concerned with halting and reversing the nuclear arms race'.

Hodgkin chaired the opening plenary session of the inaugural conference.

G.106 General papers and correspondence 1981-87.

G.107 Inaugural conference, Open University, Milton Keynes, 21-22 March 1981.

Letter re arrangements.

Programme; lists of participants; background material.

'Statement of Aims and Functions.'

Newspaper cutting.

G.108, G.109 International Symposium on Problems and Prospects of Nuclear

Disarmament, London, 21-25 September 1983.

G.108 Brief correspondence.

Programme; lists of participants; final statement.

Manuscript notes by Hodgkin.

G.109 Conference papers.

G.110 Miscellaneous background material.

## Society for Anglo-Chinese understanding (SACU)

SACU was founded in 1965: 'to promote friendship and understanding between the British and Chinese peoples'. (G.113).

Hodgkin was a sponsor of the organisation from its foundation.

G.111, G.112	General paper	s and correspondence 1965-86.
G.111	1965-67, 1969	9, 1972-73. Includes lists of sponsors, 1965.
G.112	1974-75, 1980	0-81, 1984-86.
G.113	Miscellaneous	background material.
Vietnam		
	number of org important of the she was made	ncern about the war in Vietnam led to her involvement in a ganisations seeking to provide humanitarian aid. The most hese was the Medical Aid Committee for Vietnam, of which Vice-President in 1965, becoming President in 1971. There ocumentation of her activities within the Committee.
3	As President, little material	Hodgkin visited North Vietnam in 1971 and in 1974; only a relating to these visits survives (G.144, G.145).
	The material is	s arranged as follows:
	G.114-G.121	General papers and correspondence.
	G.122-G.136	Medical Aid Committee for Vietnam.
	G.137	World Federation of Scientific Workers: Scientists' Appeal for Vietnam.
	G.138-G.141	International Commission of Enquiry into US Crimes in Indochina.
	G.142, G.143	British Hospital for Vietnam.
	G.144-G.156	Miscellaneous.
	General pape	ers and correspondence 1965-93
G.114	1965-69. Incl Tribunal.	udes correspondence with Bertrand Russell re War Crimes
G.115	1970-71.	

1972.

G.116

G.117 1973-75.

G.118 1978-79.

G.119 1980.

G.120 1984-85, 1987-90, 1993.

G.121 nd.

## Medical Aid Committee for Vietnam 1965-89

The Medical Aid Committee for Vietnam was founded in 1965. Its initial aim was to send 'medical aid to the areas where the bombs were falling, and the casualties highest - the National Liberation Front areas of South Vietnam'. It extended its terms of reference in 1966 to include 'requests for medical aid from the Red Cross Society of the Democratic Republic of Vietnam in Hanoi'. It continued to work in South East Asia after 1979 as Medical and Scientific Aid for Vietnam, Laos and Kampuchea, concerning itself with providing 'scientific aid in relation to medical research'. (G.127).

In 1965 Hodgkin was asked to become President by Joan McMichael, Honorary Secretary of the Medical Aid Committee. She declined, however, on the grounds that she was spending time in Ghana, where Thomas Hodgkin was setting up an institute of African studies, and that the President ought to be in England to support McMichael. Instead Hodgkin agreed to serve as Vice-President until 1971, when she became President.

G.122-G.131 General papers and correspondence 1965-89.

G.122 1965-69.

G.123 1970-71.

G.124 1972. Includes letter to *The Times* written by Hodgkin and dated 29th December.

G.125 1973-75.

1976-77.

G.126

G.127	1978-79. Includes an historical account of the Medical Aid Committee for Vietnam.
G.128	1980-81.
G.129	1983-87.
G.130	1988-89. Includes Hodgkin's obituary of McMichael, <i>The Guardian</i> , 16 August 1989, with manuscript and typescript drafts.
G.131	nd. Includes manuscript notes by Hodgkin, photographs, newspaper article (in Hungarian).
G.132-G.135	Minutes and agenda 1965-85.
G.132	1965, 1967-69.
G.133	1970-72.
G.134	1973-76.
G.135	1977-78, 1980-81, 1985.
G.136	'News Bulletin', 1968-89. Not a complete sequence. 1 box.
	World Federation of Scientific Workers: Scientists' Appeal for Vietnam 1967-68, 1971
	The WFSW launched two appeals, in 1967 and in 1971, for donations to replace scientific equipment lost in North Vietnam during the war.
	Hodgkin was a sponsor of both appeals.
G.137	Papers and correspondence 1967-68, 1971.
	List of names of people invited to sponsor the [?1967] appeal; list of donations.

## International Commission of Enquiry into US Crimes in Indochina 1969-75

The Commission was established at the 5th Stockholm Conference on Vietnam in March 1970. Its task, as set out in G.138, was to: 'deal with ... crimes of aggression against the fundamental national rights of the Indochinese peoples ... to gather and evaluate evidence of the crimes committed by the United States ... and to place this material at the disposal of world opinion.' It organised a series of hearings and conferences, the meeting in Copenhagen in October 1972 being particularly well documented here.

Hodgkin was one of the Deputy Chairmen of the Commission.

5th Stockholm Conference on Vietnam, 28-30 March 1970. G.138

Correspondence re arrangements.

Report on conference.

Correspondence arising.

International Commission of Enquiry into US Crimes in Indochina, Third G.139, G.140 Session, Copenhagen, 10-16 October 1972.

G.139 Letter re arrangements.

> Programme; 'Statement at the opening session' by H. Göran Franck, Secretary General; list of participants; draft of concluding statement, with manuscript additions and corrections by Hodgkin; photographs.

Conference papers.

'Home for Christmas.' Manuscript and typescript drafts ?of lecture given by Hodgkin. The lecture discusses the findings of the Copenhagen Commission and Hodgkin's visit to Vietnam in 1971 (G.144, G.145).

Miscellaneous papers and correspondence 1969-75. G.141

Manuscript notes by Hodgkin.

Newspaper articles.

G.140

### British Hospital for Vietnam 1974-77

The British Hospital for Vietnam project proposed to build a hospital in the district of Ky Anh in North Vietnam. It launched an appeal to raise the necessary funds in September 1975.

Hodgkin was an Honorary Vice-President of the project.

G.142 General papers and correspondence 1974, 1976-77.

G.143 Minutes and agendas 1974-77.

#### Miscellaneous

G.144, G.145 Hodgkin's visits to Vietnam, 1971, 1974.

G.144 Correspondence re arrangements for 1971 visit.

Manuscript notes by Elizabeth Hodgkin, daughter; memorabilia.

Correspondence arising.

Brief correspondence arising from 1974 visit.

Memorabilia.

'Le Miracle Vietnamien.' Typescript draft of article arising from visit, probably by Thomas Hodgkin, [?1971].

G.145 Photographs from 1971 visit, some annotated.

Hodgkin's manuscript and typescript notes and drafts, nd.

'A plea against slaughter', *The Times*, 20 March 1971; correspondence arising.

'Bombs over Thanhhoa', New York Times, 7 January 1972; letter arising.

G.147, G.148 Communiqués sent to Hodgkin by the Commission for Investigation of the U.S. Imperialists' War Crimes in Vietnam, 1971-72.

G.147 1971.

G.146

G.148	1972.
G.149	Papers and correspondence <i>re</i> role of the Jason Division of the Institute of Defense Analysis in Vietnam, 1972-73.
	The Jason Division was a group of leading American scientists who met to work on national security matters.
G.150, G.151	Press releases and correspondence from the Vietnamese Embassy in London, 1980-89.
G.150	1980-81.
G.151	1986, 1988-89.
G.152, G.153	Newspaper and magazine articles, 1966-89.
G.152	1966-74.
G.153	1975-81, 1989, nd.
G.154, G.155	'The Vietnam Courier' 1967-85.
	A newspaper published in North Vietnam.
G.154	1967-74.
G.155	1975-81, 1985.
G.156	'South Vietnam. In Struggle.' 1971.
	A newspaper published by the South Vietnam National Front for Liberation.

G.158

## Peace and humanitarian interests

#### **VISITS AND CONFERENCES**

G.157, G.158 'Science and Peace: The Nobel Laureates Answer', Paris, 26-28 October 1983.

Hodgkin gave a lecture on 'Science confronts Morality'.

G.157 Programme; background information; poster advertising the event.

Typescript and manuscript drafts of lecture.

Memorabilia.

G.159, G.160 'Symposium on Sarvepalli Radhakrishnan and World Unity', New Delhi, 24 March 1986.

Hodgkin arrived in India on 20 March, lecturing the next day at the National Physical Laboratory, Delhi. She was one of three speakers at the Radhakrishnan symposium, organised to commemorate the life and ideas of the former President of India. On March 25th she lectured in Bangalore on 'Recent discussions within the Pugwash movement on disarmament', returning to England the next day.

G.159 Correspondence re arrangements, May 1985 - February 1986.

Brief correspondence arising.

G.160 Typescript draft of lecture at symposium, entitled 'Radhakrishnan'.

Manuscript draft of Bangalore lecture; manuscript notes.

Itinerary; notice of Bangalore lecture; invitation to symposium;

newspaper cutting.

G.161 International Scientists' Peace Congress, 'Ways out of the Arms Race',

Hamburg, 14-16 November 1986.

Hodgkin was a member of the Advisory Committee.

Correspondence re arrangements, December 1985 - November 1986.

Correspondence arising, December 1986, March-April 1989, *re* publication of proceedings.

List of members of the Advisory and Organising Committees, and of speakers.

Manuscript notes by Hodgkin.

G.162

'A UNESCO Round Table for the Celebration of the International Year of Peace', Paris, 15-16 December 1986.

Brief correspondence re arrangements.

Conference papers.

Letter arising.

G.163

'Congress of Intellectuals for a Peaceful Future of the World', Warsaw, 1986.

List of participants only.

G.164, G.165

International Forum of Scientists for a Test Ban, Moscow, 14-16 February 1987.

Hodgkin was invited to participate in the Forum by the Academy of Sciences of the USSR. There are references to a similar meeting in 1986, but there is no evidence that she participated.

G.164

Correspondence re arrangements, 1986, nd.

Letter arising.

G.165

'Declaration' of participants of 1986 meeting; paper from 1987 meeting.

Photograph; manuscript notes (author unknown).

Memorabilia.

## LECTURES AND PUBLICATIONS

See also G.158 and G.160.

G.166

'A Writing for Mahatma Gandhi.' Gandhi Centenary Commemoration Volume, Gandhi Peace Foundation, 1968.

Hodgkin was invited by the National Committee for the Gandhi Centenary, New Delhi, to write an article for a volume commemorating the birth centenary of Mahatma Gandhi.

Correspondence, August 1967 - April 1968.

Typescripts, with manuscript additions and corrections by Hodgkin; manuscript notes.

G.167, G.168 'On Making Peace Possible.' Sophia Lecture, Newcastle upon Tyne, 22

October 1981.

G.167 Correspondence re arrangements, January 1979, 1980.

Notice of lecture; 'Guest List for Dinner Party'.

Brief correspondence arising re publication of lecture in the journal Co-

Existence.

G.168 Typescript draft, with manuscript additions and corrections by Hodgkin;

list of corrections to be made.

Manuscript notes.

Reprint of lecture in Co-Existence, vol.19, no.1, April 1982.

G.169 'Shrimati Indira Gandhi.'

Manuscript draft [? of lecture] only, nd.

G.170, G.171 Unidentified manuscript notes by Hodgkin re lectures, nd. 2 folders.

#### **MISCELLANEOUS**

The material is arranged as follows:

G.172-G.199 Papers and correspondence.

G.200-G.202 Newspaper and magazine cuttings.

G.203, G.204 Printed and duplicated material.

## Papers and correspondence 1952-91

A chronological sequence of shorter papers and correspondence with individuals and organisations.

G.172 1952-72.

G.173 1973.

G.174 1974-76.

G.175	1977-79.
G.176	1980.
G.177	1981 January-May.
G.178	1981 June-December.
G.179	1982.
G.180	1983 January-October.
G.181	1983 November, December.
G.182	1984 January-August.
G.183	1984 September-December.
G.184	1985 January-May.
G.185	1985 June-August.
G.186	1985 September-December.
G.187	1986 January-April.
G.188	1986 May-August.
G.189	1986 September-December.
G.190	1987 January-April.
G.191	1987 May-August.
G.192	1987 September-December. Includes typescript and manuscript draft of 'Prospects for Peace' by Hodgkin.

G.193 1988 January-August.

G.194 1988 September-December.

G.195 1989 January-June.

G.196 1989 July-December.

G.197 1990-91.

G.198, G.199 nd. 2 folders.

# Newspaper and magazine cuttings, 1954-90

G.200 1954-55, 1962, 1976-80.

G.201 1981-83.

G.202 1984-88, 1990, nd.

## Printed and duplicated material

G.203, G.204 2 boxes.

## **SECTION H**

## **CORRESPONDENCE**

H.1-H.331

H.1-H.262

GENERAL SCIENTIFIC CORRESPONDENCE

In alphabetical order with an indication of any information of particular biographical, historical or scientific interest.

Hodgkin kept together by topic much of the scientific correspondence relating to her principal research projects, and this correspondence is to be found in Section B

Research.

H.263-H.306

SHORTER SCIENTIFIC CORRESPONDENCE

In chronological order.

H.307-H.331

REFERENCES AND RECOMMENDATIONS

In chronological order.

#### GENERAL SCIENTIFIC CORRESPONDENCE

1977 H.1 Abraham, E.P.

One letter only re first recorded proposal of the B-lactam structure of

1959-66 H.2 Abrahamssohn, S.

> Abrahamssohn was a Swedish scientist who was awarded a Rockefeller Foundation Fellowship in 1959 to work in Hodgkin's laboratory.

1964, 1967-72 Adams, M.J. H.3

> Adams did D.Phil research with Hodgkin and after a period at Purdue University, Lafayette, Indiana returned to Oxford University to make her career there.

Research and recommendations.

1948-52, 1955 Addamiano, A. H.4

> Addamiano was an Italian scientist who came to work in Hodgkin's laboratory in 1948 supported by the Italian government.

Research.

1965-66, 1969 H.5 Adeoye, S.A.

> Adeoye came from the University of Ibadan, Nigeria to continue his postgraduate research in Oxford. Hodgkin had already become acquainted with Adeoye's work when he was carrying out research at the University of Ghana.

Arrangements for visit to Oxford; recommendations.

1954-55 **H.6** Aeschlimann, J.A.

> Aeschlimann was Vice President in charge of chemical research at Hoffmann-La Roche, Nutley, New Jersey.

X-ray examination work for Hoffmann-La Roche.

H.7

Agarwal, R.

1976-77

Agarwal was based at the IBM Thomas J. Watson Research Center, Yorktown Heights, New York.

Recommendations.

**H.8** 

Ambrose, E.J.

1950-51, 1957

Ambrose was based first at the Courtaulds Ltd Research Laboratories, Maidenhead, Berkshire and then from 1951 at the Chester Beatty Research Institute, London.

Research on gramicidin S and fibrous insulin.

H.9

Anderson, B.J.

1965-76

Anderson came from the University of Auckland to do postdoctoral research on thiostrepton in Hodgkin's laboratory. He subsequently made his career in Australia and New Zealand.

Arrangements to work in Oxford; research; recommendations.

H.10

Andreeva, N.S.

1970-77

Andreeva was based at the Academy of Sciences of the USSR Institute of Molecular Biology, Moscow.

Visits.

H.11

Astbury, W.T.

1935, 1937, 1952-53

Astbury was based at the University of Leeds where he was Professor of Biomolecular Structure 1945-61.

Research; Royal Society discussion meeting on the structure of proteins (May 1952).

H.12

Baker, E.N.

1968-69, 1977

Baker came from New Zealand to do postdoctoral research in Hodgkin's laboratory subsequently returning to New Zealand to make his career.

Recommendations.

H.13

Barker, H.A.

1959, 1961

Barker was based at the Department of Plant Biochemistry, University of California, Berkelev.

Vitamin B12 coenzymes.

H.14

Bartczak, T.J.

1968-76, 1981

Bartczak came from the Institute of Polymers, Lodz, Poland for postdoctoral training in Hodgkin's laboratory 1969-70.

Arrangements to work in Oxford; publication.

H.15

Basak, B.S.

1963-65, 1972, 1974

Basak was Professor of Physics at Presidency College, Calcutta. He came to Hodgkin's laboratory in 1964 for training in computer applications in x-ray crystallography.

Arrangements to work in Oxford; advice on external examiners.

H.16

Bastiansen, O.

1958, 1963, 1966

Principally re visit of Hodgkin to Norway in 1958.

H.17

Beevers, C.A.

1936-51

Beevers was the inventor with H. Lipson (q.v.) of the Beevers-Lipson strips for Fourier analysis.

Beevers-Lipson strips; research.

H.18

Bekoe, D.A.

1963-68

Bekoe was a West African crystallographer working in Ghana and Nigeria.

Research; visit by Hodgkin to Nigeria; recommendation.

H.19

Bentley, G.A.

1970-76

Bentley came from the University of Auckland to do postdoctoral research in Hodgkin's laboratory. He worked on the crystal structure of 4-zinc insulin.

Recommendations.

H.20

Bentz, E.J., Jr.

1965-66, 1970-71

Possible study at Oxford; visit to Oxford.

H.21

Bernal, E.

1944-45, 1972, 1980-86

Wife of J.D. Bernal.

H.22, H.23

Bernal, J.D.

various dates 1935-69, nd

Hodgkin worked with Bernal in Cambridge 1932-34. He subsequently became Professor at Birkbeck College London, Physics 1937-63, Crystallography 1963-68.

Hodgkin lectured and wrote about Bernal on a number of occasions, preparing the biographical memoir for the Royal Society (*Bibliog.* 160, 1980). See D.22, D.41, D.80-D.102, D.154, D.155, F.133.

For material re Bernal Peace Library see G.1-G.6.

H.22

1935-39. Photocopies of Hodgkin's letters to Bernal (one to Eileen Bernal).

The years have been added to the photocopies by Hodgkin.

For photocopies of Bernal's correspondence with scientific colleagues see D.95-D.102.

Originals in Cambridge University Library.

H.23

1943, 1950, 1956, 1965, 1967, 1969, nd. 1950 material relates to a decision by the British Association for the Advancement of Science not to re-elect Bernal to its Council. 1965 item is copy of a letter to Thomas Hodgkin.

H.24

Bijvoet, J.M.

1949-58, 1971-75

Bijvoet was based at the University of Utrecht.

H.25

Blackett, P.M.S.

1957, 1960

Blackett was a British physicist who was awarded the 1948 Nobel Prize in Physics.

Research funding for crystallographic calculations on the Deuce computer at the National Physical Laboratory; requirements for neutron diffraction work in the UK.

H.26

Blow, D.M.

1956, 1974-76

Includes letter re Russian scientist refused visa to go to Israel.

H.27

Blundell, T.L.

1989-90

1989 letter re Eastern European scientists visiting UK.

H.27A

Boll-Dornberger, K. née Schiff

various dates 1940-81

Käte Schiff was born in Austria and worked for her doctorate in V.M. Goldschmidt's laboratory at Göttingen. She came to England as a refugee working for a time with Hodgkin in Oxford. After the Second World War she returned to Germany with her husband Paul Dornberger and subsequently made her career at the Institut für Strukturforschung, Berlin-Adlersdorf, DDR.

Includes biographical account by Hodgkin.

H.28

Booth, A.D.

1945, 1947, 1973

H.29

Borisov, V.V.

1967-76

Borisov came from the Academy of Sciences of the USSR Institute of Crystallography, Moscow to work in Hodgkin's laboratory 1976-77.

Arrangements to work in Oxford.

H.30

Borrás-Cuesta, F.

1968, 1974-78

Borrás-Cuesta came from the Catholic University, Santiago, Chile, to take part in the insulin research in Hodgkin's laboratory.

Arrangements to work in Oxford; difficulties in carrying out research in Chile; recommendations.

H.31

Bragg, W.H.

1939

Bragg was a British physicist who with his son W.L. Bragg (q.v.) pioneered the technique of x-ray diffraction in the study of crystals. For this work they were jointly awarded the 1915 Nobel Prize in Physics.

One letter only re publication of Bibliog. 30, 1940

H.32-H.34	Bragg, W.L.	various dates 1942-76
H.32	1942, 1945-49.	
H.33	1954-57, 1959, 1965. Bragg's letter of 6 M which you will turn down right away' for Hod Royal Institution, London.	May 1955 is 'a wild proposal gkin to come and work at the
H.34	1969-71, 1976. Material re Bragg Sympos correspondence re Bragg papers at the Roya died in 1971.	ium 1970, obituary, reviews, al Institution, London. Bragg
H.35	Brehm, V.E.L.	1968-72
	Brehm came from the Danish Farmaceutiske x-ray structural work on compounds of bio laboratory.	Højskola, Copenhagen to do logical interest in Hodgkin's
	Arrangements to work in Oxford.	
H.36	Brink, C.	1949-50, 1952-53
	Brink came from Leiden to do postdoct laboratory.	toral research in Hodgkin's
H.37	Brodsky, B. née Doyle	1976-77
	Brodsky came from the Rutgers Medical Sci a crystal structure in Hodgkin's laboratory.	hool, New Jersey to work on
H.38	Bunn, C.W.	1949-55, 1969, 1973
	Bunn was an ICI industrial chemist who inver x-ray analysis.	nted the fly's eye technique in
	For earlier correspondence <i>re</i> his collaborat structure analysis see B.341-B.344, B.375.	ion with Hodgkin in penicillin
	Research; computer applications in crystal	analysis; recommendation.

H.39

Candeloro De Sanctis, S.

1966-75, 1987, 1991

Candeloro came from the Istituto Superiore di Sanità, Rome with a scholarship from the Italian National Research Council to work in Hodgkin's laboratory. She collaborated in the structure analysis of ferroverdin.

Arrangements to work in Oxford; research; publications.

H.40

Carlisle, C.H.

1948-58, 1968, 1976, 1980

Carlisle was a research student of Hodgkin at Oxford working on the crystal structure of cholesteryl iodide. He subsequently made his career at Birkbeck College London succeeding J.D. Bernal in the Chair of Crystallography at Birkbeck in 1968.

Research; Institute of Physics X ray Analysis Group (XRAG); recommendation.

Includes 'Synopsis of remarks by Prof. J.D. Bernal' at autumn meeting of XRAG, 1952.

H.41

Chain, E.B.

1945, 1954, 1962

Research.

1945 letter includes Chain's reaction to award of the Nobel Prize in Medicine (with Fleming and Florey) for work on penicillin.

H.42-H.46

Chaudhury, A.M.

1973-79

Chaudhury was Vice-Chancellor and Professor of Physics at the University of Dacca who visited Hodgkin's laboratory in June 1973 as part of a programme arranged by the British Council. He subsequently fell foul of the military regime in Bangladesh and was charged with corruption, spending a period in prison, before coming to Oxford as non-stipendiary Visiting Fellow of Wolfson College. Hodgkin made strenuous efforts on Chaudhury's behalf including financial provision for the Wolfson Fellowship.

Principally *re* Chaudhury's difficulties with the Bangladesh authorities and efforts to enable him to take up the Wolfson Fellowship.

H.42

1973-75.

H.43

1976 January-June.

H.44	1976 July-December.
H.45	1977-79.
H.46	Photocopied and printed background material. Includes copies of documents in the martial law case against Chaudhury, and newsheets published in London by opponents of the military regime in Bangladesh.
H.47	Chibnall, A.C. 1942, 1947, 1980
	Chibnall was the Sir William Dunn Professor of Biochemistry at Cambridge 1943-49.
	Includes copy of Chibnall's Bakerian Lecture on 'Amino acid analysis and the structure of protein' 1942.
H.48	Cochran, W. 1950-1956, 1966
	Cochran was based at the Crystallographic Laboratory, Cavendish Laboratory, Cambridge and the University of Glasgow.
H.49	Cook, J.W. 1934
	Cook was based at the Research Institute, The Cancer Hospital (Free), Fulham Road, London.
	re paper on the pentacyclic aromatic hydrocarbon from cholesterol.
	Includes copy of paper and letter from Cook to Bernal.
H.50	Cooper, A. 1961, 1965-69
	Cooper came from the University of New South Wales to undertake D.Phil. research in Oxford under Hodgkin's supervision.
	Research; recommendations; publication.
H.51	Coppola, J.C. 1958-59
	re possible D.Phil. work with Hodgkin at Oxford. In the end Coppola went to University College London to work with Kathleen Lonsdale (q.v.).

H.52-H.54

Cornforth, J.W.

various dates 1945-89

Cornforth was a research student of Sir Robert Robinson in Oxford who subsequently worked at the National Institute for Medical Research, London, "Shell" Research Limited and the University of Sussex. He was awarded the 1975 Nobel Prize in Chemistry (jointly) for his work on the stereochemistry of enzyme-catalyzed reactions.

Research.

H.52

1945-1957. Includes manuscript draft on 'The crystallographic investigation of some phenol formaldehyde polymers' dated Oxford August 1953.

H.53

1961-63, 1976, 1989.

H.54

Manuscript data, x-ray photographs etc.

H.55

Coulson, C.A.

various dates [1947]-1974

Coulson was Rouse Ball Professor of Mathematics 1952-72 and Professor of Theoretical Chemistry 1972-74, Oxford University.

1974 material relates to organisation of commemorative appeal after Coulson's death that year.

H.56

Coulter, C.L.

1968-75

Coulter was based at the Department of Anatomy, University of Chicago where he carried out research on a monophosphate derivative of vitamin B12. He spent a sabbatical year in Oxford 1970-71.

Research; publication; recommendations.

H.57, H.58

Cox, E.G.

1936-37, 1946-56, 1960, nd

Cox was based at the Chemistry Department, University of Leeds. He subsequently became Secretary of the Agricultural Research Council.

H.57

1936-37. Principally *re* joint report on crystallography for inclusion in Annual Reports of The Chemical Society.

H.58

1946-56, 1960, nd.

1954 correspondence re computing for Hodgkin's vitamin B12 work.

H.59

Cruickshank, D.W.J.

1954, 1957, 1966, 1969-77

Cruickshank was a member of E.G. Cox's Department at Leeds University (see H.58). He subsequently held Chairs at Glasgow University and the University of Manchester Institute of Science and Technology.

1954 letter is re computing for Hodgkin's vitamin B12 work.

H.60

Cutfield, J.F.

1969-76

Cutfield came from the University of Auckland to do postdoctoral research in Hodgkin's laboratory. He returned to New Zealand to a post at the University of Otago.

Arrangements to work in Oxford; recommendations.

H.61

Cutfield, S.M.

1970-71, 1975-76

Susan Cutfield came to Oxford with her husband J.F. Cutfield (see H.60) to work as a research assistant in Hodgkin's laboratory. She subsequently became an advanced student working under Hodgkin's supervision for the D.Phil. degree.

Arrangements to work in Oxford; research; recommendation.

H.62

Dale, D.H.

1957-59, 1966, 1969, 1972

Dale came from Rhodes University, South Africa to do D.Phil. research with Hodgkin 1958-62. He subsequently worked at the UK Atomic Energy Research Establishment before moving to Australia.

Arrangements to work in Oxford; research; recommendations.

H.63

Dale, H.H.

1944, 1965

Dale was a British physiologist best known for his work on the chemical transmission of nerve impulses for which he was awarded (jointly) the 1936 Nobel Prize in Medicine.

1944 letters relate to use of x-ray tube in laboratory at the Royal Institution, London.

H.64

Dargay, J.M.

1970-75

Dargay came from Drexel University, Philadelphia to do D.Phil. research with Hodgkin in Oxford.

Arrangements to work in Oxford; progress report; recommendation.

H.65

Darwin, C.

1949-50

Darwin moved from Oxford to work in A.L. Patterson's laboratory at the Institute for Cancer Research, Fox Chase, Philadelphia.

Recommendation; impressions of Patterson's laboratory and life in the USA generally; Conference on the Solid State at Brooklyn Polytechnic Institute; research.

H.66

Dauben, W.G.

1951, 1954, 1961

Dauben was based in the Department of Chemistry, University of California, Berkeley.

Suprasterol.

H.67

Davies, H.

1972, 1984

re crystallographic study of a compound for Biorex Laboratories.

H.68

Delbaere, L.

1968-69, 1972-73, 1977

Delbaere came from the University of Manitoba, Winnipeg to do postdoctoral research in Oxford supported by the National Research Council of Canada.

Arrangements to work in Oxford; recommendation.

H.69

Dhar, N.R.

1969

Dhar was based at the Sheila Dhar Institute of Soil Science, University of Allahabad, India.

Principally letters from Dhar with details of his biography and agricultural research.

H.70

Dietrich, H. von

1957-59

Dietrich came from the Chemical Institute of the University of Heidelberg to do postdoctoral research in Hodgkin's laboratory supported by the Rockefeller Foundation.

Arrangements to work in Oxford; publications.

H.71

Dodds, E.C.

1937, 1940, 1955

Dodds was based at the Courtauld Institute of Biochemistry, Middlesex Hospital Medical School, London.

Research.

H.72-H.74

Dodson, G.G.

1960-61, 1965-88, nd

Dodson came from the University of Auckland to do postdoctoral research in Hodgkin's laboratory, becoming her principal colleague for a number of years in research on the structure and function of insulin. He subsequently moved to the University of York where he became Professor of Chemistry.

Research and career.

H.72

1960-61, 1965-71. Includes recommendations.

H.73

1973-77, 1979, 1981-82, 1986, 1988. Includes recommendations.

H.74

Nd. Includes cvs.

H.75

Donnay, J.D.H. and Donnay, G.

various dates 1947-83

J.D.H. and Gabrielle Donnay were husband and wife working in mineralogical crystallography in the USA and Canada.

H.76

Duax, W.L.

1966, 1981, 1988-89

H.77-H.79

Dunitz, J.D.

various dates 1946-84, nd

Dunitz came to Oxford in 1946 to do postdoctoral research in Hodgkin's laboratory working on calciferol. After periods of research in the USA including the California Institute of Technology, Pasadena he made his career at the Eidgenössische Technische Hochschule, Zürich.

Research and career.

H.77

1946-49.

H.78

1950-56.

H.79

1957-58, 1962-65, 1969, 1972, 1984, nd.

H.80

Edmond, E.D.

1967, 1969-71, nd

Edmond came from the University of Edinburgh to do D.Phil. research in Hodgkin's laboratory. He worked on the x-ray crystallographic analysis of crystals related to vitamin B12.

Includes recommendations.

H.80A

Emelyanov, V.S.

1982-86, nd

Emelyanov was a leading figure in the Soviet atomic bomb project and became Chairman of the State Committee on the Use of Atomic Energy.

Correspondence and papers *re* translation and possible publication of English language version of Emelyanov's memoirs.

Includes letter from Emelyanov giving permission for publication in England, and photograph of Emelyanov.

H.81, H.82

Ewald, P.P.

various dates 1934-86

Ewald was one of the founders of x-ray optics and structural crystallography. He came to Cambridge as a refugee from Nazi Germany in 1937 subsequently moving to Queen's University Belfast as lecturer and then professor. In 1949 he moved to the USA as head of the physics department at the Polytechnic Institute of Brooklyn, New York.

Hodgkin first corresponded with Ewald in 1934 about her paper on the interpretation of Weissenberg photographs (*Bibliog.* 12).

H.81

1934, 1939, 1956, 1958, 1961, 1974-76, 1979-80.

H.82

1986. Correspondence *re* Royal Society memoir of Ewald (d. 1985), draft memoir by H.A. Bethe, Hodgkin's comments on draft, Hodgkin's own memories of Ewald etc.

H.83-H.85

Fankuchen, I.

various dates [1930s]-1968

Fankuchen was an American crystallographer who came from New York to do postdoctoral research in England successively at Manchester, Cambridge and Birkbeck College London from 1934 to 1939 when he returned to the USA. He subsequently made his career at the Polytechnic Institute of Brooklyn, New York.

Research and a little personal news.

H.83	[1930s], 1940-41. Includes 'Some x-ray biotin' by Fankuchen.	diffraction measurements on
H.84	1944-49, 1955-58. Includes carbon of Bernal, 12 December 1945.	letter from Fankuchen to J.D.
H.85	1962-68. Includes reprint of 'Memorial of Donnay (q.v.). Fankuchen died in 1964.	of Isidor Fankuchen' by J.D.H.
H.86	Ferguson, G.	1961, 1965-66
	Ferguson came from Glasgow to do poste laboratory. He worked for a year on mon to Glasgow.	
	Includes recommendation.	
H.87	Freeman, H.C.	1965-66, 1969, 1974
	Freeman was an x-ray crystallographer University of Sydney.	in the Chemistry Department,
	Includes recommendation.	
H.88	Friedmann, E.	1936, 1944
	Friedmann was based at the Biochemistry	Laboratory, Cambridge.
H.89	Ganguly, A.K.	1973-74
	Ganguly was based at the Schering Corpo	ration, Bloomfield, New Jersey.
	Structural elucidation of Schering antibiot	ics using x-ray crystallography.
H.90-H.92	Glusker, J. née Pickworth	1953-57, 1966-80, 1984, 1987
	Glusker was a student of Hodgkin's at 6 degree on a degradation product of postdoctoral research at the California Instubsequently making her career at the Inst Chase, Philadelphia.	vitamin B12. She then did titute of Technology, Pasadena
	Research and career.	

1953-57. Includes recommendation. H.90 1966-73. Includes recommendations. H.91 1974-80, 1984, 1987. Includes recommendation. H.92 Gopal, S. 1974, 1977-78, 1985-86 H.93 Gopal's letter of 9 February 1985 refers to the planning of a seminar on his father Radhakrishnan's contribution to philosophy, religion, public affairs and world unity. See also G.159, G.160. Folder also includes a little correspondence 1977-78 with Gopal's nephew G. Desiraju about the possibility of his doing some work at the Chemical Crystallography Laboratory, Oxford. 1955-59, 1966, 1984 H.94 Gowenlock, B.G. Gowenlock was based at University College Swansea when he approached Hodgkin about dimeric nitrosomethane crystallography. various dates 1956-87 H.95 Grdenic, D. Grdenic, who worked in Hodgkin's laboratory for a period preceding the correspondence, was based at the Laboratory of General and Inorganic Chemistry, University of Zagreb. He was one of the co-authors of a paper on the structure of ferroverdin with Hodgkin (Bibliog. 143). 1953, 1958, 1960 H.96 Greenaway, F. Greenaway was based at the Science Museum London. Museum exhibits including vitamin B12 models. 1967-71 Guss, J.M. H.97 Guss approached Hodgkin from the University of Sydney about first D.Phil. research and then postdoctoral research with her in Oxford. In the event he worked for his Ph.D. in Sydney and carried out postdoctoral research at Sheffield and Sussex Universities. 1960-65 Hardgrove, G.L. H.98

Hardgrove was based at St. Olaf College, Northfield, Minnesota.

Suprasterol research; sabbatical year in Oxford 1965-66.

H.99

Harding, M.M. née Aitken

1968-72, 1979, 1982

Harding was a student at Somerville College Oxford who did D.Phil. research with Hodgkin. She subsequently made her career at Edinburgh and Liverpool Universities.

Includes cv.

H.100

Harker, D.

1950-51, 1957, 1968, 1977

Harker was Director of The Protein Structure Project at the Polytechnic Institute of Brooklyn, New York.

Research; recommendation.

H.101

Harrison, H.R.

1966-70, 1973, 1981

Harrison came from Yale to do D.Phil. research in Hodgkin's laboratory supported by a Marshall Scholarship.

Includes recommendations.

H.102

Harrison, P.M. née Cowan

[1950s], 1955-59, 1968-78, 1991

Harrison studied chemistry with Hodgkin in Oxford and then researched there on ferritin and at King's College London on fibrous proteins. She subsequently made her career at the University of Sheffield.

Research and career.

Includes 'outline programme of work on ferritin and apoferritin' 1957 and recommendations.

H.103

Haworth, R.D.

1937-38

Haworth was based at Armstrong College, Newcastle (University of Durham).

Examination by x-ray crystallography of specimens sent to Hodgkin by Haworth.

H.104

Hodder, O.J.R.

1970-71, 1975

Hodder was an Oxford chemical crystallographer with a particular interest in computer programmes for structure analysis.

Includes recommendations.

H.105

Hoskins, B.F.

1961-70

Hoskins came from the University of New South Wales to do postdoctoral research in Hodgkin's laboratory.

Arrangements to work in Oxford; research; recommendation.

H.106

Hospital, M.

1970-74

Hospital was based at the University of Bordeaux.

Visits to Oxford and Bordeaux; meeting organised by 'Le groupe français de croissance cristalline'.

H.107

Howard, J.A.K. née Duckworth

1966-75, 1991, nd

Howard came from the University of Bristol to study for her D.Phil. supervised by Hodgkin and B.T.M. Willis at Harwell. She subsequently made her career at Bristol until 1991 when she moved to the University of Durham as Professor of Chemistry.

Includes research report 1967, recommendations and cv.

H.107A

Huber, C.P. née Saunderson

1958-67

Huber came from the University of Manitoba, Winnipeg to do D.Phil. research in Hodgkin's laboratory. She subsequently returned to Canada to work in the Division of Pure Chemistry, National Research Council, Ottawa.

Arrangements to work in Oxford etc.

H.108

Hughes, E.W.

various dates 1948-58, 1980-88, nd

Hughes was based at the California Institute of Technology, Pasadena.

Visits to Pasadena; visa problems, etc.

H.109

Huxley, H.E.

1968, 1974

1968 recommendation.

1974 the problem of muscular contraction and ideas about the sliding filament mechanism as relevant to Jean Hanson's life and work. See also H.192.

H.109A

Iball, J.

various dates 1946-61

Iball was based at Lever Brothers, Port Sunlight and then the University of St Andrews.

H.110

Isaacs, N.W.

1968-78

Isaacs came from the University of Queensland to do postdoctoral research with O. Kennard (q.v.) in Cambridge and then Hodgkin in Oxford.

Research and recommendations.

H.111, H.112

James, M.M.N.

1962-69, 1973-77

James came from the University of Manitoba, Winnipeg to do D.Phil. research with Hodgkin, working on the crystal structure of antibiotic peptides related to penicillin. He subsequently made his career at the University of Alberta.

Research and career.

H.111

1962-66. Includes recommendations.

H.112

1967-69, 1973-77. Includes recommendations.

H.113

Jeffrey, G.A.

1945, 1952, 1965, 1975

The correspondence was initiated while Jeffrey was working at the laboratories of the British Rubber Producers' Research Association. He subsequently made his career at the University of Leeds and in the USA.

Research.

H.114

Jensen, H.

1935-38

Jensen was based at the Laboratory for Endocrine Research, Johns Hopkins University when the correspondence was initiated.

Joint paper on cinobufagin (Bibliog. 20, 1936).

H.115

Jerslev, B.

1948-50, 1957

Jerslev came from the Danish School of Pharmacy, Copenhagen to study x-ray crystallography in Hodgkin's laboratory, subsequently working at Princeton before returning to Denmark.

Research and publications.

H.116

Jones, E.R.H.

1940, 1946-47, 1950, 1988-89

Correspondence 1940, 1946-47, 1950 *re* samples sent by Jones to Hodgkin for x-ray analysis.

H.117

Kamenar, B.

various dates 1963-88

Kamenar was a lecturer of Zagreb University who came to work in Hodgkin's laboratory on nitroso compounds and on a molybdenum phenol complex. He was a former student of D. Grdenic (q.v.)

Arrangements to work in Oxford etc.

H.118

Kamper, M.J. née Harrison

1955-59

Reduction of Department of Scientific and Industrial Research maintenance allowance for a married woman living with her husband.

H.119

Kendrew, J.C.

1949, 1967, 1969

Kendrew was the Cambridge x-ray crystallographer who was awarded the 1962 Nobel Prize in Chemistry jointly with M.F. Perutz (q.v.) for their research into the structure of globular proteins.

1949 correspondence *re* refereeing paper by Kendrew for the Royal Society.

H.120

Kennard, O.

various dates 1949-73, 1985, 1990

Kennard was based at the University Chemical Laboratory Cambridge, becoming Director of the Cambridge Crystallographic Data Centre.

Includes recommendations.

H.121

Kennedy, A.F. née Cullis

1959-61

Kennedy worked as Hodgkin's research assistant.

Includes 'Intended research - a study by x-ray crystallographic methods of insulin and of related structures', nd, and 'Summary of x-ray work on insulin since October 1959' by Ann Kennedy, 25 May 1960.

H.122

King, H.

1937

King was based at the National Institute for Medical Research in London.

Ergometrine methiodide and methobromide.

H.123

Kirz, J.

1971-73

Kirz was an Associate Professor at the State University of New York at Stony Brook who came to work in Hodgkin's laboratory for a year.

Arrangements to work in Oxford.

H.124

Knox, J.

1967-76, 1981, 1987

Knox was an American x-ray crystallographer who worked with C.K. Prout in the Chemical Crystallography Laboratory, Oxford on various organic complexes of molybdenum.

Principally recommendations.

H.125

Kon, G.A.R.

1934-35, 1941, 1946

Kon was based at the Organic Chemistry Department, Imperial College London.

Specimens sent by Kon for x-ray examination by Hodgkin.

Three 1934 letters are addressed to J.D. Bernal.

H.126

Kratky, O.

1946-48, 1988

Kratky was based at the Institute of Theoretical and Physical Chemistry, University of Graz when he initiated the correspondence.

H.127

Laqueur, E.

1935

Laqueur was based at the University of Amsterdam.

Testosterone.

H.128, H.129

Lewitova, A.

1971-76, 1984, nd

Lewitova came from the Charles University, Prague to work in Hodgkin's laboratory supported by an EMBO Long Term Fellowship. She subsequently married another researcher in the laboratory G.A. Bentley (q.v.).

H.128

1971-73. Arrangements to work in Oxford.

H.129

1974-76, 1984, nd. Includes reports on research, recommendations and

H.130

Liang, T.-t.

1966-67

Liang worked for a time in Hodgkin's laboratory. His visit to the UK was cut short by the Cultural Revolution in China.

H.131

Linderstrøm-Lang, K.

1938, 1957

Linderstrøm-Lang was Director of the Carlsberg Laboratory, Copenhagen.

H.132

Lindsay, D.

1970, 1973, 1977

In 1970 Lindsay was based at the University of Sussex; he collaborated with Hodgkin's laboratory on insulin research.

Recommendations.

H.133

Lindsey, J.M. née Broomhead

1949-50, 1954-55, 1976

Lindsey was employed as Hodgkin's research assistant supported by the Nuffield Foundation to work on vitamin B12. She subsequently made her career in Canada.

1950 correspondence relates to scientific visit to USA and includes Lindsey's reports on vitamin B12 work at Pennsylvania State College.

H.134

Línek, A.

1954, 1974, 1978

Linek was based at the Czechoslovak Academy of Sciences Institute of Solid State Physics, Prague.

Advice for colleagues wishing to visit England.

H.135

Lipscomb, W.N.

1955-59, 1978, 1980

Lipscomb was based at the University of Minnesota, moving to Harvard in 1959. He was awarded the 1976 Nobel Prize in Chemistry.

1956-57 correspondence *re* invitation for Hodgkin to lecture at University of Minnesota in conjunction with Fourth International Congress of Crystallography at Montreal and her US visa problems. Includes carbon of Hodgkin's visa application. See also F.9.

H.136, H.137

Lipson, H.

1942-91

Lipson was the inventor with C.A. Beevers (q.v.) of the Beevers-Lipson strips for Fourier analysis. After work at the Crystallographic Laboratory, Cambridge Lipson made his career at the University of Manchester Institute of Science and Technology where he was Professor and Head of the Physics Department for many years.

Research; publications; visits.

H.136

1942-45, 1948-53, 1958, 1960.

H.137

1965, 1968, 1972-73, 1976-77, 1983, 1986, 1988, 1991.

H.138-H.140

Lonsdale, K.

1943-60, 1966, 1970

Lonsdale was an x-ray crystallographer based at the Royal Institution,

London moving to University College London in 1946.

Research; publications; visits.

H.138

1943-45.

H.139

1946-1951.

H.140

1954-56, 1959-60, 1966, 1970.

H.141-H.143

Low, B.W.

1943-58, 1971

Low was one of Hodgkin's students at Oxford and worked with her on the structure of penicillin. She went to work in Linus Pauling's department at the California Institute of Technology, Pasadena 1946-47 and subsequently made her career in the USA.

Research; publications; career.

H.141

1943-47. Includes recommendations.

H.142

1948-49.

H.143

1950-58, 1971. Includes recommendations.

H.144

Lowe, G.

1972-73

Lowe was based at the Dyson Perrins Laboratory, Oxford.

Research.

H.145

Lüttke, W.

1955-56

Lüttke was based at the Physical Chemistry Institute, Freiburg.

Research.

H.146

Luzzati, V.

1952, 1956-57, 1959

Luzzati was based at the Centre de Recherches sur les Macromolecules,

Strasbourg.

1956-57 correspondence re visit to research centres in the UK.

H.147

MacGillavry, C.H.

1937, 1952-53, 1965, 1976

MacGillavry worked in the Netherlands where she became Director of the Crystallography Laboratory, University of Amsterdam.

Correspondence 1952-53, 1965 re visits to the Netherlands.

H.148

Mackay, M.F.

various dates 1956-82, nd

Mackay began research in x-ray analysis through assisting Hodgkin's research on the structure of vitamin B12. She subsequently made her career in Australia.

Includes thesis report and recommendation.

H.149

Magnéli, A.

1961, 1977

Magnéli was based at the University of Stockholm and was 1977 President of the International Union of Crystallography.

Includes draft of article by Magnéli to celebrate the 90th birthday of P.P. Ewald (q.v.) in 1978.

H.150

Marshak, A.

1939, 1947

H.151, H.152

Maslen, E.N.

1955-69, 1975-76, 1979, 1984

Maslen came to Oxford from Australia on a Rhodes Scholarship and worked with Hodgkin for his D.Phil. degree. His principal subject for research was the structure of the antibiotic, cephalosporin c. He returned to Australia and made his career at the University of Western Australia, Perth.

Research and career.

H.151

1955-57, 1958-62. Includes laboratory notes on Penicillin V.

H.152

1965-69, 1975-76, 1979, 1984. Includes recommendations.

H.153

Mason, S.A.

1970-71, 1973, 1977

Mason came from the University of Melbourne to do postdoctoral research in Hodgkin's laboratory at Oxford and with B.T.M. Willis at Harwell. He subsequently moved to the Institut Max von Laue - Paul Langevin, Grenoble.

Arrangements to work in Oxford; recommendations.

H.154

Mathieson, A. McL.

1955, 1960, 1965-66

Mathieson was an Australian scientist working for the Commonwealth Scientific and Industrial Research Organization (CSIRO).

Includes recommendation.

H.155

Megaw, H.D.

1951, 1956, 1966

Includes recommendation.

H.156

Mellor, D.P.

1956, 1958-60

Mellor was based at the School of Chemistry, University of New South Wales.

Research.

H.157, H.158

Mendel, H.

1950-53, 1967-74, 1978

Mendel came to work with Hodgkin as a Ramsey Research Fellow from the University of Utrecht. He worked for his D.Phil. degree partly at Oxford and partly at Utrecht (with J.M. Bijvoet q.v.) on creatine and creatinine. He returned to the Netherlands and worked in industry before taking an academic post at the University of Ibadan, Nigeria.

Research and career.

H.157

1950-53, 1967-69. Includes recommendation.

H.158

1970-74, 1978. Includes recommendations.

H.159, H.160

Mercola, D.A.

1968-78, 1985, 1989

Mercola came from the University of California, Irvine to undertake postdoctoral research in Hodgkin's laboratory on the structure of insulin.

H.159	1968-71. Arrangements to work in recommendations; cv.	Oxford; research proposal;
H.160	1973-78, 1985, 1989. Recommendations;	grant application; cv etc.
H.161	Milledge, H.J.	1956, 1970-73
	Milledge was an x-ray crystallographer who (q.v.) at University College London.	worked with Kathleen Lonsdale
	Includes recommendations.	
H.162	Mills, O.S.	1963, 1965, 1974-75
	Mills was an x-ray crystallographer based a	at the University of Manchester.
	Includes recommendations.	
H.163, H.164	Moore, F.H.	various dates 1963-83, nd
	Moore came from the University of Auck researcher at Harwell, worked for his D.Ph B.T.M. Willis at Harwell on a neutron diffra subsequently made his career at the Austral and Engineering.	nil. with Hodgkin at Oxford and ction study of vitamin B12. He
	Research and career.	
H.163	1963-65. Includes 'Summary of proposals f 1965, recommendations and cv.	or future work', progress report
H.164	1966-67, 1970, 1972, 1974-76, 1983, nd.	Includes recommendations.
H.165	Murray-Rust, P.	1963, 1966, 1969, 1972, 1989
	Includes recommendations.	
H.166	Needham, D.M.M. and Needham, J.	various dates 1944-88
	Includes 'Memorandum on the health of Dr	Dorothy Needham FRS', 1985.
H.167	Neuberger, A.	various dates 1934-76

H.168

Nockolds, C.E.

1966-70

Nockolds came from Perth, Western Australia to do D.Phil. research with Hodgkin on the x-ray analysis of a monoacid derivative of vitamin B12.

Includes recommendations.

H.169

Norman, A.W.

1975-78

Norman was based at the Department of Biochemistry, University of California, Riverside.

Vitamin D.

H.170

Nowacki, W.

various dates 1937-63, 1972-76, 1981

Nowacki was based at the Mineralog.-Petrograph. Institut, University of Bern.

H.171

Nyholm, R.S.

1965, 1970-71.

Nyholm was Professor of Chemistry at University College London.

Includes thesis report.

H.172

Nzokou, L. (variant Njoku) 1974, 1978-88

Nzokou was born in The Cameroons and received an advanced education in chemistry at the University of Voronesz in the Soviet Union. He subsequently held academic posts in Ethiopia and Algeria. Hodgkin had know Nzokou for many years, and actively supported his career. He addresses her as 'Mama' or 'Maman' in the correspondence.

Includes recommendations and cv.

H.173

Osaki, K.

1956-59, 1965-66

Osaki was a research scientist from Osaka University who worked in Hodgkin's laboratory for a few months in 1959 supported by a Rockefeller Foundation fellowship. Osaki became Professor of Inorganic Chemistry at Kyoto University which Hodgkin visited in 1965.

1956-59 correspondence *re* arrangements for Osaki to work in Oxford. Includes copy of Osaki's 'Report of the European Trip (January-February 1959)'.

1965-66 correspondence re Hodgkin's visit to Japan. See also F.25, F.26.

H.174-H.176

Patterson, A.L.

various dates 1938-83

In a letter of 20 October 1966 (H.174) Hodgkin described Patterson as the person 'who had made the most difference to x-ray crystallographic studies after the initial discoveries in 1912-15 of x-ray diffraction and structure analysis'. In her opinion his 1935 paper 'A direct method for the determination of the components of interatomic distances in crystals' had been 'used in the solution of the vast majority of crystals studied anywhere since 1935'.

Patterson who was head of the Department of Molecular Structure at the Institute of Cancer Research, Fox Chase, Philadelphia died in November 1966.

H.174

1938, 1948-49, 1951, 1953, 1956, 1958, 1966. Includes obituaries.

H.175

1969-70, 1980, 1983. Correspondence 1969-70 is with Patterson's widow re visit to Philadelphia to lecture. Correspondence 1980, 1983 is re A.L. Patterson award of the American Crystallographic Association.

H.176

'A.L. Patterson: Experiences in Crystallography - 1924 to date'. 13pp typescript autobiographical account.

H.177, H.178

Pauling, L.C.

various dates 1946-91

Pauling was an American theoretical chemist and biologist who received the 1954 Nobel Prize in Chemistry for his work on intermolecular forces. He was also awarded the 1962 Peace Prize.

H.177

1946-60. Includes 'The road to Stockholm' presented by the Chemistry and Biology Stock Company, 3 December 1954, California Institute of Technology, Pasadena. This dramatic production marked the award of the 1954 Nobel Prize in Chemistry.

H.178

1965-91.

H.179

Pepinsky, R.

1949-50, 1953, 1957-58

Pepinsky was based at the Alabama Polytechnic Institute, Auburn and from October 1949 the Pennsylvania State College. He was a pioneer in the use of the electronic computer in the analysis of x-ray crystallographic data.

Research; visits.

Includes 'tentative' programme for Conference on computers and the phase problem in x-ray analysis, Pennsylvania State College, 6-8 April 1950.

various dates 1939-92, nd H.180-H.183 Perutz. M.F. Perutz was the Cambridge x-ray crystallographer who was awarded the 1962 Nobel Prize in Chemistry jointly with J.C. Kendrew for their research into the structure of globular proteins. 1939-49, 1955, 1958. Includes 'Summary report on researches into the H.180 crystal structure of haemoglobin 1st July 1943 - 1st August 1944'. 1964, 1972-80. Includes article on origins of molecular biology and H.181 review. H.182 1981-89, 1992. Includes reviews. Nd. Undated correspondence and drafts. Includes untitled draft 'account H.183 of protein structure from the Xray side' and 'Enemy alien', Perutz's account of his Second World War experiences. Some of the correspondence is on Crystallographic Laboratory, Cambridge, Cavendish Laboratory, Cambridge and Peterhouse, Cambridge headed notepaper. 1955-65, 1972 Phillips, D.C. H.184 Phillips was based at the National Research Council, Canada and the Royal Institution, London before moving to Oxford in 1967 as Professor of Molecular Biophysics. Research and career. 1955, 1973, 1980 Pope, G.S. H.185 Pope was based at the National Institute for Research in Dairying, Reading. Research; recommendation. 1975, 1977 Prasad, J.S. H.186 Prasad came from the Physics Department, University of Mysore to work in the Chemical Crystallography Laboratory, Oxford supported by a Commonwealth Academic Staff Fellowship.

Arrangements to work in Oxford; letters of thanks.

H.187

Raistrick, H.

1935-36

Raistrick was based at the London School of Hygiene and Tropical

Medicine.

Raistrick's first letter of 29 October 1935 is addressed to Professor Robert

Robinson at the Dyson Perrins Laboratory, Oxford.

Aurofusarin.

H.188

Ramachandran, G.N.

1964, 1966, 1972, 1981

H.189

Raman, S.

1959-60, 1972

H.190, H.191

Ramaseshan, S.

1962-92

Ramaseshan spent a year in Hodgkin's laboratory 1963-64 as a Senior Visiting Research Fellow. He then returned to India where he held a number of leading scientific positions including Director of Research, National Aeronautical Laboratory, Bangalore and Director, Indian Institute of Science, Bangalore.

Visits.

H.190

1962-77.

H.191

1979-92. Includes short tribute by Hodgkin on the occasion of Ramaseshan's 60th birthday.

H.192

Randall, J.T.

1947-50, 1955, 1974-75, 1981

1974-75 correspondence *re* Randall's Royal Society memoir of Jean Hanson and in particular the history of the sliding filament mechanism of muscle contraction. Includes correspondence with H.E. Huxley (q.v.) and drafts of relevant section of memoir.

H.193

Rasmussen, S.E.

1970, 1972, 1976, 1979

Rasmussen was based at the Department of Chemistry, Aarhus University, Denmark. He served for a term as General Secretary and Treasurer of the International Union of Crystallography.

H.194

Rawlins, F.I.G.

1946-47

Rawlins was based at the National Gallery, London.

Examination of organic compounds from Holland.

H.195

Richter, F.

1955, 1961

Richter was based at the Beilstein-Institut, Frankfurt am Main.

Research.

H.196

Riley, D.P.

1939-56, 1966, 1976

Riley was Hodgkin's first research student who did pioneering work with her on both insulin and lactoglobulin.

Includes recommendations.

H.197

Rimmer, B. née Oughton

1961, 1973, 1977

Rimmer worked with Hodgkin as a Research Fellow 1952-61 on the crystal

structure of insulin.

H.198

Roberts, K.C.

1936, 1939-40

The correspondence was initiated when Roberts was based at the Rubber Research Institute of Malaya, Kuala Lumpur.

Research.

H.199

Robertson, J.H.

1948-54, 1963-69, 1978

The correspondence was initiated when Robertson was based at the Dewar Crystallographic Laboratory, University of Edinburgh. After research at Pennsylvania State College and at Oxford with Hodgkin (on vitamin B12) he made his career at the University of Leeds.

Research and career.

Includes recommendation.

H.200

Robertson, J.M.

1937, 1945-50, 1955, 1989-90

Robertson was Gardiner Professor of Chemistry in the University of Glasgow, 1942-70.

Equipment, International Tables, computational work etc.

Includes photograph of plaque honouring Robertson's work unveiled at Glasgow in 1989.

various dates 1935-67, 1970-75 Robinson, R. H.201-H.203 Robinson was Waynflete Professor of Chemistry at Oxford University, 1930-55. He was awarded the 1947 Nobel Prize in Chemistry for his work on plant products of biological importance, especially alkaloids. 1935, 1940, 1945, 1947, 1955-58, 1960, 1964, 1967. H.201 1970-75. Includes Hodgkin's 'Memories of Robert Robinson' prepared for H.202 tape recorded discussion between Hodgkin and Robinson. Transcript of tape recorded discussion. H.203 1956, 1966, 1968, 1976 H.204 Rogers, D. Rogers was based at University College Cardiff in 1956. He subsequently became Professor of Chemical Crystallography at Imperial College London. 1949, 1954-55, 1967 Rollett, J.S. H.205 Rollett did his Ph.D. research at the University of Leeds and then postdoctoral research at the California Institute of Technology, Pasadena returning to the UK to work with Hodgkin at Oxford. 1934-41 H.206 Rosenheim, O. Rosenheim was based at the National Institute for Medical Research, London. The first letter in the correspondence is addressed to J.D. Bernal. Research and publications. 1957, 1972, 1977, 1989 H.207 Rossman, M.G. Rossman was an American x-ray crystallographer who collaborated with Hodgkin on insulin research. Includes recommendations. 1966-67, 1969-73 Rumanova, I.M. H.208

Rumanova was based at the Academy of Sciences of the USSR Institute of

Crystallography, Moscow.

Proposed visit to Oxford.

H.209

Rumball, S. née Sheat

1965-67, nd

Rumball came from the University of Auckland to do postdoctoral research in Hodgkin's laboratory. She worked on the cadmium complex of insulin.

Includes recommendations.

H.210

Sabesan, M.N.

1970-80

Sabesan came from the University of Madras to do postdoctoral research in Hodgkin's laboratory.

Includes thesis report; recommendations; cv.

H.211, H.212

Sakabe, N. and Sakabe, K.

1972-84, nd

The Sakabes (husband and wife) came from Nagoya University to work in Hodgkin's laboratory as part of an exchange agreement between the Royal Society and Japan. They worked on the refinement of the crystal structure of insulin.

Arrangements to work in Oxford; research and publication.

H.211

1972-75.

H.212

1976-84, nd. Includes recommendation.

The undated correspondence relates to the insulin research carried out during the Sabakes' stay in Oxford and gives some indication of the working relationship between Hodgkin and her collaborators at this time.

H.213

Sasvári, K.

1970-71, 1976, 1987

Sasvári was a Hungarian crystallographer based in 1970 at the Central Research Institute for Chemistry of the Hungarian Academy of Sciences.

H.214-H.218

Sayre, D.

1949-57, 1961-62, 1970-80, 1989

Sayre studied physics at Yale, and after wartime work at the Massachusetts Institute of Technology, pursued an interest in x-ray analysis of large molecules, first at the Alabama Polytechnic Institute, Auburn (R. Pepinsky q.v.), and then at Oxford where he worked under Hodgkin's supervision for the D.Phil. degree. Returning to the USA he worked for a time at the Johnson Foundation for Medical Physics, University of Pennsylvania before making his career in the research department of IBM, New York. He spent the academic year 1972-73 at Oxford with a Visiting Fellowship at All Souls College.

Research and career.

H.214	1949-50.	
H.215	1951-55. Includes grant application, recommenda	ations.
H.216	1955-57, 1961-62, 1970. Includes recommendation	ons.
H.217	1971-73.	
H.218	1974-75, 1977-80, 1989, nd. Includes cv, recomme comments on book by Sayre's wife Anne on Rosal	endation and Hodgkin's lind Franklin.
H.219	Schmidt, G.	950-51, 1954-55, 1975
	After working with Hodgkin in Oxford Schmidt mo made his career at the Weizmann Institute of Scie	oved to Israel where he ence, Rehovoth.
H.220	Schubnikov, A.V.	1944, 1946, 1954
	Schubnikov was Director of the Academy of Scienc of Crystallography, Moscow.	es of the USSR Institute
	or orystallography, woscom.	
H.221	Not used.	
H.221 H.222		1982
	Not used.	
	Not used.  Sheehan, J.C.  Sheehan was an American organic chemist who	
	Not used.  Sheehan, J.C.  Sheehan was an American organic chemist who synthesis of penicillin.	
H.222	Not used.  Sheehan, J.C.  Sheehan was an American organic chemist who synthesis of penicillin.  History of penicillin.	1963-69 a, Los Angeles to do e returned to the USA to
H.222	Not used.  Sheehan, J.C.  Sheehan was an American organic chemist who synthesis of penicillin.  History of penicillin.  Shefter, E.  Shefter came from the University of California postdoctoral research in Hodgkin's laboratory. He	1963-69 a, Los Angeles to do returned to the USA to
H.222	Not used.  Sheehan, J.C.  Sheehan was an American organic chemist who synthesis of penicillin.  History of penicillin.  Shefter, E.  Shefter came from the University of California postdoctoral research in Hodgkin's laboratory. He work at the State University of New York at Buffal	1963-69 a, Los Angeles to do returned to the USA to
H.222	Not used.  Sheehan, J.C.  Sheehan was an American organic chemist who synthesis of penicillin.  History of penicillin.  Shefter, E.  Shefter came from the University of California postdoctoral research in Hodgkin's laboratory. He work at the State University of New York at Buffal Includes recommendation.	1963-69 a, Los Angeles to do returned to the USA to lo.  1946-55, 1964, 1977 eatty Research Institute

H.225

Spring, F.S.

various dates 1936-51

Spring was based at the University of Manchester and the Royal Technical College Glasgow.

The first letter in the correspondence is addressed to Bernal.

H.225A

Steiner, D.F.

1971, 1974-77

Steiner was based at the Department of Biochemistry, University of Chicago. He was a close collaborator of Hodgkin in insulin research and was particularly known for his discovery of the biological precursor of insulin, proinsulin.

Principally re proposed visit to Oxford.

H.226

Stoeckli-Evans, H.

1968-72

Stoeckli-Evans came from the University of Salford to do postdoctoral research in Hodgkin's laboratory.

Includes recommendation.

H.227

Stora, C.

1945, 1951, 1958-60

Stora was a French chemical crystallographer based in Paris.

H.228

Synge, R.L.M.

1945-59, 1972, 1975, 1989

The very great bulk of the correspondence was conducted while Synge was based at the Rowett Research Institute, Bucksburn, Aberdeenshire. He subsequently moved to the Food Research Institute, Norwich. Synge was awarded the 1952 Nobel Prize in Chemistry jointly with A.J.P. Martin for their invention of partition chromatography.

Research.

H.229

Taylor, N.E. née White

1955-60

Taylor came from the University of Western Australia, Nedlands to work in Hodgkin's laboratory supported by a Commonwealth Scientific and Industrial Research Organisation overseas studentship. After a period at the University of Cape Town she returned to Australia.

Includes thesis report.

H.230

Taylor, W.H.

various dates 1934-71

Taylor was based at the Crystallographic Laboratory, Cavendish

Laboratory, Cambridge.

H.231

Thatcher, M.H. née Roberts

1970, 1983, 1985, 1988

Thatcher was a student of Somerville College Oxford who chose to do her Part II Chemistry with Hodgkin working on gramicidin. She worked as an industrial chemist for a time before reading for the Bar and entering politics. She became leader of the Conservative Party in 1975 and was Prime Minister, 1979-91.

Includes draft letter from Hodgkin to Thatcher *re* Russia 1983 and Hodgkin's recollections of Thatcher at Oxford written for A.L. Hodgkin 1970 and M.A. Epstein 1988.

H.232

Thompson, B.P.

1965-69

Thompson came from the University of St Andrews to do postdoctoral research with Hodgkin. He subsequently worked for the British Council and was posted to India.

Includes recommendations.

H.233

Tischenko, G.N.

1962-64, 1971

Tischenko was based at the Academy of Sciences of the USSR Institute of Crystallography, Moscow where she worked on derivatives of gramicidin S.

Arrangements to work in Oxford.

H.234

Tovborg Jensen, A.

1945, 1947, 1958-59, 1976

Tovborg Jensen was based at the Royal Veterinary and Agricultural School, Copenhagen.

H.235

Trueblood, K.N.

various dates 1957-89, nd.

Trueblood was based at the University of California, Los Angeles. He collaborated with Hodgkin on vitamin B12 research and crystallographic data from Hodgkin was processed on an electronic computer at UCLA.

The first letter in the correspondence is from J.D. Bernal *re* proposed visit of Trueblood to the Soviet Union.

H.236

Vaciago, A.

various dates 1958-76

Vaciago was an Italian x-ray crystallographer who worked with Hodgkin in

Oxford on a number of occasions.

Includes recommendation.

H.237

Vainshtein, B.K.

1973-78, 1981, 1986-91

Vainshtein was the Director of the Academy of Sciences of the USSR Institute of Crystallography, Moscow (in succession to A.V. Schubnikov q.v.).

Includes material re Anglo-Soviet scientific exchange, and recommendations.

H.238

Venkatappa, M.P.

1969-73

Venkatappa was an Indian scientist working in the USA.

H.239

Venkatesan, K.

1961-86

Venkatesan was an Indian scientist who did postdoctoral research with J.D. Dunitz at Zürich and then with Hodgkin at Oxford where he worked on the B12 nucleus compound, Factor V1a. He returned to India to make his career at the University of Madras and the Indian Institute of Science, Bangalore.

Research and career.

Includes recommendations.

H.240-H.242

Vijayan, M. and Vijayan, K.

1966-91

Vijayan came from the Indian Institute of Science, Bangalore to do postdoctoral research in Hodgkin's laboratory 1966-69, working on the crystal structure of insulin. He was accompanied by his wife who was also a scientist. He then returned to Bangalore spending a further period in Oxford 1976-77.

Research and career.

H.240

1966-69. Includes thesis reports.

H.241

1971-75. Includes photographs and recommendation.

H.242

1976-91. Includes recommendation.

H.243, H.244

Viswamitra, M.A.

1963-77

Viswamitra came from the Indian Institute of Science, Bangalore to work in Hodgkin's laboratory on the structure of the peptide antibiotic thiostrepton supported by a grant from the Squibb Institute for Medical Research. He returned to Bangalore to make his career, spending further periods of research in Oxford and Cambridge.

Research and career.

H.243

1963-67. Includes 'Abstract of work done on thiostrepton during the period Nov. 65 - Oct. 66', and recommendations.

H.244

1968-77. Includes recommendations.

H.245, H.246

Waters, T.N.M.

1963, 1967-75, 1979

Waters was based at the Chemistry Department, University of Auckland. He spent a sabbatical year in Oxford 1964-65 when he collaborated with Hodgkin in the study of a vitamin B12 derivative. He returned to Oxford for the second half of 1971. Over the years he sent a number of postdoctoral students to work in Hodgkin's laboratory.

Research and career.

H.245

1963, 1967-71. Includes recommendations.

H.246

1972-75, 1979. Includes recommendations.

H.247

Watson, K.J.

1960-72

Watson came from the University of Western Australia, Nedlands to do postdoctoral research in Hodgkin's laboratory. He subsequently took up an appointment at the University of Copenhagen.

Includes recommendations.

H.248

White, J.G.

1975

White was based at the Chemistry Department, Fordham University, New York.

Sabbatical in Oxford.

H.249

Wiebenga, E.H.

1949-58

Wiebenga was based at the University of Groningen.

Visits.

H.250

Willis, B.T.M.

1966, 1968, 1973-78

Willis was based at the Atomic Energy Research Establishment, Harwell.

Correspondence and papers 1973-74 re meeting on Neutrons and Biology at the Rutherford Laboratory, 18 April 1974. Hodgkin talked on 'Three

dimensional crystallography'.

H.251

Wilson, A.J.C.

various dates 1949-58, 1974, 1976

Wilson was based at University College Cardiff and the University of

Birmingham.

Includes recommendation.

H.252

Wilson, H.

1972-73

Wife of A.J.C. Wilson.

H.253

Windaus, A.

1948

H.254

Woodward, R.B.

various dates 1956-86

Woodward was based at the Department of Chemistry, Harvard. He was awarded the 1965 Nobel Prize in Chemistry for outstanding achievements in organic synthesis.

1956 item is letter from Hodgkin re vitamin B12.

Includes photograph of Woodward 1976 and Hodgkin's 'Memories of R.B. Woodward'. He died in 1979.

H.254A

Woolfson, M.M.

1971, 1975-79, 1989

Woolfson was Professor of Physics at the University of York.

H.255-H.257

Wrinch, D.

various dates 1939-70, 1976-77

Wrinch was the creator of the cyclol theory of peptide structures. She moved to the USA before the Second World War and was affiliated with Smith College, Massachusetts for many years.

1939, 1943-53, 1958, 1970.

H.256, H.257

1976-77. Symposium in honour of Wrinch's memoir, obituaries, biographical information, recollections. 2 folders.

H.258

H.255

Wyckoff, R.W.G.

1947-53, nd

Wyckoff was based at the Laboratory of Physical Biology, National Institute of Health, Bethesda, Maryland. He subsequently became Science Attaché at the American Embassy in London.

Necrosis virus crystals; Hodgkin's visa difficulties (1953).

H.259

Yablochkov, L.D.

1983, 1987-91, nd

Yablochkov was an Africanist who worked at the Institute of African Studies, Moscow. Hodgkin's husband Thomas first met him in Ghana 1960-64.

Visits to the UK.

H.260

Zahn, H.

1957, 1965, 1972-75

Zahn was based at the Deutches Wollforschungsinstitut, Aachen.

H.261, H.262

Zeidan, H.M.M.

1987-90

Zeidan studied and taught chemistry at the University of Khartoum. Hodgkin sought to help him take up some useful research, preferably in the study of pollution, which would fit him better for an academic career in other universities.

H.261

1987-88. Includes recommendations.

H.262

1989-90. Includes recommendation, cv, proposed research project.

## SHORTER SCIENTIFIC CORRESPONDENCE

H.263	1933-36	H.280	1960-61
H.264	1937-39	H.281	1962-63
H.265	1940-41	H.282	1964-65
H.266	1942-43	H.283	1966
H.267	1944-45	H.284	1967
H.268	1946-47	H.285	1968-69
H.269	1948-49	H.286	1970
H.270	1950	H.287	1971 (1)
H.271	1951	H.288	1971 (2)
H.272	1952	H.289	1972 (1)
H.273	1953	H.290	1972 (2)
H.274	1954	H.291	1973
H.275	1955	H.292	1974
H.276	1956	H.293	1975
H.277	1957	H.294	1976
H.278	1958	H.295	1977
H.279	1959	H.296	1978

H.297	1979	H.302	1987
H.298	1980-81	H.303	1988
H.299	1982-83	H.304	1989
H.300	1984	H.305	1990-91
H.301	1985-86	H.306	nd
REFERENCES AND RECOMME	ENDATIONS		
H.307	1942-48	H.320	1974
H.308	1952, 1956-59	H.321	1975
H.309	1961-66	H.322	1976
H.310	1967	H.323	1977-78
H.311	1968 (1)	H.324	1979
H.312	1968 (2)	H.325	1980-82
H.313	1969	H.326	1983-86
H.314	1970 (1)	H.327	1987
H.315	1970 (2)	H.328	1988
H.316	1971 (1)	H.329	1989
H.317	1971 (2)	H.330	1990-92
H.318	1972	H.331	Nd
H.319	1973		

**SECTION J** 

#### NON-PRINT MATERIAL

J.1-J.83

J.1-J.30

**PHOTOGRAPHS** 

J.1-J.6 Photographs of Hodgkin

J.7-J.14 Photographs with scientific colleagues

J.15-J.21 Visits and conferences

J.22-J.24 Laboratories, apparatus, models

J.25-J.29 Domestic and family

J.30 Photograph album

J.31-J.79

PHOTOGRAPHIC SLIDES

J.31-J.53 Insulin

J.54-J.58 Vitamin B12

J.59-B.79 Miscellaneous

J.80-J.82

SOUND RECORDINGS

J.83

FILM

#### **PHOTOGRAPHS**

## Photographs of Hodgkin

J.1	Photographs for Royal Society portfolio, 1947.
J.2	India, 1974.
J.3-J.6	Undated photographs, arranged in approximate chronological order, [1950s - ca.1990]. Four folders.
Photographs with s	cientific colleagues
J.7	Photograph of Hodgkin with J.D. Bernal, D. Fankuchen and I. Fankuchen, [1930s].
J.8	With H.M. Powell and colleagues from Oxford laboratory, [early 1950s].
J.9	With unidentified colleagues. Inscribed on verso 'Exeter meeting of the Chem[ical] Soc[iety]. Announcement of str[ucture] of B12 '[?1955].
J.10	A.L. Patterson and colleagues, possibly in his room at the Institute for Cancer Research, Fox Chase, Philadelphia, 1961.
J.11	With P.L. Kapitza. One photograph is inscribed on verso 'Dorothy Hodgkin and Peter Kapitza at K's country house near Moscow. 1970-80'.
	Folder includes letter from Anne Kapitza, 1987, in which she writes 'I am sending you a photo as a remembrance of your visits to our country place'.
J.12	With F.H.C. Crick, 1987.
	The photograph is labelled '5 March 1987 at Scripps Clinic, La Jolla CALIF. NIMSLO 3-D Photo by Mike Pique'.
J.13, J.14	Undated photographs. Two folders.
J.13	?With K. Boll-Dornberger.

With D.C. Phillips.

J.14

#### Visits and conferences

J.15	Kiev, ?1953. See also F.7
	Halle, East Germany, 1968.
J.16	Spain, ?1976. See also F.103.
J.17	Eleventh General Assembly and International Congress of the IUCr, Warsaw, 1978. See also E.142-E.148.
J.18	29th Pugwash Conference, Mexico City, 1979. See also G.45.
J.19	International Symposium on 'Frontiers in Bioorganic Chemistry and Molecular Biology', USSR, 1984.
	Moscow, July 1986.
J.20, J.21	Japan, August 1986. Two folders.
J.20	Photographs, inscribed on verso 'at International House of Japan, Tokyo.'
J.21	Photographs of Hodgkin taking part in a television panel discussion with Linus Pauling and Archbishop Desmond Tutu.

#### Laboratories, apparatus, models

J.22-J.24 Nd. Three folders.

J.24 contains photograph inscribed on verso 'This is a picture of B12 [model] I took out of the window in your lab in Oxford: thought you might enjoy it. Love Ed Stanford.'

#### Domestic and family

J.25, J.26 Family photographs, [1938-1940s]. Two folders.

J.27 Photographs of Crab Mill, the Hodgkin family home, Ilmington, Warwickshire, with family members and colleagues. One photograph only dated 1977.

Photographs at Crab Mill, [?1980s]. J.28 Photograph of Hodgkin family home, Powder Hill near Oxford, inscribed J.29 to be sent as a greetings card by Hodgkin, nd.

#### Photograph album

J.30

Presented to Hodgkin by the Pugwash Council at the 38th Pugwash Conference, Dagomys, USSR, on the occasion of her retirement from the Presidency of Pugwash, 1988.

The album, which was signed by most members of the Pugwash Council, contains photographs of Pugwash occasions 1969-88.

#### PHOTOGRAPHIC SLIDES

Found in plastic sheets with slide-pockets. As far as possible the titles on the original filing cabinet drawer dividers have been reproduced as the catalogue entries.

#### Insulin

J.31	'Early insulin.'
J.32	'insulin first outline solution.'
J.33	'insulin second outline solution.'
J.34	'insulin third outline solution.'
J.35	'Insulin : third solution : crystal, hezamer, dimer, monomer.'
J.36	'details of the structure.'
J.37	'View of the str[ucture of] insulin.'
J.38	'insulin 6Å resolution map.'

J.39	'insulin 2.8Å resolution map.'
J.40	'insulin : 1.9Å electron density maps.'
J.41	'Insulin : orgn of the crystal structure. Concanavalin A, etc.'
J.42	'4 Zn [insulin].'
J.43	'4 zinc insulin.'
J.44	'hagfish i[nsulin] 1st row.'
J.45	'cubic insulin.'
J.46	'insulin crystals and history.'
J.47	'insulin and biological action.'
J.48	'insulin Pattersons, heavy atoms.'
J.49	'insulin history.'
J.50	'electron density.'
J.51	'insulin models.'
J.52	'LDH Slides - from Margaret Adams.'
J.53	Untitled.
Vitamin B12	
J.54	'Factor VIa and synthetic corrins.'
J.55	'B12 Coenzyme.'

J.56	'B12 and neo B12 and B12 iodide.'
J.57	'B12 monoacid : X-rays.'
J.58	'neutron diffraction monoacid.'
Miscellaneous	
J.59	'Penicillin.'
J.60	'penicillin, x-rays, peptides.'
J.61	'X ray analysis : Pattersons benzene, hexamethylenetetramene tartrates.'
J.62	'Sterols.'
J.63	'biological structures.'
J.64	'C.F. Powell.'
J.65	'Direct methods - reserpine, Ted Maslen.'
J.66	'Liquid crystals.'
J.67	'Hugo Müller Lecture - nonactin, patch only alcohol, hodg.'
J.68	'crystals and biological structures.'
J.69	'crystalline proteins : lysozyme, carboxypeptidase, etc.'
J.70	'various proteins.'
J.71	'history.'
J.72	'X-ray diffraction = benzene; boron hydride.'

J.73 'TMV Viruses.'

J.74 'haemoglobin and myoglobin.'

J.75-J.79 Untitled. Five sheets.

#### SOUND RECORDINGS

J.80 Tape recording (¾ track mono 3¾ i.p.s.) of Hodgkin's Nobel Guest Lecture

on 'Problems in the x-ray analysis of proteins', Bibliog. 145, 1974.

This was presented in connection with the Stockholm Symposium on the Structure of Biological Molecules, 9-11 July, 1973.

Includes introductory address to symposium and introduction to Hodgkin's

lecture.

J.81 Cassette recording of Hodgkin's 'Chancellor's Address', Education

Department, Bristol University, 30 October 1974.

Hodgkin's address was entitled 'What should we learn? Problems and experiences'. The address includes biographical reflections, and was

introduced by the Vice Chancellor, Sir Alec Merrison.

See also D.145.

J.82 Cassette recording of Hodgkin's Plenary Lecture on 'New and old problems in the structure analysis of vitamin B12', at the Third European

Symposium on Vitamin B12 and Intrinsic Factor, Zürich, 5-8 March 1979.

Includes introductory remarks to the opening session by Lord Todd and K.A. Folkers.

See also F.129.

#### FILM

J.83 16mm film 'Crystal structure of the insulin dimer', Computer Systems

Laboratory, Washington University, St. Louis, Missouri, 1971.

Running time approximately 8 minutes.

Catalogue of the papers and correspondence of

# Dorothy Mary Crowfoot Hodgkin OM FRS

(1910-1994)

**VOLUME III** 

Bibliography

Index of correspondents

by Peter Harper and Paul Newman NCUACS catalogue no. 47/3/94

# **BIBLIOGRAPHY**

	incom the ex	bliography has been compiled for the catalogue from Hodgkin's own plete lists (D.108) and a search of the abstract literature. Following cample of Hodgkin's lists, her Ph.D. thesis has been included. ences in the catalogue are to this bibliography in the form <i>Bibliog</i>
1)	1932	(with H.M. Powell) Layer chain structures of thallium dialkyl halides, <i>Nature, Lond.</i> <b>130</b> , 131.
2)	1933	(with J.D. Bernal) The structure of the Diel's hydrocarbon $\rm C_{18}$ $\rm H_{16}$ . Chemy Ind., Lond. <b>52</b> , 729.
3)		(with J.D. Bernal) Crystal structure of vitamin B1 and of adenine hydrochloride. <i>J. chem. Soc.</i> , p.716.
4)		(with J.D. Bernal) Crystalline phases of some substances studied as liquid crystals. <i>Trans. Faraday Soc.</i> <b>29</b> , 1032.
5)		(with J.D. Bernal, B. Robinson & W.A. Wooster) Crystallography Annual Reports. Chemical Society, p.379.
6)	1934	(with H.M. Powell) Crystal structures of dimethyl thallium halides. Z. Kristallogr. 87, 370.
7)		(with J.D. Bernal) X-ray photographs of crystalline pepsin. <i>Nature, Lond.</i> <b>133</b> , 794.
8)		(with J.D. Bernal) X-ray crystallographic measurements on some derivatives of cardiac aglucones. <i>Chemy Ind.</i> <b>53</b> , 953.
9)		(with J.D. Bernal) Use of the centrifuge in determining the density of small crystals. <i>Nature, Lond.</i> <b>134</b> , 809.
10)	1935	(with J.D. Bernal) The structure of some hydrocarbons related to the sterols. <i>J. chem. Soc.</i> , p.93
11)		X-ray single crystal photographs of insulin. <i>Nature, Lond.</i> 135, 591.

12)		The interpretation of Weissenberg photographs in relation to crystal symmetry. <i>Z. Kristallogr.</i> (A) <b>90</b> , 215.
13)		A note on the X-ray crystallography of the toad-poisons bufagin and cinobufagin and of strophanthidin. <i>Chemy Ind., Lond.</i> <b>54</b> , 568-9.
14)		(with J.D. Bernal) Molecular weight of calciferol and related substances. <i>Chemy Ind., Lond.</i> <b>54</b> , 701-2.
15)	1936	X-ray crystallography and the chemistry of the sterols. Ph.D. thesis, University of Cambridge.
16)		(with B.K. Blount) The veratrine alkaloids. III. The preparation of cevanthrol, and the x-ray crystallographic examination of cevanthrol and cevanthridine. <i>J. chem. Soc.</i> , p.414.
17)		X-ray crystallographic measurement of phrenosinic (cerebonic) acid and its oxidation product. <i>J. chem. Soc.</i> , p.716.
18)		(with W.S. Rapson & R. Robinson) Experiments on the synthesis of substances related to the sterols. Part XI. The constitution of the condensation products from acetyl cyclo hexene and methoxytetralone. <i>J. chem. Soc.</i> , p.757.
19)		(with J.D. Bernal) X-ray crystallographic data on the sex-hormones, oestrone, androsterone, testosterone, and progesterone, and related substances. <i>Z. Kristallogr.</i> (A) <b>93</b> , 464.
20)		(with H. Jensen) Molecular weight of cinobufagin. J. Am. chem. Soc. 58, 2018.
21)	1937	(with J.D. Bernal) X-ray crystallography and the chemistry of sterols and sex hormones. <i>Chem. Weekblad</i> <b>34</b> , 2.
22)		The two crystalline modifications of insulin. <i>Nature, Lond.</i> <b>140</b> , 149.
23)	1938	The crystal structure of insulin: I. The investigation of air-dried insulin crystals. <i>Proc. R. Soc. Lond.</i> A <b>164</b> , 580.

24)		Note on the molecular weight of ß-tocopheryl allophanate. In F. Bergel, A.R. Todd & T.S. Work, Studies on Vitamin E, Part III. <i>J. chem. Soc.</i> , p.258.
25)		(with D. Riley) Crystal structures of the proteins. An x-ray study of Palmer's lactoglobulin. <i>Nature, Lond.</i> <b>141</b> , 521.
26)		(with I. Fankuchen) The molecular weight of a tobacco seed globulin. <i>Nature, Lond.</i> <b>141</b> , 522.
27)		The molecular weight of fichtelite. J. chem. Soc., p.1241.
28)	1939	X-ray studies of protein crystals. Proc. R. Soc. Lond. A 170, 74.
29)		(with D. Riley) X-ray measurements on wet insulin crystals. <i>Nature, Lond.</i> <b>144</b> , 1011.
30)	1940	(with J.D. Bernal & I. Fankuchen) X-ray crystallography and the chemistry of the steroids. Part I. <i>Phil. Trans. R. Soc. Lond.</i> A <b>239</b> , 135.
31)	1941	A review of some recent work on protein crystals. Chem. Rev. 28, 215.
32)		(with C.H. Carlisle) A determination of molecular symmetry in the $\alpha$ ß diethyl dibenzyl series. J. chem. Soc., p.6
33)	1942	(with J.G. Chalmers) The elimination of 3:4 benzpyrene from the animal body after subcutaneous injection. 2. Changed benzpyrene. <i>Biochem. J.</i> <b>35</b> , 1270.
34)	1943	(with I. Berenblum, E.R. Holiday & R. Schoental) The metabolism of 3:4 benzpyrene in mice and rats. <i>Cancer Res.</i> <b>3</b> , 151.
35)		(with B.W. Low) A note on the crystallography of helvolic acid and the methyl ester of helvolic acid. <i>Br. J. exp. Pathol.</i> <b>24</b> , 120.
36)	1944	(with B.W. Rogers-Low) X-ray crystallography of Gliotoxin. <i>Nature, Lond.</i> <b>153</b> , 651-2.

37)		(with B.W. Low) Crystallographic examination of patulin and claviformin. <i>Lancet</i> , Jan. 22nd, p.112.
38)		(with B.W. Rogers-Low) X-ray crystallography and the chemistry of the sterols. <i>Vitamins &amp; Hormones</i> , p.2.
39)	1945	(with C.H. Carlisle) The crystal structure of cholesteryl iodide. <i>Proc. R. Soc. Lond.</i> A, <b>184</b> , 64.
40)		(with G.M.J. Schmidt) X-ray crystallographic measurements on a single crystal of a tobacco necrosis virus derivative. <i>Nature, Lond.</i> <b>155</b> , 504.
41)	1946	Protein Crystals. Usp. Khim. 15, 215-30.
42)		(with E.P. Abraham, A.E. Joseph & E.M. Osborn) Antibacterial substance from <i>Arctium minus</i> and <i>Onopordon tauricum. Nature, Lond.</i> <b>158</b> , 744-5.
43)	1947	Crystallography. Nature, Lond. 160, 193.
44)	1948	(with J.D. Dunitz) The structure of calciferol. <i>Nature, Lond.</i> <b>162</b> , 608.
45)		X-ray crystallographic studies of compounds of biochemical interest. <i>A. Rev. Biochem.</i> , p.115.
46)	1949	(with C.W. Bunn, B.W. Rogers-Low & A. Turner-Jones) X-ray crystallographic investigation of the structure of penicillin. In <i>Chemistry of Penicillin</i> . Princeton University Press.
47)		(with G.J. Pitt) Crystallography 1947, 1948, 1949. A. Rep. chem. Soc., p.57.
48)	1950	X-ray analysis and protein structure. Cold spring Harbor Symp. 14, 65.
49)		(with M.W. Porter & R.C. Spiller) Crystallographic measurements on the anti-pernicious anaemia factor. <i>Proc. R. Soc. Lond.</i> B <b>136</b> , 609.

50)		(with G.J. Pitt & J. Thewlis) Crystallography 1950. A. Rep. chem. Soc., p.47.
51)		(with C. Darwin) Crystal structure of the dimer of p-bromonitrosobenzene. <i>Nature, Lond.</i> <b>166</b> , 827.
52)	1951	(with P.M. Cowan) A comparison of x-ray measurements on airdried tobacco necrosis protein crystals with electron microscope data. <i>Acta crystallogr.</i> <b>4</b> , 160.
53)		Crystallography, Introduction. Ann. Rep. chem. Soc.
54)	1952	An x-ray crystallographic study of certain peptides. <i>Intern. Congr. Biochem., Abstr. of communs.,</i> pp.159-60.
55)		X-ray analysis of the structure of penicillin. Advancement Sci. 6, 85-9.
56)		(with D. Sayre) A crystallographic examination of the structure of luministerol. <i>J. chem. Soc.</i> , p.4561.
57)	1953	(with P.M. Cowan) Some observations on peptide chain models in relation to crystallographic studies on gramicidin B and insulin. <i>Proc. R. Soc. Lond.</i> B <b>141</b> , 89-92.
58)	1954	(with H. Mendel) The crystal structure of creatine monohydrate. Acta crystallogr. 7, 443.
59)		(with C. Brink, J. Lindsey, J. Pickworth, J.H. Robertson & J.G. White) X-ray crystallographic evidence on the structure of vitamin B12. <i>Nature, Lond.</i> <b>174</b> , 1168.
60)	1955	Étude cristallographique par les rayons X de la structure de la vitamine B12. <i>Bull. Soc. fr. Minér. Cristallogr.</i> <b>78</b> , 106-115.
61)		(with J. Pickworth, R.J. Prosen, J.H. Robertson, K.N. Trueblood & J.G. White) Structure of vitamin B12. The crystal structure of the hexacarboxylic acid derived from B12 and the molecular structure of the vitamin. <i>Nature, Lond.</i> <b>176</b> , 325.
62)		(with M.J. Kamper) Some observations on the crystal structure of a chlorine substituted vitamin B12. <i>Nature, Lond.</i> <b>176</b> , 551-3.

63)		(with M. Mackay) A crystallographic examination of the structure of morphine. <i>J. chem. Soc.</i> , p.3261.
64)		(with A.W. Johnson & A.R. Todd) Structure of vitamin B12. <i>Chem. Soc.</i> , Spec. Publ. no. 3, 109-23.
65)	1956	(with B.M. Oughton) A speculation on insulin. Ciba Foundation, Colloquia on Endocrinology 9, 133-141.
66)		The structure of vitamin B12. Europäisches Symposion über Vitamin B12 und Intrinsic Factor. Ferdinand Enke Verlag, Stuttgart.
67)		(with M.J. Kamper, M. Mackay, J. Pickworth, K.N. Trueblood & J.G. White) Structure of vitamin B12. <i>Nature, Lond.</i> <b>178</b> , 64-66.
68)	1957	(with B.M. Oughton & G.M.J. Schmidt) A crystallographic study of some derivatives of gramicidin S. <i>Biochem. J.</i> <b>65</b> , 744.
69)		(with J.D. Dunitz & M.S. Webster) Structure of calciferol. <i>Chem. &amp; Ind., Lond.</i> , pp.1148-9.
70)		(with M.J. Kamper, J. Lindsey, M. Mackay, J. Pickworth, R.J. Prosen, J.H. Robertson, C.B. Shoemaker, K.N. Trueblood & J.G. White) The structure of vitamin B12. I. An outline of the crystallographic investigation of vitamin B12. <i>Proc. R. Soc. Lond.</i> A <b>242</b> , 228.
71)	1959	(with J. Pickworth, R.J. Prosen, J.H. Robertson, R.A. Sparks & K.N. Trueblood) The structure of vitamin B12. II. The crystal structure of a hexacarboxylic acid obtained by the degradation of vitamin B12. <i>Proc. R. Soc. Lond.</i> A <b>251</b> , 306-352.
72)	1960	(with M.J. Kamper, K.N. Trueblood & J.G. White) Some observations on the structures of wet and air-dried crystals of vitamin B12. <i>Z. Kristallogr.</i> <b>113</b> , 6.
73)		(with N.E. Taylor & J.S. Rollett) The x-ray crystallographic determination of the structure of bromomiroestrol. <i>J. chem. Soc.</i> , pp.3685-95.
74)		Molecules in crystals. Nature, Lond. 188, 441-447.

75)	1961	Molecules in crystals. Notes Rec. R. Soc. Lond., 16.
76)		(with E.N. Maslen) The x-ray analysis of the structure of cephalosporin C. <i>Biochem. J.</i> <b>79</b> , 393-402.
77)		(with P.G. Lenhert) Structure of the 5,6 dimethyl-benzimidazolyl-cobamide coenzyme. <i>Nature, Lond.</i> <b>192</b> , 937.
78)		(with C.P. Saunderson) Crystal structure of suprasterol II. Tetrahedron Letters 16, 573-8.
79)		J.D. Bernal. Scientific World V.
80)		(with P.G. Lenhert) The x-ray crystallographic investigation of the 5,6-dimethylbenzimidazole-cobamide coenzyme. 2nd European Symposium on Vitamin B12 and Intrinsic Factor. Ferdinand Enke Verlang, Stuttgart.
81)	1962	(with J. Lindsey, M. Mackay & K.N. Trueblood) The structure of vitamin B12. IV. The x-ray analysis of air-dried crystals of B12. <i>Proc. R. Soc. Lond.</i> A <b>266</b> , 475.
82)		(with J. Lindsey, M. Mackay, R.A. Sparks & K.N. Trueblood) The structure of vitamin B12. V. The structure of the air-dried crystals of vitamin B12. <i>Proc. R. Soc. Lond.</i> A <b>266</b> , 494.
83)	1963	(with S. Abrahamsson & E.N. Maslen) The crystal structure of phenoxymethyl-penicillin. <i>Biochem. J.</i> 86, 514.
84)		X-ray crystallography in hormone research. In <i>Techniques in endocrine research</i> . New York : Academic Press Inc.
85)		(with D. Dale & K. Venkatesan) The determination of the crystal structure of factor V 1a. Cryst. Crystal Perfect., Proc. Symp., Madras, pp.237-42.
86)		(with J.D. Dunitz, B.M. Rimmer & K.N. Trueblood) The crystal structure of a calciferol derivative. <i>J. chem. Soc.</i> , pp.4945-56.
87)	1964	(with C. Brink-Shoemaker, D.W.J. Cruickshank, M.J. Kamper & D. Pilling) The structure of vitamin B12. VI. The structure of crystals of vitamin B12 grown from and immersed in water. <i>Proc. R. Soc. Lond.</i> A <b>278</b> , 1-26.

88)		Notes on molecular geometry and chemical reactivity in connection with the B12 vitamins. In <i>The law of mass action</i> , det Norske Videnskaps Akademi, Oslo Universitetsforleget.
89)		Vitamin B12 and the porphyrins. Fedn Proc. Fedn Am. Socs exp. Biol. 23, 592.
90)		The x-ray analysis of complicated molecules. <i>Prix Nobel</i> , pp.157-78. Nobel Foundation.
91)	1965	(with D. Dale) The crystal structure of black nitrosyl-pentammine dichloride. <i>J. chem. Soc.</i> , p.1364.
92)		Die Röntgen Strukturanalyse komplizierter Moleküle. <i>Angew. Chem.</i> <b>77</b> (21) 954-962.
93)		Die Röntgen Strukturanalyse einiger biochemisch interessanter Moleküle. Arbeitsgemeinschaft für Forschung des Landes NR-Westfalen, p.159.
94)		The structure of the corrin nucleus from x-ray analysis. <i>Proc. R. Soc. Lond.</i> A <b>288</b> , 294-305.
95)	1966	Vitamin B12. Revista del Colegio de Quinicos de Puerto Rico 25, 6.
96)		(with M.J. Adams, E.J. Coller, G.G. Dodson & S. Ramaseshan) X-ray crystallographic studies on zinc insulin crystals. <i>Am. J. Med.</i> <b>40</b> , 667.
97)		(with M.M. Harding, A.F. Kennedy, A. O'Connor & P.D.J. Weitzmann) The crystal structure of insulin. II. An investigation of rhombohedral zinc insulin crystals and a report of other crystalline forms. <i>J. molec. Biol.</i> <b>16</b> , 212-226.
98)		(with E.J. Dodson, M.M. Harding & M.G. Rossman) The crystal structure of insulin. III. Evidence for a 2-fold axis in rhombohedral zinc insulin. <i>J. molec. Biol.</i> <b>16</b> , 227-241.
99)		(with M.J. Adams, E.J. Coller, G.G. Dodson & S. Ramaseshan) X-ray crystallographic studies on zinc insulin crystals. <i>Acta crystallogr.</i> 21, A 156 (supplement).

100)	1967	(with M.J. Adams, E.J. Dodson & G.G. Dodson) A report on recent calculations on rhombohedral insulin crystals containing lead. In <i>Conformation of biopolymers</i> (ed. Ramachandran), vol 1, pp.9-16. Academic Press.
101)		(with P.G. Lenhert) Structure of the vitamin B12 coenzyme. 7th International congress of biochemistry. Tokyo.
102)		Some observations on crystallography, chemistry and medicine. The Harvey Lectures, series 61. New York : Academic Press Inc.
103)		(with C.E. Nockolds, S. Ramaseshan, J.M. Waters & T.N.M. Waters) Structure of a monocarboxylic acid derivative of vitamin B12. (1) Crystal and molecular structure from x-ray analysis. <i>Nature, Lond.</i> <b>214</b> , 129.
104)		(with F.H. Moore & B.T.M. Willis) Structure of a monocarboxylic acid derivative of vitamin B12. (2) Crystal and molecular structure from neutron diffraction analysis. <i>Nature, Lond.</i> <b>214</b> , 130-133.
105)		(with A. Cooper) The crystal structure and absolute configuration of fusidic acid methyl ester 3-p-bromobenzoate. <i>Tetrahedron</i> <b>24</b> (2), 909-22.
106)	1968	(with D.P. Riley) Some ancient history of protein X-ray analysis. In Structural Chemistry and Molecular Biology: a volume dedicated to Linus Pauling by his students, colleagues and friends (ed. A. Rich & N. Davidson). W.H. Freeman & Co.
107)		Vitamin B12. Proc. R. Inst. Gt. Br. 42, 199.
108)	1969	(with D.H. Dale, B.F. Hoskins & F.D. Williams) The structure of the red nitrosylpentamminecobalt (iii) cation. <i>Chem. Commun.</i> , pp.69-70.
109)		(with D. Hall & M.N.G. James) Crystalline modifications of ampicillin. I. The trihydrate. <i>Nature, Lond.</i> <b>220</b> , 168.
110)		(with M.J. Adams, E.N. Baker, T.L. Blundell, E.J. Dodson, G.G. Dodson, M.M. Harding, B.M. Rimmer & M. Vijayan) The structure of rhombohedral 2 zinc insulin crystals. <i>Nature, Lond.</i> <b>224</b> , 491.

111)		(with S. Candeloro, D. Grdenic, N. Taylor, B. Thompson & M.A. Viswamitra) The structure of ferroverdin. <i>Nature, Lond.</i> <b>224</b> , 589.
112)		Birkbeck Science and History. First Bernal Lecture at Birkbeck College.
113)	1970	(with B.F. Anderson & M.A. Viswamitra) The structure of thiostrepton. <i>Nature, Lond.</i> <b>225</b> , 233.
114)		Introductory remarks to a discussion on the structure and functions of proteolytic enzymes. <i>Phil. Trans. R. Soc. Lond.</i> B <b>257</b> , 65.
115)		The crystal structure of insulin. Verh. schweiz. naturf. Ges., p.93.
116)		(with M.J. Adams & U.A. Raeburn) Crystal structure of a complex of mercury (II) chloride and histidine hydrochloride. <i>J. chem. Soc.</i> , A 2362.
117)		Insulin molecules. The extent of our knowledge. <i>Pure appl. Chem.</i> <b>26</b> , 357-84.
118)		(with H.R. Harrison & O.J.R. Hodder) Crystal and molecular structure of 8,12-diethyl-2,3,7,13,17,18-hexamethylcorrole. <i>J. chem. Soc.</i> , B 640.
119)	1971	(with H.R. Harrison, E.N. Maslen & W.D. Motherwell) Crystal and molecular structure of $6\beta$ -bromoacetyl and $6\beta$ -chloroacetyl 3,5 $\alpha$ -cyclo-5 $\alpha$ -cholestane (i-cholesteryl bromoacetate and chloroacetate). <i>J. chem. Soc.</i> , C 1275-81.
120)		(with T.L. Blundell, J.F. Cutfield, S.M. Cutfield, E.J. Dodson, G.G. Dodson, D.A. Mercola & M. Vijayan) Atomic positions in rhombohedral 2 zinc insulin crystals. <i>Nature, Lond.</i> <b>231</b> , 506.
121)		Obituary. Professor J.D. Bernal. The Times, 16 September.
122)		(with D. Dale, F.H. Moore, C.E. Nockolds, B.H. O'Connor & K. Venkatesan) The structure of vitamin B12 IX. The crystal structure of cobyric acid, factor V 1a. <i>Proc. R. Soc. Lond.</i> A <b>323</b> , 455.
123)		(with T.L. Blundell, E.J. Dodson, G.G. Dodson & M. Vijayan) X-ray analysis and the structure of insulin. <i>Recent Prog. Hormone Res.</i> <b>20</b> , 1.

124)	Insulin molecules: the extent of our knowledge. <i>Pure appl. Chem.</i> <b>26</b> , 375-384.
125)	X-rays and the structure of insulin. Br. med. J. 4, 447.
126)	(with T.L. Blundell, J.F. Cutfield, E.J. Dodson, G.G. Dodson & D.A. Mercola) The structure and biology of insulin. <i>Biochem. J.</i> <b>125</b> , 50.
127)	Some characteristics of protein crystals. In <i>Proc. 2nd Int. Conf. on Theoretical Physics and Biology</i> . Institut de la Vie, Paris, p.58.
128)	(with T.L. Blundell, J.F. Cutfield, E.J. Dodson, G.G. Dodson & D.A. Mercola) The crystal structure of rhombohedral 2 zinc insulin. <i>Cold Spring Harbor Symposia on Quantitative Biology.</i> <b>36</b> , 233.
129)	The crystal structure of insulin. Kristallografiya 16, 1203.
130) 19	The structure of insulin. Dansk. Tidsskr. Farm. 46, 1.
131)	(with T.L. Blundell, J.F. Cutfield, S.M. Cutfield, E.J. Dodson, G.G. Dodson, D.A. Mercola & M. Vijayan) The arrangement in three dimensions of the atoms in insulin molecules and crystals. <i>Insulin Action</i> 1, 28.
132)	Scientific visits to China under arrangements between Academia Sinica and the Royal Society 5-27 August 1972. Royal Society Publication.
133)	(with D.A. Mercola) The secondary and tertiary structure of insulin. In <i>Handbook of Physiology, Section 7 : Endocrinology</i> 1, 139. Washington : American Physiological Society.
134)	Gerhard Schmidt's first researches in x-ray crystallography. <i>Israel J. Chem.</i> <b>10</b> , 649.
135)	The structure of large molecules. <i>Growing Points in Science</i> , p.97. H.M.S.O.
136)	(with T.L. Blundell, J.F. Cutfield, S.M. Cutfield, E.J. Dodson, G.G. Dodson & D.A. Mercola) The three dimensional atomic structure of insulin and its relationship to activity. <i>Diabetes</i> <b>21</b> , 492.

137)		The structure of insulin (The Banting Memorial Lecture 1972). Diabetes 21, 1131-50.
138)		(with E. Edmond & H. Stoeckli-Evans) Further refinement of the crystal structure of neovitamin B12. <i>J. chem. Soc. Perkin Trans.</i> II (5), 605.
139)		(with T.L. Blundell, G.G. Dodson & D.A. Mercola) Insulin: the structure in the crystal and its reflection in chemistry and biology. <i>Adv. Protein Chem.</i> <b>26</b> , 279.
140)		(with T.L. Blundell, J.F. Cutfield, S.M. Cutfield, E.J. Dodson, G.G. Dodson & D.A. Mercola) The spatial structure of insulin and its relationship to activity. <i>Pept., Proc. Eur. Pept. Symp., 12th,</i> pp.255-69.
141)	1973	(with B.F. Anderson & K. Vijayan) Crystal and molecular structure of a synthetic compound related to the penicillins and cephalosporins, 3-benzyl 7-t-butyl 2,2-dimethyl-8-oxo-4-thia-1-aza-6 $\alpha$ <i>H</i> -bicyclo [4.2.0] octane-3 $\beta$ , 7 $\alpha$ -dicarboxylate. <i>J. chem. Soc. Perkin Trans.</i> (I) 484-8.
142)		(with S. Candeloro) The structure of ferroverdin I. Monoclinic ferroverdin crystals. <i>Proc. R. Soc. Lond.</i> B <b>184</b> , 121-135.
143)		(with S. Candeloro, D. Grdenic & N. Taylor) The structure of ferroverdin II. Rhombohedral ferroverdin crystals. <i>Proc. R. Soc. Lond.</i> B <b>184</b> , 137-148.
144)	1974	Insulin, its chemistry and biochemistry (The Bakerian Lecture 1972). <i>Proc. R. Soc. Lond.</i> A <b>338</b> , 251-275.
145)		Problems in the x-ray analysis of proteins (Nobel Guest Lecture 1973). Chemica Scripta 6, 145-157.
146)		Varieties of insulin (The Sir Henry Dale Lecture for 1974). <i>J. Endocr.</i> <b>63</b> , 1-14.
147)		(with B.F. Anderson & T.J. Bartczak) Crystal and molecular structure of 8,12 diethyl 2,3,7,13,17,18 hexamethylcorrole hydrobromide. <i>J. chem. Soc. Perkin Trans.</i> (II) 977.

148)	1975	Wandering Scientists (The Azad Memorial Lecture 1974). New Delhi : Delhi Press.
149)		(with E. Edmond) The crystal and molecular structure of rac-15-cyano-1,2,2,7,7,12,12-heptamethyl corrin hydrochloride, metal free corrin. <i>Helv. chim. Acta</i> <b>58</b> , 641-654.
150		Work in China on the structure and function of insulin. <i>Nature</i> , <i>Lond.</i> <b>255</b> , 103.
151)		Kathleen Lonsdale 1903-1971. <i>Biogr. Mem. Fell. R. Soc. Lond.</i> 21, 447-84.
152)	1976	(with G.A. Bentley, E.J. Dodson, G.G. Dodson & D.A. Mercola) The structure of insulin in 4 zinc insulin. <i>Nature, Lond.</i> <b>261</b> , 166.
153)		The structure of insulin. <i>Proc. Int. Wolltextil-Forschungskonf.</i> , 5th 1, 361-76.
154)		X-rays and the structure of insulin. <i>J. Natl. Sci. Counc. Sri Lanka</i> <b>4</b> , 87-98.
155)	1977	The molecular basis of insulin action: The structure of insulin. <i>Excerpta Med.</i> <b>413</b> , 155-62.
156)	1979	Crystallographic measurements and the structure of protein molecules as they are. <i>Ann. N.Y. Acad. Sci.</i> <b>325</b> , 121-48.
157)		New and old problems in the structure analysis of vitamin B12. Vitamin B12, Proc. Eur. Symp., 3rd, pp.19-36.
158)	1980	(with E.J. Dodson & G.G. Dodson) The conformations observed in the N terminal A chain residues of insulin. <i>Front. Bioorg. Chem. Mol. Biol. Proc. Int. Symp.</i> , pp.193-200.
159)		Obituary. Sir Ernest Chain 1906-1979. Chemy Br. 16 (5), 267.
160		John Desmond Bernal 1901-1971. <i>Biogr. Mem. Fell. R. Soc. Lond.</i> <b>26</b> , 17-84.

161)	1981	Biomolecular structure, conformation, function and evolution. <i>Proc. Int. Symp.</i> 1, 1-5.
162)		(with J.F. Cutfield, S.M. Cutfield, E.J. Dodson, G.G. Dodson & C.D. Reynolds) Evidence concerning insulin activity from the structure of a cross-linked derivative. <i>Hoppe-Seyler's Z. Physiol. Chem.</i> <b>362</b> (6), 755-61.
163)		Moments of discovery. Kristallografiya 26(5), 1029-45.
164)	1982	(with D. Chantry, Fang Ming Mao & T. Harper) X-ray analysis of the Piloty compounds trans- and cis- 1,4-dichloro-1,4-dinitrosocyclohexane. <i>Acta crystallogr.</i> B <b>38</b> (12), 3152-5.
165)	1983	Insulin. Structure and biological activity. Vestn. Akad. Nauk SSSR 6, 53-60.
166)		(with E.J. Dodson, G.G. Dodson & C.D. Reynolds) Insulin. <i>Biochem. Soc. Trans.</i> 11, 411-17.
167)		(with C. Chothia, G.G. Dodson & A.M. Lesk) Transmission of conformational change in insulin. <i>Nature, Lond.</i> <b>302</b> , 540-3.
168)	1984	X-ray and neutron diffraction studies of the crystal and molecular structure of the predominant monocarboxylic acid obtained by the mild acid hydrolysis of cyanocobalamin: outline. <i>Proc. Indian Acad. Sci.</i> <b>93</b> , 195-6.
169)		(with F.H. Moore, B.H. O'Connor & B.T.M. Willis) X-ray and neutron diffraction studies of the crystal and molecular structure of the predominant monocarboxylic acid obtained by the mild acid hydrolysis of cyanocobalamin: Part III. Neutron diffraction studies of wet crystals. <i>Proc. Indian Acad. Sci.</i> <b>93</b> , 235-60.
170)	1987	Patterson and Pattersons. In <i>Patterson and Pattersons. Fifty Years of the Patterson Function</i> (ed. J.P. Glusker, B.K. Patterson & M. Rossi). Oxford University Press.
171)	1988	(with T.L. Blundell, J.F. Cutfield, S.M. Cutfield, E.J. Dodson, G.G. Dodson, R.E. Hubbard & N.W. Isaacs) The crystal structure of insulin. VI. The structure of 2 zinc pig insulin crystals at 1.5Å resolution. <i>Phil. Trans. R. Soc. Lond.</i> B <b>319</b> (1195), 369-456.

172)	1991	Memories of Sir Lawrence Bragg. In The Least Bragg: Selections and Reflections (ed. Phillips), Science Reviews.			
173)		Angles on crystal faces.	Appreciation:	'Tiny' Powell.	The

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Supplementary catalogue of the papers and correspondence of

# Dorothy Mary Crowfoot Hodgkin OM FRS

(1910-1994)

Title:

Supplementary catalogue of the papers and correspondence of Dorothy Mary

Crowfoot Hodgkin OM FRS (1910-1994), biochemist

Compiled by:

Jeannine Alton and Timothy E. Powell

Description level:

**Fonds** 

Date of material:

1919-2003

Extent of material:

ca 535 items

Deposited in:

Department of Western Manuscripts, Bodleian Library, Oxford

Reference code:

GB 0161 D.M.C. Hodgkin papers (Supplement)

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NCUACS catalogue no. 135/8/04

The work of the National Cataloguing Unit for the Archives of Contemporary Scientists in the production of this catalogue is made possible by the support of the following societies and organisations:

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The British Computer Society

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The Institute of Physics

The Royal Society

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### **GENERAL INTRODUCTION**

### **PROVENANCE**

The present Supplement follows the sequence and organisation of the first catalogue of Hodgkin's papers, which laid special emphasis on her scientific and public work and was completed in 1994, shortly before her death (ref: NCUACS 47/3/94). At that time, many personal and family papers remained in family hands and were transferred on a temporary basis to the Bodleian Library Oxford for the use of Georgina Ferry whose biography, *Dorothy Hodgkin*. A *Life* was published by Granta Books, London in 1998. These are the papers which are presented in this Supplement.

In addition, Georgina Ferry has made available the following items: the typescript of the projected (incomplete) biography of Hodgkin by Francis Pagan (A.5); Elisabeth Crowfoot's 'Archaeological Biography' of her mother (A.99); the correspondence and material relating to research on vitamin B<sub>12</sub> which had been passed to her by K.N. Trueblood (H.27-H.33).

### **PRESENTATION**

The publication of the first catalogue in 1994 has been followed not only by Ferry's biography but by the Memoir written by G.G. Dodson for the Royal Society (*Biographical Memoirs of Fellows of the Royal Society*, vol 48, 2002).

The numbered notes and references in Ferry's text document her use of the uncatalogued as well as the catalogued papers and her private interviews and research. References to such material in the present catalogue are given in the form (*Ferry p...*).

The Memoir by Dodson includes a bibliography which presents Hodgkin's writings thematically. Because of its official standing as published by the Royal Society it supersedes the chronological listing given in Volume III of the 1994 catalogue and has been used here in the form (Bibliography...).

Although the distinction between scientific and personal papers has validity, it is far from absolute, and while it is true that the family and personal correspondence constitutes the main contribution of the present collection, there is additional material from all aspects of Hodgkin's life and work and considerable overlap with the 1994 catalogue. These references are given in the form (*Hodgkin...item number*).

### DESCRIPTION OF THE COLLECTION

The material is presented as shown in the List of Contents. Additional explanatory notes, information and cross-references are appended where appropriate to the separate sections, sub-sections and individual entries in the body of the catalogue. The following paragraphs are intended only to draw attention to items of particular interest.

Section A, Biographical and personal, is by far the most substantial, containing much new material relating to Hodgkin, her family and friends. Among the 'Juvenilia' at A.12-A.19 are notebooks and diaries, some home-made, recording her earliest work at home 1919-1924, including history, poems, nature study with her own illustrations, and chemistry. Her intellectual brilliance was acknowledged by her election as Fellow of the Chemical Society in 1922 at the age of twenty-one (A.33), and continued steadily with world-wide honours and awards; a celebratory volume for her 80th birthday in 1990 (A.33) testifies to the esteem and affection she inspired. The draft biography by F. Pagan, which takes the story to 1939, is also of interest (A.5).

The family correspondence at A.97-A.224 documents the attainments and activities of three generations: Hodgkin's parents John and Molly Crowfoot; herself, her sisters and her husband; and her children. Hodgkin's mother was a gifted and energetic woman (A.99-A.118 and introductory note). Her daughter Prudence Elisabeth ('Liz') followed family tradition in making a career in Africa from which she wrote regularly (A.139-A.153 and note). By far the largest component, however, is Hodgkin's almost daily correspondence with her beloved husband Thomas, whom she met and married in 1937. This famous record of a great love as well as a personal and family account is presented with a fuller introduction at A.156-A.207). Interestingly, here as in her correspondence with her previous mentor J.D. Bernal (see Section B), part of Hodgkin's mind remained in thrall to her research and she could move disconcertingly from an emotional level to practical laboratory affairs.

The tradition of regular letter-writing, in a pre-electronic age, combined with open- heartedness and shared humanitarian and political concerns, links family members and also some of Hodgkin's closest friends such as Margery Fry (A.235, A.236), Betty Murray (A.238-A.241) and - in a somewhat different key - the flamboyant Somerville Fellow Enid Starkie (A.246).

Section B, Research, while considerably less exhaustive than that previously catalogued, provides some useful complementary material, such as Hodgkin's undergraduate notebooks, the work for her Oxford Part II thesis later published (B.15), her Cambridge doctoral thesis (B.29) and her earliest work on insulin (B.30, B.31).

Correspondence and papers relating to J.D.Bernal (B.42-B.52) are of scientific and personal interest, and this continues in Section D, Publications and lectures. In addition to Hodgkin's drafts for her

writings on Bernal, there is a copy (D.9) of his dissertation 'The analytic theory of point systems', written as an undergraduate at Cambridge 1922-1923 entirely in his own time and for his own interest. It was never published but struck W.H. Bragg as so remarkable that he offered Bernal a post at the Royal Institution on the strength, it is said, of a glance at the first page.

Section E, Societies and organisations, is short, but includes new material on the Children's Medical Charity based at Westminster Hospital, and on L'Institut de la Vie.

Section F, Visits and conferences, is also short. It deals with visits in Hodgkin's later years, several of which are additional to those in the previous catalogue.

Section G, Peace and humanitarian interests, contains some additional material on Birzeit University in Palestine, and also on several international conferences on peace and disarmament which Hodgkin attended in her later years. there is also the Judgment of the Nuclear Warfare Tribunal of which she was a member (G.8).

Section H, Correspondence, presents an alphabetical sequence of Hodgkin's scientific correspondents, including Hongying Liao, M.F. Perutz, D.P. Riley, C.H. Waddington and D. Wrinch. Of special interest is the sequence of letters and data documenting the research on vitamin B12 by K.N.T. Trueblood in Los Angeles in collaboration with Hodgkin's team at Oxford (H.27-H.33). This material, kindly passed on by G. Ferry, usefully complements the detailed entries of the previous catalogue.

Section J, Non-text material, includes some interesting photographs of a 1924 trip to Egypt and the Sudan, drawings of mosaics and tesserae relating to archaeological finds by Hodgkin's parents, and glass plates of early research on insulin 1935-1936.

### **ACKNOWLEDGMENTS**

Grateful thanks are due to Georgina Ferry for her unique information and advice, and for making available three additional items of interest, to Steven Tomlinson of the Department of Western Manuscripts of the Bodleian Library, and to Dr T. E. Powell of NCUACS for careful revision of the draft catalogue.

J.B.Alton Oxford 2004

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	A.58-A.96	MISCELLANEOUS BIOGRAPHI	CAL ITEMS
	A.97-A.224	FAMILY CORRESPONDENCE	
	A.225-A.260	PERSONAL CORRESPONDEN	CE

A.1-A.11	AUTOBIOGRAPHICAL AND BIOGRAPHICAL	1947-1994
A.1-A.4	Autobiographical writings	<i>ca</i> 1953, ?1985, n.d.
A.1	4pp corrected pencil draft describing Hodgkin's first visit to the USSR in 1953.	ca 1953
	She wrote about this visit at greater length elsewhere (Hodgkin A.12, F.7; Ferry pp.267-271).	
A.2	'Dorothy Hodgkin - Early Education'.	?1985
	3pp manuscript draft, probably for article in 'L'Umile Pianta' 1985 ( <i>Hodgkin A.11</i> ).	
A.3	'A life in science'.	N.d.
	17pp typescript draft with a few manuscript corrections, taking Hodgkin's life up to 1977.	
A.4	2pp manuscript (incomplete) of work in X-ray crystallography.	N.d.
	Notes of publications, D.Phil. and B.Sc. theses supervised 1942-1975.	
A.5, A.6	Biography	1978-1980s
A.5	'Life of Dorothy Hodgkin'	1980s
	Typescript draft of a proposed full-length biography by Francis Pagan, a long-term acquaintance at Beccles, later a publisher. The work continues to 1939, when Hodgkin suggested it should await her own autobiographical account (never completed). (Ferry p.392; Hodgkin A.168).	
	Received by courtesy of G. Ferry, October 2002.	
A.6	Letters from Pagan about the project and its progress.	1978-1982

A.7-A.11	Articles and interviews	1947-1994
	Correspondence, drafts, information.	
A.7	1947-1983.	
A.8	1984-1994.	
	Includes address given by M.F. Perutz at Hodgkin's Memorial Service.	
A.9	Undated.	
A.10	Correspondence on film and television appearances.	1978-1981
A.11	Requests for information	
A.12-A.57	CAREER, HONOURS AND AWARDS	ca 1918-1994
A.12-A.22	Early notes and juvenilia	ca 1918-1931
A.12-A.14	Three hand-made notebooks, with illustrations and maps, on English history.	ca 1919
	Made during the short period when Molly Crowfoot was teaching her children herself at Nettleham near Lincoln. (Ferry pp.17-18).	
A.12	'Early Times'	
A.13	'The coming of the Saxons, the Danes and the Normans'.	
A.14		

A.15	Small red leather covered book, mainly containing hymns and pious poems in the hands of John and Molly Crowfoot.	ca 1920
	Some poems in Hodgkin's hand are included: 'The Rooks', signed 'D.M. Crowfoot Jan 17th 1920 Nettleham Hall' and 'A Wonderful Voyage' with a later manuscript note 'written by D. Crowfoot aged 11-13. N.B. When I wrote this I had not read "Ancient Mariner" '.	
	Also included on a loose page is a poem 'To Betty'.	
A.16	'Nature Diary', small notebook with brown paper cover, n.d., perhaps 1920	?1920
	Entries run 10 June-12 August (no year), with water-colour illustrations of birds, flowers etc. Entry for 17 July refers to her mother dyeing fabrics.	
A.17	'Nature Note Book P.N.E.U. [Parents National Education Union]'.	?1918-1922
	Hodgkin attended a P.N.E.U. school at Burgess Hill, Sussex, 1918, and the book (descriptions of wild flowers with water-colour illustrations) may have been started then; several drawings are dated 1922.	
A.18	Small dark green 'Chemistry Notebook of experiments done at home. Dorothy M. Crowfoot'.	1924
	Both ends of book used.	
	Notes on Borax beeds (sic) and other experiments one dated 1924, perhaps dating from work to amuse her sisters when in quarantine for mumps (Ferry pp.28-29).	
A.19	Small red and green notebook 'Joan Crowfoot. Science Chemistry', also on 'Borax beads'.	1924
	Various experiments ticked, one marked 7½/10 (?by Dorothy), from same period as A.18.	

A.20-A.22	Three notebooks of Diana ('Dilly') Crowfoot, from Farmhouse School, Wendover, Buckinghamshire.	ca 1928-1931
	The school was run by Isabel Fry, sister of Margery, who encouraged Molly Crowfoot about Dorothy's entrance to Somerville College Oxford. ( <i>Ferry p.33</i> ).	
A.20	'Form IVa Farm notes'	
A.21	'Form VI Farm notes'	
A.22	No title. Pasted in press-cuttings on agricultural topics.	1931
A.23, A.24	Sir John Leman School, Beccles	1925-1926, 1963-1983
	Hodgkin entered the school in 1921 aged 11. She remained there until she entered Somerville College in 1928 and retained contact with it thereafter. <i>Hodgkin A.215</i> .	
A.23	Miscellaneous material	1925-1926
	Material includes: school report 1925 (Chemistry 'Good on the whole' <i>Ferry p.31</i> ), Joan Crowfoot's school report 1925, timetable and set of question papers, some annotated, for Hodgkin's School Certificate Examination (Hodgkin took the examination in July 1926 with success, <i>Ferry p.32</i> . See also J.17).	
A.24	Later material	1963-1983
	Includes later letters from C. Deeley, Hodgkin's chemistry teacher, and from other old school friends, miscellaneous material on school events 1963-1983.	
A.25-A.33	Somerville College, Oxford	1928-1992
	Hodgkin went up to Somerville in October 1928, with an allowance from her aunt Dolly of £200 a year. She read	

for the B.A. Honours Degree in Chemistry and was able to specialise in X-ray crystallography for her 'Part II' thesis under the supervision of H.M. Powell. After an important period in Cambridge 1932-1934 with J.D. Bernal, she accepted the offer of a Fellowship at Somerville and remained at Oxford until retirement.

Before taking up residence at Oxford in1928, however, Hodgkin had spent the summer months with her parents on an archaeological expedition at Jerash in Jordan. She undertook the task of recording the mosaic designs of the excavated church pavements, which she completed, along with tesserae from later excavations (*Ferry pp.36-40, 52-54*) during her undergraduate days. This contribution to archaeological research at an early age is recorded at A.25. See also J.18-J.20.

A.25	Letter from	the	President,	Yale	University,	thanking	1928
	Hodgkin for h	er wo	ork on mosa	ics, 3	July.		

A.26	Miscellaneous items.	1929-1932
	Includes note re Hodgkin's donation to the Girls' Club	

Rotherhithe (*Ferry p.58*), tour brochure for Ober-Ammergau Passion Play (*Ferry p.58*), letter to parents on work on tesserae 1930 (*Ferry pp.52-54*), letters of congratulation on First Class Honours (*Ferry p.74*).

A.27 Correspondence from A.F. Joseph ('Uncle Joseph') on 1931, 1933 plans for future research and Hodgkin's visit to Heidelberg summer 1931.

Also included is a later (1933) letter about 'your celestial friend' (Hongying Liao q.v.) and undated, unsigned letter on possible research at Uppsala (*Ferry pp.62-63*).

A.28 Miscellaneous correspondence relating to Hodgkin's visit 1931 to Heidelberg in 1931.

A.29 References for Hodgkin's application for post of 1931 Demonstrator in Chemistry, Bedford College London

Hodgkin applied (unsuccessfully) for the post while completing her Part II thesis and before her move to Cambridge was decided (*Ferry pp.70-72*).

A.30	Material relating to Oxford University Junior Scientific Club.	1932
	Accounts, subscriptions, correspondence with college secretaries etc.	
	Hodgkin was Treasurer, Trinity Term 1932.	
A.31	Manuscript notes on candidates for Oxford entrance.	N.d.
A.32	Miscellaneous items on Somerville affairs, events, buildings, appeals, etc.	1934-1992
A.33	Election as Fellow of the Chemical Society, February 1932, and a later letter on the award of the Longstaff Medal 1983.	1932, 1983
	See also E.31-E.33 and Hodgkin E.63-E.67.	
A.34, A.35	Cambridge 1932 and later	1932-1939
A.34	Miscellaneous correspondence.	1932-1939
	On career (Ferry p.75), houses and lodgings (Ferry p.83), award of the Muriel Onslow Prize of 25 guineas, Newnham College 1939.	
A.35	Miscellaneous items.	1933
A.36-A.57	Later career, honours and awards	1937-1994
A.36	Marriage to Thomas Hodgkin, 16 December.	1937
	Notice, letters and telegrams of congratulation on engagement and wedding.	
A.37	Letters of congratulation	1955-1956
	Congratulations 1955 (B12) and 1956 (Royal Medal).	

<i>/</i>	Also letter suggesting Hodgkin should allow her name to go forward for the Chair of Chemistry, Westfield College London (no reply).	
A.38	Correspondence on possible chair at Leeds University.  Hodgkin was actively considering this but declined when offered the first Wolfson Royal Society Research Professorship (Hodgkin A.68, A.69; Ferry pp.283-285).  Included here is a letter at the closure of Hodgkin's Extraordinary Fellowship at Wolfson College, 1982.	1960, 1982
A.39-A.41	Nobel Prize for Chemistry (Hodgkin A.73-A.91; Ferry ch.8).	1964-1983
A.39	Presentation speeches, programme of special performance of Ghanaian dances given in Ghana to celebrate the prize.	1964
A.40	Information, programme etc of 75th Anniversary Conference.	1975
	Hodgkin lectured on 'The structures of insulin'.	
A.41	Miscellaneous later material.  Declarations on disarmament, invitations to meetings and visits (especially 1983).	various dates
A.42	Various career and honours  Includes Honorary D.Sc. Harvard University 1968 (Hodgkin A.108).	1966-1968
A.43	Congratulations on insulin structure.	1969
A.44	Honorary D.Sc., Brown University.	1970

A.45	School speech days and prize-givings	1972-1974
A.46	Various career and honours.	1974, 1976
	1974 Honorary D.Sc. Yale University; 1976 Honorary D.Sc. Modena University; Foreign Membership USSR Academy of Sciences; Honorary D.Sc. Amherst.	
A.47	Honorary Fellowship, Royal Society of Medicine.	1978
	Correspondence.	
A.48	Honorary D.Sc, Open University 1979	1978-1979
	Correspondence.	
A.49	Honorary President, World Cultural Council.	1982
A.50	Austrian Academy of Sciences: Election as Corresponding Member 1982, Honour Award for Science and Arts 1983.	1982-1988
	Correspondence on awards, travel to Vienna for the ceremony, later correspondence on meetings, in particular the Centenary celebrations 1988 ( <i>Hodgkin A.145</i> ).	
A.51	Lomonosov Gold Medal of the USSR Academy of Sciences	1983
	Letters of congratulation (Hodgkin A.144).	
A.52	Onassis Prize	1987
	Information, 'Laudatio' to Pugwash, Hodgkin's speech of acceptance.	
	The Prize was awarded to Hodgkin on behalf of the Pugwash Conferences, and accepted by her in Athens, 15 June.	

A.53	Election as a Kentucky Colonel.	1990
A.54	80th birthday  Recollections and greetings from UK and overseas friends, colleagues, pupils etc.	1990
	Bound volume of letters, cards, telegrams, printout, diagrams and drawings. With a little loose material.  Hodgkin celebrated her birthday at Crab Mill on Sunday 13 May 1990.	
A.55	Greetings (from Insulin Group).	1993
A.56	Letter on the naming of a minor planet in the solar system in Hodgkin's honour.	1994
A.57	Illness and last days.	1994
A.58-A.96	MISCELLANEOUS BIOGRAPHICAL ITEMS	1922-1994, n.d.
A.58-A.67	Diaries	1923-1989
A.58	Small diary bought in Florence, entries run 1 January-9 May 1923.	1923
	Hodgkin spent this period with her maternal grandmother and aunt at their Villa Lincolnia, San Remo. Her mother arrived from Khartoum on 16 April and they returned to London via Paris on 24 April. Hodgkin records her First Communion on Easter Day, 1 April (Ferry p.21). See J.12.	
A.59	Collins pocket diary.	1945
	Few entries, mainly by Luke Hodgkin.	

A.60	University of Bristol diary.	1972-1973
	Few entries.	
A.61	Small black diary.	1974
	Miscellaneous scientific and personal entries, pehaps used over a period.	
A.62	Desk diary.	1979
A.63	Small pocket diary.	1982
A.64	Small pocket diary.	1983
A.65	Oxford University diary.	1985-1986
A.05	Oxidia diliversity diary.	1000-1000
A.66	Black diary	1987
A.67	Oxford University diary.	1988-1989
A.68-A.71	Passports	1970-1990
A.68	Passport issued 1970.	
A.69	Passport issued 1977.	
0.00		
A.70	Passport issued 1984.	
A.71	Passport issued 1990.	
73.7 1	1 doopon looded 1000.	

A.72-A.76	Other	1922-1925, n.d.
A.72	Miscellaneous membership and other cards	N.d.
A.73	Small pocket-book size New Testament, from Hodgkin's aunt Violet Holdsworth.	N.d.
A.74-A.76	Three journals kept by Dorothy Hood ('Aunt Dolly') recording their car journeys from Italy to London.	1922-1925
A.74	'Motor Tour San Remo-London and back 1922'.	
A.75	'San Remo to London 1924'.	
A.76	'San Remo to London 1925'.	
A.77, A.78	Houses	N.d.
A.77	Brief correspondence on flats and houses occupied by the Hodgkin family.  Include Bradmore Road; Powder Hill House, Boars Hill; 94 Woodstock Road (including note of burglary in which Hodgkin's Royal Medal was stolen); Crab Mill Ilmington.	
A.78	Memorabilia.  Children's drawings, poems, cartoons, sketches for plays at Powder Hill and Ilmington.	
A.79-A.86	Money	1927-1986, n.d.
A.79	Bank book.	1928-1930

A.80	Cash book 'Michaelmas 1929'.	1929
	Some later notes.	
A.81	Hodgkin's draft will.	1970
A.82	Gifts and loans to family and friends.	N.d.
A.83	Miscellaneous gifts, subscriptions, begging letters.	N.d.
A.84	Miscellaneous bank statements, income tax coding, college battels, university pension, travel, investments etc.	1931-1986
A.85	Correspondence and papers on estate of J.W. Crowfoot (Hodgkin's father).	1927-1960
A.86	Correspondence and papers on estate of G.M. Crowfoot (Hodgkin's mother) 1957-1958.	1957-1958, 1960
	Also includes letter <i>re</i> legacy from Mrs G.M. Hood 1960.	
A.87	Health	1932-1962
	Manuscript note of onset and progress of rheumatoid arthritis 1934-1945; prescriptions, doctors' appointments 1932-1962. ( <i>Hodgkin A.204</i> ).	
A.88, A.89	Archives and models	1978-1984, n.d.
A.88	Correspondence re Hodgkin's manuscripts.	1980 and n.d.
	(Hodgkin A.196).	

A.89	Correspondence on drawings and models.	1978-1984 and n.d.
	(Hodgkin A.198).	11.0.
A.90-A.92	Personal	1941-1964 and n.d.
A.90	Poems.	1941-1964, n.d.
	Includes poem by Thomas 'Looking back over four years' (1941), poem for Thomas's Victory Party (1945), Ghanaian poem for Hodgkin's Nobel Prize 1964, and others.	
A.91	Christmas and New Year greetings cards, with messages by Hodgkin,	N.d.
	Apparently not sent.	
		200 10
A.92	A pattern for a 'monkey suit' made by Hodgkin for Pamela Wrinch Nicholson (daughter of Dorothy Wrinch q.v.), with a letter.	N.d.
A.93	Photographs and portraits	1960-1987
,	, metographic and personal	
	Miscellaneous shorter correspondence (Hodgkin A.205-A.209).	
A.94	Autographs	N.d.
	Requests for autographs, signed photographs, etc. (Hodgkin A.199-A.201).	
A.95	Social invitations	1951-1994
	Invitations and occasions (Hodgkin A.212-A.220).	

A.96

### **Press-cuttings**

N.d.

Press cuttings, articles etc (Hodgkin A.221, A.222).

A.97-A.224

### **FAMILY CORRESPONDENCE**

1923-2003

The material is presented in alphabetical order, with a note of the family relationship when this is known.

A.97, A.98

### Elisabeth Grace Crowfoot

1939-1990

Elisabeth Grace, addressed as Liz, more usually as Betty, was born in 1914, the third of the Crowfoot daughters. She trained for the stage at the Central School of Drama, London, and acted at the Alexandra Theatre Birmingham, Festival Theatre Cambridge and the Maddermarket Theatre Norwich. Later she lived at Geldeston with her parents, and after their death at Riverview (in Geldeston).

A.97

Letters to Thomas

1939, 1952-1953, n.d.

Not all dated.

1939 (coming of war), 1952-1953 (some asking Thomas's advice on a novel or play she was writing, set in Palestine).

A.98

Letters.

ca 1940-1990

Very few dated.

Early letters from Alexandra Theatre describe bombing raids on Birmingham and damage. Letters 1969 and 1970 describe visits to Katie and Jimmy Collins (q.v.). Later letters deal with settlement of parents' estate.

Letters from her son Johnny are also enclosed here.

### A.99-A.118 Grace Ma

### Grace Mary Crowfoot ('Molly')

ca 1923-1983

Hodgkin's mother, née Hood, was a remarkable woman. Born into a comfortable country family in 1877, she received no formal education. By her own talent and determination, however, her family connections and especially her marriage in 1909 to John Crowfoot and consequent residence in Cairo, the Sudan and the Middle East, she made herself an authority on flowering plants, weaving and dyeing techniques, pottery and glassmaking. She published extensively on these topics.

Her letters are exceptionally difficult to date, since she and her husband spent several months each year on archaeological digs (where one or more of their daughters might join them), returning to their Geldeston home between expeditions.

The expeditions - to Nablus, Jerash and Samaria - the finds and the camp life are described in lively terms, and often result in requests to Hodgkin for help in identifying mosaics, crystals, plants and herbs.

During her parents' frequent absences, Hodgkin was responsible for her younger sisters and for domestic arrangements. Several of her parents' letters refer to modest sums sent for Christmas and birthday presents and for household bills.

A.99

'Archaeological biography' of her mother by Elisabeth Crowfoot.

15pp typescript draft dated 13 November 1996. Received from G. Ferry, 22 October 2002.

A.100-A.112

Letters.

ca 1923-1957

1996

A few of these letters are addressed to the family as a whole, or to her younger daughters. By far the majority are to Hodgkin.

The dating offered is approximate as very few letters carry more than an indication of day and month.

A.100

1920s.

From Sudan and British School of Archaeology, Jerusalem.

A.101 1930, 1931.

From Geldeston, Jerusalem, Jerash, Nablus,

Constantinople.

A.102 1932.

A.103 1933.

References to 'Mr Bernal', 'Mr Waddington', Hodgkin's help with proof-reading, Research Fellowship at Somerville, Molly's thoughtful letters of advice to her daughter on her emotional relations with Waddington, Christmas cheque £5 for the four girls. *Hodgkin A.160*,

A.189.

A.104 ?1935

Includes letters from Joan Crowfoot, in Palestine with her

parents.

A.105 1937.

Includes a letter from Dorothy to her mother, 3 March.

Engagements of Joan and Denis, Dorothy and Thomas,

wedding arrangements.

A.106 1938.

Hodgkin's pregnancy, arrangements for birth, Molly

Crowfoot's research on ivories and pottery.

A.107 1939.

Birth of Joan Payne's daughter Julian, Hodgkin's

rheumatism.

A.108 1940.

A.109	1941-?1943	
A.110	1944-?1947.	
	Several letters to Thomas on his application for Oxford Extra-Mural post, 1945 General Election, Dorothy's rheumatism, comments on an article on the Sudan, postwar visit to villa at San Remo.	
A.111	1950-1957.	
	References to Hodgkin's gift of £500 for the publication of John Crowfoot's book (A.123), award to Hodgkin of Royal Medal and her mother's journey to London to see her receive it ( <i>Ferry p.279</i> ).	
	Last letter (undated) refers to Hodgkin's trip to Scandinavia in March 1958 with requests for photographs etc on ancient textiles from contacts in Scandinavia. Mrs Crowfoot died in 1957.	
A.112	Fragmentary or not datable letters, all periods and topics.	1930s
A.113	Letters from Hodgkin to her parents.	1954, 1955
A.114	Miscellaneous notes and writings by Molly Crowfoot.	N.d.
	Includes notes on the Roman toga; and 'Account of the Relief Expedition, written by Grace Mary Hood Jan. 1909'. This is a 10pp typescript describing the effects of an earthquake in Calabria and Sicily and an expedition led by Molly and her sister Dorothy from San Remo, with a few other friends, to help the victims.	
A.115	Manuscript and typescript material relating to Molly	N.d.
7.110	Crowfoot's writings, especially on Palestinian folktales in collaboration with Louise Baldensperger.	

Also note on Molly and her work by Elisabeth Crowfoot.

A.116 Miscellaneous later correspondence.

1957-1983

Includes a note on Molly Crowfoot's lecture at Downe House 1928 and (1981) *re* deposit at Kew of her botanical drawings of the Sudan.

A.117

Correspondence with sculptor *re* headstones for Molly and John Crowfoot.

1957-1960

A.118

Photocopy of a letter to 'My dear Dorothy', welcoming the news that Molly's plan for medical education for women in the Sudan had been approved.

No date or addressee. See A.221, letter from Diana Rowley to Hodgkin identifying the recipient as Dorothy Willis, who had sent the letter to her, and suggesting two possible dates 1916 and 1921. Hodgkin also refers to it in a letter to Thomas at A.199.

### A.119-A.122

### John Winter Crowfoot

1924-1959, n.d.

Hodgkin's father (1873-1959) was described as 'one of the legendary figures of Sudan archaeology'.

He became a civil servant in the the Department of Education in Cairo in 1901, moving to Khartoum as Assistant Director of Education in the Sudan 1903-1908, returning, after a further spell in Cairo, as Director of Education and Principal of Gordon Memorial College 1914-1926. On his retirement, he was almost immediately offered the post of Director of the British School of Archaeology in Jerusalem which he occupied 1927-1935. His excavations in Palestine were accompanied by his wife and from time to time by his daughters. He continued to publish the results through his retirement years, See A.120.

A.119

Letters to Hodgkin.

1924-1939

Many are 1p only. From various sites especially Nablus, with details of excavations. Letter of 9 December 1924 describes the suppression of the mutiny. (*Ferry pp.24-25*).

A.120 1941-1959 Letters to Hodgkin. Letter 22 August 1955 welcomes gift from Hodgkin to help with publication of last volume of his studies of Samaria. See also A.111, A.123. A.121 Letters to Thomas 1942-1959 Letters of condolence on the death of John Crowfoot A.122 1959, n.d. (1959), obituary from Kush (n.d.). A.123 Sir Frederic and Lady Hamilton Correspondence with Sir Frederic and Lady Hamilton (like Dorothy Forster Hodgkin, one of the Smith daughters), on the gift of £500 to Hodgkin 'Dorothy Junior'. (Hodgkin A.160). Dorothy Forster Hodgkin (née Smith) 1937-1974 A.124, A.125 Hodgkin's mother-in-law, wife of R.H. Hodgkin q.v. The Hodgkins had bought Crab Mill, Ilmington, for their eventual retirement. It became a favourite weekend retreat for all the family. Dorothy and Thomas Hodgkin used it in their turn as a retirement home, and as a peaceful retreat for colleagues. Most of the letters are sent from Crab Mill; some from the early 1940s are from Queen's College Oxford where

A.124 1937-1949

Early letters express joy at the engagement to Thomas (*Ferry p.125*). Many refer to Luke's and Liz's babyhood when they were often left in the charge of their grandmother.

Robin Hodgkin was Provost. Later letters (from 1968) are

from The Grey House, Ilmington. Not all are dated.

A.125 1953-1974 and n.d.

Includes references to hopes of Nobel Prize 1957, Luke's

marriage 1959.

A.126-A.128 Edward Hodgkin

1939-1992, n.d.

Edward Hodgkin was Thomas's younger brother. He worked as a journalist for the *Manchester Guardian* and *The Times* (*Hodgkin A.158*).

A.126 1939-1971 and n.d.

Includes a letter to Molly Crowfoot ca 1939, after a stay at

Geldeston.

A.127 ca 1973-1992 and n.d.

Several letters postdate the death of Thomas and refer to recollections received, appeal, publication of 'Don Tomás',

photograph of Thomas's grave.

A.128 Letters from Edward Hodgkin to his parents during his

army service in World War II, none dated.

1939x1945

A.129-A.138

Luke Howard Hodgkin

1939-1954, n.d.

1939-1940

Luke was Dorothy and Thomas's first child, born 20 December 1938 and named after Luke Howard FRS, meteorologist and great-great-grandfather of Thomas.

A gifted child, he learned to read, write and type at an early age and liked to enclose his own messages to his father to be sent with his mother's letters.

A.129 Notes by Thomas on Luke's language acquisition and

u

behaviour

Included here is material re Luke Howard.

A.130	Juvenilia.	
	Early letters, language and numerical puzzles, hieroglyphs, secret or invented languages, Old English place names.	
	place names.	
A.131-A.137	Correspondence and material re Eton College.	1951-1954
	Luke Hodgkin was a King's Scholar.	
A.131	Letters from Hodgkin	1951-1952.
	A few from Thomas.	
A.132	Letters from Luke to Hodgkin.	N.d.
A.133	Letters from Edward Hodgkin (uncle), undated, and an earlier greeting 1942.	1942, n.d.
A.134	Letters from Dorothy Forster Hodgkin (grandmother).	1951-1952
4.405	Out the second second from Table and Lin Hadelin	
A.135	Greetings and messages from Toby and Liz Hodgkin (siblings).	
A.136	Shorter correspondence re Luke at Eton.	
	Includes letter from Molly Crowfoot asking Luke's advice about Egyptian coins, 1954.	
A.137	Reports and class lists from Eton 1952-1953.	1950-1953
	Also includes one report from Luke's previous school, the Dragon School Oxford, 1950.	
A.138	Later correspondence.	
	Includes some letters from Anna (née Davin), Luke's first wife, and Jean (née Radford) his second wife.	

A.139-A.153	Prudence Elizabeth Hodgkin ('Liz')	1941-1994
	Dorothy and Thomas's second child was born on 23 September 1941. Like both her parents, she was a lively and frequent letter-writer and like them, rarely dated letters fully. She shared their political and humanitarian interests, teaching in Zambia, the Sudan and, until the fall of Saigon, in Hanoi. In 1989 she joined Amnesty International.	
	She witnessed several overseas political upheavals and took a keen interest in left-wing developments.	
	Her correspondence is thus of historical and anthropological as well as personal interest, though many of the letters, with few dates and faint or indecipherable date stamps, are of uncertain order. ( <i>Hodgkin A.159</i> ).	
A.139	Early material:	1941-1959
	Memorial of baptism in Queen's College Chapel, 1941.	
	Birthday letter from R.H. Hodgkin (grandfather) 1946.	
	Letters and cards 1950s, including Oxford High School reports.	
	Cambridge University entrance timetable 1959.	
A.140	Letters from Sudan, January-May.	1960
A.140	Letters norn Sudan, January-May.	1900
A.141	Letters from Cambridge.	1962
A.142	Letters from Leeds.	1963-1964
	Liz's first teaching post was in Leeds.	
A.143	Letters to Liz from Hodgkin	1962-1964
A.144	Letters from Zambia.	1965-1967, n.d.
	Mainly from Kasama where Liz was teaching.	

A.145	Letters from Khartoum University Department of History.	1968-1969, n.d.
	Includes cable of congratulation sent on solution of insulin 1969, and joint letter from Thomas and Dorothy November 1969.	
	Liz was teaching in the Department.	
A.146-A.148	Letters from Khartoum.	1970-1972
	These letters cover a period of intense political unrest, demonstrations, arrests, dismissals of staff, occupation of the British Embassy and other manifestations.	
A.146	1970.	
A.147	1971.	
A.148	1972.	
A.149	Letters from Hanoi.	1974-1975, n.d.
	Only two letters from 1975.	
A.150	1977, 1979.	
A.151	1981-1987.	
	Includes letters from Nigeria and Mali 1983, Hanoi 1986.	
A.152	1991-1994.	

Undated and fragmentary.

A.153

#### A.154

### Robert ('Robin') Howard Hodgkin

1926-1942

Few letters only, 1926, 1937 (to Hodgkin, on her engagement), 1942 (to Thomas).

R.H. Hodgkin, Thomas's father lived 1877-1951. He was Provost of Queen's College Oxford 1937-1951.

#### A.155

### Robin Allason Hodgkin

1958, 1961, 2003

Two letters only 1958, 1961, information on Abbotsholme School (R.A. Hodgkin was Headmaster), obituary 2003.

Thomas's cousin, brother of Alan Hodgkin FRS.

#### A.156-A.207

### Thomas Lionel Hodgkin

1928-1983

Dorothy Hodgkin's husband, whom she met at the home of Margery Fry while working at the Royal Institution at Easter 1937 and married in December of the same year.

Thomas Hodgkin (1910-1982) served in the Colonial Office in Palestine 1933-1936; he worked as a Staff Tutor for the Workers Educational Association 1939-1945. From 1946 to 1952 he was Secretary to the Oxford Delegacy for Extra-Mural Studies; visits to the Gold Coast (later Ghana) and the Sudan to initiate adult education courses led to a lifelong love for Africa and Africans. He undertook many subsequent journeys, studying the previous history of the regions and identifying himself with their growing nationalism and struggles for independence. He became the first Director of the Institute of African Studies at the University of Ghana 1961-1965, and wrote widely on African history and politics.

Thomas was himself a prolific and lively correspondent, with a distinctive small neat handwriting, sloping upwards and always leaving a wide left-hand margin often filled with addenda. Few of his letters survive in this collection; they are presented at A.156-A.159. Letters which were incorporated in other items are noted in the Index. Two collections of his letters have been published: *Thomas Hodgkin: Letters from Palestine 1932-1936*, ed. E.C. Hodgkin, London 1986, and *Thomas Hodgkin: Letters from Africa 1947-56*, ed. Elizabeth Hodgkin and Michael Wolfers, London 2000.

The overwhelming majority of the material presented here

is Dorothy's correspondence with her husband, from their engagement in 1937 to 1977. The correspondence continues steadily through his wartime absences in the north of England as a W.E.A. tutor and his later extended travels and residence in Africa, with varying gaps during his presence with the family in Oxford.

It forms a rich source of information about Hodgkin herself, her research and career, and also into the social and political activities of a liberal-socialist well-connected middle class family of the time. Thomas himself was a member of the Communist Party from 1936 to 1949; Dorothy did not take this step but she was an active member of the Oxford Labour Party, attended its meetings and demonstrations, and always retained a favourable view of the Soviet Union.

Dorothy aimed to send a letter each day (on more than one occasion she sent two on the same day), no matter what the hour, the conditions or the materials to hand. Many letters are dog-eared, torn and dirty; some are on headed writing paper from Somerville College, various laboratories or Crab Mill, but more are on odd scraps of paper. They are written in college, in the laboratory, on trains or in train stations, at the dentist's, from hospital, in her garden, the University Parks, or during college committee meetings. They are almost always (Sundays are an exception) hurried or late, with Dorothy dashing out to catch the last post, missing it, and sometimes finding an unposted letter in her pocket several days later.

Tantalisingly, and especially during the early years of her marriage, very few are fully dated, some not at all. Every effort has been made to supply an approximate date from context, reference to academic, career or domestic events, to the early chronicles of the children's development, or to the notes of the weather, garden or scenery which Hodgkin frequently included. Some have tentative dates added in Thomas Hodgkin's hand. The airmail letters of the later years are more fully dated and postmarked.

The content of the letters is of great interest. In the early years (1938-1944) Hodgkin was under much pressure with days full of 'jobs' as she called them, in house, college and laboratory. Her scientific work was advancing quietly on several fronts with a growing research team and increasing respect from the wider scientific community. Her college responsibilities of committees, interviews and admissions, and the teaching of her 'girls' remained tasks which she fulfilled, not always with great joy and sometimes in rather a rush. The births, babyhood and growth of her children, their ailments, absences and achievements at school, are a constant theme.

Added to these was the family tradition of casual entertaining. Colleagues from the laboratory like Carlisle or Riley, others from outside Oxford such as Bernal, Perutz or Waddington, Labour Party associates, Somerville friends and wartime evacuees often arrived unannounced. Much hospitality was given and received. There were always maids and a cook to assist, but surprisingly little mention is made of wartime rationing and shortages.

Despite her fatigue - Hodgkin often writes of going to bed, or dropping off to sleep, at 9.30 - political or scientific discussions with friends would continue till 1.00 or 2.00 am, after which she might fit in reading for the next day. Only once does she seem to buckle, writing in a letter dated 'Monday' (A.167, probably 1940) 'Sometimes I feel depressed and wonder whether it's worth the struggle to keep this place and work going'. Otherwise she maintains an unruffled vouthful alertness, unfazed by unheralded (or forgotten) events. During this period, husband and wife aimed to spend alternate weekends in Cumbria or Staffordshire where Thomas was teaching, or in Oxford; she writes with longing expectation, or recollections, of these meetings. Though she herself had complicated arrangements to make before she could get away, her concern is always that Thomas might find the travel too exhausting.

From the middle 1940s the pace of 'my hard working days' increased and with it growing recognition and success. Modest though she was, Hodgkin gains becoming more forthright in giving confidence, bolder assessments of people or issues, recommendations, or dismissals, of candidates for academic or other posts, more experienced in discreet 'wire-pulling', more prepared even to have Thomas and his visits fit into her own schedule of engagements. In the 1950s the letters are more factual on research meetings and conferences, with more technical detail than she previously gave to Thomas; this may reflect her growing fame and confidence, or perhaps his fuller comprehension of her work. Generous hospitality continued, as the family expanded to include visiting colleagues and her children's wide circle of friends.

Hodgkin enjoyed the 'nice companionship' of 'a lovely houseful', or '23 people to tea, of very mixed kinds, mostly unexpected'.

Hodgkin's day-to-day organisation was notoriously chaotic. Missed posts, lost trains, overlooked dates, absence of pens, pencils and paper or scrambles against the clock were common but accepted facts of life. On one occasion, after a visit to Cambridge for meetings with Perutz and Lawrence Bragg, she missed her rail

connection from London to Oxford and spent a 'horribly cold' night on Paddington Station, catching the dawn train and arriving home in Oxford at 7.30 to find Luke 'somewhat weepy' (undated letter at A.167, probably 1940). The last letter in the sequence (A.240), from 'Seattle and San Francisco' dated 20 February 1977, includes the information that she has inadvertently brought the car keys with her, has no address or telephone number for her daughter Liz and no envelope for her non-airmail letter (written on Crab Mill paper). Yet here as always the tone is of tender unquestioning devotion.

The correspondence has been drawn upon extensively by Ferry in her biography. Cross-references to her text and notes are given as far as possible.

A little material following Thomas's death in 1982 is at A.205-A.207.

Α.	156-A.159	

Letters from Thomas.

1938-1982

Some of these are fragmentary and not fully dated, written in ink or faded pencil. Letters from Africa may be dated 'your time', 'their time'.

A.156

Miscellaneous letters and pages from letters 1938-1949.

1938-1949, 1982

Also included here is an obituary of Thomas 1982.

A.157

Letters and fragments.

1950s

Many during travels in Egypt and elsewhere in Africa. Includes 17 November 1959 letter setting out his wishes for 'a good old-fashioned Christian burial' (*Ferry p.387*) and other bequests.

A.158

Letters and fragments.

1960s

A.159

Letters and fragments 1970s, 1980s

1970s, 1980s

Folder also includes miscellaneous manuscript notes.

A.160-A.204 Hodgkin's letters to Thomas. 1937-1977

Letters, cards, cables.

A fuller note of contents is enclosed with the folders.

A.160 July-September 1937.

First letters, engagement, holiday in Yugoslavia (Ferry

pp.123-130).

A.161 September-December 1937.

Hodgkin's wedding and that of her sister Joan;

lactoglobulin. (Ferry p.135).

A.162 January-June 1938

Insulin paper, early pregnancy confirmed 24 April (Ferry

p.165); hopeful diagnosis of absence of arthritis or

rheumatism in finger 1 June.

A.163 13 June-December 1938

Pregnancy, arrangements with Somerville; Oxford City by-

election; meetings with Bernal; Royal Society meeting 18

November (Ferry pp. 163-172).

A.164 January-April 1939 and n.d.

> Mainly news of Luke; Hodgkin's breast abscess; Thomas's accident 3 February (Ferry pp.173 and 176);

insulin controvery with D. Wrinch (Ferry p.155).

A.165 July-December 1939

> Hodgkin's stay in clinic at Buxton for arthritis/rheumatism treatment combined with writing 'insulin letter' and

> consultation with W.H. Taylor in Manchester (Ferry

pp.177-178).

Also outbreak of war, changes to research plans, arrival of H. Carlisle and apparatus from Birkbeck College (Ferry pp. 183-184), 'good idea' on haemoglobin 29 November.

A.166

January-June 1940 and undated.

Internment of M.F. Perutz; visits from Bernal; work on insulin; meeting ?23 May with Iris Murdoch 'charming classical exhibitioner' and 'staunch supporter' of Labour Club.

A.167

July-December 1940 and undated

Arrival in Oxford of bombed-out East Londoners, and the Whitelock family (*Ferry pp.180-182*); insulin research and publications.

A.168

January-March 1941 and undated.

Departure of Whitelock family (Ferry p.182); research arrangements with Bernal; upset over 'foul creatures' in Luke's hair; letter from 'the Rockies' [Rockefeller Foundation] awarding £1,000 'rather terrific and embarrasing' [January]; first mention of new pregnancy 9 February; work on diamonds.

A.169

April-June 1941 and undated.

Mainly domestic news and visitors.

A.170

September-December 1941 and undated.

Birth of Prudence Elisabeth 23 September; full daily dated letters from hospital to 6 October including 28 September praise for Soviet Russia's system of childcare, parks and 'that sort of atmosphere' (Ferry p.267); further grant from 'the Rockies' 12 October; undated letter recalls her first meeting with Thomas (Ferry pp.120-121); undated letter ca 23 November on crystallisation of penicillin (Ferry p.194); visit from Bernal 6 December.

A.171

January-June 1942 and undated

Letters and cards, sent very frequently, sometimes twice per day, few dated or assignable.

This was a very busy time for Hodgkin. She often says she has fallen asleep over work or household chores, and has disturbed nights with the children.

A.172

2 June-August 1942.

Letters in August are from Geldeston, Norfolk.

A.173

4 September-17 December 1942 and undated.

Luke at Cutteslowe School 8 September; Rockefeller report on insulin; difficulties of working with penicillin October-November; working with B. Low (*Ferry p.195*); intensive experiments on insulin and penicillin; family chickenpox.

A.174

January-April 1943 and undated.

Includes 'state of bliss' at successful cholesterol analysis presented at Cambridge by H. Carlisle (*Ferry p.189*) 17 January; new treatment for arthritis with Dr Cyriax 6 February; letters to Thomas from 'Audrey' n.d.; receipt of insulin from A.C. Chibnall 15 February; tonsil extraction April.

A.175

1 June-31 December 1943 and undated

Few letters dated.

Includes 'a very exciting day', synthesised penicillin; continued Rockefeller grant 29 September; membership of penicillin chemists' committee (*Ferry p.200*).

A.176

January-June 1944 and undated.

Visit from Bernal 20 February; possible career moves; Luke's preciosity (and mumps) (Ferry p.227); American penicillin brought by K. Lonsdale n.d. (Ferry p.203); interview with R. Robinson about organisation of the Crystallography Department (Ferry p.202).

A.177

September-10 December 1944.

Hodgkin's miscarriage (2 letters from Shipston-on-Stour Hospital) September (*Ferry p.207*); appointment of Janet Vaughan as Principal of Somerville College (elected November); penicillin research; approach to Dragon School to take Luke 19 November.

A.178

11 January-11 September 1945 and undated.

Successful work on penicillin ('Am extremely cheerful' 11 January); visit from K. Lonsdale with news that 'M.R.C. would back me up to £3000' 4 March; Bernal's proposed research institute 11 March (*Ferry p.225*); appointment as University Demonstrator n.d. (*Ferry p.224*).

A.179

1946.

Two notes only, n.d. but after birth of Toby in May.

A.180

1947.

11 February-24 June 1947 and undated: letters to Thomas in Lagos and Accra.

Election to the Royal Society 14 March (*Ferry p.229*); refusal of visas for eight UK scientists to visit Soviet Union 24 June.

6 October-18 November: letters from America on Hodgkin's first trip to USA (*Ferry pp.231-235*).

A.181

1948.

March, to Thomas in Africa (one letter only); July-August to Thomas from Hodgkin in America.

A.182

1949.

June, from Hodgkin at Cold Spring Harbor Conference (Ferry p.265); December, to Thomas in Nigeria (one letter only).

A.183

1950.

Two letters only, January, to Thomas in Accra.

A.184

1951.

Three letters only, January, March, to Thomas in Lagos.

1...

Preparations for move to Powder Hill, Boars Hill, Oxford.

A.185

1952

August-December, to Thomas at Dakar and other French West African states.

Family now living at Powder Hill. Some letters include contributions from children.

A.186

1953.

4 January-5 March, to Thomas in French North and Equatorial Africa.

Hodgkin's postponed visit to Holland; news of Stalin's death 'comes as a sad blow' 7 March.

16, 22 September, letters from Moscow on Hodgkin's first visit to the Soviet Union, led by Bernal, very enthusiastic (Ferry pp.266-271; Hodgkin F.7).

A.187

1954.

Three letters only, June-July, to Thomas in Addis Ababa.

No letters survive for 1955 but letter of 8 January 1956 refers to correspondence of the previous year.

A.188

1956.

Five letters only, others probably missing, January-June, to Thomas in French West Africa.

A.189

1957.

Four letters only, January-November.

The Hodgkins were now living, together with Joan Payne and her children, at 94 Woodstock Road, Oxford.

A.190

1958

May, 3 letters only, to Thomas in Accra.

Margery Fry's Memorial Service; Honorary Degree for J.W. Crowfoot, Hodgkin's father.

30 October-11 December, to Thomas at Institute of Islamic Studies, Montreal, Canada.

Includes letter on 'Nobel Prize troubles'; news of Anna Davin's pregnancy and marriage 'come Christmas' to Luke, 30 October and later (*Ferry p.282 and p.288*); deputation on disarmament to House of Commons 11 December.

A.191

1959

Two letters only surviving, 6, 30 November, to Thomas in Mali.

A.192

1960

January-December and undated, to Thomas in Accra.

Discussion of possible career moves to Leeds, or to Imperial College London; appointment to Wolfson Chair May (Ferry pp.283-284; Hodgkin A.68, A.69).

A.193

1961.

Five letters only surviving.

Includes news of formal offer to Thomas of post of Director, Institute of African Studies, University of Ghana, with very favourable conditions 14 November.

A.194

1962.

February-November, to Thomas in Accra and other African centres.

Includes brief reference to Cuban Missile Crisis 'expecting the worst from Kennedy at midnight' 23 October; award of Nobel Prize in Chemistry to M.F. Perutz and J.C. Kendrew 'which is extremely nice and wholly deserved', 6 November.

A.195 January-July 1963.

To Thomas in Accra.

Frequent references to early days at Linacre House (later College), and to severe winter in UK; Hodgkin's portrait by Sheila Fell delivered to Somerville College 15 February.

A.196 October-December 1963.

To Thomas in Accra.

Arthritis attack described as 'a silly two days with a bad right hand' 10 November; eulogisitic report by Helen Gardner on visit by Robbins Committee on Education to Soviet Union 14 November; Thomas ill with dengue fever 25 November.

A.197 January 1964.

To Thomas in Zaire and Accra.

Steady progress with B12 research.

A.198 June-July, October and undated 1964.

Hodgkin was awarded the Nobel Prize in Chemistry on 29 October. The last dated letter in the folder is 22 October and there is in consequence no mention of it here.

A.199 1965.

January-June, to Thomas in Accra.

Offer to Hodgkin of Order of Merit 14 March and acceptance after telephone call from the Palace 17 March (Ferry pp.294, 295); many references to good progress on insulin research; last visit to Oxford by Bernal 23 May; offer to Thomas of newly-created lecturership in Government of African States (later New States) 31 May.

September, from Japan, Hong Kong and China (includes one letter to Toby) (*Hodgkin F.25, F.26; Ferry pp.340, 341*).

November, from Canada and USA.

/...

Letter of 7 November refers to her mother's letter on medical education in the Sudan (A.118) then in the hands of Diana Rowley q.v. Hodgkin writes that it was 'written originally to Dorothy Willis about medical education in the Sudan - starting a fund for same. I wonder what happened to it'.

A.200

1966.

Two letters only, 19 June, 5 November, from Hanoi, incomplete.

A.201

1967.

January-February, includes letters from India (*Hodgkin F.37*).

June-July, includes letters from USA (Hodgkin F.38-F.40).

A.202

1968.

February, two letters only.

April-June, from Australia and New Zealand.

Includes meetings with Katie and Jimmy Collins (Ferry p.335, see also A.232).

A.203

1969.

May, three letters only.

August, 2 letters only.

A.204

1977.

One letter only, 20 February, from 'Seattle and San Francisco'.

Included here is a group of undated or fragmentary letters, all periods.

A.205-A.207	Miscellaneous material re Thomas	1928-1983
A.205	Miscellaneous correspondence, some fragmentary.  Includes telegram 1959 from Paul Robeson accepting invitation to visit, on verso is Thomas's shopping list, perhaps for the occasion.	1928-1981
A.206	Letters of condolence on Thomas's death.  Also correspondence <i>re</i> Thomas's grave at Tolon, Greece, and publication of his autobiographical poem 'Don Tomás'.	1982-1983
A.207	Miscellaneous material on health, finance, pensions, arrangements for the estate.	
A.208-A.210	Toby Hodgkin (John Robin Tobias)	1946-1985
	Hodgkin's third child, born May 1946.	
A.208	Juvenilia.  Identity card, school reports, letters to parents.	1946-1958
A.209	1960s	
	University of Newcastle 1964-1966, travels in India, Africa, Turkey, birth of son Simon.	
A.210	Later correspondence.	1970s, 1985
	Including lettes from Judith (Toby's first wife).	
A.211	Hodgkin relations	1937-1982
	Alice Mary 1943; David 1969; Eliot 1982; Helen 1937- 1966 and undated.	

A.212	Junior Hodgkins	
	Grandchildren, nieces and great-nieces.	
A.213	(Aunt Violet) Holdsworth	1947
A.214	Christabel Hood	1938, 1959
	1959 item <i>re</i> Hodgkin's proposed visit to family villa at San Remo.	
A.215	Dorothy ('Aunt Dolly') Hood	N.d.
	Mainly about 1959 San Remo trip. See also A.74-A.76.	
	Sister of Molly Crowfoot. Hodgkin's financial benefactor at various times.	
A.216	Grace Hood	N.d.
	Hodgkin's grandmother, widow of Sinclair Hood.	
	Grace Hood and her daughter Dorothy (see A.215) moved to Oxford soon after the beginning of the Second World War (Ferry p.182).	
	Included here is a letter from a war widow, author unknown, sent to Grace and Dorothy 16 December 1942.	
A.217	Sinclair Hood	1956, 1977
A.218	Mary Keynes-Hamilton	1975 and n.d.

A.219

## Joan Payne (née Crowfoot)

1932-1982 and

Correspondence includes letters 1979 *re* presentation of Joan Payne for an Honorary MA degree.

Hodgkin's sister, born 1912.

Joan took part with her parents in Middle East excavations in the 1930s. Her marriage to Denis Payne, and the birth of her first child took place at similar dates to Hodgkin's. Joan and Dorothy shared the house at 94 Woodstock Road until the late 1960s, when Joan moved near Cumnor, Oxford. She worked on the flint collections at the Ashmolean Museum, Oxford.

A.220-A.223

## Diana ('Dilly') Rowley (née Crowfoot)

1940-1991 and n.d.

Hodgkin's youngest sister, born 1918.

Diana read Human Sciences at Somerville College Oxford. After her marriage to Graham Rowley, a Canadian archaeologist with special interests in Arctic reseach, she moved to Ottawa.

Her letters, mainly typed, are long full accounts of family life, including accounts of her own and her husband's research and publications, and expeditions to Northern Canada; they spent a sabbatical year in Cambridge 1968-1969. Many of the letters bring Easter, Christmas or New Year greetings, or are sent for Hodgkin's birthday on 12 May. (Hodgkin A.156, A.157).

See also A.20-A.22 for early school notebooks by Diana.

A.220

?1940, 1948-1959.

A.221

1962-1969 and undated.

Letter of 30 September 1965 refers to Molly Crowfoot's letter about medical education in the Sudan, identifying the recipient as Dorothy Willis and suggesting two possible dates 1916, 1921. See also A.118, A.199

A.222

1970-1979.

A.223	1981-1991 and undated.	
A.224	Shorter correspondence, with family connections, or reminiscences.	
	Includes 13pp typescript account of 'The Great William: William Miller 1769-1847', an ancestor of the Crowfoot family at Beccles, sent with two undated letters from 'Christabel'.	
A.225-A.260	PERSONAL CORRESPONDENCE	1928-1994
	In alphabetical order.	
A.225	Antonius, K.	1937-1977
	Includes a little material re George Antonius.	
	Letter 14 May 1965 recalls early meeting during Hodgkin's engagement to Thomas ( <i>Ferry p.132</i> ).	
A.226	Baba, I.	1928-1931
	Letters, cards, momentos.	
	Baba was a teacher at Beersheba Girls School.	
A.227	Bedri, B. and Bedri, Y.	1971, 1974
	Old acquaintances of the Crowfoot family.	
A.228	Bernal, E.	1938, 1971- 1983
A.229	Bosanquet, B. and Bosanquet, C.	1960, 1981, 1982

A.230

Burnet, A.

1930s, 1983

A contemporary of Hodgkin at Somerville College.

A.231

Christie, R.

1985, 1987

Hodgkin A.164.

A.232

Collins, J. and Collins, K.

1965-1981

Katie Stevens was the children's nurse, discovered in Cairo by Molly Crowfoot, who looked after the four Crowfoot daughters for several years. In 1915 she married Jimmy Collins and went to live in Australia in 1919. Hodgkin renewed acquaintance with them in 1967 during a visit to Australia and New Zealand. (Ferry pp.14-17, 235).

The letters are in Jimmy's hand but from them both until Katie's health deteriorated. Contact was made in 1965 after a long gap, and the Collins corresponded thereafter with many of the Crowfoot family, recalling early events. See especially letter of 18 March 1975, and letter to Joan Payne 6 January 1979.

Includes photographs 1972, 1981.

A.233

Davies, G. (later Koblenz)

1934-1994

Davies was a contemporary of Hodgkin at Somerville College, later sharing a flat with her in Cambridge (*Ferry p.84*).

Correspondence 1934 *re* Cambridge; 1992-1994 from USA. Includes reminsicences of Cambridge days sent in 1979.

A.234

Diamond, P. and Diamond, M.

1961 and n.d.

Pamela Diamond was a daughter of Roger Fry. Includes brief correspondence from her husband Micu.

A.235, A.236

Fry, S.M.

1932-1957

Margery Fry was Principal of Somerville College when

Hodgkin was an undergraduate. Sharing many political and humanitarian interests, she became a lifelong friend and confidant, though she resigned from Somerville in 1931. Her house in London became a frequent stop on Hodgkin's visits and was where she first met Thomas in 1937.

A.235

1932-1951.

Letter of 12 October 1936 refers to visit by 'D.W.' (Dorothy Wrinch) and asks Hodgkin to 'cope with P' (Wrinch's daughter Pamela). Letter of December 1937 is addressed to 'Beloved 2'.

Also includes obituary of Fry and entry for Fry in *Dictionary of National Biography* (by Thomas Hodgkin).

A.236

Nos. 1,2,3,7,9 of circular letters from Fry and Marie Michaelis on a world tour, September 1933-January 1934.

A.237

Harrison, A. St B.

1942, 1962-1965

Letter of 1942 is to John Crowfoot.

A.238-A.241

Murray, K.M.E.

1932-1982

Elisabeth ('Betty') Murray was a contemporary of Hodgkin at Somerville. She read history and shared Hodgkin's archaeological interests. She was Registrar and Domestic Bursar at Girton College Cambridge 1938-1948 and Principal of Bishop Otter College Chichester 1948-1970. Ferry refers passim to the attentive kindness Murray showed to Hodgkin at Oxford when she was overworking. Murray's letters, almost all carefully typed, often contain amusing accounts of 1930s life and travel, archaeological digs etc. (Hodgkin A.167).

A.238

1932-1939.

A.239

1940-1944.

From Girton College Cambridge.

A.240	1950-1962.	
	From Bishop Otter College where Murray continued to pursue archaeological interests.	
A.241	1970-1982.	
	Letter of 16 December 1972 refers to Murray's work on a biography of her grandfather James Murray.	
A.242	Nzokou, L.	1971-1983
	(variant Njoku, Hodgkin H.172)	
A.243	Pusey, N.	1927, 1928
	Norah Pusey was a school friend of Hodgkin at John Leman School, with a similar interest in science. Unlike her, she was unable, for family reasons, to go on to higher education. ( <i>Ferry pp.20, 34</i> ).	
A.244	Sayre, A.	1956, n.d.
	Anne Sayre was the wife of David Sayre, who worked with Hodgkin ( <i>Ferry pp.243-245</i> ; <i>Hodgkin H.214-H.218</i> ). The undated [1970s] letter refers to Anne's proposed book on Rosalind Franklin.	
A.245	Stanford, E.	1970s-1990
	Letters and cards (Hodgkin A.170).	
A.246	Starkie, E.M.	1937
	Three letters 1937, on Hodgkin's engagement and marriage, and Somerville affairs.	

Also included are Memorial Address by Sir Maurice Bowra 1970, and 'Recollections of Enid Starkie' by D. Davin 1971 (draft with corrections).

Enid Starkie was a Fellow in French at Somerville Collge and one of its most flamboyant characters.

A.247 Thatcher, M.H.

1977, 1988, n.d.

Miscellaneous drafts by Hodgkin, press-cuttings and

material on Palestine and Vietnam.

Lady Thatcher had been an early student of Hodgkin at

Somerville (Hodgkin H.231).

A.248 Wolfers, M.

1982

A.249-A.260 Shorter correspondence

From friends and colleagues, all periods.

Not all dated, some signed with first names only. Some have names added in Hodgkin's hand, probably at a later

date.

A.249 A.-B.

Includes letters from Olga Bernard, a refugee taken in by

Hodgkin in 1940 (Ferry p.181), J.M. Bijvoet, J.L. Bullard.

A.250 C.

Includes letter recalling research from A.C. Chibnall.

A.251 D.

A.252 E.-F.

A.253 G.

Includes letter 1990 on the death of Maire Gaster ('B.J.'),

Thomas Hodgkin's great love (Ferry pp.388-390).

A.254 H.-J.

K.-L. A.255

A.256 M.

Includes letter from Lady Morton who took in Thomas,

Dorothy and Luke in 1939 (Ferry p.176).

A.257 N.-R.

A.258 S.

> Includes letters from Ann Seidman on the return of her husband to Ghana after deportation and the Hodgkins'

> intervention (Ferry pp.348-350); from L. Simpson with recollections of San Remo and Molly Crowfoot.

T.-Y. A.259

Includes letters from Mary Whitelock, a refugee from the

London Blitz whom Hodgkin took in with her children

(Ferry pp.181-182).

A.260 First-name and unidentified signatures.

SECTION B	RESEARCH, B.1-B.56		1927-1983, n.d.
	B.1-B.25	NOTEBOOKS	
	B.26-B.56	NOTES AND CORRESPONDENCE	
B.1-B.25	NOTEBOOKS		1927-1950
	varies, there are few used from time to time	remely difficult to date. The format dates, and some may have been over several years. Both ends of used and sometimes the middle perefore tentative.	
B.1-B.16	Oxford		1927-1932
	See Hodgkin B.1-B.4.		
	B.12, B.13 and B.15 a Hodgkin's increasing fo	are of special interest in showing cus on crystallography.	
B.1	Red hard-backed noteb	ook	1927-?1930
	At front of book, mathematics, in a young	notes on Latin grammar and g hand.	
	At rear of book, notes o	n Trigonometry, in a young hand.	
		notes and diagrams on light, sation, in Hodgkin's later hand.	
		egun March 1927-Spring 1928 after during preparation for Somerville op.32-33).	
B.2		ebook, covers loose, inscribed e book is numbered '2' but no other been found.	1928
		class exercises, some marked by Bowman), R.T.L. (R. Lattey), others	

B.3-B.5	Three dark blue soft-backed notebooks.	N.d.
	Oxford work, none dated.	
B.3	History of chemistry (perhaps from lectures), tests, experiments, techniques.	N.d.
	Both ends of book used.	
B.4	Experiments, analyses, calculations.	N.d.
	Both ends of book used. Some pages in another hand.	
B.5	Notes, experiments, calculations on physical properties, surface tension, inertia, projectiles, viscosity etc. One page has headnote 'Lecture 5'.	N.d.
	Both ends of book used. At rear of book, loose pages in another hand.	
B.6	Dark blue hard-backed notebook 'Inorganic chemistry'.	N.d.
2.0	Probably lecture notes on history and properties of substances. Both ends of book used.	14.0.
B.7	Grey soft-backed notebook, bought in Oxford.	N.d.
	Notes on chemistry, from lectures or perhaps Hodgkin's own reading.	
B.8	Grey hard-backed notebook, bought in Oxford.	N.d.
.—	Notes, perhaps from lectures, on kinetic theory of gases, radioactivity, $\alpha$ rays, early atomic physics. Not all of book used.	
B.9	Small dark blue hard-backed notebook, inscribed 'Dorothy M. Crowfoot Somerville'.	N.d.
	Experiments, analyses, practicals. At rear of book, miscellaneous calculations.	

B.10	Small dark blue hard-backed notebook (same format as B.9).	N.d.
	Experiments, calculations, some notes in another hand. Not all of book used.	
B.11	Black hard-backed notebook.	N.d.
	At front of book 'List of experiments done', on density, properties of liquids, molecular volume, vapour pressure etc.	
	At rear of book miscellaneous calculations and some loose pages.	
B.12	Small beige notebook 'Analysis of glass'	1929-1930
	Detailed accounts of experiments and analyses including blue and green tesserae. Probably related to Hodgkin's analyses of specimens found by her parents on excavations at Jerash, 1929 (Ferry pp.52-54).	
	For other material on Hodgkin's work on mosaics, see J.18-J.20.	
B.13	Dark blue hard-backed notebook.	1931-1932
	Work on crystals, diagrams, calculations, refractive indices. Also on gemstones and tesserae.	
	Material in more than one hand.	
	Included on loose pages is a manuscript cast-list for 'As You Like It', Hodgkin as Touchstone, her sister Betty as Rosalind.	
B.14	Small dark blue hard-backed notebook	1931
	Manuscript note on front page '?Lecture notes from Sidgwick's lectures, possibly 1931. D.H.'	

B.15 Black soft-backed notebook 1931-1932 Record of experiments 30 September [1931] to 21 June [1932], tabulated results and measurements of crystal analyses. This is the work submitted for Hodgkin's Part II thesis and published in conjunction with H.M. Powell in 1932 (Bibliog. 123). (Ferry pp 72-74; Hodgkin B.19). At rear of book, notes on the literature, latest date 1931. See also B.26. 1932 Green soft-backed notebook. B.16 Notes on the literature. Both ends of book used. Latest date 1932. 1931 B.17, B.18 Heidelberg (Hodgkin B.5). B.17 Soft-backed notebook, bought in Heidelberg. In front of book, German vocabulary. At rear of book, notes, diagrams, calculations on crystal analysis (Ferry p.62). Black hard-backed notebook. B.18 Miscellaneous content. Includes German vocabulary and, on loose pages, exercises in German translation. Also notes, references and some more extended accounts on science and religion, European religious factions, intolerance etc, some possibly part of a translation exercise, others Hodgkin's own work, possibly added later at Cambridge.

B.19-B.21	Cambridge	1932-1934
B.19	Pages from a loose-leaf binder (in poor condition and discarded), bought in Cambridge. Some loose pages.	1930s
	Analyses and calculations, angles of rotation, X-ray investigations of various crystals. Includes 1p dated 16.5.33 using new Weissenberg camera.	
	Some pages are in another hand, perhaps J.D. Bernal.	
B.20	Small spiral-bound notebook.	1932
	At front of book, science notes.	
	In centre of book, a few notes on philosophy, science and society, T.S. Eliot, W.B. Yeats.	
	At rear of book, brief reference to 4 Scroope Terrace ('caretaker and wife to cook') where Hodgkin briefly lodged with her sisters Joan and Elizabeth in 1932 ( <i>Ferry p.83</i> ).	
B.21	Small green soft-backed notebook	1932-1933
	Few pages used. A few dates in November and December referring to work with Weissenberg camera. Latest bibliographical reference 1932.	
B.22-B.25	Oxford	1934-1950
	Four small loose-leaf notebooks, relating to Hodgkin's teaching and examining at Oxford.	
	The subjects for tutorial essays or problems set each week give a view of the scope of the university teaching programme at the time.	
B.22	Examination questions in physics and chemistry 1934 (probably for College entrance examination), tutorial subjects various dates 1936-1938, comments on entrance candidates.	1934-1938

B.23	Tutorial notes, mainly Hilary [Spring] term 1938.	1936-1937
	At rear of book, some earlier notes, 1936, 1937.	
B.24	Tutorial notes.	1938, 1939
B.25	Tutorial notes, 1949-1950; tabulated examination results.	1949-1950, n.d.
B.26-B.56	NOTES AND CORRESPONDENCE	1922-1982, n.d.
	The material, assembled from miscellaneous sources among Hodgkin's personal papers, is of necessity more fragmented than that contained in the labelled box-files from her Oxford laboratory, previously catalogued (Hodgkin, NCUACS 47/3/94).  Of special interest are Hodgkin's Cambridge doctoral thesis (B.29), the notes and reports on insulin dating from the 1930s which complement the material already catalogued, and the correspondence and research documentation relating to J.D. Bernal at B.42-B.52.	
B.26-B.29	Early work	1932-1936
B.26	'Layer-chain structures of thallium di-alkyl halides', with H.M. Powell, <i>Nature, Lond.</i> 1932 (Bibliog. 123).	
	Offprint of published paper. Work done while Hodgkin was still an undergraduate. See also B.15.	
B.27	Vitamin B1 hydrochloride	1933-1934
	Notes, diagrams, calculations, including 3pp manuscript letter from Hodgkin describing her research on vitamin B1 hydrochloride, sent to R.A. Peters in answer to enquiries from him.	
	Included here is a copy of 'Crystal structure of vitamin $B_1$ hydrochloride', with J.D. Bernal, <i>Nature, Lond.</i> 1933 (Bibliog. 124).	

B.28	'Concrete memorandum forwarded to the Rockefeller Foundation, June 16th, 1935, J.N.'	1935
	3pp typescript with manuscript heading, perhaps by Joseph Needham.	
	Section on 'crystal physics applied to biology' indicates intended use of X-ray crystallographic analysis.	
B.29	'X-ray crystallography and the chemistry of the sterols', Hodgkin's thesis submitted for Ph.D., Cambridge, 1936 (Ferry p.120).	1936
	302pp typescript and manuscript.	
B.30-B.41	Work on insulin	1935-1983
B.30	'The crystallisation of insulin'	ca 1935
	Brief one and a half page note, describing Hodgkin's first successful crystallisation of insulin with a sample supplied by Boots Pure Drug Company and passed on to her by R. Robinson ( <i>Ferry pp.109-112</i> ).	
	Pages are numbered 8 and 9, perhaps from a Departmental Report. See also J.26.	
B.31	'X-ray single crystal photographs of insulin', <i>Nature, Lond.</i> 1935	1935
	7pp typescript and manuscript draft, a fuller account of the experiment and the first paper to be published under Hodgkin's name alone ( <i>Ferry p.114</i> ).	
	With a letter arising.	
B.32	'Report for the Rockefeller Trusteees on work in progress in the Department of Crystallography Oxford 1941-42'	1942, 1943
	25pp draft (Hodgkin B.139).	
	Enclosed here are related reports on research in Leeds by W.T. Astbury and Florence Bell (1941) and in Cambridge (on the crystal structure of haemoglobin) by M.F. Perutz and colleagues (1942-1943).	

B.33	'The crystal structure of insulin'	N.d.
	Drafts and headings for a paper or publication.	
	Hodgkin wrote and lectured frequently on the subject and it is not possible to assign a firm date.	
B.34	'Wet Zn Insulin Intensities'	N.d.
	Diagrams, Patterson maps, 1p note on the work by Hodgkin.	
	Some of the photographs are dated 1981, but the work predates this by many years.	
B.35	Bundle of notes, diagrams, calculations, a few bibliographic references.	1937
	Almost all on Zn insulin, some based on 'Davy Faraday photographs' (taken at Royal Institution 1937) ( <i>Ferry p.120</i> ). See also B.39, J.22, J.23 and <i>Hodgkin B.206</i> .	
B.36	Notes, calculations, contour and Patterson maps, on insulin and tobacco mosaic virus, n.d., one later page dated 1983.	N.d., 1983
B.37	Notes, data, calculations; printout on zinc insulin molecule, June 1976.	1976
B.38	Notes, diagrams, correspondence from G.G. Dodson, 'Michael' [M.G. Rossman] ?1963; printouts dated July 1976, April and June 1977.	?1963, 1976, 1977
B.39	Extensive manuscript notes, as found	1935-1942
	Almost all on insulin, measurements, densities, wet and dry forms, some dated 1935, 1937, 1939, 1940, 1942. Includes 1p headed 'Queries for Chibnall', and pages from the 'Davy Faraday' series (see also B.35, J.21-J.23, J.26).	
	A few notes also on lactoglobulin 1937 and on gypsum 1939.	

B.40

'An improved numerical method of two-dimensional Fourier synthesis for crystals', H. Lipson and C.A. Beevers, *Proc. Phys. Soc.* 1936, inscribed 'with the Authors' compliments'.

1936

The Beevers-Lipson strips were a new and important advance in calculation methods. Hodgkin met Beevers in Manchester in November 1935 and was the first customer for the strips when they became commercially available (Ferry pp.115-116).

B.41

'A discussion on the protein molecule', *Proc. Roy. Soc.* B, 1939.

1939

Report of meeting held 17 November 1938, with papers by T. Svedberg, K. Linderstrøm-Lang, K.O. Pedersen, F.J. and J. Philpot, D.M. Wrinch, A. Neuberger, W.T. Astbury, J.F. Danielli, J.D. Bernal and others.

This was the occasion when Hodgkin have a short, muchpraised (and apparently unexpected) paper, under her maiden name one month before the birth of her son Luke (*Ferry pp.170-172*). Her contribution is on pp.35-36.

#### B.42-B.52

### Material relating to J.D. Bernal

1932-1981

Correspondence, notes and research, some dating from 1932 when Hodgkin (then Crowfoot) went to work in Bernal's laboratory in Cambridge, and some relating to other research projects.

Hodgkin left Cambridge and returned to Oxford in 1934, and Bernal moved to Birkbeck College London in 1937. Their relations remained externely close, on a personal and political level, as well as their mentor-pupil affinity which persisted. See Hodgkin and Ferry passim.

See also D.5-D.39, Hodgkin's publications about Bernal, which include some further original material assembled by her at the time of writing.

B.42-B.45

Letters and cards to Bernal

1932-1940 and n.d.

These are all autograph manuscript, rarely fully dated. They are presented in approximately chronological order, with dates assigned on the basis of content or reference.

All aspects of Hodgkin's life and contact with Bernal are

1...

1...

dealt with, beginning with her first visit to his laboratory (August 1932) and the Ravenna conference (September 1932). After her return to Oxford there are many references to her visit to consult him in Cambridge or arrangements for left-wing political meetings, juxtaposed, sometimes incongruously, with research information and ideas which occupied part of her mind in whatever emotional circumstances.

G. Ferry draws on these letters extensively in her biography of Hodgkin, particularly chapters 3-5.

Several of Hodgkin's letters to Thomas include references to Bernal's visits to Oxford on scientific or political matters.

B.42

1932-1936.

Includes undated letter, 'I am so glad and excited about the virus'.

B.43

1937.

These cover the period of Hodgkin's engagement and marriage to Thomas, and show her delicacy in dealing with these topics with regard to Bernal. The letters have been extensively quoted by Ferry.

Hodgkin's letter of 12 October is characteristic, moving from Oxford Labour Club lunches to her insulin paper, her plans for marriage in December and subsequent semidetached life with Thomas, and changes in her relations with Bernal which had clearly been of great moment to her.

Letter of 19 December, written on honeymoon, describes her wedding and also pending work on lactoglobulin which she has delegated to Riley and Fankuchen.

B.44

1938.

Science, politics, pregnancy.

Includes telegram 'Nice boy born 5pm yesterday...' and Hodgkin's letter of 28 December describing her labour, early days with the baby 'rather a nice one' and detailed comments on her sterols paper.

B.45	1939-1940 and undated.	
	Includes undated letter (spring 1940, Ferry pp.218-219) on Hodgkin's ideas about the development of crystallography in Oxford, and her own uncertain plans.	
B.46	Photocopies of letters to Bernal sent to Hodgkin from the Bernal collection at Cambridge University Library.	?1934-1939
	Perhaps sent to Hodgkin when she was writing her Memoir of Bernal, or for her own autobiography. The letters are not fully dated, and are not in order. Some attempts to date them have been made including some, in blue biro, by Hodgkin herself. Tentative dates run 1934-1939.	
	The material is mainly concerned with research and publications and includes some detailed results, diagrams, Fourier maps etc.	
B.47-B.51	Notes and research by Bernal.	N.d.
B.47	Letter by Bernal to Hodgkin on crystal research, and a forthcoming conference or meeting.	
B.48	Envelope (from Birkbeck College) of 'Prints of figures for virus paper'.	
B.49	Envelope (from Birkbeck College) of 'Prints of comparison of wet and dry chymotrypsin'.	
B.50	4pp drawings and calculations on rhombohedral and hexagonal crystals.	
B.51	8pp manuscript notes, calculations, diagrams on sterols.	
B.52	Correspondence, diagrams, photographs on protein linkage, sent to Bernal by W.T. Astbury	1935, 1941

B.53-B.56	Miscellaneous	various dates
B.53	Shorter notes, diagrams, calculations by Hodgkin and others. Various dates and topics.	various dates
B.54	A4 block of notes taken at conference, perhaps in Italy.  Some pages torn out. A few speakers' names identified.	N.d.
B.55	Notebook of notes taken at conference or visit, perhaps in the USA.  Many pages torn out. Mainly scientific but includes 1p draft for speech on neutron bomb. Latest reference 1976.	ca 1976
B.56	Envelope of bibliographical reference cards.  Latest bibliographical reference 1982.	<i>ca</i> 1982

SECTION D	PUBLICATIONS AND LECTURES, D.1-D.38	1934-1983
	The principal interest of this section is the extensive material on J.D. Bernal and Hodgkin's writings about him (D.5-D.29) which usefully complements that previously catalogued in <i>Hodgkin D.80-D.102</i> .	
	Several other items document or refer to publications not listed in the Bibliography in the Royal Society Memoir.	
D.1, D.2	Drafts and correspondence for a proposed volume on the history of science, edited by R.T. Lattey for the Home University Library.	1934
	Not listed in Bibliography.	
D.1	Correspondence from R.T. Lattey asking Hodgkin to undertake sections 19 and 20 (on atoms and molecules), a total of 12,000 words at one guinea per thousand words, June-August.	1934
	Also includes letter to typist and heavily corrected manuscript draft.	
D.2	Another manuscript draft, on 'Atoms and molecules', some paginated 1-40, and several loose pages.	
D.3	2pp draft letter and note, no date or addressee, probably re Hodgkin's paper 'The interpretation of Weissenberg photographs in relation to crystal symmetry' (Bibliography 130, Hodgkin B.62).	1935
D.4	'X-ray measurements on wet insulin crystals', with D. Riley, <i>Nature</i> , 1939 (Bibliography 60).	1939
	Typescript and manuscript draft, copy of published paper.	
D.5-D.29	Publications and material relating to J.D. Bernal	1935, 1967- 1988, n.d.
	The material is presented as follows:	

/... D.5-D.17 Writings by Hodgkin and Bernal

D.18-D.21 Correspondence

D.22-D.29 Information

Immediately after graduation from Oxford in 1932, Hodgkin went to work in Bernal's laboratory in the Department of Mineralogy at Cambridge, where she remained until 1934. Bernal became and remained an important influence in her life - perhaps second only to Thomas. His fertile scientific mind suggested and encouraged ideas for research; his strongly leftwing political views chimed with hers, though she did not quite follow him (or, later, Thomas) into the Communist Party; their intimate personal relations changed after her marriage but they remained on terms of deep affection and respect.

Hodgkin's long acquaintance with Bernal often led to requests for information or contributions to publications. After his death in 1971 she undertook two major commissions: the Biographical Memoir for the Royal Society, published in 1980, and a lecture 'Microcosm: the world as seen by John Desmond Bernal' delivered in Dublin, October 1980 and published in *Proc. R. Ir. Acad.*, 1981.

In the course of her writing, Hodgkin accumulated considerable information, correspondence etc., which is at D.22-D.29. After the appearance of the Royal Society Memoir, she was contacted by Professor Alan Mackay who had traced and arranged publication of Bernal's early (1923) paper 'The analytical theory of point systems'. Hodgkin had referred to this paper, then apparently lost, in her Memoir (pp.24-26). A copy of the recovered work is at D.9.

Bernal's manuscript draft of his autobiographical 'Microcosm', with a few annotations by him, and by Hodgkin, is at D.11-D.16. A little correspondence is at D.20, D.21.

D.5-D.17	Writings by Hodgkin and Bernal	1980, 1984, nd

D.5-D.9 'John Desmond Bernal', *Biographical Memoirs of Fellows* 1980 of the Royal Society, 1980 (Bibliography 177).

D.5 Hodgkin's manuscript draft, heavily corrected, some paginated sections.

D.6	Typescript and photocopy of first draft, paginated 1-73, and 3pp list of corrections.
D.7	Typescript and manuscript drafts for the section 'Writings about science and society' (pp 63-66 of published Memoir) which gave Hodgkin some difficulty.  Includes comments or corrections by others, and extensive manuscript corrections and additions by M.M. Gowing, quoted in part in the published version.
D.8	Notes, anecdotes, quotations, family tree, photograph etc., assembled by Hodgkin for the Memoir.
D.9	Correspondence <i>re</i> Bernal's 1923 paper on point systems.  A copy published as Occasional Paper No.1, Department of Crystallography, Birkbeck College London, is enclosed.
D.10	'Microcosm', Hodgkin's lecture to Royal Irish Academy, October 1980 (Bibliography 178) ( <i>Hodgkin D.154, D.155</i> ).  33pp heavily corrected manuscript draft of lecture; proof with minor manuscript corrections.  The title refers to Bernal's unpublished autobiographical drafts and notes.
D.11-D.16	Bernal's typescript draft of his autobiographical account, with a few manuscript notes, by him and by Hodgkin.  These are all miscellaneous sequences, some paginated, none dated but thought to have been begun in 1926. Some exist in several versions, not all are titled.
D.11	'Method'.
D.12	'Personal influences'

D.13, D.14	'Impersonal influences'	
	Very bulky folder, divided into two for ease of reference. Includes some longer paginated sequences.	
	D.13 is philology, psychology, physics (2 versions); D.14 is economics, history (4 versions).	
D.15	'Problems'	
	Includes extended 'Introduction' 29pp, section on 'The dynamics of human societies' with a manuscript headnote 'An early essay 1920', and several other shorter sequences.	
D.16	Miscellaneous sequences, some autobiographical accounts of Ireland, socialism at Cambridge, one short section dated 4 May 1935.	1935, nd
D.17	Other writings by Hodgkin on Bernal	Nd, 1984
	1p typescript recollections of Bernal, especially his visits to Hodgkin's home in 1948 while lecturing at Ruskin College Oxford, nd.	
	1p manuscript tribute, written 1984 for Institute of Physics exhibition.	
	Included here is a request for an advance obituary notice from <i>The Times</i> , nd.	
D.18-D.21	Correspondence	1967-1988
D.18	1969-1980	
	Includes invitation to give Bernal lecture ( <i>Hodgkin D.134</i> ), draft article on Lysenkoism in Britain sent to Hodgkin for comment 1980.	
D.19	1981-1988	
	Includes paper on Bernal and thanks for Memoir from J.T. Edsall, information on J.D. Bernal World Scientific Conference on Disarmament 1988.	

D.20	Brief correspondence and papers from Bernal.	1967, nd
	1p manuscript note on monetary reform n.d., letter on scientific research in Ireland 1967.	
D.21	Letters exchanged with Birkbeck College on Bernal's retirement 1968 (copies, with a few manuscript notes by Hodgkin).	1968
D.22-D.29	Information	1971, 1972, nd
	Much of this is typescript or photocopied material, perhaps sent to Hodgkin for the Memoir.	
D.22	Note of private memorial service, 8 December 1971; and Memorial Service 24 January 1972.	1971, 1972
	Hodgkin spoke at the 1971 service.	
	Addresses at the 1972 service were by the Master of Birkbeck College (R.C. Tress), C.P. (Lord) Snow, J.C. Kendrew, S. (Lord) Zuckerman and P.M.S. (Lord) Blackett.	
D.23-D.25	Recollections of Bernal, from colleagues and friends.	
	These were made, some from tapes, at the request of Eileen Bernal for a Festschrift.	
	Many of the pieces are numbered 2-57 (not a complete sequence).	
	3 folders.	
D.26	Miscellaneous information on Bernal.	
	Includes 1p manuscript notes on 'Bernal the Rationalist' by Thomas Hodgkin.	
D.27-D.29	Miscellaneous obituaries, tributes and articles, some with brief correspondence.	
	3 folders.	

D.30	Foreword to E. Ceausescu, <i>Steriospecific Polymerization of Isoprene</i> , to be published by Pergamon Press, 1982.	1982
	Correspondence with Romanian Embassy and with Pergamon Press 1982, typescript draft of Hodgkin's Foreword.	
D.30A	Birthday tribute to Drago Grdenic, for publication in Croatica Chemica Acta, 1983.	1983
	With correspondence.	
D.31	Preface to F. Langer, An Age of Stone, 1988	1988
	2 versions	
D.32-D.38	Editorial correspondence	1935-1991
D.32-D.34	Correspondence with editors and colleagues <i>re</i> publications, lectures, contributions by Hodgkin.	1959-1991
	The material deals with works many of which do not appear in the Bibliography of the Royal Society Memoir. References to related material in the previous catalogue are given wherever possible, in the form <i>Hodgkin</i>	
D.32	1959-1980	
	Insulin 1959 (Bibliography 38); Tribute to Gandhi 1968 (Hodgkin G.166); Obituary for E.B. Chain 1979 (Hodgkin D.79); Preface to A. Kelly, The Missing Half: Girls and science education (correspondence and two versions of Hodgkin's suggested preface, which was omitted from the publication as 'half-hearted') 1979-1980; Festschrift 1980.	
D.33	1981-1983	
	Dalton lecture, 'Moments of discovery' 1981 (Hodgkin D.156-D.158); correspondence on Sophia lecture 'On making peace possible' and its publication in Co-Existence 1981-1983 (Hodgkin G.167, G.168); lecture at Manchester 1982; biochemical society transactions 1982.	

D.34	1983-1991	
	'Spiegelbuch' 1983; Women of the Year lecture ( <i>Hodgkin D.160</i> ; <i>Ferry p.390</i> ) 1983; 'Memories of Lawrence Bragg' ( <i>Hodgkin D.199</i> ) 1990; 'Tribute to Paul Ewald' ( <i>Hodgkin H.82</i> ) 1991.	
	The Women of the Year lecture was the occasion on which Hodgkin, invited to speak on 'A woman's best friend', delivered a fervent tribute to Thomas. The lecture greatly moved its hearers and the occasion made £23,000 for the blind. The speech was broadcast on BBC Radio 'Woman's Hour'.	
D.35, D.36	Requests from editors and authors for articles, prefaces, reviews, comments.	1959-1983
	All topics (Hodgkin D.119-D.125).	
D.35	1959-1982	
D.36	1983	
D.37	Requests to lecture (Hodgkin D.168-D.194).	1935, 1978- 1983
D.38	Shorter correspondence on lectures, arrangements, letters of thanks.	1962-1983

SECTION E	SOCIETIES AND ORG	ANISATIONS, E.1-E.33	1959-1994
	E.1-E.5	BRISTOL UNIVERSITY	
	E.6	BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE	
	E.7	BRITISH CRYSTALLOGRAPHIC ASSO	CIATION
	E.8-E.20	CHILDREN'S MEDICAL CHARITY	
	E.21-E.26	L'INSTITUT DE LA VIE	
	E.27	INSTITUTE OF PHYSICS	
	E.28	INTERNATIONAL ORGANIZATION FOR CHEMICAL SCIENCES IN DEVELOPME	
	E.29, E.30	INTERNATIONAL UNION OF CRYSTALLOGRAPHY	
	E.31-E.33	ROYAL SOCIETY OF CHEMISTRY	

E.1-E.5	BRISTOL UNIVERSITY	1970-1994
	Hodgkin was Chancellor of the University 1970-1988.	
E.1	Letters of congratulation on Hodgkin's election as Chancellor 1970.	1970
	(Hodgkin A.113-A.116, A.154).	
E.2	Speeches at honorary degree ceremonies.  (Hodgkin E.27, E.28).	1987-1988
	2pp only manuscript draft 1987; manuscript notes on honorands 1988; typescript draft for graduation ceremony 1988, with reference to Thomas and Hodgkin House (see E.5), and letter arising.	
E.3	Correspondence on the Eighth International Biophysical Congress, held in Bristol.	1981-1983
E.4	Miscellaneous shorter correspondence on various affairs of Bristol University and city.	1972-1983
E.5	Material relating to Hodgkin House.	1980s-1994
	Hodgkin House was an international hostel for overseas students created from the merger in 1984 of two previous hostels, Meridian Hall and St Brigid's House. The combined hostel was named Hodgkin House as a tribute to Thomas and his long devotion to Africa.	
	A history of the hostel (enclosed) by C.W. Robert 1990, refers to the naming and to a visit by Hodgkin (pp 16, 18).	
	Includes a later letter 1994.	

# E.6 BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

1994

(Hodgkin E.47-E.57).

Brief correspondence.

### E.7 BRITISH CRYSTALLOGRAPHIC ASSOCIATION

1994

(Hodgkin E.58-E.59).

Brief correspondence 1994.

## E.8-E.20 CHILDREN'S MEDICAL CHARITY

1983-1988

(Hodgkin F.176).

The Children's Medical Charity was set up in 1982 in the Department of Experimental Chemical Pathology in the Vincent Square Laboratories of Westminster Hospital.

Funding cuts were a persistent problem, most of the material being concerned with various attempts to raise funds and place the research and diagnostic work of the Charity on a firm basis. Diabetes, vitamin B<sub>12</sub> metabolism and protein absoprtion were among the resarch interests of the Charity.

In 1986 it was floated as an Investment Trust, launched in July 1986. In 1988, further Government decisions proposed the closure of Westminster Hospital and Westminster Children's Hospital and their replacement by a single hospital in Fulham Road.

Hodgkin agreed to become a Scientific Adviser to the Charity in 1983. She took part in conferences and Open Days. In 1988, under the threat of closure, she agreed to become a Patron of the Westminster Hospitals Development Fund.

E.9	Minutes, accounts, research reports sent for information.	1983-1985
E.10	Drafts for Investment Trust Prospectus and for Appeal Brochure, May 1984, March 1985.	1984-1985
E.11	Copies of drafts, March 1985, with some annotations, deletions and notes by Hodgkin.	1985
E.12	Comments by Sir Peter Tizard (Medical Adviser) on research statements in the draft 1985.	1985
E.13	Material relating to the launch of the Appeal, November 1985, and launch reception of the Investment Trust, June 1986.	1985-1986
E.14	Material relating to Open Day, April 1984, and Appeal, June 1985, with photographs and messages from Hodgkin.	1984-1985
E.15	Miscellaneous correspondence and material on research, funding, appeal.	1984, 1986
E.16	Correspondence on staff and research.	1985-1986
E.17, E.18	Material on the proposed closure of the Westminster Hospitals.	1988
E.17	Correspondence.	
E.18	Pamphlets and printed matter.	

E.19 1988 Correspondence and material on 'Cobalamin '88', First International Symposium on Biomedicine and Physiology of Vitamin B12, 26-29 September 1988. (Hodgkin F.176). The conference was sponsored by the Charity. Hodgkin was the President and chaired the session on leukaemia. E.20 Correspondence and material on 'Thomas Addison and 1993 his diseases: 200 years on', 25-27 May 1993. (Hodgkin F.179). Hodgkin was a co-President. An unsuccessful attempt was made to seek the Patronage of H.M. The Queen. A little personal correspondence and greetings from members of the Charity are included. 1984-1985 E.21-E.26 L'INSTITUT DE LA VIE Papers and correspondence. The organisation was founded in 1960 in Paris by Maurice Marois. It organised international conferences on interdiscipinary themes mainly concerned with the life sciences. In 1985 it was proposed to establish a permanent centre for the Institut in Martinique, where several conferences had been held. Hodgkin served on the international organising committee and attended the conference in Port de France, Martinique, February 1985 but there is no correspondence from her. Her attendance and papers at earlier conferences are documented in correspondence with Marois (Hodgkin F passim). 1984 E.21 List of International Organising Committee members. 1984 Material relating to 9th Conference, Lille, France, 2-4 July E.22 1984.

Participants, programme.

E.23	Material relating to meeting in Martinique, 3-10 February 1985.	1985
	International Committee meeting, 1p manuscript notes by Hodgkin; manuscript notes proposed for speakers etc at meeting scheduled for 1-8 July 1986 at Versailles.	
E.24	Documents relating to the proposal to establish a permanent centre in Martinique.	1985
	Includes a hostile representation from a local committee.	
E.25	Correspondence from members of the International Committee with suggestions for conferences and speakers.	1984-1985
E.26	Nomination of Marois for Nobel Peace Prize.	1984
E.27	INSTITUTE OF PHYSICS	1959
	(Hodgkin E.71-E.99).	
	Papers for Autumn Conference, X-ray Analysis Group, 13-14 November 1959.	
E.28	INTERNATIONAL ORGANIZATION FOR CHEMICAL SCIENCES IN DEVELOPMENT (IOCD)	1983
	Information sent to Hodgkin by the President.	
	IOCD was launched by UNESCO in 1981.	

E.29, E.30 INTERNATIONAL UNION OF CRYSTALLOGRAPHY 1974-1993 Hodgkin was President of the Union 1972-1975. (Hodgkin E.100-E.176). Correspondence and papers. E.29 1974-1975 Includes some material forwarded to Hodgkin as President, and 1p typescript paper 'Anomalous Scattering Madrid 1974' by Hodgkin. E.30 1979-1983, 1993 Personal correspondence and greetings. **ROYAL SOCIETY OF CHEMISTRY** 1990-1991 E.31-E.33 (Hodgkin E.67). The material relates to the 150th Anniversary Congress, Imperial College London, 8-11 April 1991, and the Dorothy Hodgkin Symposium on 'Crystallography' which was held as part of the Congress on 9 April. 1990-1991 E.31 Correspondence. The symposium was organised by the Women Chemists' Committee of the Royal Society of Chemistry. Hodgkin agreed to allow her name to be used 'with some misgivings, as I find myself not quite in agreement with the segregation of women as a special kind of group in Chemistry'. Hodgkin's replies to letters from the secretary are often typed on the verso of the incoming letter. Women Chemists Newsletters 1 and 2 with programme of E.32 symposium.

E.33

Printed material about the Congress.

See A.33 for Hodgkin's election as Fellow of the Chemical Society in 1932.

SECTION F	VISITS AND CONFERENCES, F.1-F.21	1959-1989
	A chronological sequence. Much of the material belongs to Hodgkin's later years and is relatively brief.	
F.1, F.2	Visit to China, September-October 1959	1959
	The visit was arranged, through the Britain-China Friendship Association, for Hodgkin to join a delegation to attend celebrations of the tenth anniversary of the People's Republic of China.	
	This was the first of Hodgkin's visits to China. She lectured in Beijing on vitamin B12 and travelled with the delegation round the country. She also renewed acquaintance with Liao Hongying, who had read chemistry at Somerville in the 1930s, and helped her gain permission to visit her family (Hodgkin F.14; Ferry pp335-340).	
F.1	Correspondence with J. Needham, Chairman of Britain-China Friendship Association, invitation, letter of thanks from China.	
F.2	Small block of manuscript notes of travel, excursions, notes on Hongying, 5 September-3 October.	
	N.B. The writing is very uncertain and the notes may have been compiled at a late date.	
F.3	Visit to China, September 1965.	1965
	Brief correspondence only.	
	Hodgkin arranged to visit China as a guest of Academia Sinica, after a lecture tour in Japan ( <i>Hodgkin F.25, F.26; Ferry pp. 340-341</i> ).	
F.4	Visit to Moscow, USSR, December 1971	1971
	Correspondence with colleagues arranging visits, and about suitable gifts.	
	Hodgkin was invited by the Soviet Academy of Sciences for celebrations of the 80th birthday of N.V. Belov (Hodgkin F.63).	

## Visits and conferences, F.1-F.21

F.5	Visit to Wroclaw, Poland, 14-17 August 1978.	1977-1978
	Correspondence, arrangements.	
	Hodgkin lectured on 'Some reflections on metals in biological systems' at a Symposium on Crystal Structure and Bonding of Metal Complexes (a post-Congress Symposium of the Eleventh IUCr Congress in Warsaw).	
F.6	Visit to Bulgaria, August 1978	
	Correspondence and arrangements (by Thomas), offical invitation from the Bulgarian Academy of Sciences.	
	Hodgkin visited Bulgaria with Thomas, after the Wroclaw conference (F.5) and before the Pugwash Conference in Varna ( <i>Hodgkin G.44</i> ).	
F.7	Visit to India, November 1979	1979
	Brief correspondence re possible visit to Hyderabad.	
F.8	Visit to Bucharest, Romania, June 1980	1978-1979
	Correspondence.	
	Hodgkin lectured on water molecules at an International Conference on Water and Ions in Biological Systems (Hodgkin F.133).	
F.9	Symposium on insulin, London, 25 May 1982.	1982
	Invitation and programme (ticked to indicate attendance).	
F.10	Bicentenary celebration, Accademia Nazionale delle Scienze, Rome, Italy, 1982.	1982
	Letter only.	
F.11	Meeting on Insulin Dependent Diabetes, University	1983

## Visits and conferences, F.1-F.21

<i>1</i>	Invitation to attend and lecture on structure of insulin (ticked to indicate attendance).	
F.12	Conference on 'The planet is in peril: Nobel Laureates seek an answer', Paris, France, 25-29 October 1983.	1983
	Invitation to attend and contribute, with manuscript note 'Yes, provisionally'.	
F.13	Workshop on Post-Nuclear fires, Royal Society, London, 13-16 May 1984.	1984
	Hodgkin attended. Printed report only.	
F.14	Planned symposium and lectures in honour of J. Dunitz, Hamburg, West Germany, August 1984.	1984
	Letter only (ticked and with manuscript note 'autumn 1982').	
F.15, F.16	UNESCO Fifth International Symposium on Innovation and Society, Bucharest, Romania, 2-4 December 1985.	1979-1987
	Hodgkin lectured on 'The chemistry of stereoregularity'.	
F.15	Correspondence 1984, programme, letter of thanks 1987.	1984-1987
F.16	Report (author not known) on a visit to Romania under British Council auspices, with special reference to research and collaboration in chemistry.	1979
F.17	Visit to USSR, Japan and China, September-November 1985.	1985
	Travel and visa arrangements. One letter only from colleagues in Japan.	
	Hodgkin travelled with her daughter Elizabeth and Peter Carter (partner) (Hodgkin F.148).	

# Visits and conferences, F.1-F.21

F.18	'Eco-Danube 88', International Congress on Alternatives and Environment, October-November 1988.	1988
	Invitation, ticked with manuscript note '?B12'.	
F.19	Conference on 'The Role of Women in the Development of Science and Technology in the Third World', organised by the Canadian International Development Agency (CIDA) and the Third World Academy of Sciences (TWAS), Trieste, Italy, 3-7 October 1988.	1988
	Correspondence, information, participants, programme, with a few manuscript notes by Hodgkin.	
	Hodgkin lectured on 'The development and scientific advances I have taken part in during my life' ( <i>Hodgkin F.177</i> ).	
F.20	Brief manuscript notes taken by Hodgkin at conferences.	1989, n.d.
F.21	Invitations to conferences, declined or acceptance uncertain.	1968-1987

SECTION G	PEACE AND HUMANITARIAN INTERESTS, G.1-G.53	1958-1993
	The material here varies considerably in scope, some being relatively slight, others (such as Pugwash) representing a major component of Hodgkin's activities. All, however, indicate some active commitment or continuing interest from her. Shorter items, with little or no correspondence, are listed at G.50-G.53.	
G.1-G.49	ORGANISATIONS AND TOPICS	1958-1993
	Presented in alphabetical order.	
G.1	Amnesty International	1959-1967
	Correspondence, information and papers.	
	Includes also material on British Committee for Portuguese Amnesty, and on Amnesty International Academic Freedom Day (Hodgkin declined to be a sponsor).	
G.2, G.3	Anti-Apartheid Movement	1959-1982
	Correspondence and papers.	
G.2	1959, 1975.	
G.3	1982.	
	Includes acceptance by Hodgkin of nomination as Sponsor in succession to Thomas.	
G.4	Bertrand Russell Peace Foundation Ltd	1981
	Material re Chemical Weapons Appeal.	
	Hodgkin was an initial sponsor and made a financial contribution.	

# 1967 **G.5 British Soviet Friendship Society** Brief correspondence re Hodgkin's sponsorship and subscription for Illuminated Address presented to Soviet Ambassador on USSR 50th Anniversary Celebration 1958-1974 **G.6** Campaign for Nuclear Disarmament Correspondence and papers. Includes press release on deputation from the Women's Group (including Hodgkin) to a group of women MPs on Geneva nuclear weapons agreement 1958; letter and draft article on Oslo conference on nuclear weapons (Hodgkin attended) by A. Pirie 1961; Hodgkin's agreement to be a Sponsor 1965; letter in reply to Hodgkin's protest to Minister on US and UK nuclear forces 1973; conference on arms industry, Bristol 1975. 1969 **G.7** Martin Luther King Foundation Correspondence re symposium, 30 June 1969. Hodgkin attended (one day only). 1985 **Nuclear Warfare Tribunal G.8** Draft judgement and recommendations, evidence and commentary, with brief correspondence. The Tribunal was convened in London, 2-6 January 1985 to conduct 'An examination of the legality of nuclear weapons'. Hodgkin was a member. 1970 Oxford Society for Social Responsibility in Science **G.9** One letter only, recording Hodgkin's chairing of the Inaugural Meeting, 4 March 1970 (not recorded

elsewhere).

G.10-G.15	Palestine	1980-1993
	Correspondence and papers chiefly re Birzeit University.	
	The material predates Hodgkin's becoming, in 1985, a Sponsor of this independent Palestinian university (Hodgkin G.12, G.13).	
G.10	Correspondence and information about the closure of the university in 1979 and 1980, and growing anxiety about conditions on the West Bank.	1980
G.11	Continuing information, newsletters, press-releases and comment on Birzeit and Arab-Israeli affairs.	1980-1983
	Newsletter of May 1983 refers to visits by Hodgkin and Eric Hobsbawm in April (see G.12, G.13 below).	
G.12-G.14	Correspondence and papers relating to Hodgkin's visit to Israel, Birzeit and Jordan, April-May 1983 ( <i>Hodgkin F.138</i> ).	1981-1983
G.12	Correspondence, messages etc.	1981-1983
	Letters 1981 refer to a previous visit and lectures at Birzeit by Hodgkin, 30 May 1981. Includes draft letter of thanks to Prince El-Hassan of Jordan for her visit there.	
G.13	Travel arrangements for travel to Amman via Vienna, formalities and arrangements for crossing to West Bank over Allenby Bridge.	
G.14	Hodgkin's notes of names and addresses.	
	Includes envelope with manuscript notes of her schedule of lectures and meetings.	
G.15	Material on miscellaneous Palestinian committees, organisations, good causes etc.	1980-1993

G.16-G.31	Peace	1958-1992
	This is mainly material on the conferences devoted to peace and disarmament which Hodgkin attended, and often addressed, in her later years. They were often of an elaborate international nature and a full record has been kept of her involvement.	
G.16-G.18	Vancouver Centennial Peace and Disarmament Symposium, Vancouver, Canada, 24-26 April 1986.	1985-1986
	It was intended that a document, the 'Vancouver Proposals', should emerge from the symposium, with broad support from the participants, setting out measures to halt the arms race, prevent nuclear war and encourage international peace.	
	Hodgkin, Sean McBride and Alfonso Garcia-Robles (who later withdrew) were asked to draft the document.	
G.16	Invitation; schedule; participants; Hodgkin's itinerary; letters of thanks; despatch of Symposium proceedings, 'End the arms race: fund human needs'.	1985-1986
G.17	Correspondence and draft suggestions for the Proposals sent January 1986, some with a few manuscript notes.	1986
G.18	Drafts, notes, statements, correspondence on the Proposals, with much manuscript work by Hodgkin.	1986
G.19-G.22	86 Peace Summit in Hiroshima, Japan, August 1986	1986
	Invitations, schedule, participants, letters of thanks.	
	This was the city's contribution to the UN International Year of Peace. Hodgkin attended the Peace Memorial Ceremony, and was on the panel on the theme 'What science should be for peace'. She also visited Tokyo as a guest of the Japanese Pugwash Group; she received an invitation to visit Nagasaki on 9 August.	
G.19	Correspondence, March-December	

G.20	Manuscript and typescript drafts for Hodgkin's keynote speech 'In quest for international peace', and her reply to a question-and-answer request.	
G.21	Background information on Hiroshima, Nagasaki, peace initiatives.	
G.22	Press-cuttings of the 1986 meeting (including Hodgkin), photograph of Hodgkin at Peace Memorial.	
G.23, G.24	Round Table for the Celebration of the International Year of Peace, Paris, France, 15-16 December 1986	1986
	Hodgkin spoke on 'The role and the use of science and technology for the construction of peace'.	
	(Hodgkin G.162).	
G.23	Invitation, timetable, participants, draft conclusions, Hodgkin's manuscript notes taken at conference.	
G.24	Papers and submissions for consideration at conference.	
G.25-G.28	Nobel Laureate Conference on 'Facing the 21st Century: threats and promises', Paris, France, 18-21 January 1988.	1987-1988
	Hodgkin chose 'Disarmament and peace' for her seminar and spoke in the last session on 'How shall we face the future?' based on a stanza from the Rubaiyat of Omar Khayyam.	
	The conference was hosted by President Mitterand and organised by the Elie Wiesel Foundation for Humanity.	
	(Ferry p.397).	
G.25	Correspondence, invitation, schedule, travel arrangements, Hodgkin's choice of topic etc.	1987-1988
	Includes a letter of complaint addressed to Wiesel about his failure to mention nuclear disarmament in his concluding speech at the conference. The letter, sent by the Secretary of International Physicians for Prevention of	<i>1</i>

<i>/</i>	Nuclear War, includes the consensus statement by the Disarmament and Peace Working Group.	
G.26	Manuscript notes and drafts for Hodgkin's address.	
G.27	Printed texts of closing speeches by Wiesel and by Mitterand.	
G.28	Texts (in French) of abstracts and contributions by participants; list and brief cvs of participants.	
G.29	Shorter invitations, information on conferences and meetings on peace and disarmament.	1968-1982
G.30	Shorter information on organisations for peace and disarmament, some sponsored by Hodgkin	1958-1992
G.31	Miscellaneous manuscript notes made by Hodgkin at peace conferences.	N.d.
G.32-G.46	Pugwash Conferences on Science and World Affairs	1969-1988
	(Hodgkin G.22-G.94; Ferry pp 359-376).	
	Most of the material deals with Pugwash conferences and symposia (presented together as a chronological sequence), with some correspondence at G.44-G.46.	
	The Pugwash conferences, primarily concerned with worldwide nuclear disarmament, began in 1957 (see G.46). Conferences and symposia became annual events at international venues, widening their scope and acquiring a complex organisation as many national groups developed worldwide.	
	Though Hodgkin was entirely in agreement with the aims of Pugwash, and attended conferences from 1962, she did not become actively involved until 1975 when she accepted an invitation to become President, formally taking over in 1976, and remaining in office until 1988.	

G.32	5th Symposium, 'The role of science and scientist in national and world affairs', Mariánské Lázne, Czechoslovakia, 19-24 May 1969.  Participants, programme, papers, including papers for Biological Warfare Study Group meeting during	1969
	symposium.	
	(Hodgkin G.67; Ferry pp 367-368).	
G.33	26th Conference, 'Disarmament, Security and Development', Mühlhausen, East Germany, 26-31 August 1976.	1976
	Typescript of Hodgkin's closing address, with recollections of J.D. Bernal and others.	
G.34	27th Conference, 'Coexistence between the rich and the poor', Munich, West Germany, 24-29 August 1977.	1977
	Typescript and manuscript draft of Hodgkin's closing speech.	
	Also includes copy of speech by Lord Noel-Baker given at conference.	
	(Hodgkin G.41-G.43; Ferry p 370).	
G.35	28th Conference, 'Global Aspects of disarmament and security', Varna, Bulgaria, 1-5 September 1978.	1978
	Council's report on the conference; photocopy from Newsletter on Hodgkin's speech.	
	(Hodgkin G.44).	
	Hodgkin spent a short holiday in Bulgaria with Thomas before the Varna conference. See F.6.	
G.36, G.37	29th Conference, 'Development and security', Mexico City, 18-23 July 1979.	1979
	(Hodgkin G.45).	

G.36	Miscellaneous papers.	
	Manuscript and typescript drafts of Hodgkin's concluding remarks; agenda and minutes of Pugwash Council and Executive Committee meetings (annotated by Hodgkin);	
	Council statement on Mexico City conference.	
G.37	Opening address, background papers.	
G.38	30th Conference, 'Arms limitations, security and development', Breukelen, The Netherlands, 20-25 August 1980.	1980
	Agenda, participants, 1p note on proposed Symposium in France, April 1980.	
G.39	Symposium in Bucharest, Romania, 28-31 October 1983	1983
	Brief correspondence only.	
	Includes letters of thanks by Hodgkin, and letter <i>re</i> proposed nomination of Pugwash for Nobel Peace Prize (eventually awarded in 1995).	
G.40	35th Conference, Campinas, Brazil, 1-9 July 1985.	1985
	Notepad of manuscript notes by Hodgkin, some for her concluding speech, some on papers or discussions at the conference; press-cutting. (See J.2, <i>Hodgkin G.59, G.60</i> ).	*
G.41	50th Pugwash Symposium, 'Disengagement in Europe: towards arms reductions and weapon-free zones', Prague, Czechoslovakia, 14-17 April 1988.	1987, 1988
	Council statement and list of participants, brief correspondence. Includes cable requesting article from Hodgkin on history of Pugwash.	
	Also included here is Hodgkin's entry form for 49th Symposium 'Common security in Europe', Mragowo, Poland, 23-26 May 1987.	

G.42	37th Conference, 'Prospects for the future: towards a Palestinian-Israeli peace', Gmunden, Austria, 1-6 September 1987.	1987
	Draft report of Working Group on 'The Arab-Israeli confrontation' annotations by Hodgkin); manuscript and typescript draft for speech or paper by Hodgkin; 1p typescript speech by G.A. Baramki, Birzeit University (see also G.46). (See J.3, <i>Hodgkin G.62-G.64</i> ).	
G.43	Miscellaneous manuscript notes by Hodgkin taken at conferences.	
G.44-G.46	Correspondence	1976-1987
G.44	1976, 1979	
G.45	1979	
	Correspondence and papers, February-October on possible negotiations with China and her participation in Pugwash ( <i>Ferry p.371</i> ).	
G.46	1981-1987	
	Correspondence on invitation to G.A. Baramki to participate in a conference, 1981, 1983; letters from Anne Eaton, widow of Cyrus Eaton in whose house the first Pugwash conference had taken place, 1982, 1987.	
	Letter of 1987 explains the name: 'Pagweak is the Indian for Deep Water and somehow became Pugwashwhile "Pugwash" is not the most elegant word I've always felt Deep Water quite appropriate for the issues discussed there'.	
G.47	Scientists Against Nuclear Arms (SANA)	1981-1983
	General correspondence and papers mainly on setting up and inaugural conference of the society at the Open University, Milton Keynes. ( <i>Hodgkin G.106-G.110</i> ).	

G.48, G.49	Vietnam	1969-1981
	(Hodgkin G.114-G.156; Ferry pp 362-367).	
G.48	General correspondence and papers.	1969-1975
	Includes brief exchange with Ngugen Thi Binh, 1969 (Ferry p.363); letter and photocopy of Hodgkin's article 'Bombs over Thanhhoa' published in New York Times, 7 January 1972 (not listed in Bibliography). (Hodgkin G.146; Ferry p.366).	
G.49	Medical Aid for Vietnam.	1969-1981
	(Hodgkin G.122-G.131).	
	General correspondence and papers.	
	Includes a few circulars and committee papers, and a little personal correspondence from Joan McMichael, founder of the enterprise ( <i>Ferry p.362</i> ).	
	Hodgkin accepted McMichael's invitation to become President in 1971 after the death of John Boyd Orr.	
G.50-G.53	MISCELLANEOUS APPEALS	1959-1988
G.50	Russian dissidents.	1970-1988
	Correspondence and papers (Hodgkin G.95-G.105).	
G.51	Political prisoners, refusal of exit visas.	1969-1984
G.52, G.53	Appeals for sponsorship, contribution to good causes, signature to protest letters, legal aid appeal.	1959-1985
	2 folders.	

## SECTION H CORRESPONDENCE, H.1-H.54

1933-1994

References are given wherever possible to correspondents appearing in the previous catalogue in the form *Hodgkin....* 

H.1-H.38	GENERAL SCIENTIFIC	CORRESPONDENCE

H.39-H.42 SHORTER SCIENTIFIC CORRESPONDENCE

H.43-H.46 MISCELLANEOUS

H.47-H.54 REFERENCES AND RECOMMENDATIONS

## H.1-H.38 GENERAL SCIENTIFIC CORRESPONDENCE 1933-1992, n.d.

In alphabetical order, with an indication of any information of particular biographical, historical or scientific interest.

H.1 Byers, N. 1975, 1982

Low temperature physics, nuclear freeze (Hodgkin G.119).

H.2 Delbruck, M. 1972

Recollections of Cecil Powell.

H.3 Dodson, G.G. 1969-1990, n.d.

Includes research results and news, diagrams etc.

Dodson was a crystallographer from the University of Auckland, New Zealand, who worked with Hodgkin from 1962 and became one of her principal collaborators on insulin. He became Professor of Chemistry at the University of York, and wrote the Memoir of Hodgkin for the Royal Society, 2002 (Hodgkin H.72-H.74 and passim).

H.4	Dornberger (née Schiff), K.	ca 1941, 1945, 1981
	Includes 1p manuscript early calculations on insulin <i>ca</i> 1941.	1961
	Käthe Schiff was an Austrian refugee, who worked with Bernal at Birkbeck and became an important recruit to Hodgkin's group on the outbreak of war in 1939. After the war she returned with her husband Paul Dornberger to East Berlin (Hodgkin H.27A and passim; Ferry pp.183, 186, 383).	
H.5	Ewald, P.P.	1975, 1980
11.5	See Hodgkin H.81, H.82 and passim.	1010, 1000
	,	
H.6	Fankuchen, I.	1937-1941,
	Early protein research.	1967, n.d.
	Correspondence continues from Dina Fankuchen after Isidor's death in 1964.	
	(Hodgkin H.83-H.85; Ferry pp.115, 130).	
H.7	Glusker (née Pickworth), J.	1982-1990
	Jenny Pickworth was a Somerville pupil of Hodgkin, later joining the research team on vitamin B <sub>12</sub> and becoming a close collaborator and friend. After her marriage she worked in America. (Hodgkin H.90-H.92 and passim; Ferry pp.256-261).	
H.8	Gupta, M.D.	1967-1977
H.9	Harding (née Aitken), M.M.	1979-1980
п.э	Research on gramicidin, recommendation.	1010 11000
	Harding was a Somerville pupil of Hodgkin, later working	
	with her on insulin. (Hodgkin H.99 and passim; Ferry pp.306-314, 323-324).	

H.10	Hartley, H.	1965, 1972
H.11	Howard (née Duckworth), J.A.K.  (Hodgkin H.107; Ferry pp.398-400).	1990, n.d.
H.12	Hughes, E.W. and Hughes R.  Letters from Eddie and Ruth Hughes, friends made on Hodgkin's first visit to America in 1947. Letter of 25 May 1980 includes comments on Bernal. ( <i>Hodgkin H.108</i> ).	1952-1983
H.13	Kass, E. and Kass, A.	1980-1987, n.d.
H.14	Liao, H.  Includes a letter to Joan Crowfoot 1937, and a collection of essays 'The world belongs to all' by Liao and Derek Bryan, with marginal markings by Hodgkin.  Hongying Liao was a young Chinese Quaker who came to Somerville in 1930 to read chemistry; Hodgkin befriended and helped her. She returned to China, married a British diplomat Derek Bryan, and on his resignation from the Foreign Service she joined him in the work of the British-China Friendship Association. (Ferry pp.335-340).	1931-1959
H.15	Lonsdale, K.  Three letters only, 1946, 1960 (on Wolfson Research Fellowship). (Hodgkin H.138-H.140 and passim; Ferry p.238).	1946, 1960
H.16	Low, B.W.  One letter only, 29 July 1943, 'Red hot news!' (on penicillin degradation products, sent to Hodgkin during a course of treatment for arthritis in Buxton). (Hodgkin H.141-H.143 and passim; Ferry pp.197-198).	1943

H.17

Lüttke, W.

1961, 1983

(Hodgkin H.145).

H.18

Megaw, H.D.

1930s-1950

Hodgkin knew Megaw in Oxford and in Bernal's group in Cambridge. Megaw worked for Mullard's during the war, and was later at Girton College Cambridge. Few letters dated. (Hodgkin H.155; Ferry pp.78, 89, 101-102).

H.19

Pauling, L.C. and Pauling A.H.

1946-1996 and n.d.

Miscellaneous correspondence and papers on Pauling and his affairs, not all dated. (*Hodgkin H.177, H.178 and passim*; *Ferry, passim*).

H.20-H.22

Perutz, M.F.

ca 1942-1993

Pertuz, a refugee from Austria, joined Bernal's Cambridge laboratory in 1936. He became and remained one of Hodgkin's closest and most admiring friends; her letters mention many informal visits by him to her laboratory and home.

With J.C. Kendrew, Perutz set up the Cambridge Laboratory of Molecular Biology in 1947. His work on haemoglobin won him the Nobel Prize in Chemistry in 1962 jointly with Kendrew. (Hodgkin H.180-H.182 and passim; Ferry passsim).

H.20

1940s-1958

Includes unfinished account, by Hodgkin, in the form of a letter to Thomas, after a visit by Perutz describing his experiences of wartime internment, ?1941-1942; letter from Perutz, ?1943; 'Plan of research' on molecular structure of haemoglobin, postwar ?1945, with a manuscript note 'W.L.B.' (Lawrence Bragg); correspondence 1950, 1958.

H.21

1973-1992

Letters of 1990, 1992 have recollections of early research (Ferry p.323).

/...

## Correspondence, H.1-H.54

H.22	Miscellaneous material, mainly appeals.	1993
H.23	re Porton Down  Papers and correspondence on the work of the Microbiological Research Establishment.	1968
H.24	Ramaseshan, S.  (Hodgkin H.190, H.191 and passim; Ferry pp.351-356).	1983 and n.d.
H.25	Riley, D.P.  Two letters only, on crystal research and on 'Wrinchery' (Dorothy Wrinch's controversial alternative theories of protein structure) ( <i>Hodgkin H.196</i> ; <i>Ferry pp.147-159</i> ).  Hodgkin's first research student, working on insulin.	?1938-1939
H.26	Robertson, J.M. (Hodgkin H.200 and passim).	1990, 1992
H.27-H.33	Trueblood, K.N. and others  Trueblood, an American crystallographer based at the University of California at Los Angeles, was a key collaborator in the research on Vitamin B12. His access to the large Standards Western Automatic Computer (SWAC) made rapid extensive calculations possible.  This material was made available for the collection by G. Ferry, who had received it from Trueblood.  Correspondence with other members of Hodgkin's and Trueblood's teams is also included, and there is a little personal material.  (Hodgkin B.506-B.828 gives a full account of the research, Ferry pp.258-263 describes key events. References to publications in the form Bibliog.).	1953-1990
H.27	1953-1954	/

/... Includes the note of 8 July 1953 on hotel writing paper with Trueblood's suggestions for collaborative work using the resources of SWAC, which launched the project (*Ferry p.258*); letters, cables, data.

H.28 January-June 1955

Letter of 10 January includes Hodgkin's outline plan for a series of five papers on the work.

H.29 July-December 1955

Publication arrangements (Bibliog. 31); early announcement of B12 structure by A. Todd (*Ferry p.265*); correspondence about computer requirements at Oxford and the history of SWAC administration, September.

H.30 January-August 1956

From August Trueblood was on sabbatical leave with a Fulbright Fellowship as a visitor in Hodgkin's laboratory; publication (Bibliog. 34).

H.31 August 1957-November 1958

Includes Trueblood's comments on award of Nobel Prize to Todd, and Hodgkin's reply 'I found it a little sad...because clearly it mattered to my father' (*Ferry p.287*); comments and data for publications (Bibliog. 35, 37).

H.32 1959-1960

H.33 1969-1990 and n.d.

Includes some personal material from Jeanie (Trueblood's wife) and Louise (mother).

H.34 Venkatesan, K. 1969-1982

(Hodgkin H.210, H.239 and passim; Ferry pp.351-352).

H.35	Waddington, C.H.	1933, 1941
	Letter of 1933, from Berlin, comments on rise of Nazism (Ferry pp.97-100).	
H.36-H.38	Wrinch D.M.	1937-1984
	Dorothy Wrinch interacted with Hodgkin's life in many ways: as a friend and colleague in the 1930s; as the indirect cause of Hodgkin's first meeting with Thomas in 1937; and as the proponent of a flawed theory of protein structure which Hodgkin found herself bound to oppose despite their long friendship. (Hodgkin H.225-H.227; Ferry pp.147-160).	
H.36	Correspondence.	1937, 1944, 1969
	Three letters only.	
H.37	Correspondence with P.G. Abir-Am on her paper 'The career of Dorothy Wrinch', a copy of which is enclosed.	1980
H.38	Correspondence with P. Laszlo on a draft chapter 'Dorothy Wrinch, or a daring Renaissance scholar in an age of patient data collection', a copy of which is enclosed with a few marginal notes by Hodgkin.	1984
	Includes 4pp typescript reply by Hodgkin and 4pp manuscript recollections of their friendship and difficulties over protein structure.	
H.39-H.42	SHORTER SCIENTIFIC CORRESPONDENCE	1965-1994 and n.d.
	Brief exchanges, or single letters, on research in progress or proposed, requests to meet, results, etc.	

In alphabetical order.

H.39	AG.	
H.40	HK.	
H.41	LS.	
H.42	V., W. and unidentified.	
H.43-H.46	MISCELLANEOUS	1941-1990
H.43	Requests for reprints, for information on scientific discoveries, or recollections of colleagues, from biographers and historians.	1978-1990
H.44	Requests for advice on careers, university places and courses.	1941-1983
H.45	Requests to meet or give assistance to visiting scholars and delegations.	1944-1985
H.46	Letters of thanks from colleagues for greetings sent on birthdays and anniversaries.	1980-1988
H.47-H.54	REFERENCES AND RECOMMENDATIONS	1952-1994
H.47	Theses	1979, 1980, n.d.
H.48	Grant-awarding institutions  Von-Humboldt Foundation 1979, Leverhulme Trust 1981.	1979, 1981

## Correspondence, H.1-H.54

H.49, H.50	University appointments and promotions	1959-1991
H.49	UK universities.	1979-1983
H.50	Overseas universities.	1959-1991
H.51-H.53	Elections and awards	1952-1994
H.51	Nobel Prizes.	1965-1977
H.52	Royal Society.	1952-1994
H.53	Royal Society of Chemistry.	1982
H.54	Personal requests	1979, 1983

SECTION J	NON-TEXT MATERIAL, J.1-J.26	<i>ca</i> 1923-1989, n.d.
J.1-J.16	PHOTOGRAPHS	<i>ca</i> 1923-1989, n.d.
J.1-J.7	Photographs with colleagues or at conferences	?1957-1989, n.d.
J.1	With colleagues at café table (?Paris)	1957
J.2	With colleagues at Pugwash conference, Brazil (see G.40).	1985
J.3	With colleagues at Pugwash conference, Austria (see G.42).	1987
J.4	With colleagues at Pasadena.	1989
	Transparencies.	
J.5-J.7	Photographs of Hodgkin, one dated 1988.	1988, n.d.
	3 folders.	
J.8-J.16	Domestic and family photographs	ca 1923-1987
J.8	Envelope of five photographs, with Luke and Liz.	n.d. (mid 1940s)
J.9	Four photographs at Crab Mill	N.d.
J.10	Miniature booklet of photographs of Iona,	N.d.
	With a manuscript note 'visited by my mother and myself, a special holiday (note added 1984)'. (Ferry p.17).	
J.11	Hodgkin with a friend and car	?1928-1930

### Non-text material, J.1-J.26

J.12	Photograph of tennis match at San Remo.	ca 1923
	Inscribed on verso 'Mdme Dahl and Miss Turtan playing for San Remo a Ladies Double against Bordighera which they won'. See A.58. ( <i>Ferry p.21</i> ).	
J.13	Photograph at Epirus.	1946
J.14	Photograph of 'Georgia's tree' near Jerash	N.d.
J.15	Leather-covered album of 'Photographs taken in 1924 Egypt and the Sudan'	1924
	(Ferry pp.21-25).	
J.16	Set of five photographs of Lady Thatcher with Russian colleagues on a visit to Mosow.	1987
	Sent to Hodgkin to commemorate their long acquaintance (Ferry p.375).	
J.17-J.20	DRAWINGS AND ARCHAEOLOGY	1926-1932
J.17	Drawings and sketches, pencil and water-colour, of flowers and still-life, a few signed 'Dorothy Crowfoot', one headed 'Design V Upper', some with class marks or comments.	
	Work done at the John Leman School in preparation for the School Leaving Certificate which Hodgkin took in 1926, achieving the highest overall mark of any girl candidate for the Oxford Local Examinations that year.	
	Includes a mock 'Certificate' inscribed to 'The most brilliant demoiselle in this treasured realm of England' commemorating the result and award of a scholarship of £30 (Ferry p.32).	
	1 box.	

### Non-text material, J.1-J.26

J.18	Drawing of mosaics, tesserae, jewel crystals, based on work at Jerash, Palestine, during Hodgkin's expedition with her parents 1928.	1931, n.d.
	One only signed and dated July 1931. Some flower and landscape sketches are also included. See also A.25, B.12. ( <i>Ferry pp.38-39, 52-55</i> ).	
J.19	Envelope of 'Diakonicon mosaic photographs (note 1984)'.	N.d.
J.20	Contents of an envelope 'Drawings of Mosaics and Byzantine Patterns' mainly relating to the Third International Congress of Christian Archaeology, Ravenna, Italy, 25-30 September 1932.	1929, 1932
	Includes notes and drawings, photograph dated September 1929, some commercial cards, notes and drawings of the Book of Kells which Hodgkin saw, with Betty Murray, December 1931 (Ferry p.69).	
	Hodgkin attended the Congress with her parents before starting research with J.D. Bernal at Cambridge (Ferry	
	p.79).	
J.21-J.26	p.79).  RESEARCH MATERIAL	1935-1945, n.d.
J.21-J.26		1935-1945, n.d.
J.21-J.26 J.21	RESEARCH MATERIAL	<b>1935-1945, n.d.</b> N.d., 1935
	RESEARCH MATERIAL  Glass plates, photographs, specimens.	
	RESEARCH MATERIAL  Glass plates, photographs, specimens.  Box of glass plates, box labelled 'Tobacco Necrosis Virus'.	
	RESEARCH MATERIAL  Glass plates, photographs, specimens.  Box of glass plates, box labelled 'Tobacco Necrosis Virus'.  Tobacco virus photographs are undated.  Also contains photographs of insulin dated February 1935, perhaps Hodgkin's first work on insulin from a sample	

## Non-text material, J.1-J.26

London) with dates in July 1936.

J.23	Box labelled 'Insulin'.	1936
	Glass plates and photographs inscribed 'Davy Faraday' with dates in July 1936.	
J.24	Box of specimens labelled 'Barbaloin Rhistrick's Cmpds'.	N.d.
J.25	Box of specimens, unlabelled, contents penicillin and derivatives, some with dates in 1945.	1945
J.26	Envelope of large format photographs, includes 'photograph of Boots crystals 25.3.35' (Ferry p.109), 'Chibnall's powder 16.6.35' and other photographs 1935, 1936.	1935-1936
	See also B.30, B.39.	

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