

CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

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British National Committee for the History of Science, Medicine and Technology

Catalogue of the papers and correspondence of

SIR ERNST BORIS CHAIN FRS

(1906 - 1979)

Compiled by:

Jeannine Alton and Julia Latham-Jackson

VOLUME I

List of Contents

General Introduction

Sections A - E

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## GENERAL INTRODUCTION

### PROVENANCE

The collection, which is very extensive, was received from Lady Chain who had assembled it from Sir Ernst's rooms at Imperial College, London, and from their London home. With the assistance of her family and of Miss Vera Owen, Sir Ernst's secretary at the time of his death, she had undertaken a preliminary survey of the material and removed from it ephemera, journals and entirely family material. She had also attempted to make contact with acquaintances of Chain and the Chain family in the hope of tracing more records of his early life, as a result of which the letters to Lola Sarsowsky and Vera Katz were made available and now appear at A.200, A.200a.

### DESCRIPTION OF THE COLLECTION

Much has already been written about Chain's career and work, and no attempt will be made here at a detailed biographical account. The paragraphs below aim to do no more than furnish a guide to the contents of the manuscript collection, some of which may be less well known than certain familiar episodes. Additional explanatory notes accompany the relevant entries in the body of the catalogue.

More even than most Jewish scientists of his generation, Chain's career suffered from the vicissitudes of politics and war. His father, Michael Chain, had already left his native Russia for Berlin where Chain was born in 1906, and his death in 1919 inflicted hard times on the family; Chain's mother and sister, whom he supported as best he could from his earnings in Britain during the Thirties, disappeared without trace during the Second World War; he himself, after making a home and participating in the great research project on penicillin in Oxford, emigrated once more to Rome for many years before returning to work in London. One of the most obvious signs of all these movements is the polyglot nature of the documents.

Throughout his life Chain continued to write in Russian and, more frequently, in German. English became his language of choice (even, sometimes, when replying to German correspondents) and he also wrote and spoke fluently in French. It is remarkable to notice how rapidly he made himself familiar with Italian, writing letters and speeches and giving research talks in that language within a few months of taking up his post in Rome. This linguistic facility can be seen throughout the collection.

Although, for obvious reasons, so little survives relating to Chain's immediate family (see A.201 - A.205), he himself enjoyed a close and affectionate domestic family life, with his cousin Anna Sacharina, another émigrée for whom special permission was obtained to come to Britain to look after him and who shared his roof (wherever it was) for the rest of her life (A.206 - A.212), and with Anne Beloff whom he married in 1948 and who shared his work and interests (A.189). Many of the letters throughout the 1950s testify to their happiness and joy in the birth of their three children. It is interesting also to note their pleasure in the tranquil solitude of Western Ireland where they built a holiday home and where Chain died in 1979 (A.191).

Mention should be made of Chain's love of music and his skill as a pianist. His pianos are often mentioned, whether as an essential working tool to support his family in the harsh Berlin days, an indispensable appurtenance of his hotel accommodation on an overseas conference (J.166) or part of the household effects requiring an import licence to Ireland. As a young man, Chain had, it seems, seriously contemplated a career in music, whether as soloist or as impresario, and it remained an active principle of calm and balance in his life.

Altogether more vital, however, was the Jewish faith which underpinned his existence. References may be found passim but the whole of Section H is devoted to Israel and Jewish organisations, notably the Weizmann Institute of Science, where Chain was a governor and had at one time considered taking up an appointment. It is of interest to note that he arranged for many of his lecturing and broadcasting fees to be given to the London Synagogue or other Jewish charities, and that he declined to accept consultancy fees from close Jewish friends (F.242).

Chain's scientific career is for many synonymous with the research and development of penicillin for which he shared with Fleming and Florey the Nobel Prize for Medicine in 1945. This great achievement, so unhappily marred by various strained relationships and conflicts of view, and remaining still a matter of controversy, is documented in Section B although unfortunately no first-hand material survives in the way of laboratory notebooks, experimental observations and the like. The substantial records relating to Chain's career at Rome (Section C) and at Imperial College, London (Section D) give a fuller account (mainly through research grant applications and progress reports) of his continuing contributions to several biochemical problems such as carbohydrate metabolism, ergot alkaloids, edible protein, aeration studies, etc. Also of interest in Section D are the records of the early negotiations for the creation - administrative, financial and architectural - of the Department of Biochemistry at Imperial College, and of its development after Chain's statutory retirement in 1973. A considerable amount of additional information about Chain's lifelong active research should be sought in Sections E and F, since much was done as collaborative work under consultancy agreements with industrial firms (see especially Astra, Beechams, Ranks Hovis MacDougall) or with funding from various government and charitable organisations (see especially the British Heart Foundation, Cancer Research Campaign, Medical Research Council).

The writing, lecturing, travel and attendance at conferences concomitant with Chain's position as an acknowledged leading figure in the scientific world are documented in Sections G (Lectures and Writings) and J (Visits and Conferences). The former (Section G) includes a very substantial number of unpublished talks, addresses and papers, and also drafts and versions of published papers additional to those listed in the Bibliography compiled at Chain's death (G.1 and pp.340-361). Although Chain did not regularly keep drafts of published papers once they had appeared in print, the multiple manuscript and typescript versions which have by chance survived in some cases, testify to the care he took in the preparation even of relatively short informal speeches or writings - and indeed occasionally of 'spontaneous' or 'unprepared' remarks.

Possibly as the son of an industrial chemist, Chain always argued strongly for the forging of strong links - and well-defined frontiers of interest - between government, universities and industry. This was indeed one of the principal causes of the painful disagreements within the Oxford team over the development of penicillin, and certainly Chain continued to write and lecture extensively on the theme throughout his life; see especially 'Social responsibility and the scientist in modern western society' (1970), 'Relationships between industrial and academic laboratories' (1973), 'The pharmaceutical sciences, government and the people' (1975). In broad terms his argument was that government should provide the initial funding for research projects, universities should foster and guarantee absolute freedom of enquiry, and manufacturing industry should furnish the resources for the eventual exploitation of discovery. He practised what he preached, and in so doing earned a fearsome reputation for persistence whether in defence or opposition, both as a member of academic or official boards, grant-giving bodies or research councils (Section E) or as a consultant to industrial and pharmaceutical firms throughout the world.

Despite the wealth of material in the collection, lacunae remain, not surprisingly perhaps in view of Chain's many changes of workplace and the varying methods and efficiency of their secretariats. Mention has already been made of the lack of first-hand research records especially up to and including the penicillin work. Equally unfortunate are the gaps in the correspondence files, which are most noticeable before 1945 but also occur sporadically after that date. Sometimes only Chain's carbons survive, e.g. for the period of the Second World War, and for 1948 when he was organising his move to Rome; some years are fully represented in the remaining folders, e.g. 1958, 1959, 1963, some very sparsely, e.g. 1956, 1966-68, and some are almost completely missing, e.g. 1960. A note is usually made in the relevant catalogue entries where gaps are found, but it is notoriously more difficult to notice absence than presence, and some may have been missed.

The index includes individuals, organisations, societies and firms.

## FURTHER MATERIAL

Lady Chain retains some personal correspondence.

A biography of Chain has been commissioned and is to be written by R.W. Clark. Mr. Clark has kindly agreed to deposit with the present collection the material assembled in the course of his research. This will eventually be incorporated at the end of Section A.

## ACKNOWLEDGEMENTS

Our main debt is to Lady Chain and her family, for their initial work on the collection, for continuing encouragement and advice throughout the work, and for comments on the draft catalogue.

We are also indebted to:

Dr. N.G. Heatley and Dr. T.I. Williams, for information about the work at the  
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in German

Dr. C.M. MacRobert, for identifying and providing summaries of material in  
Russian

Mrs. M.M. Edwards, for careful and accurate typing.

SECTION A                    BIOGRAPHICAL AND PERSONAL A.1 - A.234

A.1 - A.6                    GENERAL BIOGRAPHICAL INFORMATION

A.7 - A.174                CAREER, HONOURS AND AWARDS

A.175 - A.217             PERSONAL AND FAMILY MATERIAL

A.218 - A.234             PHOTOGRAPHS AND PRESS-CUTTINGS

A.1-A.6                    GENERAL BIOGRAPHICAL INFORMATION

A.1                        Miscellaneous biographical notes prepared by Chain at various dates.

Includes 3 pp. notes prepared for a Beecham Symposium, 1970, and 2 pp. reply to a request for information received from R. Robinson who was writing his autobiography, 1973.

A.2                        Miscellaneous accounts of his research activities prepared by Chain at various dates. Some of these are duplicated elsewhere in the collection but are assembled here for ease of reference.

Includes 7 pp. typescript 'Sequence of events which led to my scientific activities in Italy at the Istituto Superiore di Sanità; 2 pp. summary of 'Research Activities'; 14 pp. account of 'Research carried out in the Fermentation Pilot Plant from 1966-1972'.

A.3                        List (incomplete) of honours, awards, medals received by Chain.

Miscellaneous notes of honours sent for inclusion in Imperial College Directory.

Biographical and personal

- A.4 Articles and biographical accounts, as published in New Scientist, March 1959, Ahead, December 1969.
- A.5 Drafts for articles and biographical sketches prepared by journalists and researchers and submitted to Chain for comment.
- Includes draft of article in Ahead (in A.4 above) not identical with published version, 1969, and 3 pp. 'Profile' of Chain by M. Weisman for publication in Menorah, 1976.
- A.6 Obituary notices and tributes, 1979-80.

A list (incomplete) of Chain's publications, prepared at Imperial College, is reproduced on pp. 340-361.

Biographical and personal

A.7-A.174

CAREER, HONOURS AND AWARDS

In chronological order.

For similar material, see also:

D.31

E.1, E.73-E.75, E.84, E.157, E.186, E.198, E.204, E.218

G.50, G.105

H.6-H.8, H.94

J.9, J.27, J.37, J.42, J.60, J.81-J.82, J.136, J.165-  
J.171, J.178

K.151

- A.7 Birth Certificate, Berlin 1906.
- A.8 School reports, 1920, 1924.
- A.9 'Fest-Zeitung', humorous journal for end of term, 1922.
- A.10 German naturalisation certificate, 1928.
- A.11 Miscellaneous passes and identity cards, for University, Charité hospital, etc., Berlin, 1931-33.
- A.12 Chain's passport, issued Berlin 8 October 1929, bearing visas for Argentina (1929), France, Belgium, Russia, Poland (all 1930) and first 'leave to land' stamp in Britain dated 2 April 1933. Miscellaneous 'leave to land' stamps continue to 1935 and an unconditional 'leave to land' stamp is dated 26 November 1936.
- N.B. The Argentina visa relates to Chain's musical activities, see also A.175.
- A.13 German exit pass to London, stamped 19 May 1933.

Biographical and personal

- A.14 Chain's Doctorate in absentia from Friedrich-Wilhelms-Universität, Berlin, May 1933.
- A.15-A.24 Material relating to Chain's arrival and arrangements to work in Britain.
- A.15 Card from A. Szent-Györgyi, recommending Chain, n.d.
- A.16 Letter from A. McKenzie, 22 August 1932, inviting Chain to work in Dundee, and another letter, 21 April 1933, recommending him to R. Robinson and to the Rockefeller Foundation.
- A.17 Letter from H. Lieb re proposed participation by Chain in lecture course at Graz, October 1933.
- A.18 References for Chain from P. Rona (Director, Pathology Institute, Charité Hospital), March 1933.  
  
Also includes letter re Chain's grant, letters re research, May-September 1933.
- A.19 Two draft letters by Chain, addressee(s) unknown, one dated '5.IV' and both written immediately after arrival in Britain, requesting help in finding a place to continue planned programme of research on lecithin fermentation by enzymes.  
  
Draft of similar letter in Russian (addressee Iosif Borisovitch) re possibility of finding work in America. n.d. but similar to above.
- A.20 Letter from Rockefeller Institute advising Chain to apply to Rockefeller Foundation for a fellowship, 21 April 1933.
- A.21 Letter from R.N. Salaman advising application to Joint Foreign Committee for financial help, 29 April 1933.
- A.22 Correspondence, 1933, re arrangements for Chain to work in the Sir William Dunn Institute, Cambridge.  
  
Includes copy of Chain's letter to F.G. Hopkins (8 April) and letter from N.W. Pirie outlining arrangements for Chain's work (9 September).  
  
Also included here is later correspondence, 1963, re retirement presents for Fred Johnson and Alf Cowell, members of the Department in Chain's time.

Biographical and personal

- A.23 Correspondence, 1933-35, with Jewish Refugees Committee and with the Liberal Jewish Synagogue re financial help for Chain.
- A.24 Shorter personal and scientific correspondence re early days in Britain, 1933-35.
- A.25 'Arische und nichtarische Mathematik'. Summary (author unknown) of article in 'Deutsche Zukunft' by Biederbach, with a ms. note by Chain 'G.V. 12.4.34', and with a letter of introduction from L.J. Harris for Chain 'who is anxious that some of this unbelievably virulent literature should be shown to those in authority'.

Included here are two letters in Russian from a friend or colleague in Berlin about conditions in Germany (one letter dated May 1934). A summary of the contents by Dr. M. McRobert, 1982, is attached.

An early copy of Der Sturmer, on Jewish ritual murder, c.1933-34, is also included here.

- A.26 Correspondence with the Academic Assistance Council and the Home Office re permission for Chain to remain in Britain, and the cancellation of time limit on his passport, 1935-36.
- A.27 Brief correspondence re award of Ph.D., Cambridge, June 1935.
- Includes letter from F.G. Hopkins arranging viva and adding 'You need not fear the ordeal; we shall be very merciful!'.
- A.28 Two letters, 1935, re Chain's work on snake venom.
- A.29 Personal correspondence, 1935. Includes letter re Chain's sending money to his family in Germany.

Biographical and personal

- A.30 Correspondence, 1935, re Chain's move to Oxford. Includes letter from H.W. Florey arranging a meeting with Chain at Oxford (dated 16 July, no year), letter of farewell from D.D. Woods (26 September).
- Also included here is a letter from N.G. Heatley saying that he 'should be very pleased, and honoured, to work with you, provided one or two small matters can be put right'. The letter is dated 'January 13th 1935' but this would seem to be an error for 1936.
- A.31 Correspondence re visas for France, 1937, 1938. Letter of 1938 states that visas cannot be granted in the future.
- A.32 Shorter correspondence re grants for Chain's research from British Empire Cancer Campaign, etc., 1938.
- A.33 Shorter correspondence re support for Chain's mother, 1938-39.
- A.34 Miscellaneous items of biographical interest, invitations, shorter personal correspondence, 1930s.
- A.35 Chain's British Aliens Registration card, showing his first arrival at Harwich, 2 April 1933, and his various addresses in Cambridge and Oxford until his naturalisation 1939.
- A.36 Certificate of proficiency, British Red Cross Society, 1938.
- Letter from A.R.P. Department, Oxford, declining Chain's offer of service in First Aid Section on the grounds that he was not a British subject.
- A.37 Certificate of Naturalization, issued 18 April 1939, and preliminary correspondence.
- A.38 F.S.S.U. Agreement on appointment as Departmental Demonstrator, Sir William Dunn School of Pathology, Oxford, 20 February 1940.
- Invitation to Membership of Senior Common Room, University College, Oxford, April 1942.
- A.39 Brief correspondence, 1943 and 1945, re Chain's salary.
- A.40 Letter re conferment of M.A. by decree, Oxford, 1945.
- Letter re Honorary Membership, Royal Medical Society of Edinburgh, 1945.

Biographical and personal

- A.41-A.55 Visit to America, July–November 1945.
- The group of U.K. scientists was headed initially by Sir Robert Robinson and included Dr. H. King.
- Chain visited and/or lectured at various universities, institutions and laboratories. See A.41 for his own account of the scientific purpose of the visit.
- Towards the end of his stay, the award of the Nobel Prize was announced and there is some reference to this in the later correspondence.
- See B.26–B.29 for letters from colleagues at Oxford reporting on penicillin work in progress during Chain's absence.
- See A.207 for letters from Chain's cousin Anna Sacharina during this period.
- A.41 Copies and drafts of letters from Chain to Sir Edward Mellanby (Secretary, Medical Research Council), April 1944 and March 1945.
- Letter of 1944 urges the importance of fuller exchange of information between British and American scientists on penicillin synthesis.
- Letter and drafts of 1945 are re publication of material on penicillin purification, and re Chain's wish to visit America 'to become acquainted with the latest developments in the deep fermentation technique, particularly as applied to the growth of actinomycetes'.
- A.42 Correspondence with Medical Research Council, British Commonwealth Scientific Office, etc. re visit, salary, etc.
- A.43 Letters of introduction, laissez-passer.
- A.44 Exercise book containing a brief autobiographical summary (written in 3rd person, perhaps in connection with American lecture tour), and notes on visit to an unidentified penicillin plant on 25 July. Few pages only used.
- Also included here is 1 p. ms. outline itinerary of visits.

Biographical and personal

- A.45-A.48 Correspondence, etc. re lectures and visits to laboratories. In alphabetical order.
- A.45 Abbot Laboratories
- Best, C. H. (telegram)
- Connecticut Pharmaceutical Association
- Chain spoke at the Twentieth Anniversary of the College, 11-12 October, on 'The introduction of penicillin as a drug into medicine'. Correspondence continues to May 1946. Includes photographs of Chain.
- Cornell University.
- A.46 Lilly Research Laboratories
- Merck & Co.
- re possible supply of streptomycin for F.G. Hopkins.
- University of Minnesota (Mayo Foundation)
- Mount Sinai Hospital (N.Y.)
- A.47 Polytechnic Institute of Brooklyn
- The Rockefeller Foundation
- re equipment, grants, visits, congratulations on Nobel Prize.
- Saint Louis University School of Medicine.
- A.48 U.S. Department of Agriculture, Peoria
- Wyeth Institute of Applied Biochemistry
- Yale Medical Library
- A.49-A.51 Correspondence with colleagues and personal friends. In alphabetical order.
- A.49 Dakin, H. D.
- Estermann, R.
- Friedheim, E. A. H.
- Hodgkin, D. C.
- Ilse

Biographical and personal

- A.50 Kolinski, M.  
Lotte  
Malko, N. A.  
Ochoa, S.  
Samojlovna, R.  
Stern, K. G.  
Tavernier, J. B.
- A.51 Wechsler, I. S.  
re proposed medical school at Hebrew University in  
Jerusalem.  
Weissberger, A.  
Williams, T. I.  
Wrinch, D.
- A.52 Miscellaneous shorter correspondence re purchase of books,  
apparatus, specimens, etc.
- A.53 Draft interview with Chain for broadcast in 'Headline  
Edition', 29 October 1945 (on penicillin).
- A.54 Correspondence re another interview on the subject, prepared  
for C.B.S. programme 'We The People', but not used because  
of disagreement over presentation of the script.
- A.55 Miscellaneous bills, receipts, personal notes, etc.

Biographical and personal

A.56-A.77 The Nobel Prize

The Nobel Prize for Physiology and Medicine for 1945 was awarded to Fleming, Florey and Chain 'jointly for the discovery of penicillin and its curative action in various infectious diseases'.

Chain was in America when the award was announced; some of the letters and telegrams of congratulation in A.60-A.73 were therefore addressed to his cousin Anna Sacharina who kept house for him in Oxford (see also A.207).

The publicity attendant on the award prompted several letters from former friends or family acquaintances describing their wartime vicissitudes and enquiring about the fate of others. These letters have been grouped together in A.72.

A.74-A.77 contain later material relating to various celebrations and meetings organised by the Nobel Foundation, 1950-75.

See B.36-B.38 for material relating to Chain's Nobel lecture on 'The Chemical Structure of the Penicillins'.

A.56 Telegrams and letters announcing award, including brief telegram from Florey, with copies of Chain's replies, October-November

A.57 Typescript programme of Nobel Prize celebrations.

A copy of Chain's speech at the prize-giving ceremony is also included in the folder.

A.58 Miscellaneous material arising from visit, travel arrangements, invitations, menus, requests for biographical information, export licence for Nobel Medal, etc.

A.59 Translations of Swedish press coverage of the Nobel Prize celebrations.

Press-cutting from The Times announcing the award is also included here.

See A.226 for additional press-cuttings and printed material relating to the award.

Biographical and personal

- A.60-A.73 Letters and telegrams of congratulation, many with reminiscences, and references to Chain's musical talents.
- A.60 Official congratulations from Oxford University, University College, etc. Includes ms. draft of Chain's reply to the Vice-Chancellor.
- A.61 A - B
- A.62 C - D
- A.63 E - F - G
- A.64 H
- A.65 J - K - L
- A.66 M - N
- A.67 O - P
- A.68 R
- A.69 S
- A.70 V - W
- A.71 Telegrams (not indexed)
- A.72 Letters from relations, friends or family acquaintances, renewing contact after wartime events. In English, French, Russian and German. (Alphabetical order. Not indexed.)
- A.73 Unidentified or first-name signatures.
- A.74-A.77 Correspondence, etc. re Nobel Foundation meetings, 1950-75. See also E.130.
- A.74 1950
- 50th Anniversary celebrations. Chain attended, as did D. Marotta. Folder includes programme of events and correspondence with colleagues.

Biographical and personal

- A.75      1954
- Invitation to Lindau meeting, programme of lectures, correspondence.
- A.76      1955
- Chain attended, as did Marotta. The Prize for Physiology and Medicine was awarded that year to A.H.T. Theorell.
- Brief correspondence only.
- A.77      1975
- 75th Anniversary celebrations. Chain attended. Travel schedule, programme of events, list of participants, invitations, etc.
- A.78      Ms. draft letter (addressee unknown) re possibility of developing penicillin research at London School of Hygiene and Tropical Medicine. Undated, but written on British Commonwealth Scientific Office letter-paper and presumably during visit to America, autumn 1945.
- A.79, A.80      Visit to Palestine
- The visit took place in April 1946 and included discussions about the possibility of Chain's moving to work in the proposed new department of biochemistry in the Weizmann Research Center (later Institute). Folder includes letter of 12 December 1945 from E. Bergmann setting out terms of offer.
- A.79      Correspondence re lectures, requests for articles, advice on appointments, letters of thanks, etc.
- A.80      Volume of papers to commemorate 70th Anniversary of Chaim Weizmann, one of 100 privately-printed copies, sent to Chain as a memento of his visit.
- A.81      Menu of dinner given in honour of the penicillin team at Magdalen College, Oxford, 13 March 1946 and signed by participants.
- A.82      Award of Hon. Doctorate, University of Bordeaux, 1947.
- Letter of notification only.



Biographical and personal

- A.93 Letters and telegrams of congratulation, some with replies by Chain. Letter from A.I. Virtanen encloses press-cutting photograph of Ehrlich ceremony.
- A.94 Programmes, schedules, biographical notes prepared for ceremony, etc.
- A.95 Hon. Doctorate, Università degli Studi di Torino, 1954.  
Correspondence and press-cutting.
- A.96 Letter from Comunità Israelitica di Roma re Chain's religious faith, 1955.
- A.97 Hon. Fellowship, National Institute of Sciences of India, 1955.  
Letters of notification.
- A.98 Hon. Membership, Central Committee of the Microbiological Society of Israel, 1955.  
Letters of notification.
- A.99 Election as Corresponding Member, Accademia Medica di Roma, 1955.  
Letter of notification.
- A.100 Award of Gold Medal in Therapeutics of the Worshipful Society of Apothecaries of London, 1957.  
Correspondence re award and presentation of medal; includes telegram of congratulation from Marotta.  
See also A.147, G.16.
- A.101 Consigliere, Sezione Laziale, Società Italiana per lo Studio delle Malattie Infettive, 1957.  
Letter of election.
- A.102 Conferment of Medal of the City of Paris, 1957.  
Notice of ceremony.

Biographical and personal

- A.103 Hon. Membership, Société Française de Microbiologie, 1959.  
Correspondence re election 1959, and a little later correspondence, 1979.
- A.104 Hon. Doctorate, Université de Paris, 1959.  
Correspondence re award of degree, arrangements for ceremony (Chain's carbons only).
- A.105 Hon. Membership, Finnish Biochemical Society, 1959.  
Letter of acceptance (to A.I. Virtanen) (Chain's carbon only).
- A.106 Election as Associé Étranger, Académie des Sciences, Institut de France, 1962.  
Correspondence, telegrams of congratulation.
- A.107 Election to Fellowship of Royal Society of Arts, 1963.  
Certificate only.
- A.108 Membership of Medical Advisory Committee, Hektoen Institute for Medical Research, Chicago, 1963.  
Letter only.
- A.109 Election as Fellow Member, World Academy of Art and Science, 1963.  
Correspondence re election.
- A.110 Shorter correspondence with Imperial College, mainly 1965, re Chain's flat, but includes letter, 1967, reappointing him to Chair of Biochemistry to 30 September 1973, and brief correspondence on his retirement, 1973.

For material relating to Chain's period at Imperial College, see Section D.

- A.111 Hon. Doctorate, University of Chicago, 1965.  
Press release.
- A.112 Election Hon. Life Member, New York Academy of Sciences, 1966.  
Press release.

Biographical and personal

- A.113 Award of Carl Neuberg Medal and of Hon. Doctorate, Philadelphia College of Pharmacy and Science, 1967.  
Notification. (See J.81-J.83.)
- A.114-A.146 Knighthood, 1969.  
The knighthood was announced in the Birthday Honours and conferred on 8 July.
- A.114 Correspondence re conferment, arrangements for Investiture, coat of arms, etc.
- A.115 Ms. and typescript versions of Chain's letter to Prime Minister (H. Wilson) thanking him for recommendation for honour, and recalling the chief events of his scientific career.
- A.116 Ms. and typescript versions of Chain's speech of thanks at lunch given in his honour by Lord Rank, 11 July; speech includes autobiographical recollections and Chain's views on relations between academic, industrial and governmental sponsorship of research.  
Lunch menu also included.
- A.117 Correspondence with College of Arms, and with Imperial Society of Knights Bachelor, various dates, 1969-79.
- A.118-A.146 Letters and telegrams of congratulation, a few with replies by Chain.
- A.118 4 pp. ms. list of names, perhaps of those who sent congratulations.
- A.119 A
- A.120 Ba - Be
- A.121 Bi - Bo
- A.122 Br - Bu
- A.123 C
- A.124 D
- A.125 E - F

Biographical and personal

A.126	G
A.127	Ha
A.128	He - Hu
A.129	I - J
A.130	K
A.131	L
A.132	M
A.133	N - O
A.134	P
A.135	Ra - Ri
A.136	Ro - Ru
A.137	Sa - Se
A.138	Sh - Sn
A.139	So - Su
A.140	T
A.141	U - V - Wa - Wh
A.142	Wi
A.143	Wo - Wy
A.144	Y - Z
A.145, A.146	Unidentified and first-name signatures.

Biographical and personal

- A.147 Election to Freedom by Redemption of Worshipful Society of Apothecaries of London, 1969.
- Correspondence and notification of Election.
- Also enclosed here is later correspondence re Chain's election to the Livery of the Society, with a Certificate for use when applying to take up the Freedom of the City of London.
- See also A.100, A.174.
- A.148 Honorary Membership of Council, Società Italiana di Scienze Farmaceutiche, 1969.
- Correspondence.
- A.149 Election as Associé Étranger, Académie Nationale de Médecine, Paris, 1969.
- Correspondence.
- A.150 The Mark Twain Society.
- Correspondence notifying Chain of various honorary elections made by the Society, 1969-78.
- A.151 Nomination to Board of Electors to Sir William Dunn Chair of Biochemistry, Cambridge, 1970.
- A.152, A.153 The Athenaeum.
- A.152 Correspondence re Chain's election under Rule II, 1972.
- Includes certificate of election.
- A.153 Correspondence re nominations and elections, 1974-79.
- A.154 Award of Hanbury medal, May 1972.
- Letter of congratulation only.
- A.155 Award of Grand Decoration of Honour in Gold of the Federal Republic of Austria, and Hon. Membership of Gesellschaft der Wiener Ärzte, 1973.
- Letters of congratulation, letter re official permission to wear insignia.
- See also J.136.

Biographical and personal

- A.156 Conferment of title 'Emeritus Professor of Biochemistry',  
University of London, 1973.  
  
Letter only.
- A.157-A.168 Chain's 70th birthday, 1976.
- A.157 Chain's speech of thanks at the dinner given in the Middle  
Temple Hall in his honour by colleagues and friends, 15 June,  
with autobiographical recollections and personal information.  
  
The dinner was held during the International Symposium on  
'Biologically Active Substances - Exploration and Exploitation'.
- A.158 Ms. drafts of some of Chain's replies to birthday letters or  
telegrams.
- A.159-A.168 Letters and telegrams, a few with Chain's replies; the  
majority of the greetings are from Jewish friends and organisations,  
who attached a special significance to the attaining of this  
birthday.
- A.159 A - B
- A.160 C - E
- A.161 G - H
- A.162 J - K - L
- A.163 M - N - O
- A.164 P - R
- A.165 S
- A.166 T - V
- A.167 W - Y - Z
- A.168 First-name or unidentified signatures.

See H.20 for another birthday celebration organised for Chain by the  
Hillel Foundation.

Biographical and personal

- A.169 Place list for lunch at Windsor Castle on occasion of visit of President of Israel, E. Katzir, June 1976.
- Honorary Fellowship, Società Italiana per il Progresso delle Scienze, 1977.
- Notification of election.
- A.170 Foreign Membership, USSR Academy of Sciences, 1977.
- Brief correspondence re ceremony.
- See also E.218, H.59.
- A.171 Correspondence re celebration of 50th Anniversary of the Sir William Dunn School of Pathology, Oxford, 1977.
- A.172 Correspondence re Fellowship of the Zoological Society of London, 1978.
- A.173 Corresponding Member, Academia de Ciencias Médicas, Argentina, 1978.
- Correspondence re nomination.
- A.174 Freedom of City of London, April 1979.
- Certificate.
- Miscellaneous other certificates and tessere are included here.

Biographical and personal

A.175-A.217 PERSONAL AND FAMILY MATERIAL

A.175-A.186 Music

Chain's musical gifts were widely acknowledged. He played the piano to recital standard and also in chamber ensembles with friends. In his early days he seems to have contemplated a career in music (see A.175). Towards the end of his life it gave him great pleasure to share performances with his son Benjamin. The folders below contain correspondence with musical friends, requests for sponsorship for individuals or institutions, invitations to give recitals, attend concerts, etc. There are many additional references to musical activities and interests in general correspondence passim.

A.175 Programmes of concerts at which Chain played, 1920-22.

Documents, 1928, 1929-30, issued by the Berlin branch of the USSR Volksarbeitskommissariat, authorising Chain to go to America to engage Russian artistes and musicians to give concerts in North and South America. The visa for Argentina in Chain's passport issued in October 1929 (see A.12) suggests that he made this journey and indicates his serious consideration at that time of a musical career.

A.176 Miscellaneous material, 1930s, re concerts/recitals in Cambridge and Oxford.

A.177 1947, 1952-59

A.178 1961-67

A.179 1967-69

Includes support for Yehudi Menuhin School, London Bach Society, Royal College of Music.

A.180 1970-73

A.181 1973

Correspondence with the Heberden Society re arrangements for the Annual Dinner, 23 November. Chain and R. Kohn gave a recital after the dinner.

Letters of invitation, and of thanks, from the President refer to Chain's Honorary Membership of the Society and to the use of D-Penicillamine in the treatment of rheumatoid arthritis.

Biographical and personal

- A.182 1974-78
- A.183 Correspondence with M. Kolinski, 1936-75. Kolinski died in 1981 and an obituary published in Ethnomusicology is included here.
- A.184 Correspondence (in Russian), photographs and publicity material from N. Malko, a Russian conductor and old friend of Chain, who worked in Copenhagen and Prague and later emigrated to U.S.A. 1934-48.
- Letter of 8 December 1935 congratulates Chain on his appointment at Oxford, and insists that he cannot instruct Chain, who is a difficult pupil, in conducting.
- Other letters during 1930s include information and gossip about various composers and musicians.
- A.185 Correspondence with C.D.W. Stafford, 1965-70, mainly invitations to opera performances.
- Miscellaneous notes by Chain on composers, records, etc.
- A.186 Miscellaneous correspondence on music, 1930s-1976.
- The correspondence is in Russian and bears notes on the content kindly provided by M. MacRobert.
- A.187, A.188 Miscellaneous material re Chain's health.
- A.187 1936, includes prescriptions, medical bills, Chain's own notes on his health and family medical history, 1933-36.
- A.188 1954-79.
- A.189 Material relating to Chain's engagement and marriage to Anne Beloff. The marriage took place on 7 October 1948, at Hampstead Synagogue.
- Includes letter of good wishes signed by Florey and all colleagues in the School of Pathology, Oxford.
- Also included is brief correspondence re activities of Chain's children, 1968, 1976.

Biographical and personal

A.190 Fitzwilliam College, Cambridge, 1966-78

Chain was accepted as a student at Fitzwilliam House (as it then was) in 1933, when he was working for his Ph.D. with F.G. Hopkins. The connection, made at such a time, meant much to him. When the non-collegiate Fitzwilliam House received its Charter of Incorporation as Fitzwilliam College in 1966, the Governing Body unanimously elected Chain as an Honorary Fellow. He proposed the toast of the College at the Annual Dinner in 1967 and also gave the Inaugural Lecture of the 'College Centenary Lectures' in 1969 (see G.88).

The correspondence is with successive Masters of the College, and with colleagues, re Annual Dinners held in January each year and which Chain attended whenever his health and other engagements allowed. The folder also includes menu, table-plan and Chain's 'Toast' at the 1967 Dinner, with reminiscences of his connection with Cambridge, and the College, in the 1930s.

A.191 Correspondence and papers re Chain's house at Mulranny, Co. Mayo, mainly 1970-72, and one letter 1979.

This was a holiday house, built by Chain after he and his family had enjoyed several holidays in rented property in the district. The family moved into the house in August 1971. Chain was greatly attached to the house and its surroundings, spent as much time there as possible during his later years, and died there in 1979.

Folder includes material re the importing of Chain's Steinway grand piano, and a copy of Mayo News ('Connacht's Brightest Weekly'), August 1970, with an article 'Mulranny Captures Research V.I.P.'

See K.74, K.126 for correspondence about other property in Italy and Israel which Chain was considering purchasing at various dates.

A.192 Miscellaneous correspondence re portraits of Chain, 1969, 1973, and request for him to write his memoirs, 1979.

A.193 Two short travel notes by Chain, describing journey from Rome to London and Moscow (3 pp., n.d.), and 'Impressions of flight over Sinai desert' (3 pp., n.d. but probably 1967).

Biographical and personal

- A.194 Letters and telegrams of birthday greetings, sent to Chain, various dates, 1955-78.
- See A.157-A.168 for material relating to Chain's 70th birthday in 1976.
- A.195-A.197 Replies to letters or cables of congratulation sent by Chain to colleagues on awards of honours, Nobel prizes, etc.
- A.195 1950-59
- A.196 1960-69
- A.197 1970-79
- A.198 Replies to letters of condolence written by Chain.
- A.199 Ms. drafts for Chain's last letters, 1979.
- Mainly to personal friends, several referring to the engagement of his elder son Benny, and to his own illness.
- A.200-A.217 Family correspondence.
- Very little first-hand material survives about Chain's own family and early days. His Russian-born father Michael, an industrial chemist, died in 1919 when Chain was thirteen, and the family knew hard times during the inflationary 1920s when his mother Margarete had to let rooms in her house. After Chain settled in Britain he sent money home as far as he was able (see A.29, A.33) but his family's circumstances remained poor. His mother and sister Hedwig did not survive the Second World War (see A.205 for references to the last dates at which they were seen alive).
- A.200 Chain's letters to Lola Sarsowsky.
- 11 letters, September 1921-December 1923, and one letter c. October 1933.
- The earlier letters, many enclosed in Michael Chain's business envelopes, are mainly personal and include references to family affairs following Michael Chain's death, school, musical and political activities. Chain was strongly left-wing at that time.
- The last letter, from Britain, describes how Chain is able to send some money home, and still expresses a strongly left-wing reaction to 'bourgeois' England.

Continued

Biographical and personal

A.200 (Cont'd.) Most of the envelopes have a date, number and note of content by L. Sarsowsky (on verso). The summaries of content attached to the letters were provided by U. Horstmann in June 1982.

A.200a Chain's letters to Vera Katz.

8 letters, October 1934-April 1935. These are photocopies, sent to Lady Chain with a covering letter from Mrs. Ambrose (née Katz) in November 1982 and made available by her. They are mainly concerned with conditions in Britain and Vera Katz's plans to emigrate.

A.201-A.203 Folder of cards and letters from Chain's mother to Boris Haine, brother of Michael, with whom Chain stayed when he first arrived in London (A.201), to Chain (A.202), to Nura (Anna Sacharina, see below) and others (A.203), mainly 1933-36, and one letter 1939 to 'Meine Lieben'. The cards are not signed, and the letters are signed 'Frauchen'; some include post-scripts from Hedwig. The last letter is dated 12 August 1939.

The letters describe life in Berlin, family difficulties, loss of property and furniture including Chain's grand piano. There are many references to financial problems and Chain's support of the family.

A.204 Summons and deposition re the Chain family's debts, 1936.

Summons is dated 26 August 1936, in the name of Liselotte Goerk, minor, resulting from a previous case of 7 March 1927.

Deposition is from the Chain family's lawyer (Manecke) applying for an annulment of the distraint of property on the grounds that the property is personal belongings required in the household and for their work (this being the taking-in of lodgers and Chain's musical activities as lecturer and critic for which a desk and piano are required) and that the family's inability to meet the demands was due to the early death of Michael Chain and consequent loss of prosperity.

A.205 3 letters re Chain's mother.

Letter in Russian, 1935, re financial difficulties.

Letter from German prisoner-of-war, 1945, who had news up to beginning of 1943.

Letter in German, 1951, writer saw Margarete 1942, when Hedwig was ill.

Biographical and personal

- A.206-A.212 Material re Anna Sacharina (Nura).
- Anna Sacharina was a relation by marriage, her husband being a relative of Michael Chain; she was always deemed to be a cousin and referred to as such. After several shorter visits, she was allowed to settle in Britain (A.206) and kept house for Chain in Oxford. After his marriage and removal to Rome, she remained part of the household, returning later with the family to London. She died in 1978 at the age of 89.
- A.206 Correspondence, 1934-37, with Home Office, officials and colleagues re permission for Anna Sacharina (then resident in Paris) to come to Britain.
- Includes two postcards sent to Anna Sacharina, 1936.
- A.207 Letters from Anna Sacharina to Chain, various dates, 1945-48, 1954.
- The 1945 letters, many addressed to 'My dear Mops', cover the period of Chain's journey to America and the award of the Nobel Prize.
- A.208 Letters from Chain to Anna Sacharina, various dates, 1957, 1958, 1961, 1963.
- Letters of 1958 describe the progress of negotiations with Imperial College about Chain's proposed department there; letters of May 1961 are from China describing conditions there (see also J.30-J.34); letter of June 1961 refers to cephalosporin patent case (see also K.22-K.25).
- A.209 Not allocated.
- A.210 Miscellaneous shorter correspondence re Anna Sacharina, her friends and relatives, visits, etc., 1958-72.
- A.211 Correspondence from Anna Sacharina, and with officials, 1965-66, re visa for Raissa Slepakova to visit her sister Anna.
- In his letter to the Home Office of 28 June 1965, Chain states that Anna Sacharina (then aged 76) was 'a naturalised British subject since 1942 and has been living with me and my family since 1923 when she left the Soviet Union'.
- A.212 Letters of condolence received on the death of Anna Sacharina, 1978.

Biographical and personal

- A.213 Letters and cards from W. Lederer, various dates 1933-37. Lederer was an uncle of Chain, then working at Nachod, Czechoslovakia. Letter of April 1933 is addressed to B. Haine, another uncle with whom Chain stayed on his first arrival in Britain.
- A.214 Letters from F. Eisner (a relative of Chain's mother), various dates, c. 1935-59.
- A.215 Miscellaneous letters from relatives and old acquaintances, 1948-78.
- Not indexed.
- A.216 Correspondence with M. Hain (relative of Chain's father) and her husband V. Staroselsky, 1963, 1976.
- In Russian, with summary of content provided by M. MacRobert.
- A.217 Shorter personal correspondence, in Russian.

Biographical and personal

A.218-A.234 PHOTOGRAPHS AND PRESS-CUTTINGS

A.218-A.225 PHOTOGRAPHS

N.B. Other photographs relating to specific occasions and visits have been left in place.

A.218 7 photographs of Chain, taken in Jerusalem, possibly on his visit in 1946 (A.79, A.80).

A.219 Photograph of Chain, probably in Rome laboratory.

Photograph of equipment (Milan).

Photograph of Chain, probably at Imperial College.

A.220 Portrait photographs of Chain.

A.221 3 photographs of Chain and Anne Chain, n.d.

Photograph of Chain and friends, 1973.

A.222 Photographs of Chain at Honorary Degree (mounted, with citation).

Signed photograph of André Gratia.

A.223 Black album of photographs and press-cuttings of Chain's visit to South America (see J.42-J.45).

The album was sent by M. Goldman, from whom a letter is included.

A.224 Red album of photographs of the opening of the Department of Biochemistry, Wolfson Laboratories, by Queen Elizabeth the Queen Mother, 4 November 1965.

Includes photographs of Chain and his family, Linstead, Sherfield, Wolfson and members of the departmental staff.

A.225 Brown album, 'Reflections on Research and the Future of Medicine', compiled to commemorate the dedication of new research facilities of Merck Sharp and Dohme Laboratories, Rahway, New Jersey, May 1966 (see also J.70-J.73).

Includes photographs of many distinguished guests.

Biographical and personal

- A.226-A.234 PRESS-CUTTINGS
- A.226 Material relating to award of Nobel Prize, visit to Stockholm and press comment on penicillin, etc. Mainly c.1945.  
1 Box.
- A.227 Folder of press-cuttings, mainly re lectures, conferences and visits, 1959-60.
- A.228 Folder of press-cuttings, mainly re affairs of Istituto Superiore di Sanità, Marotta case and other matters re science in Italy, c.1963-64.
- A.229 Folder of miscellaneous material, 1950s, 1960s.
- A.230 Envelope of press-cuttings re Chain's Trueman Wood Lecture, 1963.
- A.231 Envelope of miscellaneous press-cuttings, 1972-73.
- A.232 Folder of miscellaneous material, 1960s.
- A.233 Blue album of press-cuttings, mainly 1962-65. Includes material re work with Beechams.
- A.234 Large blue album of press-cuttings, mainly 1965-71.

<u>SECTION B</u>	<u>RESEARCH AT CAMBRIDGE AND OXFORD</u>	<u>B.1 - B.112</u>
B.1 - B.7	RESEARCH NOTES AND DRAFTS, 1934 - 39	
B.8 - B.14	SCIENTIFIC CORRESPONDENCE, 1931 - 38	
B.15 - B.33	PENICILLIN: RESEARCH, REPORTS, CORRESPONDENCE	
B.34 - B.60	PENICILLIN: LECTURES, DRAFTS, PUBLICATIONS	
B.61 - B.92	HISTORICAL ACCOUNTS OF THE DISCOVERY OF PENICILLIN	
B.93 - B.112	CORRESPONDENCE ON THE HISTORY OF PENICILLIN	

This Section documents Chain's early research at Cambridge and Oxford on lecithin and snake venom, and the work in Oxford on penicillin which led to the award of the Nobel Prize with Fleming and Florey in 1945.

It will be obvious from the above list of contents that very little actual research material has survived from this period. There are no notebooks, few records of experiments (with the possible exception of B.1) and even the scientific correspondence is very sparse for the 1930s and consists of Chain's carbons only for the duration of the Second World War. B.15ff. contains a few documents relating to the early penicillin work, in particular the draft for the grant application to the Rockefeller Foundation submitted by Florey in 1939 (see also B.107), but most of the information about this period is to be found in the historical accounts and correspondence at B.61 - B.112.

See C.4 - C.9 for carbon copies of 1948 correspondence including some references to penicillin.

Research at Cambridge and Oxford

B.1-B.7 RESEARCH NOTES AND DRAFTS, 1934-39

- B.1 Bundles of ms. notes and drafts in German, mainly relating to work on enzymes, including lecithin. The papers appear to be in no particular order and are undated, with one exception (14.8.34.).

The notes almost certainly relate to work with H. Fischgold with whom Chain published 2 papers in 1934-35. A draft letter to Fischgold, 19 February 1934, which was found among them, has now been transferred to B.9

- B.2 'The determination of the isoelectric point of lecithin and spingomyelin', by E. Chain, H. Fischgold and J. Kemp.

6 pp. typescript draft of paper published in a slightly different form, and without Fischgold's name, in Biochem. J., 1934 (Bibliog. 3).

For correspondence with Fischgold see B.9

- B.3 Ms. and typescript drafts for talk on enzyme reactions, n.d., c.1934.

Folder also includes 1 p. ms. note on lecithin in an unidentified hand.

- B.4 'Some chemical and biochemical investigations on phospholipins'

Chain's Cambridge Ph.D. thesis, 1935. For brief related correspondence see A.27.

- B.5 'Studies on Phosphorylcholine', by A.B.L. Beznák and E. Chain.

3 typescript drafts (one incomplete) and originals of figures I - VI for paper published in Quart. J. Exp. Physiol., 1937 (Bibliog. 9).

For correspondence from Beznák see B.13

- B.6 Ms. and typescript research notes and drafts in English and German, in no apparent order, n.d., c.1936 onwards.

- B.7 Ms. and typescript notes and drafts, c.1937-39.

Includes draft letter of application for a grant to visit Stockholm in connection with the work on snake venom, n.d.

Research at Cambridge and Oxford

- B.8-B.14 SCIENTIFIC CORRESPONDENCE, 1931-38
- See also A.28, K.209.
- B.8 1931
- Brühl, L. J. March  
re specimens of Norwegian whale liver and pancreas.
- 1933
- Walton, A. August  
Letter to Florey re sample of boar mucin.
- B.9 1934 (and n.d.)
- Fischgold, H. February-November  
Correspondence re publication of collaborative research papers (see B.1, B.2). Sequence includes letter from an unidentified correspondent, 30 January 1934, and referees' reports on paper by Fischgold and Chain submitted for publication in Proc. R. Soc. Lon.
- B.10 1935
- Gulland, J. M. October  
re lecithinase.
- Hall, H. W. December  
re Warburg flasks (p.2 of another letter re Warburg flasks is also included here).
- Hopkins, F. G. March
- Krebs, H. A. August
- B.11 Munch, J. C. May
- Reichel, J. April  
re sample of antivenin.
- Wrinch, D. M. November
- Yudkin, J. (and Yudkin, M.) October

Research at Cambridge and Oxford

B.12	<u>1936</u>		
		Butantan Institute, Brazil (Chain's carbon only).	November
		Fildes, P. (Chain's carbon only)	December
		Heatley, N. G.	January-February
		Köhler, F. Sending catalogue of apparatus.	December
		(signature illegible) <u>re</u> samples required for Chain's research.	June
B.13	<u>1937</u>		
		Beznák, A. B. L. <u>re</u> reprints of joint paper with Chain ( <u>Bibliog.</u> 9).	March
		(signature illegible) <u>re</u> possible collaboration with Chain.	January
B.14	<u>1938</u>		
		Menkin, V. <u>re</u> leukotaxine.	October
		Myrbäck, K. <u>re</u> supply of yeast for preparation of apozymase.	November
		Valentine, A. H. Comments on paper published by Chain in <u>Biochem. J.</u> ( <u>Bibliog.</u> 11).	July

Research at Cambridge and Oxford

- B.15-B.33      PENICILLIN: RESEARCH, REPORTS, CORRESPONDENCE
- B.15            'Preparation from certain bacteria and fungi of strongly bactericidal enzymes, effective against staphylococci, pneumococci and streptococci'
- 3 pp. ms. draft outlining proposed investigation of the 'bactericidal principle' in certain strains of penicillium and actinomyces. n.d., perhaps intended for grant application.
- B.16            Typescript drafts for grant application to the Rockefeller Foundation, submitted by Florey in November 1939.
- See also B.107.
- B.17            'Report on biochemical research carried out during the year 1941'
- 3 pp. typescript with ms. date 28 August 1941.
- B.18            2 photographs of apparatus with a ms. note by N.G. Heatley (1980) 'Part of the war-time plant for extraction of penicillin designed and built by A.G. Sanders and J. Kent (with help from G. Maskell) at the Sir William Dunn School of Pathology, Oxford, 1942-43'.
- B.19            Undated ms. notes and diagrams, mainly re penicillin.
- B.20            'Report on teaching activities and research during the tenure of an University Demonstratorship in Chemical Pathology in the years 1941-1945'
- 4 pp. typescript draft.
- B.21-B.25      Carbon copies of Chain's outgoing correspondence, October 1940-July 1945. These were filed in a single chronological sequence which has now been split into several folders for ease of reference. Very occasionally the sequence included an incoming letter and these have been left in place and indexed. Although Chain's carbons would not normally be indexed, some of the correspondents are cross-referenced in the index as an additional aid to researchers.

Research at Cambridge and Oxford

- B.21      October-December 1940
- Mainly letters to various colleagues to accompany reprints of Lancet paper (Bibliog. 19) and/or samples of penicillin culture. Includes letter to L.A. Epstein, 19 November, re preparation of collaborative paper (Bibliog. 23) for publication, and Epstein's ms. reply.
- B.22      March 1941, February-November 1942
- Includes letter to the Editor of Nature, 17 February 1942, withdrawing note by Chain and Abraham on the purification of penicillin after a government request to stop all publications on penicillin, and request to I.C.I. for a sample of crude penicillin, 24 June 1942.
- B.23      April-December 1943
- Includes letter to Sir Robert Robinson, 24 May, re penicillin supply.
- B.24      January-December 1944
- Includes letter to M. Howarth re proposed article on penicillin for Strand magazine, to editors of various journals re proofs, etc. of papers (e.g. Bibliog. 31, 32) and to B.C. Wright re film about penicillin.
- B.25      January-July 1945
- Includes draft letter to F.G. Young, 25 February, commenting on recently published paper by Glaxo workers on preparation of purified penicillin, letter to Mellanby, 10 March, re restrictions on publication of penicillin work, and 2 letters to Sir Henry Tizard, 3 and 17 July, re the public view of the role of the Oxford workers in the penicillin story.
- B.26-B.29      Letters from colleagues at the Sir William Dunn School, July-October 1945, reporting on penicillin work in progress during Chain's absence in U.S.A.
- See A.41-A.55 for additional material relating to Chain's visit to U.S.A.

Research at Cambridge and Oxford

- B.26 Burt, J.  
Letters are numbered 2-16. (nos. 6-8 are missing from the sequence).
- B.27 Callow, D.  
Duthie, E. S.
- B.28 Florey, H. W.
- B.29 Philpot, F. J. (Flops)
- B.30 Miscellaneous correspondence, September-November 1945  
Includes copy of letter from Chain to the Rockefeller Foundation re grant for purchase of molecular distillation equipment, and letter from A.W.M. Ellis inviting Chain to meet representatives of the Rockefeller Foundation in Oxford.
- B.31 Ms. flow diagram for a fermentation plant with separate sketch of pipe layout for antifoam tank, signed 'Oxford 2/9-46. IB'.
- B.32 Ms. notes on the published literature relating to penicillin, 1943-48, arranged under subject headings. Subjects include 'Lysis by penicillin', 'Penicillinase', 'Production', 'Acquired resistance' and 'Mode of action'.
- B.33 Ms. notes similar to above, but on reports from American laboratories sent to the Committee for Penicillin Synthesis of the Medical Research Council under their agreement with the U.S. Office of Scientific Research and Development. The reports are numbered (e.g.) CPS 13 Merck, CPS 96 Squibb, CPS 221 Cornell, etc. Very few of them are dated, but according to Chain in his Nobel lecture (Bibliog. 35) the first reports were received in England in April 1944 and the arrangement continued until October 1945.

Research at Cambridge and Oxford

- B.34-B.60      PENICILLIN: LECTURES, DRAFTS, PUBLICATIONS, 1944-49
- See also G.2, G.3.
- B.34            Copy of British Medical Bulletin, 2, 1, 1944, devoted to 'Penicillin 1929-43', including articles contributed by Chain, Fleming and Florey.
- B.35            Russian translation of article on Penicillin published in Endeavour, 3, 9, 1944 (Bibliog. 32).
- B.36-B.38      'The Chemical Structure of the Penicillins'
- Nobel Lecture, delivered 20 March 1946 (Bibliog. 35).  
See also A.56-A.77 for material relating to the award of the Nobel Prize.
- B.36            Complete typescript with ms. corrections.
- B.37            Incomplete ms. and typescript drafts.
- B.38            2 envelopes labelled 'Synthesis' and 'Degradation' containing photographs of figures and diagrams. These were found with B.36 and some of them correspond with the figures in the published version of the lecture.
- B.39            Fragmentary ms. drafts (mainly opening paragraphs) for lectures on penicillin in Holland, Denmark, Scotland, Finland, Palestine and Newcastle, n.d., but probably all 1946.
- For correspondence re Chain's visit to Palestine see A.79, A.80.
- B.40            Miscellaneous requests to lecture, 1946.
- B.41            'What is penicillin?'
- 6 pp. ms. for talk on penicillin, n.d.
- B.42            Patent specification for 'Improvements in or relating to the preparation of stable penicillin-containing solutions', by Chain and F.J. Philpot, 24 December 1947.
- Includes a letter from the Patent Agents, 8 November 1948.
- See also K.180.

Research at Cambridge and Oxford

- B.43 'The catalytic effect of metal ions on the alcoholysis of the penicillins', by E. Chain and F.J. Philpot.  
14 pp. typescript + 1 additional page, n.d.  
Presumably not published. Not in Bibliog.
- B.44 'Structural and synthetic studies on Penicillin'.  
Ms. and typescript drafts for talk in Paris, n.d., c.1948.
- B.45 'The Industrial Production of Penicillin'  
95 pp. typescript memorandum with Supplements prepared by Chain for the U.S.S.R. in 1948 (see correspondence below). Ms. draft for pp.13-17 is also included in the folder.
- B.46 Carbon copies of Chain's letters to members of the U.S.S.R. Trade Delegation, April-September 1948, and a ms. draft in reply to a letter from one of the members of the delegation (N. Borodin) written on 23 January [1948]. Most of the letters refer to the preparation of the memorandum now at B.45 which was submitted to the Trade Delegation with a covering letter on 23 September.
- B.47 'The case for a state-owned penicillin factory in this country'  
10 pp. typescript memorandum, n.d., but c.1948.  
See also K.14, K.286.
- B.48-B.53 Material relating to collaborative book with Florey et al. ('Antibiotics'), published by Oxford University Press, 1949.
- B.48 Typescript draft of chapter on 'Acquired resistance to penicillin in vitro', with a few ms. corrections by J. Burt.
- B.49 Typescript draft of chapter on 'The nature of the action of penicillin' with similar ms. corrections.
- B.50 Typescript draft of chapter on 'Penicillinase' with similar ms. corrections.
- B.51 Drafts of 'Table of Contents' for Volume II marked 'alternative A', 'alternative B', and list of references.

Research at Cambridge and Oxford

- B.52 Correspondence with Florey and Abraham re the book, 1948-49.
- B.53 Correspondence with the Medical Editor, Oxford University Press, re royalties, etc., 1950.
- B.54-B.60 Reports, photographs and other material re penicillin sent to Chain for information.
- B.54 'Penicillin'. 127 pp. monograph produced by Merck & Co. Inc., June 1944. Ms. note on the front cover reads 'Recd. 23/5/45 Sir Howard Florey'.
- B.55 'Biosynthesis of Penicillins'. 7 pp. duplicated typescript issued under the auspices of the Committee on Medical Research (O.S.R.D., Washington) and the Medical Research Council, n.d., c.1946, as preliminary to a joint monograph on penicillin.
- Memorandum to 'Authors of contributions for the penicillin monograph'. 4 pp. duplicated typescript, n.d.
- B.56 'Summarised Description of the Speke Process for the Manufacture of B.P. Standard Amorphous Penicillin as at 1st August 1947'. 4 pp. typescript.
- Duplicated typescript extracts from the Federal Register relating to penicillin, July 1947-March 1948.
- B.57 Photographs re penicillin issued by the Ministry of Information.
- B.58 Photographs sent to Chain by Chas. Pfizer & Co., 18 January 1946.
- B.59 Miscellaneous other photographs. Includes a letter from Distillers Co. Ltd., 14 February 1947, re photographs for book on penicillin.
- B.60 Miscellaneous diagrams.

Research at Cambridge and Oxford

B.61-B.92 HISTORICAL ACCOUNTS OF THE DISCOVERY OF PENICILLIN

The following papers consist mainly of drafts for publications, lectures, contributions to symposia, etc. and a little correspondence. The main sequence of correspondence is at B.93ff.

See also F.76, F.177, F.236, G.88, J.108, J.184, J.186-J.189.

- B.61 4 pp. ms. draft, describing the early work on penicillin at Oxford, n.d.
- B.62 'Short account of the events which led to the re-investigation of the chemical and biological properties of penicillin in the Sir William Dunn School of Pathology'.  
4 pp. typescript, n.d., c.1944.
- B.63 Copies of two letters to 'Professor Burn', 6 and 31 January 1945, re statement on the origin of the penicillin work in Oxford. A 6 pp. typescript is appended to the second letter.
- B.64 4 pp. ms. in German re the discovery of penicillin, n.d.
- B.65 13 pp. typescript draft of letter to the Evening Standard, September 1952, containing an account of the discovery of penicillin.  
  
The letter was not published, but Chain sent copies of it to various newspapers and journals; correspondence with editors of the Lancet, Sunday Times and Discovery is included in the folder.
- B.66 'Alexander Fleming and the history of the penicillin discovery'  
22 pp. typescript, English version of article published in Nuova Antologia, 1955 (Bibliog. 48).  
  
Brief correspondence arising from the Italian version is also included in the folder.
- B.67 18 pp. typescript, autobiographical account including description of the early penicillin research, n.d., c.1956.

Research at Cambridge and Oxford

- B.67A 'Extract from a lecture on Antibiotics to be given in London in November 1964'
- 9 pp. typescript account of early penicillin work. Part of the Oliver-Sharpey lecture (see G.51).
- B.68-B.72 Material arising from the death of Lord Florey in February 1968.
- B.68 Ms. and typescript drafts for appreciations of Florey written for various newspapers and journals.
- B.69 Correspondence with the Editor of the British Medical Journal arising from their leader on Florey on 1 March 1968.
- B.70 Letters to the Editor of The Listener re article on Florey, June 1969. A reprint of the article is included in the folder.
- B.71, B.72 Correspondence with the President (P.M.S. Blackett) and the Biological Secretary (B. Katz) of the Royal Society re the Florey Memorial Appeal. Includes ms. drafts of several long letters from Chain commenting on the text of the appeal pamphlet.
- B.71 Correspondence with Blackett, February-March 1969. Includes 2 pp. transcript of part of a talk recorded by Florey in Australia, c.1965, with a letter from the producer of the B.B.C. radio programme 'Portrait of Lord Florey', referred to in B.70.
- B.72 Correspondence with Katz, February-May 1969.
- B.73-B.84 Discussion meeting on 'Penicillin and related antibiotics - past, present and future', held jointly by the Royal Society and the Royal College of Physicians to commemorate the thirtieth anniversary of the introduction of penicillin into medicine, 20-21 May 1971. The meeting was organised by Chain and E.J. Stokes and Chain delivered the opening address on 'Thirty Years of Penicillin Therapy' (Bibliog. 149).
- B.73 Correspondence with the Royal Society, July-September 1969, including letter from the Executive Secretary, 3 July, inviting Chain to organise a discussion meeting on the subject of antibiotics.
- B.74 Correspondence with the President of the Royal College of Physicians, July-September 1969, re arrangements for holding a joint meeting with the Royal Society.

Research at Cambridge and Oxford

- B.75, B.76 Correspondence with the Royal Society and others re programme, financial arrangements, invitations to participants, etc., 1970-71.
- B.75 July-December 1970
- B.76 January-May 1971
- B.77-B.80 Correspondence with colleagues invited to attend the meeting. In alphabetical order.
- B.77 B - N
- B.78 P
- B.79 P - S
- B.80 S - W
- B.81 Fragmentary ms. drafts and complete typescript of Chain's paper on 'Thirty Years of Penicillin Therapy'
- B.82 Correspondence re arrangements for publication of contributions to the meeting in Notes and Records of the Royal Society and the Journal of the Royal College of Physicians.
- B.83, B.84 Correspondence with recipients of complimentary copies of Chain's paper on 'Thirty Years of Penicillin Therapy'.
- B.83 B - H
- B.84 R - T
- B.85 Typescript draft describing the early work on penicillin, sent to Chain by the Earl of Halsbury, 1971. The typescript has corrections in Chain's hand.
- B.86-B.88 'The Early Years of the Penicillin Discovery'

This was a talk given by Chain at a symposium on 'Penicillin 1928-78' held at St. Mary's Hospital Medical School, London, 10 November 1978. An edited version of the talk was published in the inaugural issue of Trends in Pharmacological Sciences (TIPS), 1979 (Bibliog. 181).

Continued

Research at Cambridge and Oxford

- B.86-B.88  
(Cont'd.) Chain used the paper as the basis for a more extended version which he gave at the Symposium on the History of Antibiotics, Honolulu, April 1979 (see J.186-J.189).
- B.86 Correspondence with the organiser of the St. Mary's Symposium (A.A. Glynn), April-November 1978. Includes programme and text of Chain's opening remarks.  
  
See also E.86.
- B.87 Typescript of Chain's talk.
- B.88 Correspondence with the Editor of TIPS, November 1978-February 1979.
- B.89 'The Discovery of Penicillin and its Curative Properties'  
  
Ms. and typescript drafts, n.d.
- B.90 Royal Society discussion meeting on 'Penicillin 50 Years After Fleming', 1-3 May 1979. Chain was asked to chair a session.  
  
Correspondence with the organisers and with the Royal Society.
- B.91 'The Early Years of the Penicillin Discovery 1929-1941'  
  
Ms. and typescript of article published in abbreviated form in Trends in Biochemical Sciences (TIBS), 1979, under the title 'Fleming's Contributions to the Penicillin Discovery'. The alterations were made because Chain published a similar article in TIPS at the same time (Bibliog. 181). Folder includes correspondence with O. Hoffmann-Ostenhof and the Editor of TIBS.
- B.92 Fragmentary ms. notes re penicillin, n.d.

Research at Cambridge and Oxford

B.93-B.112 CORRESPONDENCE ON THE HISTORY OF PENICILLIN

Much of the following correspondence consists of comments by Chain on drafts or publications by others. The correspondents are arranged in alphabetical order.

See also K.202.

B.93 Abraham, E. P. April-May 1969

re Abraham's Royal Society Memoir of Florey and the grant application submitted to the Rockefeller Foundation by Florey in 1939.

See also B.107

B.94 Anson, M. L. February 1958

re autobiography of S.A. Waksman.

Auffarth, F. December 1954

Baldry, P. E. June 1977

Comments on Baldry's book 'The Battle against Bacteria'.

B.95 British Broadcasting Corporation May 1970

re script of broadcast for children 'Fleming Discovers Penicillin'. Includes 2 versions of the script.

B.96 Calder, R. (later Baron Ritchie-Calder) October-November 1952

Mainly re review by Calder of biography of Fleming by Ludovici.

B.97 Catherwood, F. (and others) January-July 1977

Comments on the treatment of the penicillin discovery in the John Player Foundation British Genius Exhibition. Includes correspondence with the Exhibition Director and letter to the Editor of The Times.

B.98 Central Office of Information October 1962

Chain's carbon only, commenting on script for film of penicillin story.

Research at Cambridge and Oxford

- B.99 Clarke, E. July 1971-January 1972  
re medal commemorating the introduction of penicillin into therapy and text of proposed accompanying brochure. Includes copy of draft for the brochure and letter from Chain with comments and corrections.
- B.100 Eagle, H. June 1959  
Enebdck, C. April-May 1975  
Includes Chain's brief comments on article by Enebdck on the penicillin discovery.
- B.101 Ford, B. J. July-August 1974  
Comments on reply by Ford to a letter by Chain published in Nature.  
Geissler, E. February 1957  
Howard-Jones, N. July 1974  
Comments on article by Howard-Jones published in World Health.
- B.102-B.105 Macfarlane, R. G. 1976-79  
Correspondence re Macfarlane's biography of Lord Florey ('Howard Florey. The Making of a Great Scientist', Oxford University Press, 1979).
- B.102 June-July 1976
- B.103 January-May 1978
- B.104 December 1978-January 1979  
Includes 6 pp. letter from Chain, 3 January, commenting on draft chapters of the book.
- B.105 Correspondence with the Book Review Editor of Nature, April-May 1979 arising from request to Chain to review Macfarlane's book.

Research at Cambridge and Oxford

- B.106      Marti-Ibanez, F.      November 1958
- Chain's carbon only, commenting on article in MD Medical News Magazine.
- Olby, R.      October-November 1972
- re grant applications by Chain and Florey associated with the penicillin work.
- Ratcliff,      n.d.
- Chain's ms. draft only, commenting on booklet 'The Story of Penicillin'.
- B.107      Rockefeller Foundation      April-May 1969
- Request by Chain for a copy of Florey's original grant application relating to the penicillin work. This is now included in the folder.
- See also B.16.
- B.108      Smithsonian Institution      June-August 1974
- re penicillin exhibit at The National Museum of History and Technology. Includes copy of letter from M. Sela.
- B.109      Trueta, J.      June 1973, June 1976
- re various aspects of the early penicillin history including the circumstances of the first toxicity test on penicillin.
- B.110      Van Heyningen, W. E.      April 1959
- Correspondence arising from a letter from Van Heyningen to The Sunday Times about the part played by other members of the Sir William Dunn School of Pathology in the early penicillin work.
- B.111      Williams, H.      May 1963
- Chain's carbon only.
- Wilson, A. D.      June-July 1971, September 1976
- Includes comments on Wilson's book 'Penicillin in Perspective'.

Research at Cambridge and Oxford

B.112	Wunderlich, G.	March 1969
	Wyatt, H. V.	April-May 1975

Comments on article by Wyatt.

SECTION C      ISTITUTO SUPERIORE DI SANITÀ, ROME C.1 - C.101

C.1 - C.17      CHAIN'S CAREER AT ISTITUTO, 1947 - 65

C.18 - C.27      THE 'MAROTTA CASE', 1965 - 66

With an introductory note

C.28 - C.65      ADMINISTRATIVE CORRESPONDENCE, 1948 - 65

C.28 - C.41      Equipment, supplies

C.42 - C.45      Requests for reprints and information

C.46 - C.53      Staff

C.54 - C.65      Requests to visit/work in Chain's laboratory

C.66 - C.78      RESEARCH PROJECTS

C.79 - C.101      LECTURES AND CONFERENCES

With an introductory note

Istituto Superiore di Sanità, Rome

C.1-C.17 CHAIN'S CAREER AT ISTITUTO, 1947-65

C.1 Letter from Madame Bovet, 10 May 1947, on research plans and hopes for collaboration with Chain at Istituto in Rome.

C.2 Draft letter of appointment to direct Laboratory of Biological Chemistry and conduct a course of lectures at Istituto for one year 1 October 1948-September 1949.

C.3 Miscellaneous plans for equipment at Istituto.

Includes 5 pp. ms. 'Suggestions for the equipment of a laboratory for studies on penicillin fermentation', by Chain.

3 pp. 'List of items shipped ...'

List of Chain's journals.

C.4-C.9 Correspondence, January-October 1948

This is a sequence of carbon copies only of Chain's correspondence on all topics for this period.

The main theme is Chain's forthcoming appointment to the Istituto from 1 October, with arrangements for terms of contract, building, equipment and supplies, books and journals for the laboratory, and removal arrangements for Chain, his cousin Mrs. Sacharina, and his technician D. Callow who accompanied him on secondment.

There is also general scientific correspondence on theses, lectures, visits to several countries to advise on penicillin production, consultancies, patent rights, publications.

C.4 January (1 letter only), March 1 (1 letter only), April

C.5 May

C.6 June

C.7 July Includes letter, 5 July, on acquired resistance of bacteria to penicillin.

C.8 August

C.9 September-October

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- C.10, C.11 Correspondence with editors, journalists and authors re articles or information on Istituto and on Chain's research centre.
- C.10 1951-53
- C.11 1955-59
- C.12 2 typescript drafts on Istituto, its work and personnel, n.d.  
  
In original folder inscribed 'Manoscritto del Film sull' Istituto' and perhaps intended as commentary to film.
- C.13 'My activities at the Istituto Superiore di Sanità - a brief survey'  
  
Typescript prepared by Chain for R.P. Linstead (Rector, Imperial College), May 1958, 11 pp.  
  
There is another copy at D.8.
- C.14 Correspondence and informal writings by Chain describing work at Istituto.  
  
Includes ms. drafts for letters written from Rome to Weizmann (1948), McKenzie, Williams (1949) describing life and work.  
  
8 pp. ms. speech (in Italian) welcoming guests at a party at home and describing work, n.d., but on first birthday of son.  
  
3 pp. typescript speech welcoming guests at a dinner given at Chain's home for retirement of Marotta and appointment of Giacomello as his successor, n.d., c.1962.  
  
1 p. undated note on reorganisation required.
- C.15 Correspondence, October 1963-June 1964, re an article published 11 August 1963 in L'Espresso alleging irregularities in the financing and patenting of Chain's research. Correspondence is with solicitors in London and Rome and includes drafts of withdrawal statement to be published in journal. Letter of 1 April 1964 gives details of Chain's appointments and research as consultant to Beechams from 1956.

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- C.16 Correspondence re Chain's move to Imperial College, London, 1960-65.

Includes copy of Chain's letter to Marotta, February 1960, explaining his move to Imperial College (scheduled for 1 October 1961), letters exchanged on resignation from contract with Istituto, January 1965, and shorter correspondence re termination of residence in Italy.

See D.41 for arrangements for Chain's removal to London.

- C.17 Personal letters from former Italian colleagues and friends, 1964-79.

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C.18-C.27 THE 'MAROTTA CASE', 1965-66

In 1964 Domenico Marotta, founder of the Istituto Superiore di Sanità and its head until his retirement in 1963 (see C.14), was prosecuted on various charges of malfeasance and misappropriation of funds. The trial lasted over eight months and in July 1965 Marotta, then almost eighty, was found guilty and sentenced to six years and eight months in prison. Among others charged with similar offences were Giordano Giacomello, Marotta's successor as head of the Istituto, who received a sentence of three years, five months, and Italo Domenicucci, sentenced to six years, five months.

When the case was heard, Chain was at Imperial College, London. He offered to give evidence but was not called; an expression of sympathy in a letter to Domenicucci's wife, however, was quoted by the public prosecutor, Renato Ricciardi, who went on to accuse Chain of contempt of the judiciary. A prosecution was set in train, and counsel engaged, but the charges were dropped under an amnesty declared in May 1966 as part of the celebrations of the twentieth anniversary of the Italian Republic.

Chain's anger and distress at the proceedings against both Marotta and Giacomello arose not only from his personal regard for them but because part of the funds allegedly misappropriated by them were his own research grants from American sources which were administered as a matter of form by the Director in place.

The material includes correspondence with lawyers, friends and colleagues, press-cuttings, and legal depositions. It runs in a roughly chronological sequence from February 1965 to May 1966.

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- C.18 Correspondence, February-May 1965, with Domenicucci. Letter of 6 April includes official statement of charges against all the accused.
- C.19 Correspondence and papers, June, including Chain's telegram of protest sent to Prosecuting Counsel and others, correspondence with lawyers and colleagues, press-cuttings on the subject, copy of Prosecuting Counsel's statement on defamatory nature of telegram.
- C.20 Papers, July, including copy of part of concluding speech by Prosecuting Counsel with accusations against Chain, press-cuttings and articles.
- C.21 Copies of defence submissions by A. Sorrentino (for Marotta) and L. Salerni (for Domenicucci). July.
- C.22 Correspondence re Chain's prosecution for 'oltraggio', July-August. Includes press-cuttings and ms. draft letter by Chain to Editor, Corriere della Sera, re article published on 30 July.
- C.23 Correspondence and papers, September, with E. Trabucchi, re articles on the case and enclosing ms. and typescript drafts of Chain's 'Sequence of events which led to my scientific activities in Italy at the Istituto Superiore di Sanità'.
- C.24 Correspondence and papers, August-October, re a letter submitted for publication on the case in The Times, but not accepted. Includes various ms. and typescript drafts.
- C.25 Correspondence and papers, November, re articles and press comment on the case, and re engagement of counsel for Chain.
- C.26 Continuing correspondence, December 1965-February 1966, re legal representation, and draft letter from Chain to Giacomello.
- C.27 Correspondence, May 1966, including material re amnesty, as a result of which charges were cancelled.

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C.28-C.65 ADMINISTRATIVE CORRESPONDENCE, 1948-65

- C.28 - C.41 Equipment, supplies, books and journals, specimens, apparatus
- C.42 - C.45 Requests for reprints and information
- C.46 - C.53 Staff
- C.54 - C.65 Requests to visit/work in Chain's laboratory, letters of thanks

Each sub-section follows a roughly chronological sequence including correspondence (not always complete), invoices, drawings, etc.

C.28-C.41 EQUIPMENT, SUPPLIES, ETC., 1948-63

- C.28 1948
- C.29 1949
- C.30 Drawings of fermenters of various capacities, executed at Milan 1948-49, perhaps for Istituto.  
  
Also included are two drawings of perfusion pumps, National Institutes of Health, 1950.
- C.31 1950
- C.32 1951, 1952 (mainly Chain's carbons)
- C.33 1951-53, with Walter J. Johnson Inc., re books and journals.
- C.34 1953
- C.35 1954, with Shandon Scientific Co.
- C.36 1954, 1955 (one letter only)
- C.37 1956-59, with Walter J. Johnson Inc., re books and journals.

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- C.38 1957-58
- C.39 1959. Includes correspondence with Packard Instrument Co. re possible manufacture of electronic scanner developed in Istituto.
- There is no surviving material for 1960.
- C.40 1961-62
- C.41 1963 and undated
- C.42-C.45 REQUESTS FOR REPRINTS AND INFORMATION, 1949-63
- C.42 1949-54
- C.43 1955-58
- C.44 1959-61
- C.45 1962-63
- C.46-C.53 STAFF, 1949-65

Correspondence re research students, visiting scientists, sponsored research fellows accepted or recommended for work with Chain at Istituto. May include references, scientific exchanges, later career, reports on work, etc.

N.B. Much of the correspondence is Chain's carbons only.

- C.46 1949-52
- C.47 1953
- C.48 1954
- C.49 1955-59
- C.50 1960-61
- C.51 1963
- C.52 Miscellaneous general correspondence about staff, promotions, publications, payment of grants, etc. (many Chain's carbons only). Various dates, 1951-65.

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C.53 Miscellaneous information, press releases, etc. re award of Nobel Prize for physiology and medicine to D. Bovet, 1957.

C.54-C.65 REQUESTS TO VISIT/WORK IN CHAIN'S LABORATORY, 1949-65

The facilities of Chain's department at the Istituto, and the research projects under way there, attracted a continuous stream of visitors and of applicants to work there. Successful applicants, or those sponsored by specific research grants, are included under 'Staff' in C.46 - C.53 above, but the full extent of the demand to participate in Chain's research can be better gauged from the folders below. In addition to prospective students, the correspondence also emanates from firms, government and university laboratories, organisations, publishers and journalists, and from established scientists many of whom were or became friends who made several visits to the Istituto over the years.

The material ranges from single letters of application to more substantial exchanges including travel arrangements, publication of results and letters of thanks for hospitality both in the laboratory and at home. There are several examples of Chain's wish to accept students from Eastern Europe and from developing countries.

Attention is drawn to similar material in D.112 - D.123 where Chain's Department of Biochemistry at Imperial College, London, also rapidly developed into an international centre of attraction for research.

The General Correspondence in Section K also includes many references to visits to Rome. 1949-50

- C.54 1949-50
- C.55 1951-52
- C.56 1953
- C.57 January-June 1954
- C.58 July-December 1954

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- |                               |  |
|-------------------------------|--|
| C.59                          | 1955                                       |
| C.60                          | 1957 (Four only remain)<br>March-June 1958 |
| C.61                          | July-November 1958                         |
| C.62                          | 1959                                       |
| No material survives for 1960 |  |
| C.63                          | 1961                                       |
| C.64                          | 1962                                       |
| C.65                          | 1963-65                                    |

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C.66-C.78 RESEARCH PROJECTS

This is the surviving material among Chain's papers. Many other lines of research were pursued under his direction but no documentation remains other than published papers.

- C.66 Hard-cover notebook inscribed on front cover 'John H. Daymond. Chimica Biologica. 1956'

Daymond was Chain's technician during part of his time in Rome. The front two-thirds of the notebook contains records of a series of 104 aeration experiments, January-October 1956, while the remainder is mostly taken up with analyses of various substances, September 1956-January 1957. There are also a few loose pages of notes (some in Chain's hand) and printed matter tucked inside the notebook at various points.

- C.67 Correspondence and papers re application for grants from United States Army Research and Development Liaison Group, 1957.

The projects were: 'To study the intermediate metabolism in higher animals to elucidate the mode of action of regulatory substances'; and 'To study the intermediate metabolism of microorganisms'.

Includes various drafts of submission of plans of research, budgets, etc.

- C.68 Letter re application to Division of Virology and Epidemiology, National Foundation, New York, re grant application, January 1959.

(Chain's carbon only. No other documentation remains.)

- C.69 Correspondence and papers re application for grant from National Institutes of Health, U.S.A., 1962-64.

The project was on 'Carbohydrate and amino acid interrelations in brain', in collaboration with M. Cohen of Minneapolis.

Includes grant application, reports on research, financial and travel arrangements.

See also K.35-K.38

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- C.70 Correspondence and papers re application for grant from United States Department of Agriculture, European Regional Research Office, 1963.
- The project was on 'Investigation of aerobic fermentation processes by measurement of the effect of differences in vessel size and mechanical agitation on the concentration of dissolved oxygen'.
- Includes budget, final report.
- C.71 'Aeration Studies IV: Aeration conditions in submerged fermentations with different microorganisms in 3000 litre fermenters'.
- Collaborative paper with G. Gualandi and G. Morisi, published with slightly different title in Biotechnology and Bioengineering, 8, 1966 (Bibliog. 119).
- Draft of paper, earlier version probably given as conference paper, editorial correspondence 1965-66.
- C.72-C.76 Miscellaneous reports and notes on research. (Few dated or signed and perhaps not all by Chain.)
- C.72 'Chemical questions' and 'biological questions' to be answered on penicillin, with bibliography (latest date 1947).
- C.73 Research note on use of fibreglass as filter, and possible patent.
- C.74 'Notes' by Chain for a discussion group on penicillin resistant staphylococci.
- C.75 'Un isolatore per singole spore'.
- C.76 Report on fermentation research, November 1961-February 1962, and programme of work for March-June 1962.
- C.77 13 pp. typescript in Italian describing experiments with fermentation processes, n.d. Includes 'Discussione' and was probably a conference paper.
- C.78 Miscellaneous shorter unidentified ms. notes, almost all on Istituto headed jotter pads, some in numbered sequences, on various topics of research, equipment, conference notes, notes on the literature, etc.

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C.79-C.101 LECTURES AND CONFERENCES

These were an important aspect of Chain's work in Rome. They had a dual purpose: on the one hand to attract scientists of international reputation to visit the Istituto for 'in-house' lectures and thereby keep its members in touch with the latest research ideas; and on the other, by these personal contacts and by the organising (in collaboration with the Director, D. Marotta) of major international conferences and symposia, to make more widely known the resources available in Rome for fermentation studies, the successful research projects undertaken and the results obtained.

The inauguration of the fermentation pilot plant in 1951 was marked by a major symposium on fermentation biochemistry held under the auspices of the Istituto and the World Health Organisation (C.93), and throughout the 1950s there was a succession of such events in addition to invitation lectures on a smaller scale.

Some account of this effort to strengthen the international contacts of the Istituto is given in Chain's paper at C.23, 'Sequence of events which led to my scientific activities at the Istituto Superiore di Sanità'. Many of the letters of thanks, like the requests to visit or work at the Istituto at C.54 - C.65 above, testify to its success.

The material is presented as follows:

C.79 - C.92 LECTURES

An alphabetical sequence with scientific colleagues invited by Chain to lecture at the Istituto, and which may include travel arrangements, personal and scientific correspondence, texts or translations of lectures, etc.

C.93 - C.101 CONFERENCES

A chronological sequence on major conferences and symposia, similar to above but involving a wider range of international activity.

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C.79-C.92

LECTURES

See also E.96, K.187, K.251.

C.79

Anfinsen, C. B.

Chain's introductory remarks, n.d.

Berenblum, I.

'Biological and metabolic aspects of skin carcinogenesis',  
June 1958.

Telegram, 15 pp. typescript of lecture.

C.80

Calvin, M.

'Il ciclo fotosintetico', December 1955.

Correspondence, 42 pp. typescript. Italian translation of  
lecture and 1 p. introductory remarks.

C.81

Dickens, F.

Correspondence only, 1957.

C.82

Dodds, E. C.

'Specificità nel campo di azione degli ormoni', April 1955.

Correspondence, 1954-55.

Also included is material relating to 'Hormone analogues - a new  
Phase', lecture delivered by Dodds at Bologna, May 1958;  
English text, Italian translation with many ms. corrections by  
Chain, revised version of translation.

C.83

Holter, H.

Correspondence 1954-55 re lecture on cytochemical microtechniques.

C.84

Krebs, H. A.

'The control of metabolic processes', October 1956.

Correspondence, Chain's introductory remarks, 16 pp. typescript  
English text, 12 pp. Italian translation.

C.85

Martin, A. J. P.

'Gas-liquid chromatography', February 1955.

Correspondence, 17 pp. typescript English text.

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- C.86 Neuberger, A.  
'Biosintesi della porfirina', June 1959.  
Correspondence, 13 pp. Italian translation.
- C.87 Rideal, E. K.  
'Moonlayers and some biological implications', April 1958.  
Correspondence only.
- C.88 Thompson, H. W.  
'Some recent applications of infra-red spectroscopy to chemical problems', March 1956.  
Correspondence, outline of lecture.
- C.89 Tiselius, A.  
'Alcuni recenti progressi nella cromatografia e l'elettroforesi delle proteine e dei polipeptidi', April 1955.  
Brief correspondence, notice of lecture only.
- C.90 Warburg, O.  
Correspondence re lecture scheduled for May 1955, but perhaps not delivered.
- C.91 Windeyer, B. W.  
'Medical aspects of the nuclear age', May 1959.  
25 pp. typescript English version, correspondence.
- C.92 Young, F. G.  
'Alcuni aspetti della biochimica dell' insulina', February 1958.  
Correspondence, notice of lecture only. See also K.283.
- C.93-C.101 CONFERENCES AND SYMPOSIA
- C.93 'Bacterial Growth and its Inhibition', inaugural Symposium of International Research Centre of Chemical Microbiology (at Istituto), June 1951.  
Includes 4 pp. ms. preliminary notes by Chain on organisation, funding, invitations, etc., and miscellaneous other notes.  
Chain's introductory address 'Aims and functions of the International Research Centre of Chemical Microbiology'.  
3 pp. later note by Chain on the Centre.

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- C.94 Minutes of Departmental Meeting, February 1952, with a list of personnel and account of research in hand.
- C.95, C.96 Sixth International Congress of Microbiology, Rome, June 1953.
- C.95 Correspondence with colleagues re organisation and invitations, 1952.
- Chain's introductory remarks welcoming members to Third Symposium (on Microbial Metabolism).
- Press-cutting on published reports (1954).
- Shorter correspondence re publication.
- C.96 Correspondence arising from Congress, with R. Cruickshank re possible discussion group on 'air hygiene', with P. Hauduroy re meeting of Sub-Committee of International Society of Microbiology held during Rome Congress, and with S. Aji re Seventh Congress held in Moscow 1956.
- C.97-C.99 Commemoration of centenary of death of Amadeo Avogadro, June 1956.
- The celebrations were organised by the Accademia dei XL; L. Pauling and C.N. Hinshelwood gave addresses and were awarded Avogadro Medals, the first recipients of this newly-instituted honour. Chain wrote to several colleagues in Britain, U.S.A. and France requesting their participation and also arranging visits or lectures at the Istituto.
- C.97 Letters to colleagues re celebrations, publicity arrangements.
- C.98 Correspondence with C.N. Hinshelwood, English and Italian texts of his address.
- C.99 Correspondence with L. Pauling, English and Italian texts of his address, lecture notice and summary only of Pauling's lecture at the Istituto during his visit, on 'Emoglobine anormali in rapporto alle malattie'
- C.100,C.101 First International Symposium on Fermentation, May 1960, held at Istituto and sponsored jointly by Istituto, American Chemical Society and Società Chimica Italiana.
- C.100 Correspondence with colleagues inviting them to attend or read papers at Conference (almost entirely Chain's carbons only), 1959.
- Chain's speech of welcome, 16 pp. typescript.
- C.101 Printed programme, and account of Symposium.

<u>SECTION D</u>	<u>IMPERIAL COLLEGE, LONDON D.1 - D.168</u>
D.1 - D.42	APPOINTMENT TO THE CHAIR OF BIOCHEMISTRY AT IMPERIAL COLLEGE Correspondence and papers, 1953-64
D.43 - D.74	RETIREMENT AND THE FUTURE OF THE DEPARTMENT Correspondence and papers, 1972-79 With an introductory note
D.75 - D.123	DEPARTMENT OF BIOCHEMISTRY, ADMINISTRATIVE CORRESPONDENCE, 1961-78 D.75 - D.87 Building and equipment D.88 - D.99 Funding D.100 - D.111 Staff D.112 - D.123 Requests to visit/work in Chain's laboratory
D.124 - D.153	DEPARTMENT OF BIOCHEMISTRY, RESEARCH AND TEACHING, 1962-79
D.154 - D.168	GENERAL CORRESPONDENCE ON DEPARTMENTAL AND COLLEGE AFFAIRS

Sections E and F contain considerable additional material relating to research grants awarded to the Department of Biochemistry during this period. See especially E.25, E.39 - E.43, E.57, E.61 - E.63, E.96 - E.112, E.120, E.124-E.129, E.190, E.195, F.121-F.168 passim, F.260, F.314ff., F.330

For research projects undertaken by the Department of Biochemistry on behalf of various industrial firms, see F.182, F.282ff., F.312, F.313, F.343, F.344.

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- D.1-D.42 APPOINTMENT TO THE CHAIR OF BIOCHEMISTRY AT IMPERIAL COLLEGE
- Correspondence and papers, 1953-64.
- D.1-D.5 Preliminary negotiations, 1953-56
- D.1 Correspondence with P.M.S. Blackett, 1953-54. 1953 correspondence is re arrangements for Chain to visit Imperial College with a view to having a general discussion with the Rector (R.P. Linstead) and others re the need for developing the study of applied microbiology in England, with particular reference to Imperial College.
- D.2 Correspondence with D.M. Newitt, October-November 1953, re arrangements for a visit to Chain's laboratory in Rome.
- D.3 Letters from I. Heilbron and E.C. Dodds, 1955, reporting on conversations with Blackett and Linstead re future developments at Imperial College.
- D.4 'Memorandum on a project of an Institute for General and Applied Biochemistry at Imperial College'
- 2 typescript drafts and 6 pp. ms. notes for detailed prospectus setting out requirements of space, staffing and equipment, sent to Blackett and Linstead in January 1956 (see D.5).
- D.5 Correspondence with Blackett and Linstead re Chain's memorandum, January-May 1956.
- D.6-D.19 Correspondence leading to official appointment, 1957-59
- D.6 Correspondence with Linstead, 1957. Includes 6 pp. letter from Chain, 3 October, with detailed comments on his 1956 memorandum.
- D.7 Correspondence with Linstead, April-June 1958. Invitation to Chain to be considered as a candidate for the Chair of Biochemistry and further correspondence re requirements of space, staffing, equipment, etc.
- D.8 11 pp. typescript 'My activities at the Istituto Superiore di Sanità' and 1 p. curriculum vitae prepared in connection with Chain's candidacy for the Chair of Biochemistry.
- There is another copy at C.13.

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- D.9 Letter from Linstead, 11 July 1958, conveying offer of the Biochemistry Chair and Chain's provisional letter of acceptance. Includes letter from H.A. Krebs urging Chain to consider the proposition very seriously, telegram re arrangements for meeting with Linstead for further discussions, and ms. notes + photograph re plans for new Department of Biochemistry at Imperial College.
- D.10 2 letters from M. Beloff, July and October 1958, re possible sources of financial support for the Imperial College project.  
  
See also K.49ff.
- D.11 Correspondence with Linstead, September-December 1958, re detailed administrative arrangements for the proposed new Department of Biochemistry at Imperial College. Includes drafts of grant application to the Wolfson Foundation and discussion of other possible sources of finance.
- D.12 Letters to Lord Nathan and L. Wolfson, October 1958-January 1959, re grant application to the Wolfson Foundation.
- D.13 Correspondence with Linstead, January-June 1959, mainly re progress of grant applications.
- D.14 Correspondence with Lord Falmouth (Chairman of the Board of Governors of Imperial College), February-March 1959, re arrangements for a visit to Chain's laboratory in Rome.
- D.15 Correspondence with Blackett re draft of grant application to the Department of Scientific and Industrial Research (D.S.I.R.), April 1959.
- D.16 3 pp. typescript note by H. Redman of a meeting with Nathan, J.D. Cockcroft and Linstead, 18 June 1959, to discuss the proposed Wolfson Foundation grant to Imperial College.  
  
Copy of letter to Redman from the Secretary, Imperial College, 2 July 1959, outlining draft heads of agreement with the Wolfson Foundation.
- D.17 Correspondence with Linstead, August-December 1959. Includes typescript drafts on 'Recent Developments in the Penicillin Field' (re isolation of the nucleus of the penicillin molecule) and a biographical outline, both prepared as source material for press releases announcing Chain's official appointment to the Biochemistry Chair at Imperial College.

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- D.18 Correspondence with Lord Nathan, August-December 1959, mainly re final negotiations with the Wolfson Foundation and Imperial College. Includes draft of Press Release announcing Chain's official appointment.
- D.19 Correspondence with the Secretary, Imperial College, October-December 1959, re formalities leading to Chain's official appointment, arrangements for the press release, etc.
- D.20-D.42 Official appointment and related correspondence, 1960-66
- D.20 Official letter of appointment to the Chair of Biochemistry, 25 January 1960, and Chain's letter of acceptance.
- Folder also includes miscellaneous related press-cuttings and printed matter.
- See also A.110.
- D.21-D.26 Letters of congratulation on Chain's appointment.
- |      |   |
|------|---|
| D.21 | B - F   |
| D.22 | G - K   |
| D.23 | L - P   |
| D.24 | R - W   |
| D.25 | Friends and first name signatures (not indexed) |
| D.26 | Publishers, firms, organisations (not indexed)  |
- D.27 Copy of letter from Chain to I. Wolfson, 30 January 1960, expressing thanks for the Wolfson Foundation's contribution to the Imperial College project.
- D.28-D.31 Correspondence with Linstead, 1960-66, re a wide range of administrative matters connected with the building and setting up of the new Biochemistry Department.
- |      |                             |
|------|-----------------------------|
| D.28 | 1960                        |
| D.29 | 1961-62                     |
| D.30 | 1963 (Chain's carbons only) |

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- D.31 1964-66  
Includes brief correspondence re conferment of Associateship of the Royal College of Science, honoris causa, 1966.
- D.32 2 letters from the Secretary, Imperial College, September-December 1960, re implications of decision to abandon plans for adapting the existing Royal College of Science Building to provide accommodation for the Departments of Chemistry and Biochemistry in favour of erecting a completely new building on the site of the old one.  
  
Draft press release re building plans, 18 January 1961, is also included in the folder.
- D.33 Correspondence with Lord Nathan, 1961-63, re building arrangements, funding, etc.
- D.34-D.37 Correspondence with Chain's Secretary at Imperial College, December 1961-March 1964.
- D.34 1961-62
- D.35 1963
- D.36 1964
- D.37 Another sequence, mainly duplicates, much less complete.
- D.38 Correspondence with the Office of the Minister for Science, 1961, in reply to a request for an outline of Chain's proposed research programme and his views on the current position of British research in microbiology and biochemical engineering.
- D.39 Copy of Press Release announcing approval by the University Grants Committee of space and cost estimates for the new biochemistry building at Imperial College to incorporate the Wolfson Laboratories and a fermentation pilot plant, 26 June 1962.  
  
Included here are 2 pp. undated typescript notes re the fermentation pilot plant.

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- D.40 Several drafts of Press Release announcing the award of the D.S.I.R. grant for the running expenses of the Department of Biochemistry, June 1963.
- D.41 Correspondence with Imperial College and various removal firms re estimates of cost for removal of Chain's household goods from Rome to London, 1964.
- D.42 Ms. draft outlining the history of the Biochemistry Department at Imperial College with a description of the facilities offered by the new Biochemistry building, n.d., c.1965-66.
- The draft is written on pages torn from a notebook (numbered 1-11) and is prefaced by 2 pp. unrelated notes.
- See A.224 for an album of photographs commemorating the opening of the Department.

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D.43-D.74            RETIREMENT AND THE FUTURE OF THE BIOCHEMISTRY  
DEPARTMENT

Correspondence and papers 1972-79.

Chain's last years at Imperial College were marred by a violent controversy over the future of the Biochemistry Department which involved two successive Rectors of the College, two Chairmen and other members of the Board of Governors, two Vice-Chancellors of the University and various legal advisers and scientific colleagues.

Part of the controversy centered around the circumstances of a gift of £50,000 originally made by Lord Rank in 1967 (see F.316) for the establishment of a second Chair of Biochemistry in Chain's department. At the time, the College was unable to find the additional money needed for the financing of a Chair so, with Lord Rank's agreement, it was arranged that the money would be made available to Chain through the College for research Fellowships. Chain used only the interest for this purpose, leaving the principal intact, and at the beginning of 1973 he approached the Rank Trustees for a further donation of £50,000 in order to make up the amount needed for the endowment of a second Chair.

It was Chain's wish that the Rank Chair should be in the field of physiological biochemistry while his own successor as Professor and Head of the Biochemistry Department should be a chemical microbiologist, thus ensuring the continuation of his own main areas of research. After considerable correspondence with the Rector and others about suitable candidates for the two Chairs the posts were advertised in September 1973. B. Hartley (a molecular biologist) was appointed as Chain's successor (and Head of Department) in January 1974 and the Rank Chair was filled a year later by E.A. Barnard.

Chain bitterly contested both these appointments which he thought were contrary to the interests of the Biochemistry Department, since they would almost inevitably foreshadow the running down of the fermentation pilot plant, and he also considered them to be a misuse of the funds which he had obtained for the endowment of the Rank Chair. The controversy continued until 1978 and was only finally resolved through the intervention of a legal adviser.

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- D.43 Correspondence with Lord Penney (Rector of Imperial College 1967-73 in succession to R.P. Linstead) and others, January-March 1972, re arrangements for the future of the Biochemistry Department.
- D.44 9 pp. typescript on 'Future Contributions from Biochemistry to the Advancement of Medical Research', March 1972.
- D.45 Correspondence with Lord Penney and others, June-December 1972.
- D.46 'The case for the endowment of a second Chair of Biochemistry, for the subject of Physiological Biochemistry at Imperial College'
- 9 pp. typescript, n.d., but folder also contains letters to A. Spicer and R.S. Edwards forwarding copies of the memorandum, 9 January 1973.
- D.47 Correspondence with A. Spicer and J.D. Hutchison, January-April, 1973, re Chain's application to the Rank Trustees for funds to make up the amount needed in addition to the original Rank benefaction for the endowment of a second Chair.
- D.48-D.50 Correspondence with Lord Penney, January-July 1973.
- D.48 January-April  
Includes comments on the progress of negotiations for the endowment of a second Chair.
- D.49 May  
Includes further correspondence re negotiations with the Rank Trustees.
- D.50 July  
Includes draft letter from Penney to the Principal, University of London, requesting approval for the establishment of the Rank Chair.
- D.51 Correspondence and drafts re advertisements for both Chairs, August-September 1973.
- D.52 Correspondence re arrangements for public announcement of the institution of the Rank Chair of Physiological Biochemistry, 1 October 1973.

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- D.53 Correspondence re use of monies remaining from research grants made to Chain by various firms and organisations, and letter from Penney, 27 September 1973, offering Chain a Senior Research Fellowship tenable for 3 years from 1 October 1973 on his retirement as Head of the Biochemistry Department.
- D.54 Correspondence with colleagues re the appointment of Chain's successor, November-December 1973 (mainly Chain's carbons only).
- D.55-D.69 Extensive correspondence with Sir Brian (later Lord) Flowers, (Penney's successor as Rector of Imperial College from October 1973), the Chairman and members of the Board of Governors and others, following the appointment of B. Hartley as Chain's successor in January 1974. The sequence includes several drafts of a detailed memorandum sent to Lord Goodman in October 1974 (see D.61-D.64) putting forward Chain's view of the controversy. The correspondence continues to 1976 (but see also D.70-D.72).
- D.55 1974  
January  
Includes minutes of a Special Biochemistry Departmental Committee Meeting, 9 January.
- D.56 February-March
- D.57 April
- D.58 May
- D.59 June-July
- D.60 October-December
- D.61-D.64 'Biochemistry at Imperial College. History and Outlook'  
Drafts for paper prepared by Chain giving his views of the matter, the final version of which was sent to Lord Goodman on 28 October 1974 (see letter in D.60).
- D.61 Ms. and typescript draft with additional ms. fragments.
- D.62 28 pp. typescript with ms. and typescript additions.

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- D.63 Another copy of D.62 incorporating the additional material with some further corrections.
- D.64 35 pp. typescript, final version, dated 27 October 1974.
- 1975
- D.65 January-March
- D.66 April-May
- D.67 June-November
- 1976
- D.68 January-March
- D.69 April-July
- D.70-D.72 Correspondence with S. Berwin of Berwin Leighton (solicitors), April 1976-August 1977. The correspondence opens with a long letter from Chain listing several letters and memoranda most of which are now among the papers in D.43-D.69 (but see also F.316-F.318). See also D.73.
- D.70 April-July 1976
- D.71 September 1976-January 1977
- Mainly copies of correspondence between Berwin and Flowers. Two letters from D.H.R. Barton are also included.
- D.72 April-August 1977
- Includes further copies of correspondence with Flowers and several drafts of arrangement between Chain and Imperial College, the final version of which was accepted by him in July 1977.
- D.73 Correspondence with Flowers and others, November 1975-October 1976, arising from Chain's request for the renewal of his Senior Research Fellowship after its expiry in September 1976.
- D.74 Correspondence re award of Honorary Fellowship to Chain, December 1977. The official award was made on 26 October 1978. Brief correspondence re continuation of secretarial arrangements after the academic year 1978-79 is also included here.

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- D.75-D.123 DEPARTMENT OF BIOCHEMISTRY, ADMINISTRATIVE CORRESPONDENCE, 1961-78
- D.75 -D.87 Building and equipment
- D.88 -D.99 Funding
- D.100-D.111 Staff
- D.112-D.123 Requests to visit/work in Chain's laboratory
- See also D.28-D.37
- D.75-D.87 BUILDING AND EQUIPMENT
- D.75 'List of Rooms in Biochemical Department of Pilot Plant'
- Schedule of space requirements, in English and Italian, n.d., but possibly connected with early plans for Biochemistry Department at Imperial College.
- D.76 Set of plans for expansion of Biochemistry Department at Imperial College dated 14 January 1959, and brief correspondence with the Planning Office, December 1958, re space needed for fermenters.
- D.77-D.79 Correspondence with Imperial College Planning Office, February 1960-May 1963, re details of building plans and equipment.
- D.77 February-December 1960
- D.78 March-October 1961
- D.79 May 1962-May 1963 (Chain's carbons only)
- D.80-D.83 Correspondence with Architects' Co-Partnership, June 1960-April 1963.
- D.80 June 1960
- Brief correspondence with A.W. Cox re arrangements for visit to Rome. Schedule of rooms in the Biochemistry Building, November 1960, is also included here.

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- D.81                    March-December 1961
- D.82                    January 1962-April 1963  
                              (mainly Chain's carbons only)
- D.83                    Architects' drawings for the internal layout of  
                              the Biochemistry Building.
- D.84                    Correspondence with engineers and contractors, 1961-63.
- D.85-D.87            Equipment, library books, etc., correspondence and  
                              schedules, 1960-64.
- D.85                    1960
- D.86                    1961-62
- D.87                    1963-64

D.88-D.99            FUNDING

The following papers relate mainly to two major initial grants towards the setting up of the Biochemistry Department, from the Department of Scientific and Industrial Research and the University Grants Committee. Pre-1960 correspondence re grant applications, including the grant awarded by the Wolfson Foundation in 1959, is to be found passim in D.1 - D.42.

Also included here is correspondence re a further application to the U.G.C. in 1966 and drafts of a letter to The Times on the general problem of the funding of scientific research.

Correspondence re subsequent grants for research in the Department of Biochemistry is at D.124ff. There is a list of references to grants in other parts of the collection at the beginning of Section D.

- D.88                    Correspondence with Imperial College re grant application  
                              to D.S.I.R., 1960. Includes copy of application,  
                              February 1960, and of Addendum submitted in April.
- D.89                    Drafts and background material for the Addendum to the  
                              D.S.I.R. application.

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- D.90 Further correspondence re D.S.I.R. grant, 1962-63 (Chain's carbons only), including 7 pp. letter, 18 May 1962, with detailed replies to points raised by D.S.I.R.
- D.91 Correspondence with E. Lester Smith (Assessor) re grant application to the University Grants Committee (U.G.C.), March-April 1963. Includes an earlier letter from the Registrar, Imperial College.
- D.92 Ms. drafts and typescript lists of requirements for equipment and staff, prepared for U.G.C., May 1963.
- D.93 Draft equipment schedule prepared by Imperial College for submission to U.G.C., June 1963.
- D.94 Correspondence with the Secretary and the Financial Secretary, Imperial College, 1963-64 (mainly Chain's carbons only). Includes arrangements for press releases re grants from D.S.I.R., M.R.C., Fleming Memorial Fund and U.G.C.
- D.95 Copy of assessors' report, July 1966, on application by Chain to U.G.C. for a further grant for capital equipment, and brief correspondence arising. The report recommended an award of less than one third of the total amount requested.
- D.96 Correspondence with O.A. Saunders (Acting Rector, Imperial College 1966-67) re Chain's U.G.C. application, October 1966-January 1967, including copies of letters exchanged between Saunders and the Chairman of U.G.C.
- D.97 Further correspondence with Saunders, February-August 1967, mainly re the financial implications of U.G.C.'s decision.
- D.98 3 letters to P.M.S. Blackett, 10 May 1967, re the possibility of obtaining a special grant from the Ministry of Technology, with a brief reply from Blackett, 23 May.
- D.99 Drafts for letter to The Times signed by Chain and six other members of Imperial College, July 1967, re government limitations on university equipment grants, related press-cuttings from other newspapers, drafts for letter to the Daily Telegraph, and correspondence arising, July-August 1967.

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D.100-D.111 STAFF

The majority of the following papers relate to Chain's initial search for staff during the setting up of the Biochemistry Department and includes some unsolicited letters of invitation as well as routine job applications and letters of recommendation from colleagues. The picture is far from complete (see especially 1963 correspondence which is mostly Chain's carbons only), but it is nevertheless interesting.

The remainder of the section contains some rather scanty correspondence with and re research students, visiting scientists, etc. accepted or recommended for work at Imperial College, 1963-76.

- |             |  |
|-------------|--|
| D.100       | February-March 1960  |
| D.101       | April-November 1960  |
| D.102       | 1961   |
| D.103       | 1962   |
| D.104       | 1963 (Chain's carbons only, with 2 exceptions)   |
| D.105       | Copies of letters answering advertisements for posts in <u>Nature</u> and other journals, April 1963.                                |
| D.106-D.108 | Research students, etc. accepted or recommended for work at Imperial College, 1963-76.<br>For material on W.H.O. Fellows, see E.235. |
| D.106       | 1963-67  |
| D.107       | 1968-71  |
| D.108       | 1969-76  |
| D.109       | Shorter correspondence <u>re</u> staff salaries, promotions, etc., 1964-74.<br>See also D.126, D.127, D.128.                         |

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- D.110 Drafts and brief correspondence re advertisements for staff in the Department of Biochemistry, 1967-72.
- D.111 Information or requests for advice re posts in other universities or laboratories, 1963-74.

D.112-D.123 REQUESTS TO VISIT/WORK IN CHAIN'S LABORATORY

As in Rome, the research and facilities, in particular the fermentation pilot plant, attracted a large number of visitors and requests to work there. Unfortunately the surviving correspondence is rather patchy, the years 1964-67 being particularly badly documented in this collection.

For similar material re Chain's laboratory in the Istituto Superiore di Sanità see C.54-C.65.

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|-------|--------------------|
| D.112 | 1964               |
| D.113 | 1965-67            |
| D.114 | 1968               |
| D.115 | February-June 1969 |
| D.116 | July-December 1969 |
| D.117 | 1970               |
| D.118 | 1971               |
| D.119 | 1972               |
| D.120 | 1973               |
| D.121 | 1974               |
| D.122 | 1975               |
| D.123 | 1976, 1978, 1979   |

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D.124-D.153 DEPARTMENT OF BIOCHEMISTRY, RESEARCH AND  
TEACHING, 1961-78

D.124-D.138 RESEARCH

The following papers document two of the many research grants awarded to Chain for work at Imperial College and contain some correspondence and research reports relating to the fermentation pilot plant as well as a few more general reports on research in the Department of Biochemistry.

D.138 contains correspondence with various organisations interested in collaborating on the development of an automatic amino acid analyser designed by A. J. Thomas in Chain's department.

See also D.88-D.99 (and introductory note) and the list of references at the beginning of Section D.

D.124-D.126 Fleming Memorial Fund Grant

- D.124 Correspondence with E.C. Dodds, 1962, arising from a suggestion by Dodds that Chain should apply for a grant from the Fleming Memorial Fund. Two letters from Chain to the Secretary of the Fleming Memorial Fund, March and April 1962, are also included.
- D.125 Correspondence with Imperial College and the Secretary of the Fleming Memorial Fund, 1963-66, re arrangements for acceptance and administration of the grant.
- D.126 Correspondence re expenditure on staff salaries, equipment and books from the Fleming Memorial Fund grant, 1973-79. Correspondence 1977-79 is with E.A. Barnard.

See also D.72, D.94, E.61-E.63.

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- D.127-D.130 Beecham Research Grants
- The Beecham Group sponsored two research projects and two studentships in the Department of Biochemistry between 1967 and 1972, and a further grant was made in 1974 for work on ds-RNA. Most of the correspondence re the progress of these research projects is with the rest of the Beecham material in Section F, but administrative correspondence with Imperial College and a few research reports have been included here.
- D.127, D.128 Correspondence with Imperial College, 1968-72, re administration of research grants for work on 'Microbial metabolites' and 'Mode of action of penicillins'.
- D.127 1968-70
- D.128 1971-72
- D.129 '2nd Annual Progress Report on Mode of Action of Penicillin carried out by Dr. Work's Group at Imperial College'. 21 pp. typescript with figures, January 1971.
- D.130 Copy of letter from J. Edwardson to Beecham Research Laboratories, January 1974, outlining proposals for work at Imperial College on ds-RNA, and research report on 'Studies on the Mechanisms Involved in the Toxicity of BRL 5907', June 1974. The front page of the report is annotated 'Beecham. Inteferon'.
- D.131 General correspondence re the fermentation pilot plant, 1966-73. Letter from G.T. Banks, 15 February 1971, contains a list of research contracts involving the pilot plant, 1970-71.
- D.132 Memoranda, schedules, data, etc. connected with the pilot plant, 1967-70, and nd. Includes:
- 'Pilot Plant Fermentation Charges', 2 pp. typescript, 3 October 1967, re contract work for outside bodies.
- Schedule of 'Proposed Additional Equipment for Use in the Pilot Plant and Workshop', 2 December 1969.
- 'Technical Staff requirements for Pilot Plant', 13 May 1970.
- 'Instrumentation of Imperial College Fermentation Pilot Plant.' 3 pp. typescript, n.d.

Continued

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- D.132(Cont'd.) 'Fusicoccin. Summary of work carried out at Imperial College'. 4 pp. typescript by G.T. Banks, n.d.
- D.133 'Report of work carried out in the Biochemistry Department, Imperial College (October 1969-March 1971)'. 13 pp. typescript.
- D.134 'The Ergotamine Fermentation. Report on Microbiological and Fermentation Studies'. 14 pp. typescript with diagrams and photographs by G.T. Banks, October 1971.
- D.135 Ms. and corrected typescript drafts by Chain of report on 'Research carried out in the fermentation pilot plant from 1966-1972'.
- D.136 Report on 'Annual Estimated Cost of Fermentation Pilot Plant'. 7 pp. typescript, 1973.
- D.137 Miscellaneous reports on research at Imperial College, 1966, 1976 and n.d.
- D.138 Correspondence 1970-71 with various firms and organisations interested in collaborating on the development of an automatic amino acid analyser designed by A.J. Thomas in the Department of Biochemistry. The instrument was eventually produced by Rank Precision Industries Ltd. and marketed under the name of 'Chromaspek' (see F.312, F.313).
- D.139-D.153 TEACHING
- The following papers mainly relate to various Working Parties set up in Imperial College of which Chain was a member.
- D.139 Working Party on Biological Studies.
- Invitation to serve; minutes of meeting, 9 May 1967, and brief correspondence; copy of report, June 1967. Folder also includes report of "1974 Committee" on 'Expansion of the Biological Sciences at Imperial College', February 1964.

Imperial College, London

- D.140-D.146      Biology Working Party.
- See also 'Working Party on Biological Studies'.
- D.140            Correspondence, 1968-69, re arrangements for reappraisal of proposals submitted by the Working Party on Biological Studies for common first-year undergraduate course in biological subjects in June 1967.
- D.141            Invitation to serve on the newly-constituted Biology Working Party, December 1968, with outline of its terms of reference and constitution.
- D.142            Correspondence and drafts leading to interim report, March 1969-January 1970.
- D.143            Correspondence with T.R.E. Southwood, December 1969-May 1970, mainly re Imperial College Field Station at Silwood Park. Includes draft revision of part of the Biology Working Party Report.
- D.144            Memoranda and correspondence re visit of U.G.C. Biological Sciences Sub-Committee to Imperial College, 12 November 1970.
- D.145            Minutes of last 2 meetings of the Biology Working Party, September 1970 and February 1971, with copies of Interim, Revised and Final Reports.
- D.146            Brief correspondence, January-March 1971.
- D.147-D.149      Working Party on Physiological Flow.
- Correspondence and papers, 1967-69.
- D.147            Invitation to attend the first meeting, January 1967; minutes and correspondence re further meetings to October 1967.
- D.148            Progress reports on the Physiological Flow Studies Unit, by C. Caro (Director), February 1968.
- D.149            Further correspondence, minutes of meetings, etc., January 1968-December 1969.

Imperial College, London

- D.150            Working Party on Bio-Engineering
- Invitation to attend the first meeting, June 1968, with terms of reference of the working party; brief correspondence, July-December 1968; 4 pp. typescript on 'Bioengineering in Biochemistry', prepared for the report of the Working Party.
- D.151            Memorandum by G.T. Banks on Courses in Fermentation Science and Technology, April 1978.
- 3 pp. ms. notes by Chain on the same subject, n.d.
- D.152            Shorter correspondence re academic affairs of Department of Biochemistry, courses proposed, examinations, etc., 1967-74.
- D.153            Miscellaneous arrangements for meetings, seminars, inter-departmental colloquia, etc., 1966-73.

Imperial College, London

D.154-D.168	GENERAL CORRESPONDENCE ON DEPARTMENTAL AND COLLEGE AFFAIRS	
D.154-D.163	Correspondence with colleagues at Imperial College, 1961-79. Includes personal and scientific exchanges.	
D.154	Barrer, R. M. 1962 letter Chain's carbon only.	1962, 1967
	Barton, D. H. R. 1961 letter Chain's carbon only.	1961, 1967, 1968
	Brown, J.	1969
	Butler, C. C.	1966
D.155	Caro, C. G. Includes copy of grant application to the British Heart Foundation.	1970
D.156	Ford, H. 1968 correspondence is mainly <u>re</u> E.M.B.O.	1966-68, 1973
	Gabor, D.	1966
	Hinshelwood, C. N.	1966
D.157	Jackson, Lord	1966-70
D.158	James, W. O.	1961
	Jones, H.	1971
	Richards, O. Chain's carbon only.	1966
D.159	Roberts, E. R.	1966-67
D.160	Rogers, D. <u>re</u> fusicoccin	1968
	Saunders, O. A.	1965-67
	Southwood, T. R. E.	1971

Imperial College, London

- |       |  |         |
|-------|--|---------|
| D.161 | Spalding, D. B.  | 1979    |
|       | <u>re</u> plans for collaboration with G.T. Banks.   |         |
|       | Tooms, J. S.   | 1968    |
| D.162 | Ubbelohde, A. R.   | 1967-70 |
| D.163 | Whittingham, C. P.   | 1969-70 |
|       | Includes 2 pp. ms. draft <u>re</u> choice of successor to Whittingham, n.d., c.1971.                     |         |
|       | Welch, A. J. E.  | 1961    |
| D.164 | Shorter correspondence <u>re</u> college and departmental affairs, 1961-76.                              |         |
| D.165 | Shorter social correspondence, 1968-74   |         |
| D.166 | Ms. for speech at Heads of Department Dinner, n.d.   |         |
| D.167 | Miscellaneous incomplete drafts for correspondence, speeches, grant applications, etc., 1 p. dated 1974. |         |
| D.168 | Miscellaneous requests for information <u>re</u> courses, etc. at Imperial College, 1969-77.             |         |

SECTION E                      SOCIETIES AND ORGANISATIONS E.1 - E.238

INTRODUCTION AND LIST OF CONTENTS

The material is presented in an alphabetical sequence and covers both British and overseas organisations.

While some entries are relatively trivial and deal with membership, invitations to meetings and the like, others are substantial folders covering a lengthy time-span and matters of consequence such as research policy, grant applications for Chain's own research projects or those referred to him for comment. Examples of these are the British Heart Foundation, the Medical and Science Research Councils, and the World Health Organization.

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MINISTRY OF TECHNOLOGY	E.120
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Societies and organisations

- E.1           ACCADEMIA FLAMINIA (Bologna)           1972, 1979
- 1972 correspondence is re Chain's election as an Honorary Academician, in the founding year of the Accademia.
- 1979 correspondence is with the President (G. Baldoni) re the activities of the Accademia Flaminia.
- E.2           ACCADEMIA NAZIONALE DEI LINCEI           1949, 1959
- 1959 correspondence is re Chain's nomination to serve on committee for Feltrinelli Prize.
- E.3           ACCADEMIA NAZIONALE DEI XL           1956-79
- Miscellaneous correspondence from successive Presidents and Secretaries (including D. Marotta).
- E.4           AGRICULTURAL RESEARCH COUNCIL (ARC)       1971
- Correspondence and papers on the rôle and policy of ARC, mainly prepared by N. Goldenberg for submission to Sir Alan Cottrell.
- E.5           AIMS FOR FREEDOM AND ENTERPRISE           1978
- Brief correspondence only.
- E.6           AMERICAN CHEMICAL SOCIETY           1963  
(Division of Medicinal Chemistry)
- Brief correspondence re Trueman Wood lecture (Bibliog. 99).
- E.7           ARTS COUNCIL           1977
- Brief correspondence re Chain's suggestion of an exhibition of Russian painting.
- E.8           ASSOCIATION NATIONALE DE LA RECHERCHE  
TECHNIQUE           1977
- Invitation to serve on Comité d'honneur.

Societies and organisations

- E.9                    ASSOCIATION OF CLINICAL PATHOLOGISTS                    1963-70
- Correspondence re organisation of meetings, sponsored by Chain at Imperial College. Various dates 1963-70.
- E.10                    ASSOCIATION OF THE BRITISH PHARMACEUTICAL INDUSTRY                    1964-71
- General correspondence re meetings and activities.
- E.11-E.17            THE BIOCHEMICAL SOCIETY                    1964-74
- Correspondence with colleagues and with officers of the Society, mainly re meetings and Symposia sponsored by Chain at Imperial College or with contributions by him.
- E.11                    Ms. draft for Chain's speech of welcome at first meeting of Society at Imperial College, n.d. [1964].
- Brief correspondence re 1965 meeting.
- E.12                    Correspondence 1966 re colloquium on 'Comparative Biochemistry of Resistance to Drug Action' (November 1966). Chain gave Chairman's introductory speech, and opened the final discussion.
- Includes ms. and typescript versions of introductory speech.
- E.13                    Correspondence 1967 re possible Science Travel Service.
- E.14                    Correspondence and papers 1969 re colloquium on 'Naturally Occurring Substances of Potential Use for Control of Plants and Animals' (May 1969). Includes typescript of part of Chain's collaborative paper with K.D. Barrow, 'The wilting toxins of Fusicoccum amygdali Del.'
- E.15                    Correspondence 1969-70 re 500th Meeting of Society, on 'Biochemistry Past and Present', and proposed contribution by Chain on history of anti-biotics, which he did not feel able to undertake.

Societies and organisations

- E.16 Correspondence 1969-71 re Joint Meeting with Society for General Microbiology, held at Imperial College in December 1972, on 'Fungal Biochemistry'. Includes programmes, ms. opening remarks by Chain, and typescript of collaborative contributions to colloquium, on 'Claviceps purpurea', and on 'Viruses of Penicillia and Aspergilli'.
- E.17 Shorter correspondence 1973-74, including Chain's transfer to Emeritus Membership (1973) and Joint Symposium with British Association (1974).
- E.18 BRITISH ASSOCIATION FOR CANCER RESEARCH 1979  
Brief correspondence re presentation to I. Berenblum.
- E.19 THE BRITISH COUNCIL 1958, 1970-72  
1958 correspondence is re Marotta.  
Later correspondence is re British Council visitors from overseas.
- E.20 THE BRITISH DIABETIC ASSOCIATION 1967-71  
Shorter correspondence re Chain's contribution to, and Honorary Patronage of, the Association, various dates.
- E.21-E.25 BRITISH HEART FOUNDATION 1963-74  
Chain was a member of the Science Committee (renamed the Scientific Advisory Committee in 1970) from its inception in 1963 until its disbandment in 1973. He also served on the Research Funds Committee, which was set up in 1970 to review applications for research grants and to allocate funds, in place of the Science Committee which was felt to have become too cumbersome to deal with the growing volume of work.  
  
Chain received support from the Foundation for some of his own research projects at Imperial College; see especially E.25 below for material relating to his application with D.J. Hearse for a grant for research into 'Drugs and Cardiac Metabolism'.
- E.21 Correspondence re Chain's membership of the two Committees, 1963-73. Includes letters of invitation to serve, letters of thanks for service on both committees, letter re disbandment of Scientific Advisory Committee.

Societies and organisations

- E.22 Correspondence re arrangements for committee meetings, symposia, and other business of the Foundation, 1967-72.
- E.23, E.24 Correspondence re applications for research grants, with Chain's comments, evaluations, correspondence with colleagues or applicants, lists of grants made at meetings of Advisory Committee, etc.  
2 folders as follows:
- E.23 1967-71
- E.24 1972-74
- E.25 Correspondence re grants made by the British Heart Foundation to the Biochemistry Department, Imperial College, 1967-74. Includes grant applications, correspondence re staff appointments, press releases, reports on research, publications, etc.  
The grants include work on 'Oxygen Metabolism of Heart Muscle', 'Metabolism of Heart Muscle', 'Drugs and Cardiac Metabolism'.
- E.26 THE BRITISH INDUSTRIAL BIOLOGICAL RESEARCH ASSOCIATION (BIBRA) 1970-78  
General correspondence re meetings and lectures.
- E.27-E.32 THE BRITISH NUTRITION FOUNDATION (BNF) 1967-78  
Chain served on the first Scientific Advisory Committee of the Foundation, on the Executive Committee (sometimes as Chairman), and on the Information Committee. In 1974 he chaired a committee set up 'to re-assess the Foundation and the direction in which it is heading', and he played a major part in its grant-awarding and prize-giving activities.  
The material includes correspondence with Officers of the Foundation, and with scientific and industrial colleagues, on all aspects of the Foundation's work. There is also a little personal material.
- E.27 1967-70  
Includes invitation to serve on Scientific Advisory Committee, correspondence with A.C. Frazer (first Director-General of the Foundation), etc.

Societies and organisations

- E.28 1972
- E.29 1973, January-April 1974  
Includes meetings chaired by Chain, funding and matters arising.
- E.30 May-December 1974  
Includes speeches by Chain at Nutrition Foundations' Annual Book Award, and at BNF Annual Luncheon (both October), and correspondence re B.B.C. 'Tuesday Call-in' programme on chickens.
- E.31 1975-78  
Includes correspondence re press comment on alleged carcinogens in coffee, Chain's service on Information Committee of BNF and his re-appointment to other Committees.
- E.32 Correspondence 1972-75 with J. Rank re affairs of the Foundation, officers, etc.
- E.33-E.43 CANCER RESEARCH CAMPAIGN 1966-76  
(Until 1970: British Empire Cancer Campaign for Research)
- Chain served as Royal Society representative on the Grand Council 1969-75 (see E.33) and on the Executive Committee (see letter of 20 July 1970 in E.34).
- E.33-38 are a chronological sequence of general correspondence on policy, funding, committee and discussion meetings, lectures and the general affairs of the organisation.
- E.39-E.43 deal with research grants made to Chain by the Campaign for projects at Imperial College.
- E.33 Letters of re-appointment as Royal Society representative on Grand Council, 1969-75.
- E.34 1966-May 1972
- E.35 October-December 1972  
Includes correspondence on research developments, typescript of an address by Lord Nathan at Royal Society Cancer Research Symposium, and letter by Chain setting out his views on fruitful lines in cancer research.

Societies and organisations

- E.36            January-February 1973  
Mainly re research policy of C.R.C.
- E.37            April-November 1973  
Mainly re committee membership, with various memoranda  
by Chain.
- E.38            1974-76  
Letter of 15 May 1975 refers to nomination of D.A.J. Tyrell  
as Royal Society representative on Grand Council in place  
of Chain, and other membership changes.  
Also included is letter of thanks (May 1976) from the President  
for Chain's service.
- E.39-E.43       Correspondence and papers 1967-73 re grant to Chain for  
research on 'Large scale production of microbial asparaginase  
and the study of its antileucaemia and pharmacological  
properties', and continuing related researches.  
N.B. This grant was awarded by the British Empire Cancer  
Campaign for Research, and continued after the change of  
name to Cancer Research Campaign.  
5 folders as follows:
- E.39            1967-68  
Includes grant application, correspondence with Imperial  
College, press releases, research report.
- E.40            1969-70  
Statements of account, arrangements for visitors and meetings,  
applications for grant renewal, report.
- E.41            1971  
Application for continuation grant for 'Studies on the isolation  
and purification of bacterial asparaginases', statement of  
account.
- E.42            1972  
Application for continuation grant with statement of research  
on 'Large scale preparation of purified deaminases of essential  
amino acids of bacterial origin'.

Societies and organisations

E.43 1973

Application for renewal of grant for work on 'Large scale preparation of purified deaminases of bacterial origin for essential amino-acids', arrangements for visit to Chain's department by Scientific Committee of C.R.C., and for future of enzyme research after Chain's retirement as Head of Department of Biochemistry.

E.44 THE CHEMICAL SOCIETY 1950, 1968

Brief correspondence re Chain's application for Fellowship, 1950.

Correspondence and papers re 5th International Symposium on 'The Chemistry of Natural Products', London 1968.

Chain was one of the Honorary Vice-Presidents and chaired the Plenary Lecture by C.B. Anfinsen on 12 July.

Includes ms. and typescript drafts of Chain's introductory speech, Handbook, List of participants.

E.45-E.52 THE CIBA FOUNDATION 1961-79

Correspondence and papers re meetings and symposia. A little personal material is also included.

E.45 1961-62

Correspondence re Symposium on 'Enzymes and Drug Action', March 1961.

Chain's contribution, 'Action of Insulin on Metabolic Reactions', was published in the symposium proceedings 1962 (Bibliog. 91).

E.46, E.47 1961-62

Correspondence and papers re Study Group on 'Resistance of Bacteria to the Penicillins', February 1962.

E.46 Invitation, programme, list of speakers and participants, abstract of Chain's paper, etc.

Chain spoke on 'The new penicillins', and his contribution was published in the proceedings.

E.47 Editorial correspondence, transcript of discussion at Study Group, sent to Chain for correction.



Societies and organisations

- E.54                    COUNCIL FOR SCIENTIFIC POLICY                    1965-67  
                                 Working Party on Liaison between Universities  
                                 and Government Research Establishments.
- The Working Party was set up under the Chairmanship of Sir Gordon Sutherland, and an interim report was produced in October 1965. It was then decided to expand the committee to present a final report by June 1966. Chain was invited to serve on the committee in November 1965. The Secretary of the Working Party was A.V. Cohen.
- Papers include invitation to serve, notices of meetings, material especially re German university and research systems (includes draft 'Comments' on the subject prepared by Chain), correspondence re drafting of report, letter of thanks for service.
- E.55                    COUNCIL OF ENGINEERING INSTITUTIONS                    1967-68  
                                 Joint Manpower Committee.
- Chain served as one of the Royal Society representatives on the committee, which was set up 'to review and analyse the various manpower reports and surveys in relation to the future needs of industry'. The Chairman was Sir Eric Mensforth.
- Material includes invitation to serve, correspondence and drafts of report, final revised version entitled 'Engineers, Technologists and Scientists in the National Economy'.
- E.56                    DEPARTMENT OF HEALTH AND SOCIAL SECURITY                    1969, 1975-76  
                                 Correspondence 1969 is re Medicines Commission.
- Correspondence 1975-76 is with Minister (D. Owen), advisers and colleagues re medical research policy.
- E.57                    DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL  
RESEARCH (DSIR)                    1963-65
- Mainly concerned with grant of £100,000 made by DSIR to Department of Biochemistry, Imperial College, for Chain's research on 'Fermentation Biochemistry and Technology and Biosynthetic Mechanisms in Micro-Organisms'.

Continued

Societies and organisations

- E.57 (Cont'd.) Includes correspondence, details of grant budget, claims and statements of account, etc. and a note by Chain on a new Postgraduate Course in Biochemistry to start in October 1966.
- Also included here is brief correspondence re visit of Russian scientists, 1964.
- E.58 EUROPEAN SOCIETY FOR BIOCHEMICAL PHARMACOLOGY 1963
- The Society was formed in 1963. Chain was a member of the international organising committee, and the first President.
- Correspondence re formation of society, ms. draft of Chain's 'Opening address, introducing Professor Otto Warburg' at first public meeting of society.
- Reprint of printed version, published in Progr. biochem. Pharmacol. 1, 1965.
- See E.60, G.190, K.236.
- Also included here is brief correspondence re newly-founded Pakistan Society of Pharmacology and Experimental Therapeutics, 1963.
- E.59 EVOLUTION PROTEST MOVEMENT 1970-75
- Correspondence, mainly re request to quote from Chain's article on 'Social responsibility and the scientist'.
- E.60 FEDERATION OF EUROPEAN BIOCHEMICAL SOCIETIES (FEBS) 1964
- Correspondence and papers re first meeting of the Federation, March 1964.
- The European Society for Biochemical Pharmacology applied for membership of the Federation at this meeting (see E.58).

Societies and organisations

- E.61-E.63 THE FLEMING MEMORIAL FUND FOR MEDICAL RESEARCH 1959-64
- Chain was one of the founding members of the Council of the Fund (see letter of 19 March 1959 in E.61).
- E.61 General correspondence re launching, organisation, publicity, etc. of the Fund, 1959.
- N.B. Almost all of this is Chain's carbons only; few incoming letters survive.
- E.62 Announcement of grant of £50,000 from Fleming Fund to Chain for research on 'The study of regulatory mechanisms' and on 'The study of metabolic reactions in nervous tissue', 1963.
- Copy of minutes of 24th and Final Meeting of Executive Committee, 1963.
- E.63 Correspondence re applications for research grants, submitted to Chain for comment, 1964.
- E.64 FOOD AND AGRICULTURE ORGANIZATION (FAO) 1954, 1963
- Brief correspondence 1954 re lecture to be given by Chain in Rome.
- Correspondence and papers 1963 re meeting held in Rome in March 1963 to publicise Freedom from Hunger Campaign.
- Includes programme, list of participants, discussion of manifesto to be issued, Chain's carbons of letters to colleagues sending copies of the amended version of the manifesto.
- E.65 FUNDACIÓN GENERAL MEDITERRANEA (MIGUEL SERVET FUND) 1974-77
- The Fundación, a philanthropic non-profit foundation, was established in 1971; the Miguel Servet Fund was created in April 1973 under the patronage of the Fundación with the aim of assisting research in diseases of the heart.
- Chain served as Honorary Member of the Council.

Continued

Societies and organisations

- E.65 (Cont'd.)      Material includes invitation to serve, arrangements for meetings, conferences, awards of Miguel Servet Prizes, and a little scientific correspondence. Chain gave his lecture on 'Government, the Medical Sciences and the People' at the Fundación's meeting in October 1975 (see J.163).
- Includes photographs taken at 1976 meeting.
- E.66-E.72      THE INDEPENDENT UNIVERSITY      1968-75
- Chain was a member of the Planning Board (see letter of 3 February 1969 in E.67); his brother-in-law Max (later Lord) Beloff became the first Principal of the Independent University when it was established at Buckingham in 1974.
- The material deals with the early organisation, funding, manifestos, meetings and conferences, publicity and launching for the project and includes some committee papers.
- E.66      1968
- E.67      1969
- E.68      1969
- Ms. draft and typescript version of talk by Chain on the Independent University, given at the Dunant Coterie Dinner Meeting, Ciba Foundation, October 1969. With a little related correspondence.
- E.69      1970
- E.70      1971
- E.71      1972
- Correspondence with Dr. M.L. Zarnitz.
- E.72      1973-75

Societies and organisations

- E.73-E.75      INSTITUTE OF BIOLOGY      1964-74
- Chain was invited to become a Fellow in 1964 and was made an Honorary Fellow in 1966.
- E.73      General correspondence 1964-74 on the affairs of the Institute, elections, meetings, etc.
- E.74      Symposium on 'Biology and the Manufacturing Industries', London, 29 and 30 September 1966.
- Chain was invited to take the Chair for the first session of the Symposium. Folder includes correspondence re arrangements, typescript drafts of Chain's introductory remarks, and of the report of Chain's speech and the discussions in which he took part, sent to him for correction prior to publication (Academic Press).
- E.75      Conference on 'Improving the contacts between industry and university', held at the Royal Society, 1 December 1967.
- Chain was asked to give a short talk on 'Academic biologists as consultants to industry'. Folder includes correspondence re arrangements and part of typescript drafts of Chain's talk, for publication in the Institute's Journal.
- E.76      THE INSTITUTE OF ECONOMIC AFFAIRS LTD.      1968-79
- General correspondence with R. Harris (General Director) on the affairs of the Institute.
- E.77      THE INSTITUTION OF CHEMICAL ENGINEERS      1963
- Brief correspondence re formation of a Working Party on Biochemical Engineering.
- E.78      INTERNATIONAL ASSOCIATION OF MICROBIOLOGICAL SOCIETIES (IAMS)      1963
- Correspondence and papers re formation of a Section on 'Economics and Applied Microbiology'.
- Chain was nominated as a Councilor.



Societies and organisations

- E.85 THE LISTER INSTITUTE OF PREVENTIVE MEDICINE 1975  
Correspondence with Chairman (A. Neuberger) and others on the affairs of the Institute.
- E.86 MEDICAL RESEARCH CLUB 1950-78  
Chain was a member from 1946.  
Brief correspondence re subscriptions and meetings, including invitation to speak at the Club's meeting to commemorate Fleming's original 1929 paper on penicillin.
- E.87-E.112 MEDICAL RESEARCH COUNCIL (MRC) 1950-76  
Chain had many links with the Council. He was a member of some of its committees, a referee for grant applications, and on friendly terms with many administrative and scientific officers. The Council contributed to the funding of several of his research projects at Imperial College, sometimes in collaboration with other bodies such as the Department of Scientific and Industrial Research, the Beecham Group, the Fleming Research Fund (qqv.).  
From the early 1970s Chain became increasingly critical of the direction of officially-funded medical research, which he considered too favourable to molecular biology at the expense of other disciplines. He waged vigorous polemical campaigns with MRC and others; see especially E.93-E.95 for material on this subject.  
E.87-E.92 General correspondence on affairs of MRC 1950-76.  
E.93-E.95 Correspondence and papers on the organisation of medical research 1972-76.  
E.96-E.112 Chain's research projects funded by MRC 1961-73.
- E.87-E.92 GENERAL CORRESPONDENCE ON MRC AFFAIRS, 1950-76  
E.87 1950-54  
E.88 Correspondence re lecture to MRC by Chain (January 1962), on some recent developments in chemical microbiology.  
Correspondence re Chain's service on Chemotherapy Committee, 1962.

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- E.89 Correspondence re visit and lecture to MRC by Chain, October-November 1962. Includes ms. and typescript drafts of talk with provisional title 'Some contributions of chemical microbiology to biochemistry and medicine'.
- E.90 Correspondence with the Secretary, 1963, re Fellowship Fund for bringing foreign scientists to Britain.
- E.91 Correspondence with A. Isaacs, 1963.
- E.92 Miscellaneous references for grants, etc., 1970-75.
- E.93-E.95 CORRESPONDENCE AND PAPERS ON THE ORGANISATION OF MEDICAL RESEARCH 1972-76
- Chain felt very strongly that physiological biochemistry was becoming neglected in favour of molecular biology, and he lobbied vigorously against this trend. In particular, he pressed officials of the Department of Health and Social Security and of the Medical Research Council on the subject, and a joint meeting was held at the Council on 22 July 1974.
- Among the papers discussed at the meeting was Chain's 'Future contributions from biochemistry to the advancement of medical research', originally a talk given to a special meeting of the Council's Training Awards Committee in May 1972, when Chain first obtained a hearing for his views. A copy is included in E.93.
- See also E.104, E.105.
- E.93 Correspondence and papers exchanged with Department of Health and Social Security, leading up to Joint Meeting. 1972-74
- E.94 Correspondence and papers exchanged with MRC including papers for Joint Meeting. 1973-74
- E.95 Correspondence re MRC Cell Board on molecular biology and on EMBO. 1976

Correspondence with Secretary, 1976.

Societies and organisations

- E.96-E.112 CHAIN'S RESEARCH PROJECTS FUNDED BY MRC 1961-73
- E.96-E.101 Metabolic Reactions Research Unit 1961-71
- E.96 Correspondence 1961-62 with Secretary and officials exploring possibilities of setting up unit at Imperial College. Includes letters relating to lecture by H. Himsworth at Istituto, Rome, on the organisation of medical research in Britain.
- E.97 Correspondence 1963-64 re application for funding and its acceptance, press release, etc.
- E.98 Correspondence 1962-64 re staffing of unit.
- E.99 Correspondence 1967-68 re 'press visit' for medical and science correspondents to Chain's unit, arranged at request of MRC, on 23 January 1968. Includes time-table of visit, press release and notices.
- E.100 Correspondence and papers 1968-69 re visit to Chain's unit of MRC Sub-Committee, on 5 March 1969.  
Includes programme of visit, guest-list, miscellaneous drafts for Chain's introductory talk.
- E.101 Miscellaneous typescript reports on the work of the Metabolic Reactions Research Unit, 1965-67, 1969 (for visit in E.99 above), on apparatus, visits to U.S. laboratories, etc.
- E.102-E.105 Continuing metabolic research 1971-73  
The MRC Metabolic Reactions Research Unit at the Biochemistry Department, Imperial College, was closed on 1 September 1971. Chain applied to the Council for funding for two research projects to continue the work of the Unit.  
The projects, to run 1 September 1971-31 August 1973 with possible extension for one further year, were:  
'The mode of action of insulin'  
'The biogenesis of ergot alkaloids'  
The Council did not accept these applications in full; although Chain was able to continue his research on insulin (partly from MRC Private Funds), his application to work on ergot was refused, as was his application for training grants for Ph.D. students.

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E.102-E.105  
(Cont'd.)

These refusals prompted him to raise the question of the balance between molecular biology and physiological whole-animal biochemistry in U.K. research. A special meeting of the MRC Training Awards Committee was held on 10 May 1972 for which Chain prepared and spoke to a paper 'Future contributions from biochemistry to the advancement of medical research'.

See E.93-E.95 for similar material.

- E.102 'The mode of action of insulin'.  
Ms. drafts of application and background information, copy of application as sent 1971.
- E.103 'Production and biosynthesis of the ergot alkaloids'  
Ms. drafts of application and background information, copy of application as sent 1971.
- E.104 Correspondence, October 1971-June 1972, re refusal of Chain's applications, and the special meeting of Training Awards Committee (includes committee papers) and correspondence after the meeting.
- E.105 Ms. and revised typescript versions of Chain's paper for the meeting.
- E.106-E.108 Non-specific immunity 1968-73  
The first grant for this project was made in 1966 (starting date 1 March) but the original application does not survive.  
The papers deal with various renewals of the grant 1968-73. The research was a collaborative project with the MRC Common Cold Research Unit and with Beecham Research Laboratories.
- E.106 Miscellaneous drafts and revisions of application for renewal of grant, correspondence with MRC, Beecham and Imperial College officials on the matter, notification of support from MRC, December 1968-February 1969.
- E.107 Budget accounts, reports on research in progress, renewals of grant, etc., April 1969-December 1970.
- E.108 Similar material, December 1970-March 1973.

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- E.109-E.112      Interferon Inducer Project, 1969-72
- This was a collaborative project between MRC (funding Chain's team at the Biochemistry Department, Imperial College), Beecham Research Laboratories, the MRC Common Cold Research Unit, and researchers in other laboratories and institutions.
- E.109      General discussion of project, definition of fields of collaboration, preliminary meetings and visits, January-November 1969.
- E.110      Correspondence and drafts, January-June 1970, re terms of agreement between MRC, Beecham and Imperial College, progress reports, background information, copy of agreement as finally signed 2 June.
- E.111      Correspondence, etc., September-November 1970, re project, results, and re Chain's proposed paper (with Buck and Himmelweit) on 'Interferon Induction in mice ...', published in J. gen. Virol. 12, 1971 (draft included) (Bibliog. 145).
- E.112      Correspondence, etc., 1971, re project and renewal of grant, patents, etc.
- E.113-E.118      MINISTRY OF AGRICULTURE, FISHERIES AND FOOD      1965-77
- Chain was a member of the Scientific Advisory Panel 1965-68, when the Panel was dissolved in favour of co-optation of 'independent scientists, where necessary, for particular investigations' (see Minister's letter of 28 June 1968 in E.115). Chain continued to act as adviser and to correspond with Ministry officials on various problems until 1977.
- E.113      1965. Correspondence, references and material assembled on the subject of diseases due to bacteria and the use of antibiotics in food and feedstuffs.
- E.114      1967. Correspondence and papers, including report by Chain on Zimpro Wet Sludge Oxidation Process, arrangements for Central Veterinary Laboratory Golden Jubilee, etc.
- E.115      1968. Includes Minister's letter dissolving Panel.
- E.116      1972, 1974 (on single cell protein).
- E.117      1976-77, on microbial fermentation of straw.
- E.118      1976-77, on 'vertical greenhouses'.



Societies and organisations

- E.122 1970  
Gnotobiotic Technology  
Specific Polyelectrolytes  
Edible Proteins of Fungal Origin  
Viral Insecticides  
Medical Isolators
- E.123 1971  
Viral Insecticides  
Specific Polyelectrolytes  
Fermentation Processes for Selected Ergot Alkaloids
- E.124 1972, January-April  
Viral Insecticides  
Meat Tenderisation by Ante-mortem Treatment (collaborative project with Imperial College and ARC's Meat Research Institute)  
Plant Suspension Cultures
- E.125 1972, June-November  
Meat Tenderisation
- E.126 1973, March-August  
Meat Tenderisation  
Letter to Chain of 20 March announces NRDC support for a two-year programme of work on the project, to be carried out at Imperial College and ARC Meat Research Institute. Also included is general correspondence re terms of contract, appointments, progress of research.
- E.127 1973, September-November  
Meat Tenderisation
- E.128 1974  
Meat Tenderisation (the project was closed in July)
- E.129 1975-76  
Meat Tenderisation  
Effluent Treatment with Tubular Reactor  
Antibiotic from *Ps Cocovenenans*

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- E.131, E.132      THE NUFFIELD FOUNDATION      1969-71
- E.131      General correspondence on the affairs of the Foundation, grant applications, research fellowship project, etc. 1969-71
- E.132      Correspondence and papers re Second Food Safety Conference, organised by the Foundation and held at Churchill College, Cambridge, 14-17 July 1969.
- The opening paper, on 'The need for more biochemical information in the field of food safety evaluation', was to have been given by A.C. Frazer, who died suddenly on 14 June. Chain presented the paper, with an introductory tribute to Frazer. Chain's tribute, and his contribution to the discussion, were published in the conference proceedings.
- Material includes programme, list of participants, typescript of Frazer's paper, ms. and typescript versions of Chain's tribute and contribution, correspondence re conference and publication of proceedings as a book 'Metabolic Aspects of Food Safety'.
- E.133      THE NUTRITION SOCIETY      1972
- Brief correspondence re a symposium held by the Scottish Group of the Society.
- E.134      OFFICE OF HEALTH ECONOMICS      1963-78
- Chain was an Honorary Adviser (see letter of 1 January 1964, and E.219).
- General correspondence with G. Teeling-Smith (Director) re publications, meetings and affairs of the organisation.
- E.135      PAN AMERICAN HEALTH ORGANIZATION      1973-77
- Chain was asked to serve on the Advisory Committee on Medical Research for 4 years from 1973 (letter 22 February 1973). Folder contains correspondence re arrangements for annual meetings of the Committee in Washington, 1973-75. Chain was unable to attend the meeting in 1976 because of other commitments. Also included are transcripts of Chain's remarks at the 1973 and 1974 meetings, with Chain's ms. corrections.

Societies and organisations

- E.136 THE PARLIAMENTARY AND SCIENTIFIC COMMITTEE 1973
- Brief correspondence only re meeting.
- E.137-E.145 PAUL EHRLICH FOUNDATION 1959-79
- Chain was awarded the Paul Ehrlich Prize, and gave the Paul Ehrlich Lecture, in 1954, Ehrlich's Centenary Year (see A.90-A.94). This award gave him great pleasure. He became a member of the Council of the Foundation (Stiftungsrat) and played an active part in meetings of the Council and in the nomination and recommendation of candidates for prizes; he also, whenever possible, attended the annual prize-giving ceremonies at Frankfurt on 14 March (Ehrlich's birthday).
- Formal circular letters to members of the Council re meetings, recommendations and elections, etc. have been discarded as a complete record of deliberations is held at the Paul Ehrlich Foundation. The folders below contain correspondence addressed to and conducted by Chain personally, including recommendations, elections and meetings in which he was actively concerned.
- The correspondence is mainly conducted with scientific colleagues and with successive Secretaries of the Foundation, but also includes letters from members of the Ehrlich family.
- An explanatory booklet about the Foundation is included for information in E.137.
- E.137 1959-64
- E.138 1965-66
- Includes correspondence with and re F. Peyton Rous.
- E.139 1967
- E.140 1968-70
- E.141 1971-73
- E.142 1974



Societies and organisations

- E.150 1973
- E.151 1974  
Includes material re Symposium on 'Bread' held in September.  
(Chain chaired a session and edited transcripts for publication.)
- E.152 1975
- E.153 1976
- E.154 1977  
Includes material re International Symposium on 'The Diet of Man - Needs and Wants', held in April 1977. (Chain chaired a session.)
- E.155 1978-79  
Includes brief correspondence re International Symposium on 'Food Chains and Human Nutrition', held in April 1979.  
(Chain was to chair a session but declined for reasons of ill-health.)
- E.156 THE ROCKEFELLER FOUNDATION 1949  
Correspondence re request for Foundation support for work with D. Bovet at Istituto Superiore di Sanità, Rome.
- E.157 ROYAL COLLEGE OF PHYSICIANS 1965-72  
General correspondence and papers.  
Includes Chain's election as an Honorary Fellow (1965), 450th Anniversary Appeal (1968), and exchange of views on the organisation of biochemical research and the Research Councils (1971-72). Chain addressed guests at a specially-convened small dinner-party to discuss the subject and a typescript of his remarks is included.  
In 1964 Chain gave the Oliver-Sharpey Lecture at the College (see G.51).

Societies and organisations

- E.158 ROYAL GEOGRAPHICAL SOCIETY 1975  
Brief correspondence only, re Louis Rey.
- E.159 THE ROYAL INSTITUTE OF CHEMISTRY 1954  
Brief correspondence, chiefly re publication of lectures by Chain.
- E.160 THE ROYAL INSTITUTION 1965  
Correspondence 1965 re Evening Party to celebrate 50th Anniversary of Award of Nobel Prize to Sir Lawrence Bragg. See also K.188 (Porter, G.)
- E.161 ROYAL POSTGRADUATE MEDICAL SCHOOL 1964, 1971-74  
Correspondence 1964 is a brief note re speakers for Symposium.  
Correspondence 1971-74 is on the affairs of the Committee of Management on which Chain served as a co-opted member. In 1974 the School was granted a new Royal Charter which established a School Council in place of the former Committee.
- E.162-E.183 THE ROYAL SOCIETY 1954-79  
For Chain's election to the Fellowship of the Society, see A.85, A.86.  
E.162-E.170 Committees, meetings, symposia  
E.171-E.176 Elections  
E.177-E.183 General correspondence on affairs of the Society
- E.162-E.170 COMMITTEES, MEETINGS, SYMPOSIA  
E.162 Letter of appointment as Royal Society representative on the Grand Council, British Empire Cancer Campaign (later Cancer Research Campaign, q.v.), 1964.

Societies and organisations

- E.163 Papers re Use and Management of Biological Resources Subcommittee of the British National Committee for the International Biological Programme, 1967-72.

The Chairman of the Subcommittee was N.W. Pirie, and there is earlier correspondence with Pirie from 1963.

- E.164 Papers re Mullard Award. Chain served on the Standing Advisory Committee. Includes Chain's nomination of a team from the Beecham Research Laboratories for the 1971 Award (for work on semi-synthetic penicillins).

- E.165 Discussion meeting on U.K. participation in European Molecular Biology Organization (EMBO), October 1969. Includes programme, background papers, ms. and typescript drafts of Chain's contribution to discussion.

For Discussion meeting on 'Penicillin and related antibiotics - past, present and future', organised by Chain and E.J. Stokes and held 20-21 May 1971, see B.73-B.84.

- E.166 Correspondence and papers re 'A Framework for Government Research and Development' (the "Rothschild Report") 1971-72. Includes Chain's letters to Officers of the Society, papers and minutes of the Royal Society Industrial Activities Committee (Chain was a member) commenting on the Report, correspondence re Select Parliamentary Committee on Science and Technology, and later correspondence with Rothschild, April-June 1972.

- E.167-E.169 Discussion meeting on 'Food Technology in the 1980s', May 1974, organised by Chain, S.A. Goldblith, L. Rey and A. Spicer.

The meeting arose from discussion at June 1972 meeting of the Royal Society Industrial Activities Committee, and the papers were published in Proc. Roy. Soc., B, 191 (Bibliog. 170).

3 folders as follows:

- E.167 1973

Preliminary discussions and arrangements, scope of meeting, invitations to speakers, provisional programme.

- E.168 1974

Continuing correspondence re arrangements, time-tabling, letters of invitation and thanks, includes some abstracts of papers and copy of Chain's 'Concluding remarks'.

Societies and organisations

E.169 1975

Mainly correspondence re publication in the Society's Proceedings, and the paper on 'Engineered Food' given by E.F. Binkerd (substituting for J.V. Luck) which was omitted from the publication. A copy of the paper as delivered, with accompanying photographs, is enclosed.

E.170 Termination of service on National Committee for Biochemistry, 1976.

Correspondence on new technologies, 1978.

Correspondence on Joint Working Party on Biotechnology, 1979 (Chain was to give evidence to the Working Party on 6 September 1979, but died the previous month).

For correspondence on Discussion meeting 'Penicillin 50 years after Fleming', see B.90.

E.171-E.176 ELECTIONS

E.171 1954-60

E.172 1963-70

E.173 1971-78

E.174 1971-74

E.175 1972-77

E.176 1974

E.177-E.183 GENERAL CORRESPONDENCE ON AFFAIRS OF THE SOCIETY

E.177 1963-66

E.178 Correspondence re Royal Society/Israel Academy scheme for the exchange of scientists, 1970.

E.179 1970

E.180 Correspondence and papers re Royal Society Club, 1970-72, 1978 (and one letter 1958).

Societies and organisations

- E.181 Brief correspondence and papers re visits of Russian scientists arranged under Royal Society's exchange agreement with the USSR Academy of Sciences. Various dates, 1971-79.
- E.182 Correspondence re Appeal fund, 1974.
- E.183 1977-78.
- 
- E.184 THE ROYAL SOCIETY OF ARTS 1972, 1974  
Brief correspondence only.
- E.185 THE ROYAL SOCIETY OF HEALTH 1969  
Correspondence re award of Gold Medal to A. Sabin.
- E.186 THE ROYAL SOCIETY OF MEDICINE 1961-79  
General correspondence on the affairs of the Society.  
Correspondence 1968 refers to award of Jephcott Medal to Chain.  
Correspondence 1969 refers to Chain's election as Honorary Fellow of the Society.  
Correspondence 1977-79 includes requests for an editorial on virus chemotherapy and Chain's reasons for considering the time premature.
- E.187 ST. MICHAEL'S FOUNDATION LTD. 1972-74, 1977  
Chain was a member of the Council of Management.  
Correspondence and papers 1972-74 is mainly re St. Michael's Medical Services Ltd. and proposed St. Michael's Hospital for diseases of heart and circulation.  
Correspondence 1977 includes announcement of the winding-up of the Foundation.

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- E.188                    SAINT-VINCENT INTERNATIONAL PRIZE                    1978-79
- Includes invitation to serve on committee for the Seventh Saint-Vincent International Prize for Medical Science (instituted in 1950), and Chain's recommendation of Sir John Charnley for the prize.
- E.189-E.196            SCIENCE RESEARCH COUNCIL (SRC)                    1968-73
- Correspondence and papers on general SRC policy and support for projects in areas of biochemical research and the biological sciences, including Chain's reports on applications for research grants from SRC Biological Sciences Committee.
- E.189                    July 1968-January 1969
- Mainly correspondence with the Secretary (Professor (now Lord) Flowers) and with colleagues re increased support for biochemical research and Chain's proposal for a Biochemistry Committee of SRC. Includes an earlier (1966) paper by Chain 'Arguments for increased support of basic biochemical research by the SRC', and his views on the report of the SRC's Enzyme Chemistry and Technology Panel.
- E.190                    Correspondence October 1968 re SRC Grant for Fermentation Biochemistry in Chain's Department at Imperial College.
- E.191                    Correspondence and papers re meeting held at SRC to discuss 'Industrial Biology', 3 April 1969.
- Includes discussion papers prepared for meeting (Chain's was entitled 'The case for support by the SRC of long term research projects in the field of industrial biology'), minute of meeting and Chain's comments on it.
- E.192                    Continuing correspondence re SRC Working Party on Industrial Biology, Biological Sciences Committee, and Enzyme Chemistry and Technology Committee, August-October 1969.
- E.193                    Chain's reports on grant applications for SRC Biological Sciences Committee, February 1970.
- E.194                    Correspondence and papers, mainly re SRC interim Report on Developmental Biology, August-November 1970.
- Includes correspondence with colleagues, and comments on Report by Chain, and by L. Wolpert.

Societies and organisations

- E.195      Correspondence and papers re funding of Chain's Advanced M.Sc. Course in Microbial Biochemistry and Fermentation Technology, February-December 1972.  
  
Included here is a ms. draft letter on similar subject, n.d. and perhaps earlier.
- E.196      Chain's reports on grant applications for SRC's Biological Sciences Committee, 1973.
- E.197      SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH      1978-79  
  
Chain was invited to serve as a member of the Board of Scientific Consultants from July 1978.  
  
Correspondence re arrangements for meetings of the Board in October 1978 and March 1979.
- E.198      SOCIETÀ CHIMICA ITALIANA      1952-62  
  
General correspondence re conferences, invitations to lecture, conferral of Honorary Membership (1958).
- E.199      SOCIETÀ ITALIANA DELLE SCIENZE VETERINARIE      1954-55  
  
Brief correspondence re lecture at congress.
- E.200      SOCIETÀ ITALIANA DI CHEMIOTERAPIA      1953-63  
  
Chain was one of the founder members, and a member of Council (1953) and Honorary President (1963).
- E.201      SOCIETÀ ITALIANA DI MICROBIOLOGIA      1958  
  
Brief correspondence re conference.
- E.202      SOCIETÀ ITALIANA DI SCIENZE FARMACEUTICHE      1958-59  
  
Brief correspondence only re congress.

Societies and organisations

- E.203 SOCIETY FOR ANGLO-CHINESE UNDERSTANDING 1965-66
- Correspondence re formation of Society. Chain was one of its sponsors and was asked to serve as co-treasurer, but declined from pressure of work.
- E.204 SOCIETY FOR ANTIMICROBIAL CHEMOTHERAPY 1979
- Brief correspondence, May 1979, re Chain's nomination as one of the Society's first Honorary Members.
- E.205 SOCIETY FOR DRUG RESEARCH 1971
- Correspondence 1971, mainly re Symposium on 'Interferon Inducers', organised by Society, 27 October 1971.
- Chain was one of the Chairmen and spoke on 'Double stranded ribonucleic acids as interferon inducers'.
- E.206 SOCIETY FOR GENERAL MICROBIOLOGY 1951-79
- Includes correspondence re Symposium on 'Antibiotics: Structure and Function', September 1963 (Chain gave the opening speech on 'Retrospect and Prospect') and Symposium on 'Biochemical Activities of Antimicrobial Drugs', April 1966.
- E.207-E.216 SOCIETY OF CHEMICAL INDUSTRY 1958-70
- E.207-E.210 deal with the VIIIth National Congress of the Società Chimica Italiana held jointly with the Society of Chemical Industry, Turin, 26 May-2 June 1958. The Italian organisers were Marotta and Chain.
- E.207 Correspondence 1958 re Congress with colleagues, invitations to speak or attend, letters of thanks, publication, etc. A little scientific correspondence is included.
- E.208 Correspondence 1958-59, mainly with Editor, Chemistry and Industry, re publication of material about Congress, and of its papers.
- Includes an article by Marotta on Istituto Superiore di Sanità, and also correspondence with Editor, Manufacturing Chemist.
- A little correspondence re award of C.B.E. to Marotta is also included.

Societies and organisations

- E.209 Miscellaneous typescript and ms. drafts of Chain's account of the Congress, for publication in Chemistry and Industry.  
Ms. draft of speech by Chain introducing Sir Robert Robinson.
- E.210 Printed programme, speeches, menus, etc.
- E.211 Correspondence 1959, mainly re meeting of the Society in Glasgow when Hon. Membership was conferred on Marotta.  
Includes biographical notes on Marotta prepared by Chain.
- E.212 Shorter correspondence 1960  
Miscellaneous invitations to Chain to lecture to various Groups of the Society, 1961-68.
- E.213 Invitation to give the Lister Memorial Lecture (given in Edinburgh, 28 May 1965) and arrangements, 1963-65.
- E.214 Correspondence 1961-63 re Second International Fermentation Symposium, held in London 1964.  
Chain and his collaborators contributed their paper on Aeration Studies IV (Bibliog. 119).  
Also included here is brief correspondence 1966 re meeting on cephalosporin.
- E.215 Correspondence and papers re Symposium on 'The isolation and applications of microbial enzymes', London, September 1968.  
Includes programme, and ms. and typescript versions of Chain's introductory remarks.
- E.216 Correspondence and papers re Symposium on 'Keys to Industrial Fermentation Development', held at Imperial College, June 1970.  
Chain chaired the meeting and led the discussion.
- E.217 UNESCO 1975  
Correspondence re 'Rencontre pour l'universalité de l'UNESCO'.

Societies and organisations

- E.218                   USSR ACADEMY OF SCIENCES                   1975-79
- Miscellaneous correspondence, 1975-79, mainly with Secretary, G.K. Skryabin.
- Correspondence 1975 refers to Chain's visit to Russia for celebrations of 250th Anniversary of Academy.
- Correspondence 1976 refers to Chain's election to Honorary Membership of Academy. See also A.170, H.59.
- Correspondence 1976-79 refers to research, publications, etc.
- 
- E.219                   THE WELLCOME FOUNDATION LTD.                   1961-65, 1972
- General correspondence with Directors of the Foundation re visits, collaboration, etc.
- Includes correspondence 1963 re link with Sclavo (q.v.) and invitation to Chain 1964 to serve on Advisory Panel, Office of Health Economics (see E.134).
- 
- E.220                   THE WELLCOME RESEARCH LABORATORIES                   1957-64, 1976
- General correspondence with Directors and research scientists re exchanges of specimens and information, visits to laboratories, etc.
- 
- E.221                   THE WELLCOME TRUST                   1966-77
- Correspondence mainly re grant applications supported by or referred to Chain.
- 
- E.222                   WORLD FEDERATION OF DOCTORS WHO RESPECT  
HUMAN LIFE                   1975, 1976
- Brief correspondence only, re conferences organised by the British Section.

Societies and organisations

E.223-E.237      WORLD HEALTH ORGANIZATION (WHO)      1948-74

Chain's connection with WHO began in 1948. He served on the Expert Committee on Antibiotics (later designated Expert Advisory Panel on Antibiotics) from its inception in 1950. The International Research Centre of Chemical Microbiology at the Istituto Superiore di Sanità was one of the research stations affiliated to the WHO, accepting WHO Fellows for research and training. Many of the conferences organised by Chain in Rome (see Section C) were held under the auspices of this scheme.

From 1971 the Expert Advisory Panel on Antibiotics was integrated in the Expert Advisory Panel on Biological Standardization on which Chain was invited to serve.

E.223      Copies of correspondence, 1948, re lectures on penicillin given in Czechoslovakia by Chain on behalf of WHO.

E.224      January-February 1949

Mainly re arrangements for meeting at Geneva, February 1949, 'to determine aspects of the way in which WHO and ECE [Economic Commission for Europe] can assist in getting the UNRRA donated penicillin plants into operation'. Chain attended as an Expert Consultant.

Includes Report on the findings of the meeting.

E.225      April-December 1949

Includes correspondence re formation of an Expert Committee on Antibiotics, and plans for establishment in the Istituto Superiore di Sanità of a Centre for research and training in antibiotics, with funding from WHO.

Some correspondence re Podbielniak extractors, and re penicillin research in Czechoslovakia and Poland, is also included.

E.226      Miscellaneous WHO research reports on antibiotics, 1948-49.

E.227      January-March 1950

Mainly re arrangements for first meeting of Expert Committee on Antibiotics, Geneva, 11-15 April. Includes drafts of agenda, memoranda by Chain and by S.A. Waksman, committee papers (with WHO report on 'Training and research facilities in Antibiotics' at Istituto).

Chain was elected Chairman of the committee at this meeting.

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- E.228 April-May 1950  
Includes draft and final versions of report on the committee meeting.
- E.229 June-August 1950  
re Committee, WHO Fellowships at Rome, criticisms of Expert Committee's report.
- E.230 September-November 1950  
re WHO Fellowships, penicillin plant in India, etc.
- E.231 1951  
Includes letter, 21 January, inviting Chain to serve on Expert Advisory Panel on Antibiotics which replaced former 'expert committee', and correspondence re proposed visit by Chain to U.S.A. (letter of 16 March gives briefing). In the event, the visit was cancelled by WHO and Chain's U.S. visa was refused (see E.232).  
Folder also includes material on Indian penicillin project and symposium at Rome.
- E.232 1952-53  
Correspondence and papers re refusal of a U.S. visa to Chain and the cancellation of his WHO visit in 1951 (see E.231 above). Includes 16 pp. account prepared by Chain of his relations with WHO, penicillin plants from UNRRA, etc. The account was originally intended for publication in Bulletin of the Atomic Scientists but was sent to the U.S. State Department via the Science Attaché. Also includes press-cuttings.
- E.233 1952  
Correspondence re symposium, visa, publications, etc.
- E.234 1953-60  
Correspondence re renewal of service on panel, symposium, meetings, etc.
- E.235 1966  
Correspondence re WHO Fellows wishing to work in Chain's Department at Imperial College.



CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

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British National Committee for the History of Science, Medicine and Technology

Catalogue of the papers and correspondence of

SIR ERNST BORIS CHAIN FRS

(1906 - 1979)

Compiled by:

Jeannine Alton and Julia Latham-Jackson

VOLUME II

Sections F - J

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SECTION F

INDUSTRIAL CONSULTANCIES AND COLLABORATIVE  
RESEARCH F.1 - F.346

INTRODUCTION AND LIST OF CONTENTS

Section F reflects Chain's continuing contact with a wide range of industrial firms. Although not all of the companies listed here had a formal consultancy agreement with him, most of them sought his advice at one time or another and they have been included as part of the general picture of industrial collaboration.

The largest group of papers (F.44 - F.174) relates to Chain's consultancy with the Beecham Group which culminated in 1959 with the isolation of 6-aminopenicillanic acid (the 'nucleus' of the penicillin molecule). Chain continued to be associated with the Beecham Group until his death in 1979 and the surviving papers document the extent of his involvement with the expansion of their research effort after 1959 as well as his friendly personal contacts, particularly with H. G. Lazell (Chairman 1958 - 68).

Attention is also drawn to the very full record of Chain's collaboration with Astra from 1948 to 1957, a period for which documentation in other parts of the collection is rather patchy.

Many of Chain's contacts with industry resulted in the funding of collaborative research projects conducted in his laboratory, both in Rome and, particularly, at Imperial College. Correspondence re the negotiation and administration of such collaborative projects is to be found both here (see the references to this Section under 'Imperial College' in the General Index) and in Section D, especially D.127 - D.130.

Inevitably, with so many contacts in the industrial world, Chain was often responsible for initiating collaborative projects between the various firms with whom he was associated. Such links are noted, but not generally cross-referenced in the catalogue entries which follow. Instead, each firm is included in the General Index with a list of references to this and other sections of the catalogue where appropriate.

Industrial consultancies and collaborative research

AC'CENT INTERNATIONAL INC.	F.1-F.3
ADVISORY SERVICES (CLINICAL & GENERAL) LTD.	F.4-F.6
AFICO LTD. <u>see</u> NESTLÉ	
ALTHEA S.p.A.	F.7
AMERICAN CYANAMID COMPANY	F.8
ANIC S.p.A.	F.9
ANTIBIOTICOS S.A.	F.10
ASSORENI	F.11
ASTRA	F.12-F.41
BAYER	F.42, F.43
BEECHAM GROUP LTD.	F.44-F.174
BIOCHEMIE GMBH	F.175
BRISTOL LABORATORIES INC.	F.176-F.178
BRITISH PETROLEUM (BP)	F.179
BRITISH PETROLEUM (BP) PROTEINS LTD.	F.180, F.181
CALMIC LTD.	F.182
CARLO ERBA	F.183
CIBA-GEIGY LTD.	F.184
COGER S.p.A.	F.185
CYANAMID OF GREAT BRITAIN LTD.	F.186
EDWARDS HIGH VACUUM	F.187
ENI (ENTE NAZIONALE IDROCARBURI)	F.188-F.190
FARMITALIA	F.191-F.200
FISONS LTD.	F.201
GALENIKA	F.202
GRÜNENTHAL (CHEMIE GRÜNENTHAL GMBH)	F.203-F.211
HINDUSTAN ANTIBIOTICS LTD.	F.212-F.215
HOECHST (FARBWERKE HOECHST AG)	F.216-F.218
IMPERIAL CHEMICAL INDUSTRIES LTD. (I.C.I.)	F.219-F.227
ISF S.p.A.	F.228
ISRAEL PENICILLIN AND BIOLOGICAL PRODUCTS CO.	F.229
ISTITUTO SIEROTERAPICO E VACCINOGENO TOSCANO "SCLAVO" S.p.A.	F.230

Industrial consultancies and collaborative research

LEPETIT S.p.A.	F.231-F.233
LILLY RESEARCH LABORATORIES, ELI LILLY AND CO.	F.234, F.235
MARKS AND SPENCER LTD.	F.236-F.251
MERCK SHARP & DOHME	F.252-F.257
MONTECATINI EDISON S.p.A. (later MONTEDISON)	F.258-F.267
NATIONAL DRUG COMPANY	F.268
NATIONAL IRANIAN OIL COMPANY (N.I.O.C.)	F.269-F.281
NESTLÉ ALIMENTANA S.A.	F.282-F.292
PFIZER (CHAS. PFIZER & CO. INC.)	F.293-F.297
PFLEGER (DR. R. PFLEGER CHEMISCHE FABRIK (GMBH))	F.298-F.310
PULLMAN ASSOCIATES GMBH	F.311
RANK PRECISION INDUSTRIES LTD.	F.312, F.313
RANKS HOVIS McDOUGALL LTD.	F.314-F.324
REVLON INC. <u>see</u> USV	
RICHARDSON-MERRELL INC.	F.325
ROCHE PRODUCTS LTD.	F.326
LABORATOIRE ROGER BELLON	F.327
SANDOZ LTD.	F.328-F.330
SCLAVO <u>see</u> F.230	
LABORATORI BIOCHIMICO-FARMACEUTICI SMIT	F.331
SMITH KLEINE & FRENCH LABORATORIES LTD.	F.332
WM. UNDERWOOD CO. <u>see</u> AC'CENT INTERNATIONAL	
UPJOHN INTERNATIONAL INC.	F.333, F.334
USIFROID (SOCIÉTÉ D'UTILISATION SCIENTIFIQUE ET INDUSTRIELLE DU FROID)	F.335
USV PHARMACEUTICAL CORPORATION	F.336-F.342
WALLACE LABORATORIES	F.343, F.344
WESTFALIA SEPARATOR LTD.	F.345

Industrial consultancies and collaborative research

- F.1-F.3 AC'CENT INTERNATIONAL INC. 1971-73, 1979
- Chain was introduced to the President of Ac'cent's parent company, Wm. Underwood Co. by S.A. Goldblith in October 1971, and as a result he invited Chain to visit Ac'cent's fermentation plant at San José, California, in January 1972. Chain's report on this visit was used as a basis for several further discussions, but in August 1973 Wm. Underwood Co. negotiated the sale of Ac'cent to the Stauffer Chemical Company.
- F.1 Correspondence (mainly with President, Wm. Underwood Co.) re arrangements for Chain's visit to San José. Includes one letter from the President of Ac'cent with miscellaneous background information on personnel, production processes, etc.
- F.2 Chain's 8 pp. typescript 'Report on Visit to the Ac'cent MSG Plant in San José, California' (on 10 and 11 January 1972), with miscellaneous letters to President, Wm. Underwood Co. and others.
- F.3 Correspondence with the Presidents of Wm. Underwood Co. and Ac'cent, January 1972-September 1973 (and one letter, 1979). Includes various arrangements for meetings, 1972, and announcement of Wm. Underwood Co.'s decision to sell Ac'cent in 1973.
- F.4-F.6 ADVISORY SERVICES (CLINICAL & GENERAL) LTD. 1971-74, 1977-79
- Correspondence from the Managing Director (R. Kohn), including copies of letters to colleagues at Farmitalia, Carlo Erba and Nestlé re various scientific investigations undertaken by his company. Many of the letters also contain arrangements with Chain for musical and social activities.
- F.4 January 1971-April 1973
- F.5 May 1973
- F.6 July 1973-January 1974, 1977, 1979



Industrial consultancies and collaborative research

F.12-F.41                      ASTRA    1948-79

Chain's first contacts with Astra appear to date from the end of 1945, although his formal collaboration began in 1946 (see F.12). The documentation for the very early period is unfortunately rather sparse, but from mid-1948 until the end of 1957 there is a very full range of correspondence relating mainly to the development of penicillin production processes. The material includes exchanges of information, laboratory specimens and results, drawings of equipment, arrangements for meetings and visits and a little personal correspondence.

After 1958 the surviving papers are very sparse (Chain's carbons only, 1958-59 and less than half a dozen letters for the whole of the 1960s), but there is a further sequence from 1976-79 when Chain was asked to advise on Astra's proposed links with Iran.

The brochure 'Astra and Antibiotics', a draft of which is now at F.38, includes photographs of Chain and a summary account of his collaboration with the Astra Group.

See also K.5.

- F.12                      3 letters from B. Sjögren and H. Berlin, April and July 1946, re detailed planning of penicillin plant and arrangements for meeting in Oxford. The letters are numbered 1, 2 and 5.
- F.13                      3 letters from E. Sperber, June-July 1948, with details of fermentation runs and arrangements for Chain to visit the Astra laboratories in August.
- Also included is a letter from H. Berlin thanking Chain for past collaboration and 1 p. ms. notes.
- F.14                      Correspondence with Sperber and Sjögren, October 1948-January 1949. Includes arrangements for visit by Chain in December and letter from Sjögren enclosing summary of discussions during Chain's visit and report on subsequent experiments.
- F.15                      Summaries of further discussions at Astra laboratories on research in progress, January-February 1949, sent to Chain for information.

Industrial consultancies and collaborative research

- F.16 Correspondence with Sjögren and Sperber, February-April 1949, including comments and reports on fermentation runs.
- F.17 Correspondence May-July 1949, mainly re penicillin patents. Includes arrangements for visit by Chain in August.
- F.18 Correspondence September-December 1949, mainly re details of penicillin production process. Includes dis-cussion of possible collaboration with the Czechoslovakian Government.
- F.19 Correspondence February-June 1950, re progress with penicillin production and methods of air filtration. Includes personal letter from H. Berlin.
- F.20 Correspondence July-November 1950. Includes arrangements for a visit to Rome by Sperber in September and for Chain's visit to Stockholm with Professor Marotta and his daughter in December.
- F.21 Correspondence February-November 1951. Includes exchange re difficulty of obtaining Podbielniak extractors and arrangements for visit to Rome by Sjögren in October.
- F.22 Correspondence April-December 1952. Includes arrangements for visit by Chain in September, negotiations re royalties on sales of benamide penicillin and discussion of possible co-operation with the Danish company Roskilde.
- F.23 Correspondence January-February 1953, mainly re arrangements for meeting in Copenhagen to discuss co-operation with Roskilde. Includes related ms. and typescript notes and diagrams.
- F.24 Correspondence March-December 1953, re arrangements for meetings and visits, details of penicillin production, etc.  
See also F.25.
- F.25 Correspondence re penicillin patents, June-December 1953.
- F.26 Further correspondence re penicillin patents, January-June 1954. Includes arrangements for Chain to give evidence during a visit to Sweden in March, and extracts from 2 wartime penicillin reports.

Industrial consultancies and collaborative research

- F.27 Correspondence, April-October 1954, mainly re details of penicillin production process.
- F.28 Correspondence, November 1954-January 1955, including arrangements for visit to the Astra laboratories by A. Tonolo and R. Falini to advise on penicillin production problems, and related correspondence.
- F.29 Correspondence, February-December 1955. Includes comments on fermentation results, more re penicillin patents, and arrangements for ordering copies of the 10-litre fermenters used in Chain's laboratory in Rome.
- F.30 Correspondence, January-June 1956. Includes copies of correspondence with Italian firm supplying the fermenters and arrangements for visit to the Astra laboratories by G. Gualandi to make aeration measurements.
- F.31 Correspondence, July-December 1956. Includes evaluation of Gualandi's results and further correspondence with firm supplying the fermenters.
- F.32 Correspondence, January-May 1957. Includes drawings of fermentation equipment and arrangements for a Swiss microbiologist to work for 3 months in Chain's laboratory before taking up employment at Astra.
- F.33 Correspondence, June-November 1957. Includes brief exchange re award of Nobel Prize to D. Bovet (see also C.53).
- F.34 Correspondence, January 1958-December 1959. These are second copies of Chain's letters only as the original Astra file for this period does not seem to have survived. Chain's letter of 19 December refers to the discovery of penicin in the Beecham Research Laboratories and subsequent correspondence comments on the progress of negotiations for research collaboration between Astra and the Beecham Group.
- F.35 Correspondence, 1960-64 and n.d. A few scattered letters only, mainly from Sjögren. Includes several references to research in collaboration with the Beecham Research Laboratories.
- F.36 Brief correspondence with B. Sjöberg, 1973 (request to see Chain during a visit to London) and 1975 (invitation to Chain to come to Astra during visit to Sweden in December). A letter from Sjögren's widow following his death in 1973 is also included here.

Industrial consultancies and collaborative research

- F.37 Correspondence with Sjöberg and others, 1976, mainly re Astra's activities in Iran.
- F.38 Draft brochure describing Astra's antibiotic activities, sent to Chain for approval, August 1976. The text refers to the company's early collaboration with Chain in developing methods of penicillin production.
- F.39 Correspondence, January–November 1977, mainly re Astra's negotiations with the Iranian authorities, including draft proposal for collaboration, June 1977.
- F.40 Correspondence, May–August 1977, re invitation to Chain to be present at the Award of the Astra prize in Brazil.
- F.41 Correspondence, 1978–79, including draft letter from Chain to the Iranian Army Health Department, January 1978, advocating collaboration with Astra.
- F.42, F.43 BAYER 1958–71
- F.42 Correspondence, 1958–59, re arrangements for construction in Chain's laboratories of an instrument for the measurement of dissolved oxygen in agitated fermentation liquids in the presence of microorganisms.
- Chain's letter of 29 December 1958 discusses terms on which he would act as a consultant to Bayer.
- Correspondence 1963 re priority in the discovery of enzymatic penicillin splitting is also included.
- F.43 Correspondence, 1969–71, re interviews for a biographical article on Chain for publication in 'Therapeutische Berichte'.

Industrial consultancies and collaborative research

F.44-F.174 BEECHAM GROUP LIMITED

Chain's association with the Beecham Group began at the instigation of Sir Charles Dodds who introduced him to H.G. Lazell (Managing Director, later Chairman of the Beecham Group) in 1955.

The result was a very fruitful collaboration culminating in 1959 with the isolation of 6-aminopenicillanic acid (the 'nucleus' of the penicillin molecule) which made possible the development of a whole series of new synthetic penicillins.

Chain continued to act as consultant to Beechams until his death in 1979 and the company also sponsored various research projects and studentships at Imperial College. The following papers trace the development of his collaboration with Beechams and the expansion of their research effort after 1959. Unfortunately some files have been lost and there are gaps for whole years (e.g. 1956, 1957) or parts of years (e.g. November 1960-June 1961).

The material is presented more or less chronologically, with the exception of correspondence with Lazell and his successor, Sir Ronald Edwards, which has been kept separate and now appears at F.169-F.174.

For material relating to conferences and symposia organised by the Beecham Group and attended by Chain, see J.77-J.80, J.99-J.111, J.112.

- F.44 Letter from E.C. Dodds, 27 April 1955, suggesting a meeting with Chain, I. Heilbron and members of the Beecham Group (H.G. Lazell - Managing Director, W. McGeorge - Director in charge of research, and J. Farquharson - Director of the research laboratories) to discuss citric and tartaric acid production.
- F.45 Correspondence with Dodds and McGeorge, May 1955.  
Includes arrangements for meeting in London, ms. notes and letters re tartaric acid production, and arrangements for meetings in Rome in June and July.
- F.46 Correspondence with McGeorge and others, June-July 1955.  
Includes arrangements for visits to Rome, letters of thanks from McGeorge and Heilbron and letter from Chain, outlining his proposals for collaboration with the Beecham Group.

Industrial consultancies and collaborative research

- F.47 Correspondence with McGeorge, August-September 1955.  
Mainly re arrangements for visit to London by Chain for further discussions.
- F.48 English and Italian versions of technical data prepared in Chain's laboratory as a basis for his discussions with Beechams in September (see F.47). Includes a detailed costing for a 'Fermentation Plant of Six Stainless Steel Fermenters (each of a capacity of 30,000 L culture fluid)'.
- F.49 Correspondence with McGeorge and Dodds, September-October 1955.  
Mainly re organisational details connected with the establishment of research facilities in the field of chemical microbiology and plans for penicillin production. Correspondence with Dodds includes a discussion of acquired resistance to penicillin.
- F.50 Correspondence with McGeorge and others, November 1955.  
Includes arrangements for Chain to visit the Beecham Research Laboratories at Brockham Park and correspondence arising from discussions during this visit.
- F.51 Correspondence with McGeorge, December 1955.  
Mainly re arrangements for recruiting and training of staff for the new Beecham research team. Includes drafts of letter from McGeorge to Professor Marotta re scheme for training Beecham scientists in Chain's laboratory in Rome.
- F.52 'Microbiological Project for Beecham Research Laboratories Ltd.'  
Detailed financial estimates, March 1956.  
There is no correspondence with Beechams for 1956 or 1957 apart from the mainly personal exchanges at F.53 below.
- F.53 Letters from McGeorge, July-October 1957.  
Mainly personal correspondence. Includes one letter from Farquharson (congratulations on the birth of Chain's twins).

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- F.54 Correspondence with Farquharson and McGeorge, January 1958.  
Includes 8 pp. letter from Farquharson reporting on research in progress in the Microbiological Division of Beecham Research Laboratories and a 5 pp. typescript 'Aims of the research project . . . on the production of penicillins with improved properties by suitable modifications of the penicillin molecule'.
- F.55 Correspondence with Farquharson and McGeorge, February-March 1958.  
re research projects on antibiotics and on production of ascorbic acid from blackcurrant pectin. Includes letter and report from V.L.S. Charley re the latter.
- F.56 Correspondence with Farquharson and McGeorge, April-May 1958.  
re arrangements for meeting at Brockham Park, progress of the ascorbic acid project and draft memorandum of the Food Standards Committee on Glucose Beverages (see also F.57).
- F.57 'Comments on Draft Report on Soft Drinks by the Food Standards Committee of the Ministry of Agriculture, Fisheries and Food'. 2 typescript drafts.  
Letter of comment from Dodds is also included in the folder.
- F.58 Correspondence with Farquharson and McGeorge, June-July 1958.  
re various research projects in progress. Includes some ms. notes by Chain.
- F.59 Correspondence with Farquharson and McGeorge, September-October 1958.  
Includes agenda for discussion on 12 September, arrangements for meeting in October, and 2 pp. typescript by Chain 'Some comments of [sic] the use of radioactive sugars in the glucose research programme'.
- F.60 Correspondence with Farquharson and McGeorge, November 1958.  
re research projects on antibiotics and glucose metabolism. Includes draft paper on 'Penicillin derivatives of p-Aminobenzylpenicillin' by Chain and others.

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- F.61 Correspondence with Farquharson, McGeorge and others, December 1958.  
  
re work on antibiotics and glucose metabolism. Includes 2 pp. memorandum by G.N. Rolinson on future objectives in 'Penicin-Penicillin Work' and 3 pp. note by S. Johnson and F.R. Batchelor on 'Inhibition of Penicillinase by Triphenylacetyl Derivative of Penicin (AB. 1071)'.  
  
See also F.34.
- F.62 Correspondence with McGeorge and others, January 1959.  
  
Mainly re the report of the Food Standards Committee on Soft Drinks. Includes draft letters from Chain, Dodds and A.H. Douthwaite commenting on the report. Ms. letter from McGeorge, 30 January, also refers to negotiations re manufacture of synthetic penicillins with various companies in America.
- F.63 Correspondence with Farquharson, McGeorge and others, February 1959.  
  
Mainly re work on glucose metabolism. Includes 5 pp. 'Progress Notes' by F.R. Batchelor on various projects in the Microbiological Department of the Beecham Research Laboratories, and arrangements for visit to Rome by V.L.S. Charley.
- F.64 Correspondence with McGeorge and others, March 1959.  
  
Includes draft announcements in English and Italian of the successful production by Beechams of the basic nucleus of penicillin (6-aminopenicillanic acid) and further draft of letter from Chain re the Food Standards Committee Report on Soft Drinks.
- F.65 Correspondence with McGeorge and others, April 1959.  
  
Includes copy of press release in U.K. and U.S.A. re collaboration with Bristol Laboratories (q.v.) in production of synthetic penicillins.
- F.66 Reports by two members of the Beecham Group as follows:  
  
'Report on a Visit to the United States during the period 1st-16th April 1959', by F.P. Doyle.  
  
'Report of Discussions with Members of Bristol Laboratories at Syracuse, New York', by G.N. Rolinson.  
  
With covering letter to Chain from F.P. Doyle.

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- F.67 Correspondence with McGeorge, May 1959.  
Mainly re methods of tartaric acid production and progress in collaboration with Bristol Laboratories. Includes an announcement of a change in the structure of the Beecham Group to allow for the expansion of the Research Laboratories.
- F.68 Correspondence with Farquharson, McGeorge and C.D.W. Stafford, June-July 1959.  
Mainly re tartaric acid production and negotiations with Farmitalia and Astra re production of synthetic penicillins.
- F.69 Correspondence with Farquharson and McGeorge, July-August 1959.  
Mainly re progress in production of new penicillins and negotiations re Cephalosporin C. Includes letter from Farquharson re invitation to Chain to take part in a symposium at Bristol Laboratories.
- F.70 Correspondence with Farquharson, McGeorge and R.J.L. Allen, September 1959.  
re penicillin research, visit to Bristol laboratories, death of Sir Ian Heilbron, negotiations with Farmitalia, and 'slimming' qualities of PLJ.
- F.71 Correspondence with Farquharson, McGeorge and R.J. Allen, November 1959.  
re progress in work on penicillins and glucose research. Includes 2 reports by Allen on glucose projects.
- F.72 Correspondence with Farquharson and McGeorge, December 1959.  
re penicillin, including negotiations with Astra and others, and Cephalosporin C.
- F.73 'Quantitative Radiopaperchromatographic Studies on the Absorption of Sugars from the Isolated Surviving Rat Small Intestine'.  
Draft of paper by Chain, K.R.L. Mansford and F. Pocchiari, December 1959.  
Correspondence with McGeorge, January 1960, with suggestions for alterations to the draft, is also included in the folder.

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- F.74 Correspondence with Farquharson and McGeorge, January 1960.  
Mainly re work on penicillins and negotiations with Farmitalia.
- F.75 Correspondence with Farquharson and McGeorge, February 1960.  
Mainly re progress of penicillin work. Includes request from McGeorge for an account by Chain of the early history of penicillin.
- F.76 19 pp. typescript 'Annotations to the history of the penicillin discovery published in "Antibiotics" (... Oxford University Press, 1949)', sent with covering letter to McGeorge, 23 February 1960.  
For other accounts by Chain of the history of the penicillin work at Oxford, see B.61-B.92.
- F.77 'The Story of the New Penicillins'  
8 pp. typescript draft by McGeorge, sent to the London Press Exchange Ltd., 23 February 1960.  
Folder also includes draft of Beecham Research Laboratories brochure on the new penicillins.
- F.78 5 pp. typescript on 'The Problem of the Penicillin Resistant Staphylococcus' and 3 pp. describing Chain's initial collaborative work with Beechams, both sent to McGeorge, 4 March 1960.  
A further draft of 'The Story of the New Penicillins' incorporating Chain's additions and sent to him by McGeorge, 10 March 1960, is also included in the folder.
- F.79 Correspondence with Farquharson and McGeorge, March 1960.  
Mainly re progress of penicillin work and negotiations with Farmitalia. Includes copies of correspondence re 'Broxil' and reports on penicillin and other research.
- F.80 Correspondence with Farquharson and McGeorge, April 1960.  
See also F.81.

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- F.81 'Man-Made Penicillins. An Achievement of Beecham Research Laboratories Ltd.'  
4th draft of typescript describing the story of the new penicillins, sent to Chain by McGeorge, 12 April 1960.
- F.82 Correspondence with Farquharson, McGeorge and Stafford, May-October 1960.  
Includes arrangements for meetings and visits and discussion of the content of forthcoming lectures by Chain on the new penicillins.
- F.83 Correspondence and papers, July and October 1961.  
Includes letter from McGeorge, 31 October, enclosing a copy of the Patent Office Decision on H.S, Burton versus 'his colleagues' re assignment of the patent for Cephalospirin N.  
See also K.22-K.25.
- F.84 Correspondence, November-December 1961.  
Chain's carbons only, with the exception of brief notes from Farquharson and G.N. Rolinson.
- F.85-F.96 Correspondence with members of the Beecham Group, 1962.  
From 1962 the record of Chain's collaboration with Beechams is more diverse, both in number of correspondents and spread of subject-matter, and it is therefore presented year by year, with a brief indication of subject-matter.
- F.85 Allen, R. J. L. March-April  
re amount of caffeine in an average cup of coffee.
- F.86 Croydon, E. A. P. March-May  
re antibiotics used in treatment of typhoid.  
Includes a report on a visit to Rome by Croydon to discuss trials of Beecham preparations in Sardinia.
- F.87, F.88 Doyle, F. P. March-December  
Doyle succeeded Farquharson (q.v.) as Director of Research at Brockham Park in March. Correspondence is mainly re arrangements for meetings, research planned and in progress and publication of penicillin story.
- F.87 March-June
- F.88 July-December

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- F.89 Farquharson, J. January-March  
re meetings, publications policy, research, etc.  
Includes personal correspondence following the announcement of Farquharson's retirement as Director of Research for reasons of ill health. A letter from his wife following his death in 1964 is also included here.
- F.90, F.91 McGeorge, W. January-November  
re research, meetings, etc. Includes copies of reports sent to McGeorge on 'Spartase' (January), 'Impairment of Glucose Tolerance by Low Carbohydrate Diet' (April) and 'Fucidin' (May), and programme for research conference, October 1962, at which Chain gave the opening address.
- F.90 January-March
- F.91 April-November
- F.92 Mallett, A. A. May-December  
re research equipment and experimental details.
- F.93 Mansford, K. R. L. November-December  
Includes drafts of a note on 'Glucose and Brain Metabolism', intended for publication in The Lancet.  
See also F.100.
- F.94 Rolinson, G. N. June-September  
Includes reports on research planned and in progress, typescript draft of 'Studies on Penicillinase Produced by a Strain of Staphylococcus Aureus', by F.R. Batchelor, J. Cameron Wood, Chain and Rolinson, and note from Batchelor, 6 November, re submission of the typescript for publication in Proc. Roy. Soc. (Bibliog. 103).
- F.95 Stafford, C. D. W. March-October  
Mainly re talk given by Chain at Journées Bretonneaux (see J.39) and correspondence with M. Barber (see K.8).
- F.96 Wilkins, G. J. February-September  
re research, meetings, and development of fermentation technology.

Industrial consultancies and collaborative research

- F.97-F.103      Correspondence, 1963.      In alphabetical order.
- F.97      Doyle, F. P.      January-October  
Arrangements for meetings and visits, reports on research.
- F.98      McGeorge, W.      January-October  
re resistance to penicillin, research on brain metabolism, and negotiations for collaboration with A. Isaacs.
- F.99      Mallett, A. A.      October  
re BRL 700.
- F.100      Mansford, K. R. L.      February, October  
Including further draft on 'Glucose and Brain Metabolism' (see also F.93).
- F.101      Rolinson, G. N.      February-May  
re methods and results of research in progress.
- F.102      Stafford, C. D. W.      January-September  
Mainly re resistance to penicillin. Includes some personal correspondence.
- F.103      Wilkins, G. J.      July-November  
Mainly re tetracycline patents.
- F.104-F.115      Correspondence and papers, 1964.  
In alphabetical order. Correspondence from Chain for this period does not appear to have survived.  
3 folders containing data and printed matter are included at the end of the sequence.
- F.104      Carrington, T. R.      July, October  
re fermentation problems.
- F.105      Doyle, F. P.      February-November  
Mainly re work on penicillin allergy. Includes letter re use of ampicillin against typhoid (see also F.113).

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- F.106 Gilby, J. A. September  
re fermentation costs.
- F.107 Knudsen, E. T. January, July  
Includes copy of memorandum on 'Penbritin in Acute Typhoid and Carriers'.
- F.108 McGeorge, W. April, May  
Includes press-cutting re penicillin allergy and letters from R.J.L. Allen and E. Stenton.
- F.109 Mallett, A. A. January, October  
re fermentation techniques.
- F.110 Rolinson, G. N. July  
Enclosing typescript of paper by M.O. Moss.
- F.111 Stafford, C. D. W. July, August  
Includes press-cutting re the drug industry.
- F.112 Wilkins, G. J. September-October  
re licencing arrangements and invitation to meeting of the Canadian Pharmaceutical Manufacturers Association.
- F.113 Miscellaneous typescript and printed matter re treatment of typhoid and salmonella with ampicillin (see also F.105).
- F.114 Reports and data, originally contained in folder labelled 'Worthing Production Reports'.
- F.115 Miscellaneous printed matter re American legislation on antibiotics.
- F.116-F.118 Correspondence and papers, 1965.  
The main correspondent is F.P. Doyle, often with information or enclosures for meetings of the Consultants Committee of which Chain was a member. The material is presented chronologically. There are virtually no letters from Chain in the sequence.
- F.116 January-April  
Includes note by R. J. L. Allen of discussion with J. Yudkin re sucrose and glucose and note by Doyle on Bacterial Tomato Canker.

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- F.117 May-August
- F.118 October-December
- Includes note from McGeorge re cholesterol levels and glucose, 3 pp. typescript 'Notes on the Use of Antibiotics in the Veterinary Field', and copy of letter to the Medical Research Council re virus research.
- F.119-F.121 Correspondence and papers, 1966  
In chronological order. There are no letters from Chain for this year.
- F.119 January-April
- Arrangements for meetings and visits, miscellaneous correspondence re research.
- F.120 May-August
- Includes invitation to speak at Beecham Representatives' Conference in October, report of meeting re Microbial Protein project at Imperial College, review of the South African ethical medicine market and miscellaneous correspondence re research.
- F.121 September-December
- Includes drafts of letter from Doyle to Chain re proposal of Beecham Research Laboratories to sponsor a research project at Imperial College on microbial metabolites, and miscellaneous correspondence re research.
- F.122-F.125 Correspondence and papers, 1967  
In chronological order.
- F.122 January-April
- Includes draft affidavit by Chain for use in proceedings by the Beecham Group against Bristol Laboratories for infringement of hetacillin patents, a note on negotiations re liquid glucose with Ranks Hovis McDougall and miscellaneous correspondence re research and meetings.
- F.123 May-August
- Includes correspondence re alleged cure for baldness discovered by Israeli scientists, copy of typescript on 'Sucrose and Cariogenesis', and 2 memoranda on interferon sent to Chain for information.
- See also F.124.

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- F.124 Correspondence re journey to Israel, July 1967, to discuss arrangements for collaboration between Beechams and Plantex of Natanya.
- F.125 September-December  
Includes correspondence re arrangements for work at Imperial College financed by Beecham Research Laboratories and letter from R. J. L. Allen re vitamin C and colds.
- F.126-F.128 Correspondence and papers, 1968  
In chronological order.
- F.126 January-April  
Includes notes of discussion with M. Sela and others re collaboration with the Weizmann Institute and Yeda, correspondence and press-cuttings re infective drug resistance, and typescript on 'Vitamin C and the common cold'.
- F.127 May-August  
Includes 'Notes on Meetings at the Weizmann Institute, Israel, 23-26 May 1968', announcement of reorganisation of research departments at Brockham Park, and miscellaneous correspondence re meetings and visits.
- F.128 September-December  
Includes drafts of letter from Beechams offering to sponsor a three-year research project at Imperial College on the mode of action of penicillins, correspondence re grant for research on microbial metabolites (see D.127, D.128) and miscellaneous correspondence re research, meetings and visits.
- F.129 Correspondence and papers, 1968-70, sent to Chain as a member of Beechams' Agricultural Projects Consultants Committee. Most of these are concerned with the Report of the Joint Committee on Antibiotics in Animal Husbandry.

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- F.130-F.139 Correspondence and papers, 1969  
In alphabetical order.
- F.130 Batchelor, F. R. July  
re proposed Penicillin Symposia in Australia.
- Britton, R. H. W. October  
re Consultants Committee Meetings.
- Brown, D. M. December  
re double-stranded (ds) RNA research.
- F.131 Cole, M. July  
re screening of microbial metabolites for insecticidal activity.
- Croydon, E. A. P. April  
Invitation to speak at symposium in New York.
- F.132 Dewdney, J. M. June-December  
Includes reports and notes of meetings re ds-RNA research.
- F.133, F.134 Doyle, F. P.  
F.133 re organisation and funding of Beecham research project on 'Mode of action of penicillins', conducted at Imperial College. January-December
- F.134 Miscellaneous correspondence re meetings, research, etc. March-December
- F.135 Nayler, J. H. C. August
- Rolinson, G. N. December  
Enclosing research data.

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- F.136-F.138 Smither, R. September-October  
3 letters enclosing copies of evidence re  
action of Beecham Group Ltd. vs. Zenith Laboratories  
Inc. (over ampicillin patents), as follows:
- F.136 Letter of 17 September enclosing copy of transcript  
of Chain's deposition given on 2 September 1969.
- F.137 Letter of 14 October enclosing copies of affidavits  
by others for Chain's perusal.
- F.138 Letter of 23 October enclosing draft of 'Second Affidavit  
of Ernst B. Chain' commenting on material in F.137.
- F.139 Stafford, C. D. W. October  
Personal correspondence.
- Wilkins, G. J. January-May  
re symposia in Moscow and Australia. Letter of  
8 May contains some background information to the  
Beecham vs. Zenith case.
- F.140-F.145 Correspondence and papers, 1970  
In alphabetical order.
- F.140 Carrington, T. R. February-March  
Invitation to lecture.
- Croydon, E. A. P. January  
re sensitivity of gonococci.
- F.141 Dewdney, J. M. March-August  
Includes notes of meetings and draft paper on  
penicillin allergy.
- F.142 Doyle, F. P. January-September  
Includes programme and summaries of papers for Beecham  
Research Conference, 27-29 May 1970, and some  
correspondence and notes from colleagues re research  
on ds-RNA and mode of action of penicillins.

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- F.143 Mallett, A. A. December  
Copy of letter to Farmitalia re Penicillin G.
- Planterose, D. N. January-April  
Includes drafts of papers for submission to Nature  
and other journals.
- F.144 Rolinson, G. N. March  
Personal correspondence.
- Smith, H. March  
re Kav values.
- Stafford, C. D. W. February  
Personal correspondence.
- F.145 Wilkins, G. J. May  
Includes memorandum on 'Antibiotics in the treat-  
ment of Gonorrhoea'.  
An agenda for December meeting of the Scientific  
Committee on Non-Specific Immunity is also  
included in the folder.
- F.146-F.148 Correspondence and papers, 1971
- F.146 Letters from F.P. Doyle and others re arrangements for  
meetings and administration of Beecham research grants  
to Imperial College.
- F.147 Notes of various meetings and visits during 1971 sent to  
Chain for information. Includes report on discussions  
during a visit to the Max Planck Institute by Chain and  
representatives of Beecham Research Laboratories.
- F.148 Drafts and reports on research planned or in progress, sent  
to Chain for information. Includes undated typescript  
outlining 'Proposals for experimental work on the effects  
of various types of "fibre" and other non-nutritive  
materials on cholesterol and bile acid metabolism in the rat.'  
See J.118 for discussion meeting on 'Effect of Fibre in  
Food' attended by representatives of Beechams and others,  
November 1971.



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- F.157 Mansford, K. R. L. February-October  
Mainly re proposed 'Colloquium on Fibre'.
- Nayler, J. H. C. April  
Enclosing notes on symposium at the Sandoz Research Laboratories, Vienna, 29 March 1973.
- Smither, R. August  
re Dutch patent application for acylation of 6-aminopenicillanic acid. Includes copy of affidavit filed by Chain in February 1972.
- F.158 Wilkins, G. J. January-December  
re planning and organisation of research and arrangements for the continuation of Chain's consultancy after his retirement from Imperial College.
- F.159 Miscellaneous data and reports sent to Chain for information.
- F.160-F.163 Correspondence and papers, 1974  
Mainly in alphabetical order.
- F.160 Dewdney, J. M. January-December  
Includes reports of meetings with Sandoz and Max Planck Institute and material re Interferon Inducers project.
- F.161 Doyle, F. P. January-October  
Includes brief correspondence with W. G. Petley.
- F.162 Green, J. January-October  
Mainly re research on dietary fibre. Includes drafts of 2 papers.
- F.163 Correspondence with other colleagues at Beechams, February-December 1974, re meetings, visits, research, etc.
- F.164 Correspondence and papers, 1975-76  
Includes note of meeting re interferon, June 1975, draft of paper by J.M. Dewdney and brief correspondence re consultancy arrangements.

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- F.165, F.166      Correspondence and papers, 1977
- F.165              Letters from various colleagues at Beechams re research, meetings, etc.
- F.166              Correspondence with R. Smither re Beechams' action against Bristol-Myers for infringement of amoxycillin patents. Includes copies of related French patents.
- F.167              Correspondence with F.P. Doyle and others, 1978  
Mainly re arrangements for dinner-party to discuss the future of antibacterial chemotherapy, and for a visit to America by Chain in October.
- F.168              Arrangements for visit to Beecham Laboratories (at Worthing, July 1979 (cancelled due to illness).  
Folder also includes a report by D.N. Planterose on visit to the Weizmann Institute, April 1979.
- F.169-F.172      Correspondence with H.G. Lazell, Chairman of the Beecham Group 1958-68.
- F.169              1960-65  
Mainly arrangements for social occasions, including programme for a visit to Israel by Lazell in 1965.  
1962 correspondence refers to the contributions of the pharmaceutical industry to the development of medical research.
- F.170              1966-69  
Mainly social correspondence.
- F.171              1970-71  
Includes arrangements to meet in Bermuda, December 1970, comments on national scientific policy and the future development of the Beecham Group, and a long letter from Chain, 13 November 1970, containing an account of his early associations with Lazell and the work leading to the discovery of 6-aminopenicillanic acid.
- F.172              1973-75, 1977  
Includes accounts of discussions with F.P. Doyle and others (1973), and comments on Lazell's book 'From Pills to Penicillin' (1975).

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- F.173, F.174      Correspondence with Sir Ronald Edwards, Chairman of the  
Beecham Group 1968-75.  
See also K.70, K.71.
- F.173              1969-73
- F.174              1974-75

Industrial consultancies and collaborative research

- F.175                      BIOCHEMIE GMBH                      1955-59, 1974
- Correspondence re collaborative research, exchanges of visits, etc.
- Includes several letters from E. Brandl (Head of the Biological Research Division) who spent some time at the Istituto Superiore di Sanità and published 3 collaborative papers with Chain and others.
- F.176-F.178              BRISTOL LABORATORIES INC.              1951-69
- F.176                      Correspondence with A.R. Menotti (Vice-President and Scientific Director) re arrangements for Chain to visit the Bristol Laboratories in October 1959 (see also F.177). Some fragmentary earlier correspondence is also included here.
- F.177                      2 typescript drafts for talk on 'Penicillin: Its Past, Present and Potential Future', delivered by Chain during his visit to Bristol Laboratories, 26 October 1959.
- 2 pp. ms. draft for undated after-dinner speech is also included here.
- F.178                      Correspondence, 1969, re proposal to film an interview with Chain for an exhibition on the history of penicillin.
- F.179                      BRITISH PETROLEUM (BP)                      1965
- Correspondence with F.E. King re arrangements for meeting with Chain to discuss B.P.'s Protein from Petroleum Project.
- F.180, F.181              BRITISH PETROLEUM (BP) PROTEINS LTD.              1973, 1977
- Correspondence with H. Watts (General Manager) and others re economic and other aspects of various methods of yeast and single cell protein manufacture.
- F.180                      October-November 1973



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- F.186                      CYANAMID OF GREAT BRITAIN LTD.    1970
- Correspondence re the use of antibiotics in animal feeding stuffs following a discussion at the Royal Society of Medicine on 19 January 1970. Includes drafts of Chain's contribution to the discussion.
- F.187                      EDWARDS HIGH VACUUM                      1972, 1975
- Correspondence re specifications of freeze-drying equipment; invitations to visit the plant at Crawley.
- F.188-F.190                ENI (ENTE NAZIONALE IDROCARBURI)    1973-79
- F.188                      Correspondence with G. Mazzanti (Director-General, ENI), 1973-75, mainly arrangements for meetings to discuss ENI's involvement with various projects for yeast and single-cell protein production. Much of the correspondence is conducted by telex.
- F.189                      Correspondence with R. Fourquet (Director, ENI) and others, 1975-79. Includes press-cuttings re Italproteine plant in Sardinia (owned jointly by BP and ANIC - a subsidiary of ENI), reports and data on interferon and some personal correspondence.
- F.190                      Correspondence with G. Mazzanti, January-June 1979. Mazzanti's letter of 1 June welcomes Chain to membership of the Committee for Research and Innovation of the ENI Division for Planning and Development.

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F.191-F.200

FARMITALIA

1955-76

Chain was first introduced to Farmitalia by D. Marotta in 1949, and several members of the company worked in his laboratory at the Istituto Superiore di Sanità. One of the results of this collaboration was the development of methods for the production of a lysergic acid derivative (the ethoxamide) by submerged culture of Claviceps paspali.

Unfortunately, with the exception of some published papers, very little remains to document the first twenty years or so of the collaboration. But in Spring 1972, Chain signed a 3-year contract to act as a consultant to Farmitalia and Carlo Erba (q.v.), both by that time subsidiaries of Montecatini Edison (q.v.).

The period of his consultancy is quite well documented with correspondence, reports on work in progress, accounts of meetings, etc.

- F.191 Fragmentary correspondence (mainly incoming letters only), 1955-70, from various members of the company. Mainly arrangements for visits, meetings, etc. Includes some personal correspondence.
- F.192 Personal and scientific correspondence, March-June 1972. Includes long letters from R. Falini and G.T. Banks re Farmitalia's plant at Settimo Torinese.
- F.193 Correspondence, July-August 1972. Includes a further long letter from G.T. Banks reporting on a visit to Milan in July.
- F.194 Correspondence, September-November 1972. Includes 2 letters from Upjohn International re antibiotics and steroids discovered in their laboratories.
- F.195 Correspondence, January-March 1973, including data, reports and comments on research and policy. Some of Chain's letters mention proposals for a European Institute for Functional Biochemistry. See also F.266, K.65, K.185.
- F.196 Correspondence, April-November 1973.
- F.197 Correspondence, October 1973-March 1974, mainly re Settimo Torinese.

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- F.198 Correspondence, December 1973-April 1974.
- F.199 Correspondence and reports, May-July 1974.
- F.200 Correspondence, 1975, 1976. 2 letters only. Letter from Chain to L. Zeller, 14 February 1975, discusses possible conditions for the renewal of his contract with Farmitalia.

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- F.201 FISIONS LTD. 1975-76  
Brief correspondence with H. J. Kahn (Chairman, Agrochemical Division).
- F.202 GALENIKA 1959, 1962  
Very fragmentary correspondence consisting of:  
  
2 letters from Chain to the General Manager (P. Arambasic), 1959, one of which refers to a memorandum by Chain 'which summarises the most important points of the conversation we had with the Minister of Industry, and sets out my recommendations with regard to the establishment of a central antibiotics plant and a research institute for industrial biochemistry'.  
  
Letter from the Director of the Research Laboratory, 1962, asking Chain to accept one of his staff as a visiting researcher.
- F.203-F.211 GRÜNENTHAL (CHEMIE GRÜNENTHAL GMBH) 1953-78  
Chain's only professional contact with Grünenthal was in 1970 when he appeared as an expert witness for the defence at the hearing at Alsdorf (re thalidomide). This episode is documented at F.204-F.209.  
  
The remainder of the material consists of correspondence with Dr. Heinrich Mückter which extends from 1953-78 on both personal and scientific topics.
- F.203 Correspondence with H. Mückter, 1953, 1961, 1963, mainly re arrangements for meetings and visits.
- F.204 Correspondence with H. Mückter and others, October 1969-February 1970, including arrangements for Chain to give evidence in the thalidomide trial on 2 February 1970.  
See also F.205-F.209.
- F.205 Ms. and corrected typescript drafts for Chain's evidence. In German.

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- F.206 Ms. and corrected typescript draft of English translation of Chain's evidence.
- F.207 Transcript of examination of Chain during the trial on 2 February 1970.
- F.208 Background papers sent to Chain for information, on thalidomide and the progress of the trial.
- F.209 Correspondence with H. Mückter, September 1970-February 1971, including comments on the verdict of the thalidomide trial.
- F.210 Personal and scientific correspondence, 1972-73.
- F.211 Correspondence, 1974-78. Includes arrangements for a visit to Munich by Chain in May 1974, and correspondence re virazol, 1976.
- F.212-F.215 HINDUSTAN ANTIBIOTICS LTD. 1952-78
- Chain's connection with Hindustan Antibiotics arose from his service on the Expert Committee on Antibiotics of the World Health Organization (q.v.) and through the training facilities offered by his laboratory. Some of the Indians who came to work in Rome continued to correspond with Chain for several years after their return with news of progress in the factory and accounts of their own research.
- F.212 'Suggestions with Regard to the Organisation of the Indian Penicillin Plant'.  
1 p. typescript, 4 February 1952. 1 p. ms., n.d., re the patenting of antibiotics in India is also included here.
- F.213 Correspondence with M. J. Thirumalachar and others, 1954-78.
- F.214 Letter from N. L. Macpherson (Chief, Industrial Development Section, U.N. Technical Assistance Administration), November 1958, enclosing accounts of the establishment of penicillin factories in India, Yugoslavia and Chile.
- F.215 Correspondence 1978-79.  
With K.S. Gopalkrishnan, mainly re arrangements for Hindustan Antibiotics Silver Jubilee celebrations in 1979.



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- F.221 Personal and scientific correspondence with A. Spinks, February-October 1974. Includes typescript of lecture by Spinks on 'ICI invention and university research'.
- F.222 Correspondence and reports, February-July 1975, re single cell protein production with particular reference to negotiations for co-operation with the Iranian government.
- F.223 Correspondence and papers, August-December 1975, including arrangements for meetings and visits to discuss single cell protein production.
- F.224 Further correspondence re Iranian single cell protein project, February-December 1976.
- F.225 Correspondence with I.C.I. Pharmaceuticals Division re double stranded (ds) RNA, March-October 1976. Includes 2 letters from C.A. Clarke.
- F.226 Further correspondence re work on ds RNA, 1977-78, including arrangements for meetings and visits.
- F.227 Further correspondence re Iranian protein project and the erection of an experimental plant at Billingham, February-April 1978.
- F.228 I S F S.p.A. 1976  
Correspondence re arrangements for Chain to visit ISF's research laboratories, and letter re proposal for collaboration with Astra for production of 6-APA.
- F.229 THE ISRAEL PENICILLIN AND BIOLOGICAL PRODUCTS CO. 1949  
Correspondence re arrangements for Chain's appointment as a consultant.

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- F.230                    ISTITUTO SIEROTERAPICO E VACCINOGENO  
TOSCANO "SCLAVO" S.p.A.                    1958-63
- Correspondence with the Director (D. d'Antona) and others, 1958-63. Includes several invitations to Chain to visit the 'Palio' as guest of the Institute. 1958 correspondence is mainly re analysis of local mineral water.
- See also K.164.
- F.231-F.233            LEPETIT S.p.A.                                    1953-71
- F.231                    Letters from G. Zerilli-Marimò and others, 1953-55, mainly re arrangements for Chain to visit Lepetit's factory at Torre Annunziata (Naples). None of Chain's replies for this period has survived.
- F.232                    Further correspondence, 1961-63, including invitations to Chain to attend various functions at Torre Annunziata and Milan.
- F.233                    Correspondence, 1970-71, re a film about antibiotics produced by Lepetit in which Chain was asked to participate. Includes English and Italian versions of his script and arrangements for filming in Milan.
- F.234, F.235            THE LILLY RESEARCH LABORATORIES, ELI  
LILLY AND CO.                                    1953-68
- Correspondence with members of the Lilly Research Laboratories.
- F.234                    1953-59
- Includes correspondence re supply of insulin and glucagon samples to Chain, arrangements for exchange of visits and information, and possible collaboration in the field of biological production of lysergic acid derivatives (1959).
- F.235                    1963, 1968
- Includes correspondence and printed matter re work on interferon at the Lilly Research Laboratories.

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F.236-F.251

MARKS AND SPENCER LTD.

Chain's early contacts with Marks and Spencer were through his personal friendship with Israel M. Sieff (later Lord Sieff of Brimpton) and other members of the Board. In October 1961 he was appointed as a member of a panel of Scientific Consultants 'to study and advise us on problems which affect the production of goods which are manufactured for sale in our stores'.

The material includes notes and reports on matters affecting the Science Panel, agenda and minutes of meetings, research papers and correspondence with members of the company. Personal correspondence with members of the Marks, Sieff and Sacher families which includes many references both to Marks and Spencer and to various Jewish affairs is included at F.236-F.240.

- F.236-F.240 Correspondence with members of the Marks, Sieff and Sacher families, 1953-79. In alphabetical order.
- F.236 Marks, S. (later Baron Marks of Broughton) 1953-61  
Includes a 3 pp. typescript memorandum sent to Marks by Chain in November 1961 entitled 'Notes on the history of the penicillin development and the importance of collaboration between universities and industry'.
- F.237 Sacher, M. M. 1957-72  
Includes arrangements for Chain to speak at a dinner, 23 April 1958, commemorating the Tenth Anniversary of the Independence of Israel. The text of Chain's speech is at G.17.
- F.238 Sieff, I. M. (later Baron Sieff of Brimpton) 1955-68  
Personal and social exchanges, arrangements for meetings and visits, correspondence re Jewish affairs and a 4 pp. letter from Chain, 1962, on the application of quantitative analytical chemical methods to problems of food technology.
- F.239 Sieff, J. E. 1965-72

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- F.240 Sieff, M.J. (later Baron Sieff of Brimpton) 1958-76  
Personal and business correspondence.
- F.241-F.251 Correspondence relating to Chain's scientific advisory work for Marks and Spencer. The chief correspondents are N. Goldenberg and I. Levy.
- F.241 1961  
Includes letter from I.M. Sieff, 31 October, confirming Chain's appointment as a member of the panel of Scientific Consultants, and correspondence and reports on banana rot.
- F.242 1962  
Includes letter from Chain to A.J. Donlon, 3 May 1962, in which he writes 'I really feel that I cannot accept money for the work I am doing for my friends at M and S. I shall be quite satisfied with the reimbursement of expenses (if there are any) connected with this work, but would really feel embarrassed if I accepted a regular remuneration for work for friends for whose social and humanitarian contributions both in Britain and in Israel I have an unlimited admiration'.
- F.243 1963  
Arrangements for meetings of the Science Panel and related correspondence, mainly re storage of cooked and uncooked chickens.
- F.244 1964  
Includes agenda, minutes and other related papers for Science Panel meetings.
- F.245 March-June 1965  
Correspondence and reports, mainly re flame retardant textiles.
- F.246 July-December 1965  
Correspondence and reports, mainly re irradiated foods and insecticides.
- F.247 January-June 1966  
Includes arrangements for meetings with the Research Director, Spillers Ltd.

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- F.248      January-December 1967  
             Includes correspondence with S.A. Goldblith re  
             arrangements for him to lecture on 'The Preservation  
             of Foodstuffs by Irradiation'.
- F.249      1969  
             re nitrites and nitrosamines. Includes correspondence  
             from I. Berenblum.
- F.250      1970-71
- F.251      1972, 1974  
             Includes further correspondence from S.A. Goldblith.
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- F.252-F.257      MERCK SHARP & DOHME      1954-76
- F.252      Brief correspondence with various members of the company,  
             1954-58.
- F.253      Correspondence with M. Tishler, November 1961-February  
             1963, re statement signed by Chain and others affirming the  
             usefulness and productivity of the research laboratories of  
             the American pharmaceutical industry.
- F.254      Further correspondence with M. Tishler and others, October  
             1962-December 1963. Mainly arrangements for meetings  
             and visits, including visit by Chain to the Merck Research  
             Laboratories in March-April 1963 to assemble background  
             material for his forthcoming Trueman Wood Lecture (see also  
             G.35, G.36).
- F.255      Personal and scientific correspondence, 1968-70.
- F.256      Correspondence with L.H. Sarrett, May-October 1971,  
             re work on ds RNA.
- F.257      Miscellaneous correspondence with L.H. Sarrett and others,  
             1972-76.

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F.258-F.267

MONTECATINI EDISON S.p.A. (later  
MONTEDISON) 1954-75

Chain's contacts with this company were mainly through Farmitalia (q.v.). In Spring 1972 he agreed to act as consultant to Farmitalia and Carlo Erba, both members of the Montecatini Edison group and most of the following papers are related to this consultancy. They include reports and correspondence on the research activities of both companies culminating in a 27 pp. memorandum written in November 1973 and describing the history of Chain's own contacts with the Italian pharmaceutical industry as well as detailed recommendations for action.

1974 correspondence includes several references to proposals for the creation of an independent European Research Institute for Physiological Biochemistry in Italy in which Chain hoped that Montedison would play a leading part. See also F.195, K.185.

F.258

Brief correspondence with L. Morandi (Vice-President) and others, 1954-55.

F.259

'First preliminary appraisal of research activities at Farmitalia, Via Gracchi and Carlo Erba Research Center (sic)'. 3 pp. typescript summarising conclusions reached at a meeting between Chain and B. Camerino, 16 March 1972.

F.260

Correspondence, March-September 1972. Includes:

6 pp. memorandum by B. Camerino, 20 April, on coordination of the research effort of Farmitalia and Carlo Erba.

Correspondence with G. Mazzanti and E. Pizzi arising from Chain's refusal to accept appointment to the Board of Carlo Erba.

Correspondence with D.H.R. Barton re Camerino's proposal to offer a 5-year grant to Imperial College for research on modified antibiotics.

F.261

Correspondence with B. Camerino, March-July 1973, mainly re research policy and progress. Also included is a letter from Chain to A. Grandi, 16 July, re his professional relationship with ENI (q.v.).

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- F.262 Correspondence with A. Fornara, September–November 1973, following a meeting in Milan on 18 September to discuss plans for the research, development and production activities of Farmitalia and Carlo Erba.
- F.263 27 pp. typescript summary of Chain's discussion with Fornara on 18 September 1973, including a brief history of his personal and professional contacts with Farmitalia from 1949. A copy of this was sent to Fornara with a covering letter on 12 November 1973.
- F.264 Ms. and typescript drafts of F.263.
- F.265 Correspondence with U. Colombo and others, November 1973–April 1974, mainly re production of yeast from carbohydrates. Includes miscellaneous reports and data sent to Chain for information.
- F.266 Correspondence with U. Colombo and A. Grandi, March–September 1974, mainly re proposals for the establishment of an independent Institute for Physiological Biochemistry. Includes a letter from the Secretary-General of the Fondazione Giovanni Agnelli, 31 January 1974.
- F.267 Correspondence with the President of Montecatini Edison, November–December 1974, and a letter to A. Grandi, January 1975, re arrangements to meet.
- F.268 THE NATIONAL DRUG COMPANY, Philadelphia 1958, 1962  
Correspondence with successive Research Directors re arrangements for visits to discuss possibilities for collaborative research.

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F.269-F.281

NATIONAL IRANIAN OIL COMPANY  
(N.I.O.C.) 1974-78

Correspondence, memoranda and reports re projects for single cell protein production, 1974-78.

Includes exchanges with other Iranians including members of the government and academic colleagues. Chain was appointed as a Consultant to the Iranian Protein Committee in October 1975 and attended several of its meetings.

In addition to the single cell protein project, Chain acted as a go-between for Astra (q.v.) in negotiations with Iran re penicillin production.

Some personal correspondence is also included in the sequence.

F.269

April-October 1974

Correspondence with D. Alliance and A. Badakhshan (General Manager, Research and Laboratories Group, N.I.O.C.) arising from Chain's offer to advise the Iranian authorities about methods of single cell protein production.

F.270

January-February 1975

Correspondence prior to and arising from a visit to Tehran, February, 1975. Includes 3 pp. ms. notes on the visit and the journey to Iran from Australia where Chain had been attending a congress.

F.271

March 1975

2 typescript drafts of report by Chain on SCP (single cell protein) production, sent to A. Fazeli (Head of Biochemical and Bioenvironmental Research Centre, Arya-Mehr University, Tehran).

Related ms. notes and printed matter are also included in the folder.

F.272

March-April 1975

Correspondence with Fazeli and others arising from Chain's memorandum on SCP production and re arrangements for a visit to Iran in May. (See also J.157.)

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- F.273                      May-September 1975  
                                    Mainly notes and correspondence arising from Chain's visit to Iran in May and arrangements for visit in October.
- F.274                      Typescript of address on single cell proteins delivered by Chain to the Iranian Protein Committee, 7 October 1975. 18 pp.
- F.275                      October-November 1975  
                                    Includes accounts of meetings and visits during Chain's visit to Iran in October which included an audience with the Shah. Correspondence also refers to his appointment as consultant to the Iranian Protein Committee, and proposed collaboration with Ranks Hovis McDougall Ltd. on production of single cell protein.
- F.276                      December 1975-April 1976  
                                    Correspondence with A. Badakshan (Chairman, Iranian Protein Committee) and others. Includes several letters arising from a visit by Chain to Tehran in February 1976 and 6 pp. typescript 'First draft proposal for fermentation pilot plant unit for continuous and batch fermentation'. Correspondence also refers to proposed collaboration with I.C.I. and Nestlé.
- F.277                      June-December 1976. Includes:  
                                    Correspondence with suppliers of scientific instrumentation re equipment ordered by N.I.O.C. for their fermentation pilot plant.  
                                    Minutes of Chain's comments at meeting of the Protein Committee, 22 November 1976.  
                                    Note of brief address by Chain at meeting organised by the Royal Institute of International Affairs on 'Iran 1980-85, Problems and Challenges of Development', 7 December 1976.  
                                    Correspondence re negotiations with I.C.I. and Nestlé.

Industrial consultancies and collaborative research

- F.278            December 1976-April 1977.    Includes:
- Correspondence with K. Cantell and others re supply of interferon to treat Agha-Khan Bakhtiar (Director, N.I.O.C.).
- Correspondence re negotiations with Astra for collaboration with Iran on penicillin production.
- Some personal correspondence.
- F.279            May-October 1977.    Includes:
- Correspondence arising from Chain's visit to Iran in May, including a report on the N.I.O.C. fermentation pilot plant at Rey.
- Continuing correspondence re negotiations with Astra (re penicillin) and Nestlé (re single-cell protein).
- Some personal correspondence.
- F.280            November 1977-February 1978.    Includes:
- Correspondence with D. Alliance and E. Katzir (President of Israel) re contacts between Israel and Iran.
- Minutes of Chain's remarks at meeting of the Iranian Protein Committee, 12 November 1977.
- Further correspondence re negotiations with Astra, Nestlé, I.C.I and Ranks Hovis McDougall.
- Some personal correspondence.
- F.281            March-December 1978
- Continuation of correspondence in F.280, including a long ms. letter from H. Gaguik, 4 September, with comments on the Iranian political situation.

Industrial consultancies and collaborative research

F.282-F.292

NESTLÉ ALIMENTANA S.A. 1967-78

(includes AFICO, NESTEC and other subsidiaries)

Chain's collaboration with Nestlé and its subsidiary companies began in 1967. A contract for the growing of bacterial biomass in the fermentation plant at Imperial College was followed by further opportunities for collaborative research.

Chain's main contact in the company was Professor Louis Rey, the Research Director, with whom much of the correspondence is conducted. They became firm personal friends and remained in close touch after Rey's resignation from his full-time post with Nestlé in 1974 due to ill health. (See K.194-K.196.) Chain's main correspondent at Nestlé from 1975 was Dr C.L. Angst.

F.282

1967. Includes:

Arrangements for visit by Chain to Nestlé in May and return visit by L. Rey and others from Nestlé to Imperial College in June.

Correspondence with K.A. Blaxter re collaboration with the Rowett Research Institute (see also K.16).

Report and correspondence re visit to U.S.A. by Chain and L. Rey in November.

F.283

1968. Includes:

Arrangements for research grant to Imperial College for growing bacterial biomass in the fermentation pilot plant.

Progress reports on Nestlé Microbial Protein Project, July and October 1968.

Miscellaneous correspondence re meetings and visits.

F.284

1969. Includes:

Correspondence (administrative and scientific), research reports, notes of meetings, etc. re collaborative research in progress at Imperial College.

Miscellaneous arrangements for visits.

Industrial consultancies and collaborative research

- F.285            1970. Includes:  
                    Arrangements for meetings and visits.  
                    Miscellaneous administrative correspondence.  
                    Ms. and typescript of brief address by Chain introducing a lecture by L. Rey at Imperial College, October 1970.
- F.286            1971. Includes:  
                    Scientific and administrative correspondence re collaborative research.  
                    Arrangements for meetings and visits.  
                    See also F.287.
- F.287            Ms. and typescript drafts for interview of Chain by L. Rey (in French) recorded for a film produced by Nestlé entitled 'La Biosynthèse Industrielle: Micro-organismes et Fermentation contrôlée'.  
                    Brief correspondence, 1970-71, is also included here.
- F.288            1972  
                    Mainly re arrangements for visits by Chain to Switzerland to advise on research in progress. Includes agendas for visits in May, July and November and correspondence with L. Rey re possible collaboration between Nestlé and Ranks Hovis MacDougall.
- F.289            1973  
                    Includes some personal correspondence with L. Rey.
- F.290            1974. Includes:  
                    Arrangements for meetings and visits.  
                    Correspondence with C.L. Angst re proposals for cooperation with Montedison in the field of biosynthetic protein production.  
                    Personal correspondence with L. Rey.

Industrial consultancies and collaborative research

F.291

1975-76

Correspondence with C.L. Angst and others re progress of negotiations with Exxon and the Iranian government for single cell protein production. Chain's letter of 16 April 1975 discusses arrangements for his own participation in this project.

F.292

1977-78

Further correspondence re single cell protein production and arrangements for meetings and visits. Correspondence with C.L. Angst, April-June 1978, discusses conditions for the renewal of Chain's consultancy contract with Nestlé.

Industrial consultancies and collaborative research

- F.293-F.297 PFIZER (CHAS. PFIZER & CO. INC.) 1950-66  
Correspondence with various branches of the company in U.S.A. and Europe.
- F.293 1950, 1952  
Mainly re terramycin. Includes press release announcing its discovery in the Pfizer laboratories, February 1950.
- F.294 September 1953-March 1954  
Includes draft and final version of 'Research in Rome', an article describing Chain's laboratories at the Istituto Superiore di Sanità published in Spectrum, Pfizer's in-house magazine. The article was written as a result of a visit to Rome to attend the Sixth International Congress of Microbiology.
- F.295 April 1954-1957  
Correspondence re research and visits. Includes notes on glucatase and copy of Spectrum, August 1955, containing an appreciation of Fleming.
- F.296 1958-60  
Includes correspondence re visit by Chain to the Pfizer laboratories in New York and New Jersey, and arrangements for a member of Chain's laboratory (G. Gualandi) to visit Pfizer to advise on apparatus for measuring concentrations of dissolved oxygen.
- F.297 1961-66  
Includes correspondence re Chain's contribution to the Second International Fermentation Symposium (London, April 1974) and the Committee of Inquiry into the Drug Industry (Sainsbury Committee).

Industrial consultancies and collaborative research

- F.298-F.310 PFLEGER (DR. R. PFLEGER CHEMISCHE FABRIK  
GMBH) 1950-79
- Personal and scientific correspondence with R. Pflieger and others, mostly conducted in German. The early part of the sequence consists of incoming letters only, as copies of Chain's replies have not survived.
- F.298 Letters from R. Pflieger to Chain, 1950-56. Also included is a letter from Ursula Muellerrath, January 1949, enclosing Pflieger's address.
- F.299 Letters from R. Pflieger and others, 1957. Includes correspondence with G. Zerilli Marimò re collaboration between Pflieger and Lepetit and copies of letters from R. Pflieger to C.D.W. Stafford re licensing of Paynocil.
- F.300 Correspondence, 1958, mainly re licensing arrangements for various pharmaceutical preparations.
- F.301 Correspondence, 1959. Includes arrangements for meetings and visits and 10 pp. ms. on 'Katalytische Hydrierung der 2-Keto- und der 5-Keto-d-gluconsäure in Gegenwart von Ammoniak, Aminen und Ketonreagenzien'.
- F.302 Correspondence, 1960-62.
- F.303 Correspondence, 1963-65. Includes exchanges re possible arrangements for collaboration between Pflieger and the Wellcome Foundation.
- F.304 Correspondence, 1966. Includes arrangements for meetings and visits and miscellaneous printed matter.
- F.305 Correspondence, 1967-68. Includes arrangements for meetings and visits and several letters re agroclavin.
- F.306 Correspondence, 1969. Includes further material on agroclavin and arrangements for analysis by U.K.A.E.A. Radiochemical Centre of a compound produced by Pflieger.
- F.307 Correspondence, 1970-July 1971.

Industrial consultancies and collaborative research

- F.308 Correspondence with H. Hegler and others following the death of R. Pflieger in October 1971.
- F.309 'Robert Pflieger zum Gedächtnis'.  
Ms. and typescript drafts of tribute to R. Pflieger. Miscellaneous background material is also included in the folder.
- F.310 Correspondence with H. Hegler and others, 1975-79.
- F.311 PULLMAN ASSOCIATES GMBH 1970  
Request to Chain to act as a consultant (acknowledgement only).
- F.312, F.313 RANK PRECISION INDUSTRIES LTD. 1971-75  
Correspondence and reports re collaborative work on automatic analysis of liquids.
- F.312 November 1971-October 1972  
Correspondence with J.R. Boundy (Director and General Manager) re terms of agreement for collaboration with Imperial College. Includes invitation to Chain to serve on a small steering committee and several references to an automatic amino acid analyser designed by A. J. Thomas (Senior Lecturer in the Biochemistry Department). See also D.138.
- F.313 November 1972-October 1975  
Includes minutes of meetings of the steering committee and material re public launching of 'Chromaspek', a development of the automatic amino acid analyser designed by A. J. Thomas.

Industrial consultancies and collaborative research

F.314-F.324

RANKS HOVIS McDOUGALL LTD. 1965-79

Chain was introduced to Dr. Arnold Spicer, the Head of the newly-established Research Department (later the Rank Research Centre) by J. Yudkin in 1965.

The following papers document some of Chain's collaborative activities with the company including a consultancy arrangement and participation in a research project on microbial proteins, particularly Penicillium notatum-crysogenum (coded C 1) and Fusarium graminearum (coded A 3/5). The material includes correspondence with the Financial Secretary, Imperial College, re administration of the research grant as well as research reports, arrangements for meetings and visits, and personal correspondence with Lord Rank and his nephew Joseph.

Chain was also a member of the Advisory Committee on Nutrition for the Rank Prize Funds (see E.149-E.155), and collaborated with Rank Precision Industries Ltd. in the development of an automatic amino acid analyser designed by a member of the Biochemistry Department at Imperial College (see D.138, F.312, F.313).

Correspondence 1967-69 contains several references to a gift of £50,000 made by Lord Rank towards the establishment of a second Chair of Biochemistry in Chain's Department at Imperial College. The College was unable to raise the additional money needed for the financing of a Chair so an agreement was reached with Lord Rank that the money would be made available to Chain through Imperial College to use for Research Fellowships. Chain used only the interest for this purpose, leaving the principal intact, and in 1973 he approached the Rank Trustees for a further donation to make up the amount needed for the endowment of a second Chair. For correspondence concerning this episode and related events, see D.43-D.74.

F.314

1965

Correspondence with A. Spicer and others re arrangements for meetings and visits. Includes some exchanges of scientific information and brief correspondence from Lord Rank.

Industrial consultancies and collaborative research

- F.315            1966. Includes:
- Arrangements for a conference held in Marlow, 22 and 23 February, at which Chain gave a short address on aflatoxin and continuous culture.
- Correspondence re arrangements for further meetings, visits, conferences.
- Brief scientific correspondence and reports on results.
- F.316            1967. Includes:
- Miscellaneous arrangements for meetings and visits.
- Correspondence re possible collaboration with NRDC (National Research Development Corporation) in microbial protein research project.
- Brief personal correspondence with Lord Rank.
- Ms. (in Chain's hand) and typescript drafts for letter from Lord Rank to the Rector, Imperial College, offering a donation of £50,000 towards the establishment of a second Chair of Biochemistry in Chain's department.
- F.317            1968
- Scientific and administrative correspondence re collaborative research at Imperial College. Some correspondence re the Rank benefaction is also included.
- F.318            1969
- Includes correspondence and summary of report on automatic amino acid analyser (see also D.138, F.312, F.313) as well as further correspondence re collaborative research, Rank benefaction, meetings and visits, etc.
- F.319            1970. Includes:
- Scientific and administrative correspondence re collaborative research.
- Correspondence with J. Rank re the public image of the food industry and the British Nutrition Foundation (q.v.).
- F.320            1971
- Mainly re collaborative research: administrative correspondence, reports on results, arrangements for meetings, etc.
- Also includes correspondence with J. Rank, December 1971.

Industrial consultancies and collaborative research

- F.321            1972  
                  Includes correspondence re the British Nutrition  
                  Foundation.  
                  See also F.322.
- F.322            International Workshop on 'The Effect of Maternal Nutrition  
                  on the Development of the Offspring', 5-9 November 1972,  
                  sponsored by Johns Hopkins University and the Lord Rank  
                  Research Centre.  
                  Correspondence re arrangements.
- F.323            1973. Includes:  
                  Arrangements for meetings and visits.  
                  Paper by I.F. Duthie containing a review of the  
                  microbial protein research project since its inception  
                  in 1967.  
                  Press-cuttings and correspondence re Japanese synthetic  
                  protein production.
- F.324            1974-77, 1979  
                  Includes correspondence and data re A 3/5 project  
                  and personal correspondence with J. Rank and others.

Industrial consultancies and collaborative research

- F. 325                      RICHARDSON-MERRELL INC.                      1968
- Correspondence re visit to Imperial College and request to Chain to act as a Consultant to the company (declined).
- F. 326                      ROCHE PRODUCTS LTD.                      1973-75
- Correspondence re research and visits to various branches in U.K., U.S.A. and Australia.
- F. 327                      LABORATOIRE ROGER BELLON                      1962-63
- Correspondence with R.A.L. Bellon and others re arrangements for visits, work in progress, etc. Letter of 19 July 1963 mentions Chain's acceptance 'en principe d'accorder des conseils scientifiques au Laboratoire Roger Bellon' but it is not clear whether a formal consultancy agreement was negotiated. The letter also mentions the possibility of collaboration with the Beecham Research Laboratories.
- F. 328-F. 330                      SANDOZ LTD.                      1960-75
- F. 328                      Letters from J. Renz, 1960-62, mainly re arrangements for visits to Chain's laboratory in Rome to discuss technical problems arising from the installation of a new fermentation pilot plant. Copies of Chain's replies have not survived.
- F. 329                      Correspondence with J. Renz and others, 1966-67, mainly re ergotamine. Includes comments on research done by Farmitalia and proposals for funding of work on ergotamine at Imperial College.
- F. 330                      Miscellaneous correspondence, 1968-75.
- F. 331                      LABORATORI BIOCHIMICO-FARMACEUTICI  
SMIT                      1959, 1962
- Correspondence with the Director (U. Ciabatti) including 3 letters, 1962, re collaboration with Beechams and others in the antibiotic field.

Industrial consultancies and collaborative research

- F.332 SMITH KLINE & FRENCH LABORATORIES LTD. 1958-63
- Correspondence with R. Kohn and others re meetings and visits in Rome, London and U.S.A. Kohn's letters of January-April 1959 contain comments on progress of negotiations with the Beecham Group re 6-aminopenicillanic acid.
- F.333, F.334 UPJOHN INTERNATIONAL INC. 1958-72
- F.333 Correspondence re research and visits, 1958-67. Includes requests for information re Upjohn's methods of automatic sterilisation and brief correspondence re streptozotocin.
- F.334 Correspondence, 1968-72, mainly re streptozotocin.
- F.335 USIFROID (SOCIÉTÉ D'UTILISATION SCIENTIFIQUE ET INDUSTRIELLE DU FROID) 1975
- Correspondence re introduction of Usifroid's freeze-drying equipment to Beechams and re visit of L. Rey (designer of the equipment) to U.S.A.
- F.336-F.342 USV PHARMACEUTICAL CORPORATION 1973-78
- Chain acted as a consultant to USV from December 1974-October 1977. The correspondence deals mainly with arrangements for meetings with members of the company and its subsidiary, Revlon, and includes outlines of research policy often with detailed comments by Chain.
- F.336 October 1973-June 1974. Includes:
- Arrangements for meetings in UK and USA.
  - Draft conditions for contract.
  - Chain's report of visit to USV Pharmaceuticals at Tuckahoe, New York, 8-10 April 1974.
  - Letter from Chain to the Executive Vice-President of Revlon, 17 April 1974, outlining his own approach to pharmaceutical research.
- F.337 July-December 1974
- re administrative and scientific aspects of USV's research programme. Includes some correspondence re interferon.

Industrial consultancies and collaborative research

- F.338            1975. Includes:  
                  Arrangements for meetings and visits.  
                  2 pp. ms. notes taken by Chain during visit to USV  
                  in June.  
                  Correspondence with C.G. Smith (Executive Vice-  
                  President, Research and Development) re research  
                  planned and in progress.  
                  Some personal correspondence.
- F.339            1976  
                  Mainly re arrangements for meetings and visits and  
                  research plans in USA and Italy.
- F.340            January-April 1977  
                  Includes 9 pp. typescript by Chain on 'The cyclic AMP  
                  system as a lead to new drugs' and correspondence re  
                  the cyclic AMP system with various members of USV.
- F.341            June-October 1977  
                  Mainly re arrangements for meetings. Includes a long  
                  letter from Chain, July 1977, containing 'a brief  
                  appraisal of the research situation as I see it at Tuckahoe'  
                  and a letter of thanks from C.G. Smith at the conclusion  
                  of Chain's consultancy agreement.
- F.342            1978  
                  Arrangements for a farewell luncheon in New York in  
                  April and brief personal correspondence.
- F.343, F.344    WALLACE LABORATORIES            1965-66  
                  Correspondence and papers re plans for collaborative  
                  research.
- F.343            May-September 1965  
                  Correspondence with F.M. Berger (President, Wallace  
                  Laboratories) re arrangements for meetings with Chain  
                  and C.D.W. Stafford to discuss Beechams' attitude to  
                  collaborative research on xerosin.

Industrial consultancies and collaborative research

- F.344                      October 1965-January 1966  
                                 Correspondence re research on xerosin and interferon and arrangements for signing agreement re collaborative research. Includes copy of paper on 'The Role of Drugs in Suicide' presented by F.M. Berger at the Symposium on Suicide held in Washington, October 1965.
- F.345                      WESTFALIA SEPARATOR LTD.                      1971-72  
                                 Correspondence re design and development of a 6 Chamber Bowl Clarifier for use in the Biochemistry Department, Imperial College.
- F.346                      Shorter unindexed correspondence from various industrial firms: invitations/thanks for visits, brief requests for information, etc. In alphabetical order.

SECTION G

LECTURES, PUBLICATIONS, ADDRESSES, BROADCASTS  
G.1 - G.221

G.1	PUBLISHED PAPERS AND BIBLIOGRAPHY
G.2 - G.125	LECTURES, PAPERS, ADDRESSES
G.126 - G.155	UNDATED NOTES AND DRAFTS
G.156 - G.178	RADIO AND TELEVISION
G.179 - G.221	CORRESPONDENCE <u>re</u> PUBLICATIONS AND LECTURES

It should be noted that most of the material in this Section is additional to the list and copies of Chain's publications which appear at G.1. Chain did not regularly keep copies of his drafts and notes for scientific papers after they had appeared in print. There is often correspondence about his publications, and occasionally drafts and background material have survived; these are indicated in the entries and referenced to the bibliography in the form (Bibliog. ...).

The majority of the Section, however, contains drafts, notes and versions for speeches and papers not listed in the bibliography; they are on both technical and general scientific topics and intended for a variety of readers or audiences. The related correspondence often includes some scientific or personal matter, or deals with honours conferred on Chain.

The sequence G.2 - G.125 is not exhaustive. Other similar material can be found in the appropriate Sections, e.g. on penicillin (Section B), given at Rome (Section C), at symposia (Sections E, F, J), on Jewish occasions (Section H).

Lectures, publications, addresses, broadcasts

G.1 PUBLISHED PAPERS AND BIBLIOGRAPHY

1 box of published papers, and accompanying 'List of Sir Ernst Chain's publications' (compiled at Imperial College, London, August 1979).

This list is reproduced with permission on pp. 340-361 of the catalogue.

G.2-G.125 LECTURES, PAPERS, ADDRESSES

G.2 'Von der Entdeckung des Penicillins'

Lecture given at Internationalen Hochschulwochen, Alpbach, 1948; galley proof for volume of proceedings (1949).

Correspondence (only) re 'Une causerie sur la Pénicilline' given in Paris, June 1948.

G.3 'Etudes sur la structure et la synthèse de la pénicilline'

Exposés Annuels de Biochimie Médicale, 10, 1949 (ed. M. Polonovski).

Proof.

Also included here is correspondence re other contributions made by Chain to the Exposés Annuels, 1950, 1952, 1954, 1964. The meeting in December 1954 (Chain spoke on 'Données nouvelles dans le métabolisme des glycérides'), and the subsequent publication, were dedicated to M. Polonovski. The 1964 volume was dedicated to J. Polonovski (son) who had continued the work after his father's death.

G.4 'Industrial Microbiology'

26 pp. typescript of introductory article in series published in Research, 5, 567-576 (1952) (Bibliog. 39).

Correspondence with the Editor of Research, 1951-52, re other contributions and contributors to the series.

G.5 'Recent Progress in the Field of Carbohydrate Metabolism'

33 pp. typescript + 5 pp. bibliography. n.d., latest reference 1952.

Lectures, publications, addresses, broadcasts

- G.6 'Industrial applications of Chemical Microbiology'  
26 pp. typescript lecture, n.d., c.1952.
- G.7 Correspondence with The Times, 1952-54, re 2 articles by Chain:  
'Microbiology in Industry', Times Review of Industry, March 1953 (Bibliog. 43).  
  
'Development of Antibacterial Chemotherapy', Times Review of Science, February 1954.
- G.8 The Harben Lectures, 1954, on 'The Biochemical Approach to Biological Phenomena' (Bibliog. 44).  
Correspondence (only) re arrangements and publication.
- G.9 'The Development of Bacterial Chemotherapy'  
Address given at the Centennial Commemoration Ceremony held in Frankfurt, March 14-16 1954, on the occasion of the presentation to Chain of the Paul Ehrlich and Ludwig Darmstaeder Prize. The address was published in several languages and periodicals (Bibliog. 45).  
See A.90-A.94 for personal material relating to the Award and lecture.  
See E.137-E.145 for material relating to Chain's later service on the Council of the Paul Ehrlich Foundation.  
English (26 pp.) and German (18 pp.) typescripts of lecture, requests for reprints, copies of Chain's letters forwarding reprints (not indexed).
- G.10 Appreciation of M. Macheboeuf (d. August 1954).  
1 p. typescript, 1954.  
Correspondence with colleagues, copies of contributions by others, etc.
- G.11 'The impact of Biochemistry on Industry'  
10 pp. typescript and ms. draft, n.d.  
Folder includes some ms. corrections and incomplete typescript drafts.

Lectures, publications, addresses, broadcasts

- G.12 'Ferroverdin, a Green Pigment containing Iron produced by a Streptomyces', by Chain, A. Tonolo and A. Carilli, Nature, 1 October 1955, p.645.  
Offprint only.
- G.13 'The fate of uniformly labelled  $^{14}\text{C}$  fructose in the isolated rat diaphragm and rat brain and liver slices', article published in Annales Academiae Scientiarum Fennicae, Series AII (homage to A.I. Virtanen on his sixtieth birthday), 1955.  
Correspondence with editorial committee (1954).
- G.14, G.15 Two lectures in German, given at the University of the Saarland at the invitation of R. Ammon, January 1957. See also K.3.
- G.14 'Fortschritte auf dem Gebiet der Antibiotika'.  
2 typescript drafts of lecture, miscellaneous ms. drafts for introductory remarks of autobiographical reminiscences of own and Ammon's career.
- G.15 'Der Wirkungsmechanismus des Insulins'  
2 typescript drafts of lecture, 3 pp. summary.  
See also G.21 below.
- G.16 Speech to Society of Apothecaries, London, July 1957.  
Pages numbered 2-12 (p.1 missing), typescript and ms.
- G.17-G.20 Speeches and lectures given in various locations, c.1958, in connection with celebrations of tenth anniversary of the founding of Israel as an independent state.
- G.17 'Address given at the Independence Dinner held in London on April 22 1958 at the Dorchester Hotel', seconding toast by Lord Cohen.  
3 typescript versions.  
See also F.237.
- G.18 'Development of science in Israel'  
12 pp. typescript, given in 1958.

Lectures, publications, addresses, broadcasts

- G.19 'Ricerche all' Istituto Weizmann'  
17 pp. ms. draft, printed brochure of version published as 'Conferenza tenuta a Zurigo dal Prof. Ernst B. Chain', n.d., c.1958.
- G.20 After-dinner speech, perhaps at London Jewish Medical Society.  
Ms. notes and two typescript versions, n.d. but refers to Chain's arrival in England 'almost exactly twenty seven years ago'.
- G.21 'Some observations on the mode of action of insulin'  
Typescript draft and revised versions, perhaps first given as a lecture at the invitation of R. Ammon, see enclosed carbon letter, 1959 (Bibliog. 58).  
See also G.14, G.15.
- G.22 'Recent Studies in Carbohydrate Metabolism'  
The Harveian Lecture, delivered to the Harveian Society, London, 18 March 1959 and subsequently published in B.M.J. (Bibliog. 57).  
Correspondence only, re invitation, arrangements, publication, 1958-59.
- G.23 'Outlook for biochemistry in the decade 1960-70'  
4 pp. typescript draft, perhaps prepared for article in The Sunday Times, see accompanying correspondence with P. Collins.
- G.24 'Technological Education. A Prognosis'  
4 pp. ms. draft, n.d., c.1959.
- G.25 'Nouvelles voies microbiologiques pour l'obtention de médicaments'  
Inaugural lecture for Journées Pharmaceutiques Françaises, 1960 (Bibliog. 73).  
32 pp. ms. draft, English and French typescript and ms. versions of lecture, 2 pp. ms. introductory remarks, brief editorial correspondence.

Lectures, publications, addresses, broadcasts

- G.26 'Business and Science'  
11 pp. typescript of speech delivered to a Dinner meeting of the Thirty Club of London, February 1960. The speaker was to have been Sir Charles Dodds but he was taken ill and Chain was asked to 'step into the breach'.  
Brief correspondence with H. G. Lazell, President of the Thirty Club for 1960, is also included in the folder.
- G.27 'The penicillinase-resistant penicillins and the problem of the penicillin-resistant staphylococci'  
Ms. and various revised typescript drafts, n.d., latest reference 1961.
- G.28 'Recent progress in biochemical research'  
4 pp. typescript, n.d., c.1961.
- G.29 'Modified Penicillins'  
Typescript and ms. draft, and final version, of article published in Laboratory Practice, 1961 (Bibliog. 81).  
Brief correspondence.
- G.30 Correspondence re The Jenner Lecture, given June 1961 on 'Recent advances in the field of chemical microbiology'.  
24 pp. typescript lecture, untitled but probably The Jenner Lecture.
- G.31 'Note on the importance and function of a biochemical research centre within the medical faculty of the Catholic University at Rome'  
Memorandum by Chain, c. March 1962., ms. and typescript versions in English, Italian translation, brief correspondence.
- G.32 'Memorandum on the Need for Non-Medical Chairs of Biochemistry in Italian Universities and Technical High Schools'  
13 pp. typescript, n.d., early 1960's.

Lectures, publications, addresses, broadcasts

- G.33 'The biochemical effects of insulin'  
The Banting Lecture, delivered April 1962.  
15 pp. typescript +2 pp. references.  
Brief correspondence re lecture, and with editor, Diabetes, to whom Chain submitted the text for publication. It was not accepted, but Chain was invited to prepare a special article on the subject for the journal.
- G.34 'Les antibiotiques'  
Article for volume seven of Encyclopaedia La Vie et l'Homme, 1962.  
Includes English version, French translation heavily amended and corrected by Chain, correspondence with editors and colleagues re inadequacy of original French translation which Chain insisted on having replaced.
- G.35, G.36 'Academic and industrial contributions to drug research'  
The Trueman Wood Lecture, given at the Royal Society of Arts, June 1963. The lecture was published in full in the Journal of the Royal Society of Arts, and a shortened version was published, exceptionally, in Nature, 200, November 1963 'in view of the considerable contributions which Prof. Chain has made to drug research, and the importance which is today attached to the subject' (Bibliog. 99). The lecture was also published in Swedish, French and German versions, and frequently quoted or referred to.  
See also F.254.
- G.35 Ms. draft for lecture.
- G.36 Correspondence, 1962-64 (and some later), including invitation to give lecture, arrangements for delivery, publication and translation, Chain's letters requesting information from colleagues, letters arising from lecture, etc.  
See also E.6, G.215.
- G.37 Ms. speech at a dinner given to Chain by Nathan. n.d., c.1963 (shortly before Chain's return to London from Rome),

Lectures, publications, addresses, broadcasts

- G.38 'Address at the Commemoration Ceremony of the Warsaw Ghetto Rising'  
6 pp. typescript, n.d., probably 1963.
- G.39 Series of eight lectures or articles in German, typescript, n.d., early 1960s, as follows:  
'Allegemeine Gesichtspunkte', 9 pp.  
'Arzneimittel-Forschung', 4 pp.  
'Antibakterielle-Chemotherapie-die Sulfonamide', 3 pp.  
'Die Antibiotika', 6 pp. (latest reference 1960)  
'Chemotherapie in der Protozoenbekämpfung', 4 pp.  
'Vitamine', 4 pp.  
'Die Hormone, insbesondere die sogenannten Steroid-Hormone', 9 pp.  
'Neuropharmakologie', 6 pp.
- G.40 'The conquest of the penicillin resistant staphylococcus by new penicillins'  
8 pp. typescript and ms. draft, 1964 (Bibliog. 104).
- G.41-G.46 'Landmarks and Perspectives in Biochemical Research'  
Chain's Inaugural Lecture at Imperial College, delivered 12 May 1964, and published as an Imperial College publication (Bibliog. 112) and also in B.M.J., January 1965.
- G.41 Multiple ms. drafts for lecture, variously paginated.
- G.42 Typescript draft with ms. corrections, 54 pp.
- G.43 Arrangements for lecture, lists of guests, publication, etc.
- G.44 Correspondence from colleagues re lecture, sending good wishes and/or regretting absence. Includes letter from A. Isaacs, telegrams from D. Marotta, etc.
- G.45 List of those to whom copies of lecture were sent.  
Letters of thanks from recipients and correspondence arising.
- G.46 Requests for reprints of lecture (not indexed).

Lectures, publications, addresses, broadcasts

- G.47           Untitled lecture in German (on future trends in medical research) given at Kongressgesellschaft für ärztliche Fortbildung, Berlin, 1964.
- Ms. and typescript drafts of lecture, prepared for publication in commemorative volume for the 20th Anniversary of the Kongressgesellschaft in 1971.
- Includes ms. introductory remarks with autobiographical recollections, and a little editorial correspondence.
- G.48           William Withering Lectures, Birmingham, 13 and 14 October 1964.
- The subjects were:
- 'The biochemical effects of insulin'
- 'Some recent contributions from chemical microbiology to medicine'
- Includes correspondence, invitation, arrangements and schedule, 3 pp. draft introduction (only).
- G.49           'Antibacterial Chemotherapy', by M. Barber and E.B. Chain.
- 25 pp. typescript for article published in Annual Review of Pharmacology, 4, 1964 (Bibliog. 109).
- G.50           'Contributions from chemical microbiology to medicine'
- The Jephcott Lecture, given at Royal Society of Medicine, 6 July 1964, and subsequently published in Proc. R.S.M., 58, 1965 (Bibliog. 111).
- Includes heavily-corrected and revised typescript draft, correspondence, 1963-64, re invitation, arrangements, publication of lecture, and later correspondence, 1966, re Jephcott Medal to be presented to Chain.
- G.51           'Development and trends of antibiotic research'
- The Oliver-Sharpey Lecture, given at Royal College of Physicians of London at the 'Antibiotics and Infection' Session of the Consultant Conference, 16-20 November 1964 and subsequently published in conference Proceedings ed. N. Compston, 1965 (Bibliog. 107).
- Includes heavily-corrected and revised typescript drafts, correspondence, 1963-64, re invitation, arrangements, publication.

Lectures, publications, addresses, broadcasts

- G.52 'Entwicklung und gegenwärtiger Stand der antibakteriellen Antibiotikatherapie'  
Very heavily-corrected, 20 pp. ms. draft for lecture, undated but similar material to G.51, probably given as a lecture at Hoechst.
- G.53 Appreciation of Mary Barber sent to The Times, September 1965.
- G.54 Draft of introductory remarks (only) for seventh Lister lecture, 3 pp.
- G.55 'Why Biochemistry?'  
19 pp. typescript headed 'First Draft'. For lecture delivered at Imperial College (to Chemical Society?), c.1965.
- G.56 'What is biochemistry?'  
8 pp. typescript + 4 pp. ms. for lecture, n.d.
- G.57 Untitled talk, on careers in biochemistry, given to sixth form science teachers.  
7 pp. typescript, n.d., but refers to University expansion so c.1965.
- G.58-G.61 Papers on structure and funding of scientific research. Some prepared for specific purpose (e.g. G.58 prepared for Council for Scientific Policy, see E.54), others of more general intention.
- G.58 'Comments on the relationship between university and non-university research institutes in Germany'  
4 pp. typescript. Originally prepared for Council for Scientific Policy, 1965.
- G.59 'Relations between Academic Research Laboratories and the Biologically Based Industries'  
6 pp. typescript of talk, n.d.
- G.60 'A proposal for the creation of Research Fellowships for bringing overseas scientists to Great Britain'  
5 pp. typescript with some ms. notes, March 1965.

Lectures, publications, addresses, broadcasts

- G.61 'The case for establishing a Fellowship Fund for bringing foreign scientists to Britain'  
7 pp. typescript, n.d.
- G.62 Chairman's introduction and vote of thanks at the Jackson Pope Memorial Lecture, on 'The rôle of sugars as energy reserves in nature', given at Royal Society of Arts by Sir Edmund Hirst, January 1966.
- G.63 '25 Years of penicillin research'  
Article for special commemorative issue of The Chemist and Druggist, February 1966.  
5 pp. typescript and ms. draft, editorial correspondence.
- G.64 'The Influence of Microbiological Chemistry on Therapeutics'  
The Mackenzie Davidson Memorial Lecture, given at Twenty-Seventh Annual Congress, British Institute of Radiology, 31 March 1966 and subsequently published in Br. J. Radiol.  
Correspondence re invitation and arrangements, programme of Congress, 12 pp. typescript draft.
- G.65 'Closing the gap between industry and medicine'  
Contribution to the panel discussion at British Council Course on 'Drug Introduction, Evaluation and Safety', June 1966.  
Correspondence re invitation and arrangements, programme of Course, 5 pp. typescript draft of Chain's remarks.
- G.66 Correspondence (only) re Weizmann Memorial Lecture on 'Science in Israel', given in Leeds, July 1966.
- G.67 Correspondence (only) re collaborative article 'Aeration Studies, IV. Aeration Conditions in 3000-Litre Submerged Fermentations with Various Microorganisms', published in Biotechnology and Bioengineering, 8, 1966 (Bibliog. 119).

Lectures, publications, addresses, broadcasts

- G.68 'The New World of Biochemistry in Heart Research'  
Address at Public Meeting of the British Heart Foundation,  
September 1966.  
Correspondence re invitation and arrangements, programme  
of meeting, 6 pp. typescript and ms. draft and 2 pp.  
summary of lecture.
- G.69 'Address at the occasion of Professor S. J. Pirt's  
Inaugural Lecture', Queen Elizabeth College, London,  
January 1967.  
Correspondence re invitation and arrangements, 4 pp.  
typescript of Chain's introductory remarks as Chairman.
- G.70 Correspondence (only) re talk 'Antibiotics and the Develop-  
ment of Penicillin', given at Holland Park School,  
February 1967, and subsequent visit by members of the  
Senior Science Society to Department of Biochemistry,  
Imperial College.
- G.71 'Introduction of Sir Hans Krebs' (as John Coffin Memorial  
Lecturer), University of London, February 1967.  
Correspondence re invitation and arrangements, ms. and  
typescript drafts of Chain's remarks.
- G.72 'The Problem of the Emergence of Bacterial Resistance  
to Antibiotics'  
Address to Marks and Spencer Ltd., April 1967, the first  
in a series of talks organised by the firm.  
Ms. draft and 11 pp. typescript version.
- G.73 Correspondence (only) re talk on 'Drug Research', given  
to H.G. Wells Society of Imperial College, May 1967.
- G.74 'Address given at the Chairman's Dinner', Beecham  
Group, 24 May 1967.  
Ms. and typescript, brief correspondence.

Lectures, publications, addresses, broadcasts

- G.75 'Biochemical Research and Progress in Medicine'  
The first Earl King Memorial Lecture, given at Post-graduate Medical School, London, October 1967.  
Correspondence re invitation, arrangements, thanks for lecture.  
Miscellaneous ms. notes, 38 pp. typescript draft of lecture, which includes personal and autobiographical recollections.  
Also included is miscellaneous background material about King's life and work.
- G.76 Correspondence (only), 1966-67, re the Telford Memorial Lecture, given to Manchester Medical Society, 22 November 1967. Chain lectured on 'Biochemical Research and Progress in Medicine'.
- G.77 'The Birth of a Drug'  
Talk at Hunterian Society Dinner, December 1969.  
Ms. and typescript versions, brief correspondence.
- G.78 Two ms. drafts (6 pp. and 5 pp.) for talk on the future development of Israel. n.d., but several references to 1967 Arab-Israeli war.
- G.79 'Introduction of Professor J.Z. Young' as Henry Tizard Memorial Lecturer, Westminster School, 29 February 1968.  
Typescript drafts.
- G.80 'Complex Equipment in the Life Sciences', article published in The Financial Times, 11 March 1968.  
Ms. and typescript drafts, press-cutting of article as published, brief correspondence.
- G.81 Letter to the Editor, The Observer, on research at Porton, 2 June 1968, and correspondence arising. Includes a little background material.

Lectures, publications, addresses, broadcasts

- G.82 'The Biochemist's Approach to Medical Research'.  
Inaugural lecture in the 'Scientific Basis of Medicine' series, British Postgraduate Medical Federation, October 1968.  
A synopsis of the lecture was published under the title 'Biochemical Approach to Medicine' in The Scientific Basis of Medicine Annual Reviews, 1970 (Bibliog. 133).  
Multiple ms. and typescript drafts, brief correspondence.
- G.83 Letter to The Times re German immigration regulations, October 1968, and correspondence arising.
- G.84 Introduction to lecture by M. Sela, n.d., c.1969.  
Ms. and typescript versions.
- G.85 Ms. and typescript versions, heavily corrected, of a lecture variously entitled 'Potential future contributions of biochemical research to medicine' and 'The role of biochemistry in future medical research'. n.d., but c.1969.  
Uses similar material to G.82 above.
- G.86 'Effects of insulin on the pattern of glucose metabolism in the perfused working and Langendorff heart of normal and insulin deficient rats', by Chain, Mansford and Opie.  
Biochem. J., 115, 1969 (Bibliog. 127).  
Includes extensive drafts and revisions, editorial correspondence and copy of referees' report on paper as a result of which Chain revised the work.
- G.87 'Metabolismo di esosi in fettine di corteccia cerebrale di ratto'  
Italian typescript and ms. version of collaborative article published in English in J. Neurochem., 16 (Bibliog. 128).
- G.88 'Antibiotics and therapy in perspective'  
The first Centenary Lecture given at Fitzwilliam College, Cambridge, 28 November 1969; includes personal and scientific recollections.  
Ms. and typescript drafts, all heavily revised.  
See also A.190.

Lectures, publications, addresses, broadcasts

- G.89 'Some comments on infective drug resistance'  
Contribution to a Symposium on 'Transmissible Drug Resistance' organised by the Veterinary Research Club, 13 February 1970.  
Programme of meeting, ms. and typescript versions of talk, correspondence.
- G.90-G.92 'Social Responsibility and the Scientist in Modern Western Society'  
The Sixteenth Robert Waley Cohen Memorial Lecture, delivered to The Council of Christians and Jews, 25 February 1970.  
The lecture was published by the Council of Christians and Jews (Bibliog. 135) and in a condensed form in New Scientist, 22 October 1970 (Bibliog. 136).
- G.90 Ms. and typescript drafts of lecture (all with variants), comments on draft by M. Carlile.
- G.91 Correspondence with Council re invitation to lecture, arrangements and publication, 1968-71.
- G.92 Correspondence arising from lecture and publication, including requests and thanks for reprints, arrangements to publish in Perspectives in Biology and Medicine, letter to The Times, 1970-71, and one letter 1976.
- G.93, G.94 'Biochemical Research in Perspective. Concepts and Practical Applications'  
The Henry Tizard Memorial Lecture, given at Westminster School, 10 March 1970.
- G.93 Ms. and typescript drafts and notes for lecture.
- G.94 Correspondence re invitation and arrangements and also re the purchase of equipment for the Biology Department of the School from Chain's fee of 100 guineas.
- G.95 'A Computerised Scanner for Bidimensional Radiochromatograms', by Chain, A.E. Lowe and K.R.L. Mansford, J. Chromatog., 53, 1970 (Bibliog. 137).  
Mainly correspondence with collaborators and publishers.

Lectures, publications, addresses, broadcasts

- G.96 'Suggestions for the creation of an autonomous authority for the administration of scientific research in the United Kingdom'  
7 pp. typescript paper (photocopy) dated 24 November 1970.
- G.97 'Virus like particles from lower fungi'  
Ms. and typescript drafts for paper or lecture, n.d., c.1970.
- G.98 Ms. draft for Chairman's Introductory remarks at H. G. Wells Memorial Lecture, by J. Wren-Lewis on 'The Anti-scientific Revolution', 11 March 1971.
- G.99 Tribute to H. Raistrick, sent to The Times, 12 March 1971.
- G.100 5 pp. typescript draft for talk on fusicoccin, probably at discussion meeting or symposium, n.d., c.1971.
- G.101 Speech proposing Toast to Hunterian Society, 10 February 1972.  
Ms. and typescript drafts, brief correspondence.
- G.102, G.103 'Fungal viruses and their anti-viral properties'  
Evening Discourse given at Royal Institution, 3 March 1972, and published in Proc. Roy. Inst., 45, 1972 (Bibliog. 148).
- G.102 Ms. and typescript drafts and notes.
- G.103 Correspondence re invitation, arrangements, publication, 1970-72.
- G.104-G.106 'The role of the biochemist in the development of drug therapy and prophylaxis'  
The Hanbury Memorial Lecture, given to the Pharmaceutical Society of Great Britain, 24 May 1972, and subsequently published in The Pharmaceutical Journal.
- G.104 Ms. and typescript drafts.
- G.105 Correspondence re lecture, award of Hanbury Memorial Medal which Chain received on same occasion, publication, etc. Includes correspondence with Lord Cohen who chaired the meeting.
- G.106 Ms. introductions for other occasions on which Hanbury Lecture material was used, at Inaugural Lecture of Beecham Auditorium, 5 July 1972, and in Ireland, n.d.

Lectures, publications, addresses, broadcasts

- G.107 'Note of thanks to Sir Rudolph Peters, FRS'  
Given at British Nutrition Foundation Prize Lecture by Peters, 1972. 4 pp. typescript.
- G.108 Letter to The Times (on 'synthetic food'), September 1972. Submitted for publication but no indication whether accepted or not.
- G.109 Transcript of discussion following a talk by Chain to Oxford University Biochemical Society, 1973, with brief correspondence.
- G.110 Ms. draft on 'Semisynthetic penicillins' and other drugs, n.d., latest reference 1973.
- G.111 Ms. draft for talk in German on relations between academic and industrial research laboratories. n.d., but Chain lectured frequently on this subject c.1973.
- G.112 'Whither Biochemistry?'  
2 typescript drafts, one with extensive corrections, + 1 p. preface apologising for 'improvised and somewhat disjointed presentation'.  
n.d., c.1973, probably given at Imperial College.
- G.113 'Ner Israel Rabbinical College. Message for the 40th Annual Banquet, 9th December 1973' (at Baltimore, U.S.A.).  
Ms. and typescript drafts of message with covering letter to the Vice-President of the college (Rabbi H.N. Neuberger).  
Folder also includes background correspondence. Chain had originally hoped to attend the dinner but was prevented from doing so by illness.
- G.114 Address to British Nutrition Foundation, paying tribute to Sir Charles Dodds. n.d., December 1973 or January 1974 (Dodds died 16 December 1973).
- G.115 'Introduction of Professor Magee, R.S. of Arts, Sir William Jackson Pope Memorial Lecture', 23 January 1974.  
The meeting was to have been chaired by Dodds; Chain took his place at short notice and paid tribute to his work in the introductory remarks.

Lectures, publications, addresses, broadcasts

- G.116 Letter to The Sciences (publication of the New York Academy of Sciences), 14, 5 June 1974.  
Correspondence, copy of published text.
- G.117 'Social responsibility and the Scientist in Modern Western Society'  
Talk given to Natural History Society, Bryanston School, May 1975 (includes some material from Waley Cohen Lecture, see G.90), with correspondence re invitation and arrangements.
- G.118 Tribute to Sir Hans Krebs on his 75th birthday. Published in Assoc. of Jewish Refugees monthly magazine, AJR Information, August 1975.  
2 pp. typescript draft, brief correspondence.
- G.119 Contribution to written symposium on the present and future position of the State of Israel, published in Maariv Evening Newspaper (in Hebrew), September 1976.  
Correspondence from the Editor, press-cutting.
- G.120 Correspondence (only), 1976-77, re book Viruses and Plasmids in Fungi, scheduled for publication 1978, to which Chain and K.W. Buck were to contribute Chapter I 'Mycoviruses and Interferon Induction'.
- G.121 Ms. and typescript draft of obituary tribute to Jacques Tréfouël (d. July 1977), published in Nature. Includes correspondence re publication, and letters of thanks from family and colleagues.
- G.122 Speech at dinner in France, late 1977 or early 1978 (refers to obituary tribute to Tréfouël).  
Ms. and typescript drafts, in English and French.
- G.123 Obituary tribute to A.D. Gardner, The Times, February 1978.  
Typescript version, correspondence from Mrs. Gardner and from colleagues.

Lectures, publications, addresses, broadcasts

- G.124 Ms. draft for speech on scientific research in Israel,  
n.d., c.1978.
- G.125 'In Memory of Doug. Hems', 7 March 1979.  
Ms. and typescript versions of memorial tribute to colleague  
at Imperial College.  
Enclosed here is a letter of good wishes from Hems on Chain's  
retirement, 1973.

Lectures, publications, addresses, broadcasts

G.126-G.155      UNDATED NOTES AND DRAFTS

This is entirely autograph manuscript material, written on jotter pads or on loose pages of various format, and sometimes paginated. It is presented under tentative headings according to subject-matter.

Attention is drawn to G.145-G.154 which have been retained as samples of Chain's methods of work, with a miscellany of research ideas, drafts for papers, scientific and personal correspondence all on the same jotter or notepad for later use or typing-up.

G.155 is a folder of bibliographical notes, of interest since Chain left virtually no laboratory notebooks or experimental observations.

G.126-G.130      Miscellaneous speeches, etc. overseas

- G.126      1 p. speech at Milan      1940s.
- G.127      4 pp. speech at Milan (in Italian)      1940s.
- G.128      1 p. speech at Naples (in English and Italian)      1940s.
- G.129      2 pp. speech (in Italian) on science and human affairs.
- G.130      Speech (in French) to Spanish Academy of Sciences.

G.131-G.134      Miscellaneous speeches on Jewish occasions

- G.131      Notes for speech on development of Israel.
- G.132      2 pp. draft speech on science in Israel.
- G.133      1 p. notes, probably on Weizmann Institute.
- G.134      Miscellaneous sequences of drafts on importance of active Judaism.

Lectures, publications, addresses, broadcasts

G.135-G.144 Lectures and talks on biochemistry

- G.135 'Scope of biochemistry', 4 pp.
- G.136 'The role of the chemist in biochemical research', 3 pp.
- G.137 'The scope and aims of biochemistry', 6 pp.
- G.138 'The science of biochemistry', 5 pp.
- G.139 'Opportunities for the biochemist in industry', 2 pp.
- G.140 Speech or paper on contribution of biochemistry to medicine and agriculture, pp.1-12 only.
- G.141 'The case of successful research in clinical biochemistry', pp. 20-25 only.
- G.142 pp. 5-9 only of speech or paper on conditions favourable for fundamental research.
- G.143 Notes and drafts for speech or lecture on history and development of drug research.
- G.144 Substantial folder of miscellaneous notes, narratives and drafts for lectures on history and importance of biochemistry; some intended for M.Sc. course at Imperial College.

G.145-G.155 Miscellaneous notes and drafts

- G.145 Pages from a jotter pad or diary: research ideas, notes of letters to be written, jobs to be done, names and addresses, guest-lists, etc.
- G.146 Miscellaneous notes and drafts (part of a notepad).
- G.147 Miscellaneous notes and drafts (part of a notepad).
- G.148 Miscellaneous notes for paper on 'Synthetic Foods'.
- G.149 Pages from a jotter pad, one dated 1973.
- G.150 Drafts for personal correspondence (part of a notepad).
- G.151 Drafts for miscellaneous correspondence, with firms, Imperial College, personal friends (part of a notepad).

Lectures, publications, addresses, broadcasts

- G.152 Drafts for miscellaneous correspondence, with firms, personal friends, etc. (part of a notepad) and including 9 pp. typed-up report on visit to Ribena factory 1957.
- G.153 Shorter drafts for correspondence.
- G.154 Folder of miscellaneous shorter notes, research ideas, notes taken at meetings, on firms or laboratories, etc.
- G.155 Folder of bibliographical notes, notes on the literature.

Lectures, publications, addresses, broadcasts

G.156-G.178 RADIO AND TELEVISION

Correspondence and drafts for proposed programmes and interviews, in alphabetical order of company or organisation.

See F.233, F.287 for additional material on projects for films.

See also J.184.

G.156 ASSOCIATED-REDIFFUSION LTD.

Correspondence, 1958, re participation in 'New Horizon' series.

G.157-G.167 BRITISH BROADCASTING CORPORATION

Correspondence and papers for programmes and interviews for radio and television, 1949-79.

G.157 1949, 1961-62

G.158 1969-70

Includes correspondence with R. Jackson re a documentary for the Third Programme on the project for an Independent University (broadcast 2 July 1969).

G.159-G.163 1971

Correspondence and papers re Chain's participation in first of televised 'Controversy' programmes, on defence and the social responsibility of the scientist, filmed at the Royal Institution, 14 July 1971. The text of Chain's remarks, which were based on his Waley Cohen Memorial Lecture, 1970 (see G.90-G.92) were published in The Listener, 26 August 1971.

G.159 Correspondence re arrangements, Italian translation, etc. Chain waived his fee for this, as for several other programmes, and asked for it to be sent to the Central Synagogue.

G.160 Ms. and typescript drafts of Chain's opening address on 'Defence and the Social Responsibility of the Scientist'.

G.161 Letters from friends and colleagues who saw the programme. (Most with Chain's replies.)

G.162 Letters from members of the public.

G.163 Press-cuttings, copy of The Listener with published version.

Lectures, publications, addresses, broadcasts

- G.164 1972  
Correspondence and papers re Chain's contribution to television programme on 'The Nobel Prize' (with reference to the discovery of penicillin), transmitted 19 December 1972. Chain waived his fee and asked for it to be sent to the British Organisation for Rehabilitation Through Training.
- G.165 Ms. drafts for Chain's contribution.
- G.166 1973-74  
Miscellaneous correspondence re appearances or advice for TV programmes 'Horizon', 'Controversy', 'Science without Frontiers', 'Science Now', etc.
- G.167 1977-79  
Correspondence with BBC Open University Productions re possible participation in various programmes.
- G.168 CANADIAN BROADCASTING COMPANY  
Brief correspondence only, 1971.
- G.169 CENTRAL OFFICE OF INFORMATION  
Brief correspondence only, 1969.
- G.170 EUROPE No.1 - TÉLÉCOMPAGNIE  
Script for programme on the discovery of penicillin in the series 'Cinq minutes qui ont changé le monde', 1964.  
Brief correspondence.
- G.171 GRANADA TV  
Brief correspondence only, 1959.
- G.172 LONDON WEEKEND TELEVISION  
Brief correspondence only, forwarding script for programme on Pasteur, 1972.

Lectures, publications, addresses, broadcasts

- G.173            MEDIKASSET
- Brief correspondence only, 1977.
- G.174            NATIONAL BROADCASTING COMPANY OF THE UNITED STATES OF AMERICA (NBC)
- Interview for 'Today', 14 November 1966.
- Correspondence, drafts of Chain's answers to questions, edited transcript of interview.
- G.175            OFFICE DE RADIODIFFUSION-TÉLÉVISION FRANÇAISE (ORTF)
- Contribution to programme 'L'Enfant, l'Homme et la Vie: Les Antibiotiques', broadcast 17 July 1969.
- Correspondence only.
- G.176            RADIO ITALIANA (RAI)
- Contribution to programmes 'Gli antibiotici' and 'Nuovi antibiotici'.
- Correspondence only, 1950.
- G.177            R.G. PRODUCTION CO.
- Correspondence only, 1973.
- G.178            WEST-GERMAN TELEVISION NETWORK
- Correspondence only, 1972.

Lectures, publications, addresses, broadcasts

G.179-G.221 CORRESPONDENCE re PUBLICATIONS AND LECTURES

G.179-G.215 Publications

G.216-G.221 Lectures

G.179-G.215 presents, in alphabetical order, correspondence with editors, publishing houses, journalists and scientific colleagues. The material includes requests to write articles or books, to comment on works submitted for publication by others, to serve on editorial or advisory boards, to provide introductions to works by others, etc. There is a little scientific correspondence, and references to Chain's own scientific papers submitted for publication. The material is dated and an indication given of any information of special biographical or scientific interest. Some of the exchanges may relate to undated manuscripts and drafts elsewhere in Section G, but it has not been possible to identify them with certainty.

G.216-G.221 presents, in chronological order, requests to give lectures or talks.

G.179-G.215 PUBLICATIONS

G.179	Abacus-Kent Ltd.	1971
	<u>Academic Press Inc.</u>	1954
	<u>re</u> English edition of 'Rendiconti del Istituto Superiore di Sanità'.	
	<u>Acta Vitaminologica</u>	1962
	Adam Hilger Ltd.	1952
G.180	<u>Advances in Chemotherapy</u>	1962
	<u>Advances in Pharmacology</u>	1963
	Allan Wingate (Publishers) Ltd.	1959
	Anglo-American Book Co.	1953

Lectures, publications, addresses, broadcasts

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|-------|---|---------------------------------|
| G.181 | <u>Annual Reviews Inc.</u><br>Includes material re <u>Annual Review of Biochemistry (Bibliog. 38, 56)</u> and <u>Annual Review of Pharmacology (Bibliog. 109)</u> . | 1949, 1958,<br>1962-63          |
| G.182 | <u>Antibiotics and Chemotherapy</u><br>Chain served on the Editorial and on the International Editorial Board from the founding of the journal in 1950.             | 1950-61                         |
|       | <u>Archives Internationales de Pharmacodynamie et de Thérapie</u><br>Chain served on the new Advisory Editorial Board from its inception in 1975.                   | 1975-77                         |
|       | <u>Archives of Biochemistry</u>   | 1948, 1959                      |
| G.183 | <u>Aries Corporation</u><br>re 'Interferon Scientific Memoranda'.   | 1973                            |
|       | <u>Arzneimittel-Forschung</u><br>Invitation to serve on Editorial Committee.  | 1963                            |
|       | <u>Aurora Zanichelli</u>  | 1957                            |
| G.184 | <u>N. Barou</u>   | 1949                            |
|       | <u>Biochemical Journal</u>  | 1949, 1952, 1963,<br>1972, 1975 |
|       | <u>Biochemical Pharmacology</u>   | 1959, 1970                      |
| G.185 | <u>Biochimica et Biophysica Acta</u>  | 1954, 1961                      |
| G.186 | <u>Biotechnology and Bioengineering</u>   | 1965, 1969                      |
| G.187 | <u>Blackwell Scientific Publications</u>  | 1958, 1961, 1978                |
|       | <u>Britain-China Friendship Association</u><br>re proposed <u>Quarterly Journal of Chinese Arts &amp; Sciences</u>  | 1961                            |
|       | <u>British Doctor</u>   | 1961                            |

Lectures, publications, addresses, broadcasts

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|-------|---|------------|
| G.188 | Cambridge University Press<br>(Chain's carbons only)  | 1952       |
|       | <u>Chemical &amp; Engineering News</u>  | 1957       |
|       | <u>Chemische Industrie</u>  | 1954       |
|       | <u>Chemistry and Industry</u><br>(Chain's carbons only)   | 1959, 1962 |
| G.189 | <u>Chemistry in Britain</u>   | 1969       |
|       | <u>Chemotherapia</u><br>(Chain's carbon only, accepting invitation to<br>serve as adviser to Editorial Committee).  | 1959       |
|       | <u>Clinical Pharmacology and Therapeutics</u>   | 1961       |
|       | <u>Clinical Science</u>   | 1972-73    |
| G.190 | Daco-Verlag   | 1970       |
|       | <u>The Daily Telegraph</u>  | 1961       |
|       | <u>De Medicina Tuenda</u><br>Invitation to serve on the 'Basic Sciences' committee<br>of the new journal, and correspondence re publica-<br>tion of Inaugural Meeting of European Society for<br>Biochemical Pharmacology (see E.58). | 1963       |
|       | Deutsche Apotheker-Zeitung  | 1969       |
| G.191 | <u>Die Naturwissenschaften</u>  | 1979       |
|       | <u>Die Weltwoche</u>  | 1950       |
|       | <u>Discovery</u>  | 1953, 1961 |
|       | <u>Drug Action and Drug Resistance in Bacteria</u>  | 1979       |

	<u>Lectures, publications, addresses, broadcasts</u>	
G.192	Edizioni Scientifiche di Medicina e Chirurgia (Rome)	1955
	Edizioni Scientifiche e Techniche Monadori (Milan)	1970
	Edizioni Scientifiche Einaudi (Turin)	1957
	re Chain's preface to Italian translation of book by R. Dubos.	
	<u>Eine Welt der Vereinten Nationen</u>	1975
G.193	Paul Elek Limited	1973-74
	Ellis Horwood Limited	1973
	Elsevier Publishing Company	1959, 1962, 1972, 1979
G.194	<u>Enciclopedia della Chimica</u>	1970
	<u>Enciclopedia Medica Italiana</u>	1953-54, 1959
	<u>Encyclopaedia Hebraica</u>	1950
	<u>The EP Group of Companies</u>	1976
G.195	<u>EPOCA</u>	1963
	<u>European Journal of Biochemistry</u>	1972
	<u>Excerpta Medica</u> (Chain's carbon only).	1952
G.196	<u>The Financial Times</u>	1955, 1969, 1971
G.197	Feinermann, E.	1970
	<u>Food Manufacture</u>	1970
	Frazier, C.A.	1973

	<u>Lectures, publications, addresses, broadcasts</u>	
G.198	Gauthier-Villars éditeur	1962
	<u>General and Comparative Endocrinology</u>	1961-62
	Chain served on the Advisory Council.	
	Granada Publishing Limited	1969
	Hutchinson & Co. Limited	1955
G.199	<u>Ignossos Encyclopedia</u>	1974
	<u>Il Farmaco</u>	1949
	<u>The Industrial Chemist</u>	1961, 1963
G.200	<u>International Abstracts of Biological Sciences</u>	1958
	<u>International Archives of Allergy and Applied Immunology</u>	1953
	<u>International Journal of Environmental Studies</u>	1969-72
	Chain accepted an invitation to serve as Advisory Editor in 1972.	
	<u>International Journal of Radiation Biology</u>	1958
	Chain was invited to serve on Editorial Board, but declined.	
	Interscience Publishers, Inc.	1949, 1958
G.201	<u>Jerusalem Post</u>	1969
	<u>Jewish Chronicle</u>	1976-77
	<u>Journal of Biochemical and Microbiological Technology and Engineering</u>	1959
	Chain served on Editorial Advisory Board.	
	<u>Journal of Neurochemistry</u>	1955
	<u>J.P.A. Yearbook</u>	1961

	<u>Lectures, publications, addresses, broadcasts</u>	
G.202	Langer, E.	1954
	<u>Las Españas</u>	1950
	Les Amis de l'Université de Liège	1954
	McGraw Hill Book Company Inc.	1963, 1969
	<u>Manufacturing Chemist</u>	1957
	Marcel Dekker, Inc.	1969
G.203	MD Publications, Inc.	1958-59
G.204	<u>Médecine et Hygiène</u>	1970, 1972
	Correspondence 1970 is <u>re</u> thalidomide.	
	<u>Medicine</u>	1975
G.205	<u>Nature</u>	1954-77
	General correspondence <u>re</u> articles submitted for publication by Chain and/or his collaborators, or referred to him for comment.	
G.206	<u>New Scientist</u>	1957-74
	General correspondence, mainly requesting articles from Chain.	
G.207	<u>News Chronicle</u>	1958
	<u>Nuova Antologia</u>	1952
	<u>Omni</u>	1978
	Oxford University Press	1970
G.208	Pergamon Press	1955-57, 1963
	Correspondence 1955 is <u>re</u> Editorial Advisory Board of <u>International Journal of Applied Radiation and Isotopes</u> ; correspondence 1957 is <u>re</u> <u>Modern Methods in Biochemistry</u> .	
	<u>The Pharmaceutical Journal</u>	1959

Continued

Lectures, publications, addresses, broadcasts

G.208 (Cont'd)	<u>Pointer</u>	1969-70
	<u>Probe</u>	1966
	<u>Progress in Experimental Medicine and Biochemistry</u>	1979
G.209	H.M. Rauen	1961-62
	<u>Research</u>	1948, 1952
	'Retrospectives in Biochemistry: 1975'	1975
	D.L. Rohlifing	1971
G.210	The Royal Society (Chain's carbons only, <u>re</u> papers submitted for publication in the Society's <u>Proceedings</u> .)	1959-63
G.211	<u>Scientia</u>	1953-58
	Society of Biological Chemists, India	1955
	The <u>Sunday Times</u>	1958
	Tom Stacey Limited	1973
	Chain was a member of the consulting panel for the proposed 'History of the Jewish People'.	
G.212	<u>Trends in Biochemical Sciences (TIBS)</u>	1975-78
	Mainly requests for articles or contributions.	
G.213	Who's Who in World Jewry	1976
	Invitation to join International Publication Committee.	
	<u>World Medicine</u>	1970
	Chain was an advisor.	
	<u>World Science Review</u>	1955
	Wykeham Publications (London) Limited	1970

Lectures, publications, addresses, broadcasts

- G.214 Shorter requests for books, articles, contributions (no reply by Chain).
- G.215 Shorter correspondence re permission to quote from publications by Chain, reproduce photographs, etc., 1951-79.
- G.216-G.221 LECTURES
- G.216 Thanks for lecture on early penicillin research, given in Oxford c.1940.  
  
Requests to give talks or lectures in Italy, 1950-58.
- G.217 Requests to give talks or lectures, 1950-59.  
  
Includes request from J. Tréfouël to lecture to Société Chimique de France, 1952; correspondence, 1955-59, requesting lectures at Munich.
- G.218 Requests to give talks or lectures, 1960-69.  
  
Includes correspondence re Almroth Wright Lecture at the Wright-Fleming Institute (1963).
- G.219 Requests to give talks or lectures, 1970-71.
- G.220 Requests to give talks or lectures, 1972.  
  
Includes visit to University College of Swansea.
- G.221 Requests to give talks or lectures, 1973-78.  
  
Includes correspondence re Boulter Lecture at Guildford Medical Centre, 1975.

SECTION H                      ISRAEL AND JEWISH ORGANISATIONS H.1 - H.141

INTRODUCTION AND LIST OF CONTENTS

Section H contains correspondence and papers relating to a large number of Jewish societies, organisations and academic institutions with which Chain was associated during his life. The material, which is presented alphabetically, varies from a single folder to a substantial sequence covering several years of which by far the largest is at H.66 - H.135 (The Weizmann Institute of Science).

For drafts and lectures on Jewish topics in Section G, see G.17 - G.20, G.66, G.78, G.113, G.118, G.119, G.124, G.131 - G.134.

For conferences, etc. on Jewish topics in Section J, see J.58, J.79, J.88, J.91, J.127, J.174.

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ANGLO-ISRAEL CULTURAL FOUNDATION	H.2
ANGLO-JEWISH ASSOCIATION	H.3
ASSOCIATION OF JEWISH EX-SERVICEMEN AND WOMEN	H.4
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B'NAI B'RITH	H.13-H.21
BOARD OF DEPUTIES OF BRITISH JEWS	H.22
CENTRAL SYNAGOGUE (London)	H.23
FRIENDS OF THE FUND FOR THE ADVANCEMENT OF MEDICINE IN ISRAEL	H.24, H.25
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IMPERIAL COLLEGE JEWISH SOCIETY	H.39
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Israel and Jewish organisations

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JERUSALEM ACADEMY OF JEWISH STUDIES	H.46-H.48
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JOINT ISRAEL APPEAL	H.53
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SHAARE ZEDEK HOSPITAL, JERUSALEM	H.61
TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY	H.62, H.63
UNION MONDIALE DES ÉTUDIANTS JUIFS	H.64
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WEIZMANN INSTITUTE OF SCIENCE	H.66-H.135
WHITTINGEHAME COLLEGE (Sussex)	H.136
WORLD JEWISH CONGRESS	H.137
YESHIVA UNIVERSITY	H.138
Shorter unindexed correspondence	H.139-H.141



Israel and Jewish organisations

- H.6-H.8 Award of Honorary Doctorate by Bar-Ilan University,  
27 June 1974.
- H.6 Announcement of the award, arrangements for the  
ceremony.
- H.7 Ms. drafts and abstract of Chain's address on the  
occasion of the award.
- H.8 Letters of thanks from Chain, letters of congratulation  
from colleagues.
- H.9 1974-76
- Includes letter from the Chancellor of Bar-Ilan University,  
26 July 1976, announcing Chain's election to member-  
ship of the Board of Trustees.
- H.10 1977
- Includes correspondence re election of Rabbi E. Rackman  
as President of Bar-Ilan University and arrangements  
for meetings of the Board of Trustees.
- H.11 1978
- Mainly re meetings and visits. Includes correspondence  
and memorandum by W. Feder re proposed medical school  
of Bar-Ilan University.
- H.12 1979
- Mainly re arrangements for dinner marking the endowment  
of the President Ephraim Katzir Chair in Bio-physics at  
Bar-Ilan University, 16 May 1979.
- H.13-H.21 B'NAI B'RITH 1961-79
- (includes Hillel Foundation)
- Correspondence and papers.
- H.13 1961, 1965-66
- 1961 letter is an invitation to address the B'nai B'rith  
Leo Baeck (London) Lodge.
- 1965-66 correspondence is with the Director of the Hillel  
Foundation (H. Shaw) and includes invitation to Chain to  
become a Patron (accepted).

Israel and Jewish organisations

- H.14                    1967  
Includes invitation to chair the Hillel Foundation annual lecture and drafts of Chain's introduction of D. Brogan as lecturer.
- H.15                    1968  
Mainly re Hillel Foundation Building Appeal.
- H.16                    1969  
Includes ms. of speech delivered at lunch given by H. Lever in Chain's honour in aid of the Hillel Foundation Building Appeal, and miscellaneous correspondence with the Chairman and the Director of the Hillel Foundation.
- H.17                    1970-71  
Mainly invitations to meetings and functions at Hillel House.
- H.18                    1972  
Invitations to meetings and functions, requests to lecture.
- H.19                    1973-75  
Invitations to meetings and functions, requests to patronise fund-raising and other activities.
- H.20                    1976-79  
Includes draft of address delivered at a soirée in honour of Chain's 70th birthday, 11 January 1977.
- H.21                    Undated ms. draft of speech re the value of the Hillel houses to Jewish university students.
- H.22                    THE BOARD OF DEPUTIES OF BRITISH JEWS                    1969, 1971-79  
  
Request to serve on British Committee for Jews in Arab Countries (1969); invitations to attend functions, sign petitions.
- H.23                    CENTRAL SYNAGOGUE (Great Portland Street, London)                    1966-77  
  
Correspondence re membership of the congregation, attendance at services, etc.

Israel and Jewish organisations

H.24, H.25      FRIENDS OF THE FUND FOR THE ADVANCEMENT  
OF MEDICINE IN ISRAEL      1971-77

Chain was a Trustee.

H.24      Correspondence with V. Mishcon and others, 1971-72,  
re arrangements for Chain to become a Trustee.

H.25      Correspondence with A. Shapiro and other Trustees,  
1973-77, re administration of the Fund.

H.26-H.38      HEBREW UNIVERSITY OF JERUSALEM      1952-79

Chain was a member of the Board of Governors.

Correspondence is mainly with the President and Chairman of the Board of Governors of the University and officers of the English Friends of the Hebrew University of Jerusalem.

There is very little correspondence before 1967 and virtually none for 1970-72.

H.26      Correspondence with the Executive Vice-President of the Hebrew University (D.W. Senator), 1952-53, re planning and academic organisation of the University.

H.27      Letter from the Chairman (N. Bentwich), March 1958, enclosing copies of speeches made at the laying of the corner-stone of the University (1918) and at the opening ceremony (1925).

Undated typescript 'Notes for the Talk at the Dinner of the Friends of the Hebrew University of Jerusalem'. The material assembled by Bentwich may have been intended to help Chain in the preparation of this talk.

Brief correspondence with the Secretary, 1962, 1963.

H.28      Typescript of 'Address to the Friends of the Hebrew University of Jerusalem on November 18th, 1965'.

H.29      Communications from the President, Chairman of the Board of Governors and Executive Vice-President of the Hebrew University, 1966-70. Mainly re arrangements for meetings and functions.

Israel and Jewish organisations

- H.30 Correspondence with the Chairman and Secretary of the Friends of the Hebrew University of Jerusalem, 1967. Includes arrangements for travel to Meeting of Board of Governors in June, copy of report on a visit to the Hebrew University by A. Neuberger, May 1967, and correspondence re nominations for the offices of President and Chairman of the Board of Governors of the University.
- H.31 Ms. and typescript drafts of speech by Chain introducing a film about agricultural experiments in the Negev desert shown at a meeting of the Friends, 30 January 1968. Folder also includes correspondence re arrangements and photograph of Chain delivering the speech.
- H.32 Correspondence with officers of the Friends of the Hebrew University, 1968. Includes arrangements for travel to meeting of Board of Governors in March.
- H.33 Correspondence with officers of the Friends of the Hebrew University, 1969. Includes correspondence re fund-raising and invitations to Chain to speak at various functions.
- H.34 Communications from the President and the Chairman of the Board of Governors of the Hebrew University, 1973-75. Includes announcement of Chain's appointment as an honorary member of the Board, April 1974.
- H.35 Correspondence with officers of the Friends of the Hebrew University, 1973-75. Mainly re meetings and functions. Includes correspondence with A. Neuberger re the role of the Academic Committee of the Board of Governors of the University.
- H.36 Communications from the Chairman of the Board of Governors, 1976-79. Mainly re meetings and various university affairs.
- H.37 Correspondence with officers of the Friends of the Hebrew University, 1976-78. Re meetings and conferences.
- H.38 Brief correspondence from members of the Hebrew University and the Hadassah Medical School, 1955-77. Not indexed.

Israel and Jewish organisations

- H.39 IMPERIAL COLLEGE JEWISH SOCIETY 1969-71  
Correspondence re meetings and introduction of Kosher meals service at Imperial College.
- H.40 INSTITUTE OF JEWISH AFFAIRS 1969-79  
Correspondence with the Director (S. J. Roth) re arrangements for Chain to take the Chair at lecture by S. Ettinger, 3 March 1970.  
Invitations to other IJA lectures and meetings are also included here.
- H.41 INTER-UNIVERSITY JEWISH FEDERATION OF GREAT BRITAIN AND IRELAND 1969-72  
Includes invitation to Chain to accept an Honorary Vice-Presidency of the Federation for 1969-70 and correspondence re various meetings and social events.
- H.42 ISRAEL MEDICAL ASSOCIATION 1969, 1971  
Letter re Chain's nomination as continuing Honorary President of the British Fellowship of the Association, August 1971.  
Brief correspondence re meetings.
- H.43 ISRAEL NATIONAL COUNCIL FOR RESEARCH AND DEVELOPMENT 1970, 1977  
1970 correspondence is re desalination research and development in Israel. Chain's reply has not survived.  
1977 correspondence refers to symposium on 'Biotechnological applications of Proteins and Enzymes' (see also J.172, J.173) and developments in the pharmaceutical and food industries.
- H.44 ISRAEL UNIVERSITIES' STUDY GROUP FOR MIDDLE EASTERN AFFAIRS 1974-75  
Includes correspondence re the attitude to Israel of UNESCO and other international organisations and specialised agencies.

Israel and Jewish organisations

- H.45 ISRAELI EMBASSY (London) 1968-79
- Correspondence with various members of the embassy staff. 1968 correspondence is re the granting of 'compulsory licences' to Israeli firms, and includes exchanges with M.W. Weisgal and W.L. Abramowitz on the same subject.
- H.46-H.48 JERUSALEM ACADEMY OF JEWISH STUDIES 1973-78
- Correspondence with the Principal (Rabbi B . Horovitz) re the affairs of the Academy, arrangements for meetings and functions in England and Israel, fund-raising activities, etc.
- H.46 1973-75
- H.47 1976-78
- H.48 Ms. and typescript drafts for speech by Chain describing the work of the Jerusalem Academy, delivered at a reception given by W.I. Hubert in January 1976. Brief correspondence with Mr. Hubert is also included in the folder.
- H.49 JEWISH COLLEGE OF TECHNOLOGY 1972-78
- Correspondence is mainly with the English Friends of the Jerusalem College of Technology, of which Chain was an Honorary Vice-President, re meetings, fund-raising, etc.
- H.50 JEWISH NATIONAL FUND 1969-75
- Correspondence with the Director re various activities of the Fund. Includes requests for Chain to serve on a prize-awarding committee (1969), and become a patron of the J.N.F. Education Department (1971).



Israel and Jewish organisations

- H.56, H.57      THE MACCABEANS      1955, 1971-75
- H.56      Correspondence with successive Honorary Secretaries of the Society consisting mainly of invitations to Chain to attend one of the society's dinners as a guest of honour (he accepted in December 1974, see below).
- H.57      Typescript drafts of 'Speech for the Maccabeans on December 15th 1974', including autobiographical reminiscences of Chain's early life up to his departure from Germany in 1933.
- H.58      MUSEUM OF THE DIASPORA (BETH HATEFUTSOTH)      1977-78
- Request to Chain to become a member of the Executive Council of the British Friends of the Museum (accepted); invitations to the opening ceremony in Tel Aviv, May 1978.
- H.59      NATIONAL COUNCIL FOR SOVIET JEWRY OF THE UNITED KINGDOM AND IRELAND      1976
- Correspondence re implications of Chain's election as a Foreign Member of the Academy of Sciences of the USSR. See also A.170, E.218.
- Brief correspondence from the Women's Campaign for Soviet Jewry is also included here.
- H.60      SCHEU FOUNDATION FOR ASTHMA AND RESPIRATORY DISEASES      1977-78
- Correspondence and information about the Foundation. Includes invitation to Chain to become a Trustee. See also K.204.
- H.61      SHAARE ZEDEK HOSPITAL, JERUSALEM      1973, 1975
- Correspondence with the Chairman (V. Mishcon) and Executive Director of the British Council of the Shaare Zedek Hospital, mainly arising from requests to Chain to give lectures/attend functions in aid of the hospital.

Israel and Jewish organisations

- |            |  |               |
|------------|--|---------------|
| H.62, H.63 | TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY  | 1953-77       |
| H.62       | Correspondence with colleagues at the Technion, 1958-77, <u>re</u> research, visits, functions, etc.   |               |
| H.63       | Correspondence with the British Technion Society and other related bodies, 1953-77. Mainly <u>re</u> meetings and functions. Chain was an Honorary Vice-President of all these bodies.   |               |
| H.64       | UNION MONDIALE DES ÉTUDIANTS JUIFS   | 1949          |
|            | Correspondence from the Secretary-General <u>re</u> Chain's appointment as a member of the Honorary Committee.   |               |
| H.65       | UNION O.S.E. (Union des Oeuvres de Secours aux Enfants et de Protection Sanitaire des Populations Juives)  | 1954, 1960-75 |
|            | Includes 'Association "OSE" in Israel' and 'British OSE Society (Organisatio Sanitaria Ebraica)'.<br>1954 correspondence includes request to Chain to serve on the Scientific Council of Union O.S.E.<br>Later correspondence is mainly with British OSE Society <u>re</u> meetings of the Executive Committee. Chain was an Honorary Vice-President until the organisation was absorbed by the Central British Fund for Jewish Relief and Rehabilitation in 1975. |               |

Israel and Jewish organisations

H.66-H.135            THE WEIZMANN INSTITUTE OF SCIENCE  
(formerly the Daniel Sieff Research Institute)            1949-79

Very little remains to document Chain's early associations with the Weizmann Institute, although it is clear that he seriously considered going to work there in the late 1940s (see A.79, A.80, H.66, K.12). He was a long-standing member of the Board of Governors, Chairman of the Committee on Membership and Honours for Public Service (from 1970 - see H.90) and Vice-President of the Weizmann Foundation from 1972 (see H.94).

Much of the following correspondence is with fellow Governors re forthcoming meetings and elections, and it includes discussions of many different aspects of the Institute's financial and administrative affairs as well as some more personal exchanges.

- H.66                    Correspondence 1949-56  
Includes letter from E.D. Bergmann, January 1949 urging Chain to come and work at the Institute; letter from C. Weizmann, December 1949; correspondence with A. Katchalsky re development of antibiotics industry in Israel, 1950-51; correspondence re Chaim Weizmann Memorial Lectures and arrangements for visit of D. Marotta, 1956.
- H.67                    Correspondence and papers 1958-59  
Includes letter from M. J. Sieff re candidates for Presidency of the Institute and 7 pp. typescript in Italian headed 'Memorandum per l'organizzazione in Italia di una Società di Amici dell' Istituto Scientifico Weizmann'.  
The remaining correspondence consists of Chain's carbons only.
- H.68                    Correspondence 1961-63  
Mainly re arrangements for meetings of the Board of Governors and other events. Includes some personal exchanges and a long letter from Chain to I. Sieff re the relationship between the Executive Council of the Institute and the Board of Governors.

Israel and Jewish organisations

- H.69 Correspondence with members of the American Committee for the Weizmann Institute, 1954-63.  
Mainly with A. Feinberg (President) and J. Brainin (Executive Vice-Chairman), re various fund-raising and commemorative projects.
- H.70 Correspondence, 1964-January 1965  
re arrangements for celebrations to mark the 20th Anniversary of the founding of the Weizmann Institute and the 70th birthday of Meyer W. Weisgal, Chairman of the Executive Council of the Institute. Includes 2 pp. typescript tribute to Weisgal written for inclusion in a Jubilee presentation volume (see below).
- H.71 Copy of booklet prepared for Weisgal's 70th birthday.
- H.72 Correspondence with A. de-Shalit, April 1965, re proposals for collaboration between the Weizmann Institute and the British Ministry of Technology.
- H.73 Correspondence with Weisgal and others, May-October 1965.  
Mainly re arrangements for meetings, visits, etc. Includes copy of a letter from N.M.V. Rothschild to M. J. Sieff re financial and administrative problems of the Weizmann Institute.
- H.74 Correspondence with W. Taub and others, July-September 1965, re negotiations with Beecham Research Laboratories for collaboration with the Weizmann Institute through the Yeda Research and Development Co. Ltd.
- H.75 Booklet recording speeches and tributes during Presentation of the Weizmann Award in the Sciences and Humanities to Lord Sieff of Brimpton and (post-humously) Mrs. Rebecca Sieff, 3 January 1967.
- H.76 Arrangements for Extraordinary Meeting of the Board of Governors of the Weizmann Institute, April 1967.  
Folder also includes Agenda of the meeting and a copy of the 'Operating Budget 1967-68'.
- H.77 Correspondence with Margalit Sela and others re visit to the Weizmann Institute for informal discussions, June-July 1967.

Israel and Jewish organisations

- H.78 Correspondence re Annual General Meeting of the Board of Governors, October 1967.  
Includes a letter from D.D. Stone (Chairman of the Board), August 1967, re the impact of the recent war on the future of Israel.
- H.79 Ms. drafts of speech, apparently delivered on the occasion of the opening of the new Wolfson Institute of Experimental Biology at the Weizmann in October 1967.
- H.80 Arrangements for meeting of Board of Governors, December 1968.  
Includes copy of proposal by P. Hillman for establishment of a research group in Neurophysiology at the Weizmann (for consideration at the meeting), and some related correspondence.
- H.81 Correspondence with P. Sporn, January-April 1969, re nominations for the Presidency of the Weizmann Institute. Includes accounts of meetings of members of the Selection Committee and discussions with prospective candidates.
- H.82 Correspondence with other members of the Selection Committee and prospective candidates, September 1968-April 1969. Includes letter from M.J. Sieff re size and structure of the Board of Governors of the Weizmann Institute.
- H.83 3 pp. typescript draft by P. Sporn, 4 March 1969, headed 'Advisory Council, The Weizmann Institute of Science', advocating the formation of a small Scientific Advisory Council to make recommendations to the Board of Governors.
- H.84 Summary of resolutions at Extraordinary General Meeting of the Board of Governors, April 1969, including the election of A.B. Sabin as the next President, and correspondence with Sabin following his election.
- H.85 Correspondence with various members of the Weizmann Institute and Board of Governors, May-December 1969, mainly re arrangements for meetings and visits.

Israel and Jewish organisations

- H.86 Correspondence, January-April 1970  
Mainly re administrative and scientific policy of the Weizmann Institute. Includes several references to proposed Scientific Advisory Council. Letter from H.W. Thompson, 3 April, is re arrangements for Chain to represent the Royal Society at the installation of the new President of the Institute.
- H.87-H.90 Correspondence with D.D. Stone (Chairman, Board of Governors) and others, September-November 1970. In alphabetical order.
- H.87 C.B. Anfinsen  
Includes copies of letters from A.B. Sabin and S.L. Stulman to Anfinsen re terms of reference of the new Scientific and Academic Advisory Committee.
- H.88 M.M. Boukstein  
Mainly re Boukstein's appointment as Chairman of the Executive Council. Includes letter from C.B. Anfinsen.
- H.89 H. Levine  
Includes general correspondence re scientific policy, the political situation in the Middle East, etc.
- H.90 D.D. Stone  
Includes request to Chain to serve as Chairman of the newly-formed Committee on Membership and Honours for Public Service, invitation to Birthday Dinner Party in New York in honour of Stone and H. Levine, and arrangements for informal meeting of the Scientific and Academic Advisory Committee.
- H.91 Correspondence re membership of the Committee on Membership and Honours of the Board of Governors of the Weizmann Institute, February-September 1971. Includes correspondence with M.M. Boukstein re general affairs of the Institute.
- H.92, H.93 Correspondence re nominations for honours, February-December 1971.
- H.92 February-October
- H.93 November-December

Israel and Jewish organisations

- H.94-H.99 Correspondence and papers, 1972  
Nominations for Honours Committee, arrangements for meetings, general correspondence re the affairs of the Institute.
- H.94 January  
Mainly re nominations and electoral procedure. Includes copy of telex from A.B. Sabin congratulating Chain on election to Vice-Presidency of the Weizmann Foundation.
- H.95 February-May  
Mainly re nominations and electoral procedure. Includes some correspondence re fund-raising.
- H.96 June-July  
Mainly re nominations and electoral procedure. Includes draft recommendations of the Honours Committee on the criteria for election of candidates to the Board of Governors, and related correspondence.
- H.97 August-September  
Mainly re nominations and elections, but includes letter from M.M. Boukstein re scientific work at the Institute.
- H.98 September-October  
Mainly re nominations and elections. Includes some arrangements for meetings in November.
- H.99 November-December  
Mainly re meeting of Board of Governors. Includes letter from A. Patchornik reporting on progress of collaborative research project with Beecham Research Laboratories.
- H.100-H.104 Correspondence and papers, 1973
- H.100 January-March  
Nominations and elections, arrangements for meetings and discussions. Includes Chain's draft letter of congratulation to E. Katzir on his election as President of Israel.

Israel and Jewish organisations

- H.101 April-May  
Nominations and elections, arrangements for meetings. Includes correspondence re corrections to the minutes of the Board of Governors meeting in November 1973.
- H.102 June-July  
Nominations, arrangements for meetings and visits, correspondence re administrative problems. Includes some correspondence with the Executive Secretary of the Weizmann Institute Foundation.
- H.103 August-September  
Nominations, arrangements for meetings. Includes correspondence re the minutes of the Executive Council meeting in June 1973.
- H.104 October-December  
Mainly re nominations. Includes some personal correspondence from D. Kleeman.
- H.105-H.110 Correspondence and papers, 1974
- H.105 January-March  
Re nominations and elections. Includes letter from A. Feinberg (Chairman, Board of Governors) re fund for families of members of the Weizmann Institute killed in the Yom Kippur War.
- H.106 April  
Includes correspondence with D. Kleeman, S.L. Stulman and others re financial position of the Weizmann Institute, copy of typescript by M.W. Weisgal entitled 'Some Observations on the State of the Institute' and miscellaneous re nominations, awards, etc.
- H.107 May  
Includes correspondence re nominations, elections and meetings and re various financial and administrative problems of the Institute.

Israel and Jewish organisations

- H.108            June-July
- Re nominations, elections, meetings. Includes invitation to Chain to serve on the International Sponsoring Committee for the Chaim Weizmann Centenary Celebration and 2 pp. typescript 'Report on Membership of Board of Governors of the Weizmann Institute and Criteria for Election to the Board', 10 July 1972.
- H.109            August-September
- Mainly re arrangements for meetings and functions. Includes some correspondence re nominations and elections and re financial position of the Institute.
- H.110            October-December
- Re nominations, elections, arrangements for meetings and financial affairs of the Institute.
- H.111            Correspondence with the Director of the Weizmann Institute Foundation, February-November 1974.
- Also included here is material re the Comitato Italiano per L'Istituto Scientifico Weizmann.
- H.112-H.117    Correspondence and papers, 1975
- H.112            January-April
- Includes copies of press releases re research at the Weizmann Institute, draft telegram of condolence from Chain on death of Margalit Sela and letter announcing the Search Committee's recommendation that Professor Michael Sela be appointed as President of the Institute.
- H.113            May-June
- Mainly re nominations and elections. Includes press-cuttings re the activities of the Italian Committee for the Weizmann Institute.
- H.114            July-September
- Mainly re nominations, elections, arrangements for Meetings. Includes correspondence from D. Kleeman re administrative affairs of the Institute.

Israel and Jewish organisations

- H.115            October  
                     Includes agenda for Executive Council meeting on  
                     18 November and copy of Operating Budget for 1975-76.
- H.116            November  
                     Mainly re nominations and elections.
- H.117            December  
                     Correspondence re nominations and re matters arising  
                     from the Board of Governors meeting in November 1975.
- H.118-H.121    Correspondence, 1976
- H.118            January-February  
                     Re meetings and functions, nominations and awards.  
                     Includes further correspondence arising from the Board  
                     of Governors meeting in November 1975 and personal  
                     correspondence with M.M. Boukstein.
- H.119            March-July  
                     Re nominations, arrangements for Board of Governors  
                     meeting, etc.
- H.120            August-October  
                     Mainly re nominations and awards with some personal  
                     correspondence including copy of Chain's letter of  
                     congratulation to Sir Marcus Sieff on his election as  
                     Chairman of the Board of Governors.
- H.121            November-December  
                     Mainly re nominations and awards. Includes some  
                     personal correspondence.
- H.122-H.126    Correspondence 1977
- H.122            January-February  
                     Includes correspondence re membership of the Board of  
                     Governors and scientific research in progress at the  
                     Institute.
- H.123            March-May  
                     Includes request to Chain to serve on an ad hoc committee  
                     to study the relations between 'pure' and 'applied' research,  
                     and arrangements for visit to Israel in June.

Israel and Jewish organisations

- H.124            June  
Includes extensive correspondence with the President (M. Sela) re scientific policy of the Institute including the function of the ad hoc committee and proposed agreement between Yeda and Miles Laboratories.
- H.125            August-September  
Mainly re honours and awards. Includes letter from Chain to D. Vofsi expressing views on the scientific policy of the Institute.
- H.126            October-December  
Includes copies of Chain's letters of condolence on the deaths of M.W. Weisgal and D.D. Stone.
- H.127-H.131    Correspondence 1978
- H.127            January  
Mainly re nominations and awards. Includes copy of letter from Chain to E. Japhet re meetings of the ad hoc committee on applied research.
- H.128            February-March  
Mainly re nominations and awards.
- H.129            April-June  
Includes correspondence with M. Sela and Sir Marcus Sieff re structure and function of the Committee on Applied Research and letter from D. Kleeman re the future of the Weizmann Institute Foundation.
- H.130            June-July  
Re nominations and awards.
- H.131            September-December  
Includes correspondence re meeting of Board of Governors which Chain was prevented by illness from attending.
- H.132            Correspondence, January-July 1979  
Includes correspondence re negotiations with the Italian pharmaceutical industry, arrangements for meetings and visits and some personal correspondence.

Israel and Jewish organisations

- H.133 Ms. of undated speech about the Weizmann Institute.
- H.134 Undated typescript outlining proposals for re-organisation of the internal administration of the Institute.
- H.135 Shorter unindexed correspondence re the Weizmann Institute, 1967-71.

- H.136 WHITTINGEHAME COLLEGE (Sussex) 1967  
Chain was on the Board of Governors.  
Correspondence with the Secretary, agendas and minutes of meetings of the Board of Governors.
- H.137 WORLD JEWISH CONGRESS 1967, 1975  
Letter from M. Goldman, December 1967, congratulating Chain on joining the World Jewish Congress Executive.  
Invitation to Farewell Dinner of the British Section of the World Jewish Congress, 1975.
- H.138 YESHIVA UNIVERSITY 1968-77  
Chain was awarded an Honorary Degree by the Albert Einstein College of Medicine, Yeshiva University, in 1961 (see J.37).  
This folder contains invitations to Chain to attend various functions at the University including dinner honouring the 30th Anniversary of Samuel Belkin as President of Yeshiva University to which Chain sent a message of congratulation to Belkin since he was unable to attend.

Israel and Jewish organisations

H.139-H.141      Shorter unindexed correspondence      1948-79

Within each folder the organisations are presented in alphabetical order.

H.139      Requests to give talks and lectures on various aspects of Jewish life and thought, 1948-79.

H.140      Requests/thanks for financial help, patronage or other support, 1963-79.

H.141      Invitations to dinners and functions; miscellaneous, 1963-77.

SECTION J            VISITS AND CONFERENCES    J.1 - J.193

This Section deals with visits, lecture-tours, scientific congresses and symposia 1948-79. Chain was in great demand and received many invitations to attend, present papers, chair sessions, provide introductory or concluding remarks, or to participate in the organisation of conferences as a committee or panel member, or as editor of the published proceedings. He was a cosmopolitan, enjoying travel despite the discomforts of asthma and respiratory difficulties, and accepted many of these invitations which he usually combined with visits to research institutions or laboratories, or to friends.

The material is consequently heterogeneous, and may vary from a single letter of invitation to a full account including preliminary arrangements, invitations sent out to speakers, drafts for speeches or major papers delivered by Chain, letters of thanks or congratulation and the like, extending over several years. Many of the undated lectures and papers in G.126 - G.155 were almost certainly given at conferences, but cannot be identified precisely (but see G.64, G.89).

The presentation is chronological as far as possible. At the end of each year is placed a folder or folders of miscellaneous invitations or correspondence for which no further identifiable material can be traced. Some of these represent declined invitations, but some refer to conferences which Chain may have attended and for which no other evidence survives in this collection.

For conferences on penicillin, see B.73 - B.84, B.86 - B.88, B.90.

For conferences organised by Chain at the Istituto Superiore di Sanità, see C.79 - C.101.

For conferences organised by societies and organisations, see E.11 - E.17, E.44, E.45 - E.52, E.64, E.65, E.73 - E.75, E.83, E.132, E.149 - E.155, E.165, E.167 - E.169, E.198, E.202, E.205, E.206, E.207 - E.210, E.224, E.233, E.234.

Visits and conferences

Invitation for 1948

- J.1            Symposium on the ground substance of mesenchyme and hyaluronidase, New York Academy of Sciences, 3-4 December 1948.

1949

- J.2            Réunion Internationale de Tuberculose, Lausanne, April. Chain's lecture, on 'Chemistry of the Tubercle Bacillus', was published in the conference volume 'Bacilles tuberculeux et paratuberculeux'.  
Folder includes travel and editorial correspondence, photograph of Chain, p.1 of summary and pp.4-5 of text of lecture on 'Biologically active substances from the tubercle bacillus', n.d.
- J.3            Symposium on 'Mutagenic substances', Naples, 27-31 May. Brief correspondence re meeting and publication.
- J.4            Congress of Società per il Progresso delle Scienze, Rome, 28 November.  
Chain lectured on 'Modern Developments in Bacterial Chemotherapy'.  
14 pp. typescript of lecture, brief editorial correspondence.

Invitations for 1949

- J.5            Symposium on Venereal Diseases, Washington D.C., 7-8 April.  
  
Symposium at St. Andrews, 23-30 July.

Visits and conferences

Invitations for 1950, 1951, 1952

- J.6 First International Congress of American College of Chest Physicians, Rome, 17 September 1950.
- XIIth International Congress of Pure and Applied Chemistry, New York, 3-7 September 1951.
- Conference in Jerusalem, n.d. (1951).
- Symposium in Pallanza, n.d. (1952).

1953

- J.7 Second International Congress of Biochemistry, Paris.
- Introductory speech, 10 pp. typescript. n.d. but refers to M. Macheboeuf, organiser of Symposium, who died suddenly in August 1953.

1954

- J.8 Indian Science Congress, Hyderabad, January.
- Brief correspondence re travel arrangements.
- Invitation to address Indian Academy of Sciences, Ahmedabad, programme of visit, ms. and typescript versions of two lectures given by Chain on 'Technique of submerged fermentations' and 'Some aspects of intermediate carbohydrate metabolism'.
- J.9 Riunioni Medico-Chirurgiche Internazionali, Turin, 29 May-6 June.
- Chain was awarded an honorary degree during the proceedings and also gave a lecture on 'Aspects of intermediate carbohydrate metabolism'.
- Correspondence re arrangements, summary of Chain's lecture, requests for copies, etc.
- J.10 'Some mechanisms of Biological Synthesis'.
- 29 pp. typescript of lecture at Congress of Agricultural Industries, n.d., c.1954.

Visits and conferences

Invitations for 1954

- J.11                   Giornate Biochimiche Italo-Franco-Elvetiche, 21-24 April.
- International Poliomyelitis Congress, Third International Congress, Rome, 6-10 September.
- Third International Congress of Internal Medicine, Stockholm, 15-18 September.
- Swiss Chemical Society, Altdorf, 25-27 September.
- Second Radioisotope Conference, Harwell, n.d.
- Asociacion Internacional de Antibioticos y Quimioterapicos, 2nd International Congress, Buenos Aires, n.d. (Chain was an Honorary President).
- Médecine et Hygiène, Symposium on antibiotics, October.

1955

- J.12                   Third International Congress of Biochemistry, Brussels, August.
- Chain gave a paper on carbon metabolism of moulds.
- Brief correspondence only, re paper and arrangements.

Invitation for 1955

- J.13                   Istituto Lombardo, meeting on macromolecules, Milan, 25-28 July.

1956

- J.14                   Rassegna Internazionale Elettronica e Nucleare, Rome, 28 June-15 July.
- Chain was a member of the Scientific Committee.
- Brief correspondence only, re Proceedings.

Visits and conferences

1957

- J.15 Fifth National Congress of Chemotherapy, Turin, 5-6 June.  
Chain gave a paper, 'Introduction to the new antibiotics'.  
Correspondence re arrangements, publication, etc.
- J.16 International Symposium on Chemistry of Enzymes, Tokyo,  
15-23 October.  
One letter only.

1958

- J.17-J.19 Visit to U.S.A., September-October.
- J.17 Symposium on Molecular Biology, organised by Columbia  
University and the Rockefeller Institute for Medical Research,  
25-30 September.  
Programme of meeting, correspondence with organisers.
- J.18 Second Conference on Physicochemical Mechanism of Nerve  
Activity, 2-3 October, and  
  
Second Conference on Muscular Contraction, 3-4 October,  
both organised by New York Academy of Sciences.  
Chain gave a paper on 'Recent progress in intermediary  
carbohydrate metabolism of brain and muscle' at the first  
of these conferences.  
Programme of meetings, correspondence with organisers.
- J.19 Correspondence with colleagues and friends re lectures and  
visits by Chain during his stay in U.S.A., at Rutgers,  
Bethesda, New York University College of Medicine,  
Harvard, Wisconsin, Purdue, Columbia, etc.
- J.20 Seventh International Congress for Microbiology, Stockholm.  
  
Chain was Chairman of a section.  
Brief correspondence, Chain's carbons only.

Visits and conferences

J.21 Fourth International Congress of Biochemistry, Vienna, 1-6 September.  
Chain gave a summarising talk.  
Brief correspondence re arrangements and publication.

J.22 Symposium at Wellcome Research Institution, London, September.  
Brief correspondence only.

Invitations for 1958

J.23 Seminario di Chimica Terapeutica, Pavia, April.

Convegno sul valore antibiotico della colimicina, Rome, April.

Congresso della Società Internazionale di Ematologia, Rome, September.

Société Suisse d'Endocrinologie, Berne, September.

1959

J.24 Symposium on antibiotics, Prague, 18-23 May.  
Chain gave a paper, and contributed to panel discussion.  
Correspondence with organisers and colleagues re arrangements; includes a little scientific correspondence arising, press-cutting.

First International Symposium on Anti-infectious and Anti-mitotic Chemotherapy, Geneva, 12-13 September.

Chain was an Honorary President.

Correspondence with organisers.

Invitations for 1959

J.25 Conference on Controlled Clinical Trials, Vienna, March.

Meeting on 'Biochemistry and Physiology of Insulin and the Sulfonylureas', New York, April.

Symposium on 'Prevenzione della resistenza batterica agli antibiotici', Perugia, May.

Visits and conferences

Invitations for 1960

- J.26                      Continuous culture symposium, March.
- Twelfth International Congress of the International College of Surgeons, Rome, May.
- Chain served on Committee of Honour.
- Meeting of German Society for Endocrinology, April.
- Chain gave a paper.
- Symposium on transport and metabolism, Prague.
- Chain served on International Committee.

1960

- J.27, J.28                Visit to U.S.A., December.
- J.27                      Correspondence re City of Hope Award to Chain, 4th December; ms. and typescript versions of his address on occasion of award.
- Also included is 12 pp. typescript 'Synopsis of the main subjects of the scientific work of E.B. Chain and his coworkers'.
- J.28                      Meeting of the Association for Research in Nervous and Mental Disease, New York, December.
- Typescript of Chain's paper, 'Studies on brain metabolism', later published in a slightly different form in Ultrastructure and Metabolism of the Nervous System, 1962 (Bibliog. 92).
- Folder also includes brief correspondence re publication arrangements.

1961

- J.29                      'Giornate Mediche Internazionali' of Società Italiana di Chemioterapia, Turin, 10-11 June.
- Chain gave a paper on the new penicillins.
- Correspondence with organisers.

Visits and conferences

- J.30-J.34 Visit to China, April-June.  
The visit was at the invitation of the Chinese Medical Association and the Academia Sinica; it was first bruiteed in 1958 but arrangements were not complete until 1961.
- J.30 Correspondence, 1958-61, re visit, arrangements, schedule of activities, guest-lists, etc. and a little later correspondence re research, exchange of students and information.
- J.31 Red exercise-book of miscellaneous travel notes, names of personnel, draft for speech, etc. (few pages used); another ms. draft for a speech is included as a loose sheet.
- J.32 Ms. and typescript drafts for Chain's report on his visit.
- J.33 Copy of final version of report, 17 pp. duplicate typescript and brief correspondence sending copies to Foreign Office and Ministry of Science.
- J.34 Article on visit, based on interview and originally intended for publication in The Observer but not published.
- J.35 Fifth International Congress of Biochemistry, Moscow, 10-16 August.  
Chain chaired the section on Biochemistry of Antibiotics.  
Correspondence with organisers, programme of events, letters of thanks and later correspondence re Chain's invitations to Russian colleagues to work at Istituto in Rome.
- J.36 Visit to Czechoslovakia, September, at invitation of Slovak Academy of Sciences.  
Correspondence only.
- J.37 Visit to New York, November, for award of Honorary Doctorate of Humane Letters by Albert Einstein College of Medicine, Yeshiva University.  
Correspondence, 1961-62, letters of thanks, 9 pp. ms. draft of Chain's address.
- Invitations for 1961
- J.38 Second International Symposium of chemotherapy, Naples, 14-17 September (Chain chaired a session on 'new antibiotics').  
Visit to U.S.A.  
Visit to Paris, December.

Visits and conferences

1962

- J.39 Journées Bretonneau, Tours, 16-18 February, Centenary celebration for death of Bretonneau.  
Chain lectured on the new penicillins and the production of lysergic acid.  
Correspondence with organisers and colleagues, programme of events, 4 pp. ms. draft of Chain's introductory remarks on Bretonneau.
- J.40 Fifth International Congress, Società Farmaceutica del Mediterraneo Latino, Palma de Mallorca, 9-11 May.  
Chain spoke on 'Recenti Progressi nel Campo della Neurochimica'.  
Correspondence with organisers and colleagues, summary of lecture.
- J.41 Journées Médicales de Bruxelles, 14-16 June.  
Chain spoke on 'The New Penicillins'.  
Correspondence with organisers.
- J.42-J.45 Visit to South America, July.  
This was an extended tour, taking in Brazil, Argentina, Uruguay and Chile, and including an Honorary Degree from the University of Brazil and contacts with Jewish organisations as well as with academic and industrial institutions.
- J.42 Correspondence re arrangements, invitations, letters of introduction, guest-lists, letters of thanks and a little continuing correspondence 1961-63.
- J.43 Ms. drafts for speeches given on visit, invitation cards.
- J.44 Miscellaneous printed matter re Jewish and academic institutions in South America.
- J.45 Photographs and press-cuttings of visit.  
See also A.223.

Visits and conferences

J.46 International Symposium on Pharmaceutical Chemistry, organised by Società Italiana di Scienze Farmaceutiche, Florence, 17-19 September.  
Chain chaired a session, and his concluding remarks were published in the conference Proceedings.  
Correspondence with organisers re arrangements and publication.

J.47 Journées de Biochimie, Bordeaux, 18-20 October.  
Chain spoke on the mode of action of insulin, and on the new penicillins.  
Correspondence with organisers and colleagues.

Invitations for 1962

J.48 Laboratoires Bristol, symposium on child medication.  
Chain was asked to preside and speak.

Meeting and lecture at Milan and Pavia.

Simposio Internazionale sui Glucidi Fosforilati, Milan, October.

1963

J.49, J.50 Symposium on 'Global Impacts of Applied Microbiology', Stockholm, 29 July-2 August.

Chain spoke on 'Antibiotics today and in the future' and his paper was published in the conference Proceedings.

J.49 Correspondence with organisers and colleagues, programme of events.

Folder also includes letter of thanks for lecture given to Microbiology Division, Swedish Medical Society, March 1963.

J.50 Miscellaneous typescript and ms. drafts, corrected proof of Chain's paper.

Visits and conferences

- J.51 Visit to Moscow, October.  
The visit was originally planned for May, but had to be postponed.  
Correspondence re invitation and arrangements 1962-63, mainly Chain's carbons only.  
Invitations for 1963
- J.52 (March-June)  
Invitation to America, n.d.  
Beecham Symposium on Drug Absorption, April.  
Invitation to America, May.  
8<sup>o</sup> Congresso Nazionale, Società Italiana di Patologia, Perugia, May.  
Laboratoires Bristol, Symposium in Paris, May.  
Invitation to Padua, June.
- J.53 (July-November)  
Third International Symposium of Chemotherapy, Stuttgart, July. Chain was asked to give introductory talk.  
International Symposium on Diabetes, Modena, September.  
Squibb Institute, 25 Anniversary Symposium, October.  
Symposium on new penicillins, Milan, November.  
Invitation to São Paulo.  
1964
- J.54 Centenary Celebrations, Politecnico di Milano, April.  
Chain attended as representative of Imperial College as R.P. Linstead (Rector) was unable to attend.  
Invitation, programme of events, brief correspondence.

Visits and conferences

- J.55 Conference at Apothecaries Hall, London, 2-4 June.  
Chain served on Conference Committee and chaired session on 'Laboratory Aspects of Therapy'.  
Conference programme, copy of Chain's talk 'The New Penicillins' (offprint). (Bibliog. 106).
- J.56 Sixth International Congress of Biochemistry, New York, 26 July-1 August.  
Chain accepted an invitation to chair a session, but no other documentation survives.

Invitations for 1964

- J.57 3<sup>o</sup> Symposium Internazionale sul Lisozima di Fleming, Milan, April. Chain was asked to serve on Committee of Honour.  
  
First International Symposium on Radiosensitizers and Radio-protective Drugs, Milan, May. Chain was asked to serve on Committee of Honour.  
  
Antibiotic Congress, Prague, June.  
  
Invitation to Danish Society of Pathology, November.

1965

- J.58 World Jewish Congress Second 'Conference of Intellectuals', Spring.  
The theme of the Conference was 'Why should Jews remain Jews in this changing world?'. Chain spoke on 'Why I am a Jew' at the invitation of I. Sieff.  
Invitation, ms. and typescript drafts of speech.  
Also included here is 8 pp. ms. draft for speech on the value of Jewish primary education, introducing I. Sieff, n.d., but probably also c.1965.
- J.59 Visit to New York for Tenth Anniversary Dinner of Albert Einstein College of Medicine, Yeshiva University, given in honour of Samuel Belkin (President), May.  
Chain spoke at the dinner, but only a preliminary 'message' survives; he was made a Founder Member of the College.  
Correspondence, arrangements, letters of thanks.

Visits and conferences

- J. 60, J. 61      Visit to Chicago, June.  
Chain received an honorary D.Sc., gave a lecture 'Antibacterial Chemotherapy in Perspective', and visited various friends and colleagues.
- J. 60              Correspondence re degree and lecture, travel arrangements, speech of presentation, letters of thanks.
- J. 61              Correspondence with colleagues and friends.
- J. 62              International Symposium on 'Impact of Basic Sciences on Medicine', organised by Hebrew University of Jerusalem, 20-28 June.  
Chain spoke on 'Present state of antibiotics chemotherapy' and a condensed version was published under the title 'Phases of penicillin research' in the conference proceedings in the Israel Journal of Medical Sciences, 1, 1966.  
Correspondence re arrangements, programme, list of participants, correspondence with colleagues and friends, transcript of Chain's talk, proof of published version.
- J. 63, J. 64      Fifth International Conference on Antimicrobial Agents and Chemotherapy, and Fourth International Congress of Chemotherapy, Washington D.C., 17-21 October.  
Chain spoke on 'Twenty-five years of penicillin therapy in perspective', published in Antimicrobial Agents and Chemotherapy, 1965 (Bibliog. 115).
- J. 63              Correspondence with organisers, programmes, list of participants, invitation to various 'round table' and discussion groups, letters of thanks, editorial correspondence.
- J. 64              Ms., revised typescript, etc. of Chain's paper.
- J. 65-J. 67      'Teach-in' on 'Pharmaceutical Profits and the Nation's Health', Edinburgh, 7 December.  
Chain was the first speaker; the Chairman was R.H. Girdwood. The 'Teach-in' was organised by the Association of the British Pharmaceutical Industry.
- J. 65              Programme of meeting, correspondence with organisers and colleagues, press report, ms. and revised typescript of Chain's contribution.

Visits and conferences

- J.66 Transcript of 'Teach-in', 121 pp. duplicated typescript.
- J.67 Documents relating to prosecution brought by American Cyanamid Company against a former employee for 'drug piracy', papers numbered 1-11.
- Invitation for 1965
- J.68 Official Opening, School of Microbiology, University of Melbourne.
- 1966
- J.69 Visit to Copenhagen, 26-28 April, to address Danish Society of Pathology and Microbiology, on 'The New Penicillins'.  
Correspondence only, re arrangements, 1965-66.
- J.70-J.73 Visit to U.S.A., for symposium 'Reflections on Research and the Future of Medicine', organised by Merck, Sharp and Dohme in New York and New Jersey to celebrate the opening of their new research laboratories at Rahway, N.J., 26-27 May.  
Chain gave the principal address, 'The Quest for New Biodynamic Substances', which was published in Perspectives in Biology and Medicine, 10, 1967 (Bibliog. 120).
- J.70 Correspondence re symposium, travel arrangements, etc. and including some scientific correspondence on research projects and collaboration.
- J.71 Correspondence re publication of Chain's address.
- J.72 Ms. and typescript notes and drafts for address, press release and press-cuttings.
- J.73 Conference programme, background material sent to Chain.  
For an album of photographs compiled on the occasion see A.225.
- J.74 74 Visit to Paris, for Tercentenary Celebrations of Académie des Sciences de l'Institut de France, June.  
Chain was invited to give one of the speeches at the inaugural ceremony 'sous la Coupole', and also represented Imperial College.  
Correspondence with Secretary of Academy, programme of events, ms. notes and drafts for Chain's address (in French).

Chain spoke on 'Fermentation Research in Perspective'.

Continued

Visits and conferences

- J.75, J.76 Ninth International Congress for Microbiology, Moscow, 24-30 July.  
Chain was guest of honour of Organising Committee, and 'Moderator' (= organiser) of Symposium B1, on 'Biologically Active Substances of Microbial Origin', held on 26 July.
- J.75 Correspondence with organisers and colleagues.
- J.76 Conference programme and newsletters, miscellaneous papers and material sent to Chain.
- J.77-J.80 Symposium on the Semi-Synthetic Penicillins, arranged by Beecham Research Laboratories, Johannesburg, 2-3 September.  
Chain gave the opening address, on 'The Semi-Synthetic Penicillins', and the conference proceedings were published. During his visit he also visited Kenya, Uganda, other medical research centres in South Africa, and spoke on 'Science in Israel' to the Israeli United Appeal Group in Johannesburg.
- J.77 Correspondence with organisers and colleagues, invitations, travel arrangements, letters of thanks; includes a little material on scientific research.
- J.78 Chain's journal and travel notes, 8 pp. ms.
- J.79 Correspondence re Chain's talk on behalf of Israeli United Appeal.
- J.80 Conference programme, Abstracts of speeches, texts of Chain's address and of his contributions to discussions, editorial correspondence.

1967

- J.81-J.83 Visit to U.S.A., March-April.  
Chain was invited by the Carl Neuberg Society for International Relations to receive the Carl Neuberg Medal and to address the Society at a banquet in Philadelphia. He also received an Honorary Doctorate from the Philadelphia College of Pharmacy and Science.  
Chain spoke on 'Fermentation Research in Perspective'.

Continued

Visits and conferences

- J.81 Correspondence re award of Carl Neuberg Medal, travel arrangements. Includes earlier correspondence from Pharmaceutical Manufacturers Association re invitation to Chain to be 'honored guest' at the Annual Meeting, which did not materialise.
- J.82 Programme of Award, banquet, symposium on 'Drugs and Dreams', 29-30 March, texts of Chain's address to Carl Neuberg Society, and his reply on award of Hon. D.Sc.
- J.83 Correspondence re visits by Chain to research laboratories including Upjohn International, Inc., Zimpro Inc. (on behalf of Ministry of Agriculture, Fisheries and Food).
- J.84 Symposium on the Biological and Clinical Aspects of the Central Nervous System, organised to celebrate 50th Anniversary of the Pharmaceutical Department of Sandoz Ltd., 16 October.  
Invitation, programme of arrangements.
- J.85 Second Conference on Global Impacts of Applied Microbiology, Addis Ababa, 6-11 November.  
Correspondence re arrangements, provisional programme of events.
- J.86 Visit to Esso Research Laboratories, New Jersey, 27 November.  
Brief correspondence only.

1968

- J.87, J.88 Visit to Brussels, 25-26 January.  
Chain was invited by the wife of the Israeli Ambassador to Belgium to attend and speak at a dinner for various charitable medical organisations; he spoke on the Weizmann Institute.
- J.87 Correspondence, invitations, arrangements.
- J.88 Ms. draft of a talk on 'Science in Israel', 6 pp.  
Two typescript drafts of talk on 'The Weizmann Institute of Science, a Jewish contribution to Knowledge and Progress'.

Visits and conferences

J.89 UNESCO Symposium on Brain Research and Human Behaviour ,  
Paris, 11-15 March.

Chain acted as 'General Discussor'.

Correspondence with organisers and colleagues, invitation,  
draft and final version of programme, list of participants,  
ms. drafts of Chain's contributions to discussion.

J.90 The Economic Conference, Jerusalem, 31 March-4 April.

Correspondence, programme, reports, resolutions, etc.

Invitations for 1968

J.91 Invitation from Jewish Institute for Medical Research, Houston,  
to address Houston Society of Internal Medicine.

Invitation to E. Merck Tercentenary Celebrations, Darmstadt,  
May.

Comité d'Honneur for M-M Janot, May.

Congrès Juif Mondial, colloquium on 'Où va le Judaïsme?'

J.92 Conference on 'Preparing Nutritional Protein from Spirulina',  
Stockholm, June.

Symposium International sur le Développement, Monaco,  
September-December.

Symposium on New Antiviral Vaccines, Moscow, October.

1969

J.93, J.94 Visit to University of Miami, Florida, January.

J.93 Correspondence re visit, printed matter, arrangements for  
television interview with W.J. Whelan, schedule of  
appointments, photographs of Chain and colleagues,  
invitations to visit other universities during trip.

J.94 'Some comments on the mode of action of insulin'.  
Ms. and typescript draft of paper (kept with above).  
See also K.272.

Visits and conferences

- J.95, J.96 Sixth meeting of the Federation of European Biochemical Societies (FEBS), Madrid, 7-11 April.  
Chain was Chairman of Colloquium D, Molecular Bases of Antibiotic Action, and contributed a paper to Colloquium E, Molecular Neurobiology. His paper 'Recent studies in amino-acid glucose interrelations in brain' was published in FEBS Symposium, 21, 1970 (Bibliog. 134).
- J.95 Correspondence with colleagues and organisers re arrangements, draft and final programmes, personal and social engagements, editorial correspondence re publication, letters of thanks.
- J.96 Various ms. and typescript drafts of Chain's paper.
- J.97 Hauptversammlung der Deutschen Pharmazeutischen Gesellschaft, Karlsruhe, 2-5 October.  
Chain spoke on '30 Jahre Penicillintherapie. Ein Rückblick und Ausblick'.  
Correspondence, conference programme, ms. drafts of Chain's lecture.  
N.B. The conference programme incorrectly lists the title as '40 Jahre Penicillin-Forschung'.
- Invitations for 1969
- J.98 Biochemie Kundl, Symposium on high dosage penicillin therapy, Vienna, June.  
Sixth International Congress of Chemotherapy, Tokyo, August.
- 1970
- J.99-J.111 'Aspects of Infection 1970'.  
Beecham Research Symposia held in Auckland, Sydney and Melbourne, April 1970.  
Chain gave the opening and closing addresses at each symposium, on 'The Semi-Synthetic Penicillins - an Introduction' and 'Prospects in Anti-Infective Therapy' respectively. His own conference paper 'Advances in the Understanding of the Mechanism of Penicillin Allergy' was published in the Proceedings, a copy of which appears at J.111.

Continued

Visits and conferences

- J.99-J.111  
(Cont'd.)
- During the visit Chain addressed Biochemical/Medical Society meetings on the history of penicillin therapy and on insulin; various dinners and celebrations were also held in his honour.
- He returned via Hong Kong and Bangkok where he visited research institutes.
- Because of his poor health and the protracted nature of the trip, Chain arranged for his family to accompany him and to take the journey in easy stages.
- J.99
- Programmes, timetables, Chain's itinerary, biographical notes prepared for trip, etc.
- J.100
- Correspondence with organisers at Beechams, colleagues and friends re conference, Chain's participation, contributions, travel arrangements, September 1969-January 1970.
- J.101
- Similar material, February-June 1970.
- J.102
- Material re Dinner in Chain's honour, Auckland, N.Z.; menu, guest-list, ms. draft for speech, correspondence re arrangements.
- J.103
- Ms. draft for speech in Australia.
- J.104
- Correspondence, itineraries, arrangements for visits to Hong Kong and Bangkok.
- Press-cutting re visit to Fiji.
- J.105
- Scientific correspondence with colleagues arising from visits and lectures.
- J.106
- Chain's letters of thanks, written on his return. Some with replies from colleagues and friends.
- J.107
- Photocopies of letters of thanks written on behalf of Chain and his family by A.J. Melrose (Beechams).
- J.108
- Transcript of recording of Chain's lecture 'Thirty Years of Penicillin Therapy in Perspective', given at St. Vincent's Hospital, Melbourne, 17 pp. typescript.
- This was an early informal version of his later paper 'Thirty Years of Penicillin Therapy' and although it had aroused great interest, Chain refused to allow publication and expressed annoyance that a tape-recording had been made (see letter in folder).

Visits and conferences

- J.109 Ms. and typescript drafts of Chain's paper on penicillin allergy, and editorial correspondence.
- J.110 Miscellaneous papers and references, mainly on penicillin allergy, sent to Chain in connection with the Australian/New Zealand symposia.
- J.111 'Aspects of Infection 1970'. Bound copy of symposium proceedings.  
The Foreword and Introduction both refer to the importance of Chain's contribution to the events.
- J.112 Beecham Research Symposium on Semi-Synthetic Penicillins, Moscow, 28 September-1 October.  
Chain was invited to lead the delegation of non-Soviet participants, and to present a paper on 'Active Areas of Research in the Penicillin Field'. He cancelled his visit for reasons of health.  
Correspondence re Symposium, travel arrangements, etc. Includes programmes of papers, list of participants.
- J.113 'Lines of Development in Medicine', Symposium at Twente, Holland, 20-21 November.  
The Symposium was organised by the Dr. G. J. van Hoytema Foundation and Merck Sharp and Dohme Nederland. Chain went at the invitation of Merck Sharp and Dohme and delivered a paper on 'The Role of Biochemistry in Future Medical Research'. His paper was published in the symposium proceedings, which did not appear until 1972 (see letter of 6 November 1972).  
Correspondence with organisers re conference, travel and publication arrangements, programme and abstracts of papers, ms. and typescript draft of Chain's talk.
- Invitations for 1970
- J.114 Symposium on Genetics of Industrial Microorganisms, Prague.  
Conference on 'Environment and Society in Transition', New York City, April.  
Congress 'Cefalosporine, Penicilline semisintetiche', Sassari, May.  
Pre-symposium on The Chemistry and Mode of Action of Antibiotics, Riga, June.

Visits and conferences

- J.115 Tenth International Congress for Microbiology, Mexico City, August.
- International Symposium on Antibiotics, Saragossa, October. Chain was invited to be Honorary President.
- Centenary celebrations of birth of Jules Bordet, Institut Pasteur, November.
- Second International Symposium on Antibiotics, Valencia, November. Chain was invited to give the closing speech.
- 1971
- J.116, J.117 Food Manufacturers' Federation, Second National Convention, on 'Tomorrow's Food', Brighton, 26-27 September.
- Chain spoke on 'Support of Fundamental and Applied Research in Food Science and Technology'.
- J.116 Correspondence with organisers and colleagues.
- J.117 Ms. and miscellaneous typescript drafts of Chain's speech (all different).
- J.118 Discussion meeting on 'Effect of Fibre in Food', held at the Department of Biochemistry, Imperial College, 24 November.
- Correspondence re arrangements, list of participants, drafts of Chain's opening remarks, letters of thanks.
- Participants included representatives of industrial, academic, medical and government institutions.
- J.119 'The Conversion and Manufacture of Foodstuffs by Micro-organisms'. International Symposium sponsored by The Japan Section of the Institute of Food Technologists, Kyoto, Japan, 6-8 December.
- Chain was to give a special lecture on 'Utilizing Microbes for Man's Benefit in the Future', but was unable personally to attend.
- Correspondence, programmes.

Visits and conferences

- J.120-J.126 Visit to South America and U.S.A., 25 December 1971-12 January 1972.
- Chain was invited to spend a working week in Santiago, Chile, advising the Government of Chile on behalf of the World Health Organisation/Pan American Sanitary Bureau 'on the possible improvement in their antibiotic production especially with regard to penicillin production' (see J.120 for correspondence re terms of arrangements). He was accompanied by his elder son Benjamin.
- Chain also visited other colleagues and firms in North and South America.
- J.120 Correspondence preceding visit, including invitations and terms.
- J.121 Itinerary, letters of introduction, addresses, social engagements.
- J.122 Correspondence with Beechams before and after visit, re costs of penicillin plant. Includes brief ms. research notes made by Chain during visit.
- J.123 Correspondence re visits in U.S.A. in course of travel.
- J.124 Correspondence arising from visit.  
Chain's report to WHO.
- J.125 Letters of thanks sent by Chain on his return, some with replies.
- J.126 Miscellaneous bills, receipts, memorabilia, photographs.

Invitations for 1971

- J.127 'Les Voies du Judaïsme', Brussels, January.
- 'Chemical Engineering at the Service of Mankind', Spring.
- UNESCO meeting on university science education improvement, March.
- Symposium on 'Molecular Mechanisms of antibiotic action on protein biosynthesis and membranes', Granada, June.  
Chain was asked to chair one of the sessions.

Visits and conferences

- J.128                    Symposium 'Moving Frontiers of Medical Virology',  
Budapest, June-July.
- Symposium on toxins, Prague, Summer.
- Israel Chemistry Week, Tel-Aviv, October.
- Gruppa Incentivazione Ricerca Farmaceutica, research  
meeting, Rome, October.
- Académie Nationale de Médecine, 150th Anniversary  
Celebrations, November.
- 1972
- J.129                    Visit to Norway, July.
- This was a private visit, which Chain combined with a  
visit to the Findus factory at Hammerfest. He was accom-  
panied by his son Daniel.
- Correspondence re travel arrangements and with colleagues,  
itinerary, letters of thanks.
- J.130                    Proposed visit to Argentina, 1972, 1973.
- Chain was invited to make a visit and lecture tour, sponsored  
by the Odol Foundation. The visit, scheduled for September  
1972, was deferred until May, then October 1973 and then  
postponed because of political uncertainties in Argentina.
- General correspondence re visit, 1971-73.
- J.131, J.132            Industrial Biochemistry Group of the Biochemical Society,  
Colloquium on 'Biochemists in Industry', Nottingham,  
19 December.
- Chain spoke on 'Relationships between industrial and academic  
laboratories' and his talk was published in Biochem. Soc.  
Spec. Publ., 2, 1973 (Bibliog. 155).
- J.131                    Correspondence with organisers, programme, editorial  
correspondence.
- J.132                    Ms. and typescript drafts of Chain's talk.

Visits and conferences

Invitations for 1972

J.133 Symposium on 'Antibiotics after Thirty Years', Birmingham, February.

International Sugar Research Foundation Symposium on 'Sugar and Human Health', Zurich, March.

Congress in Wiesbaden, April.

International Congress on endotoxins, Virginia, May.

1973

J.134-J.140 Visit to Vienna, 30-31 March.

The visit was mainly for the Symposium '20 Jahre Penicillin V', organised by Biochemie; Chain gave the introductory lecture which was published in a slightly shortened version under the title 'Beiträge des Biochemikers zur Arzneimittelforschung' in Wiener Klinische Wochenschrift, 1974 (Bibliog. 163).

During his visit Chain also addressed the Gesellschaft der Ärzte in Wien and took part in a Round Table discussion at Sandoz.

In March, Chain was awarded the Grand Decoration of Honour in Gold for services rendered to the Republic of Austria, and was nominated Hon. Member of the Gesellschaft der Wiener Ärzte (see J.136).

J.134 Correspondence with organisers, mainly re arrangements but includes an account sent to Chain of the history of discovery of Penicillin V, 1971-73.

J.135 Correspondence re other lectures and meetings at Sandoz, etc., 1972-73.

J.136 Correspondence, press releases, etc. re honours bestowed on Chain during visit.

J.137 Editorial correspondence.

J.138 Ms. and typescript drafts of Chain's lecture on 'Beiträge des Biochemikers zur Arzneimittelforschung'.

Visits and conferences

- J.139            Miscellaneous versions of lectures on academic and industrial contributions to drug research, some given in Vienna.  
All in German.
- J.140            Miscellaneous notes, diagrams, draft introductions for lectures.  
Includes 47 pp. typescript lecture 'Dreissig Jahre Penicillintherapie. Ein Rückblick und Ausblick', n.d., and 11 pp. typescript of earlier lecture 'Gedanken zur Arzneimittelforschung', given at Medical Congress in Berlin, May 1964.
- J.141            Sixth International Course on Freeze-Drying and Advanced Food Technology, Bürgenstock-Lucerne, 17-23 June.  
Chain gave the opening address, on 'The impact of advances in methodology on biochemical research', and his talk was published in the Proceedings (Academic Press, 1974).  
Programme of Course, editorial correspondence, 17 pp. typescript draft, and galley proof of Chain's address.
- J.142            Visit to Rutgers University, New Jersey, for memorial service for S.A. Waksman, at which Chain spoke.  
Includes travel arrangements, background material on Waksman's work at Technion, Haifa, ms., typescript and shortened version of Chain's address, copy of published memorial volume, photograph, and a little correspondence.  
Also included is a little later correspondence re Waksman Memorial Lectures, 1978
- Invitations for 1973
- J.143            New York Academy of Sciences Conference on 'The Mode of Action of Antibiotics on Microbial Walls and Membranes', June.  
Carlo Erba Foundation International Symposium on 'Fattori Naturali di Difesa Antifettiva e Antineoplastica', Milan, June.

Visits and conferences

1974

- J.144 Visit to Ghent, 29 March.  
Chain delivered the second Corneel Heymans Memorial Lecture, on 'The Role of the biochemist in medical research in the past and future', which was published in the Ghent University chronicle, 'De Brug'.  
Correspondence re lecture, publication, and also with the family of Mrs. Heymans who died January 1974.  
Transcript of tape-recording of lecture, 20 pp.  
Also included is a little earlier correspondence, 1970, re recollections of Heymans.
- J.145 Visit to Bordeaux, to celebrate election of F. Tayaeu to Académie de Médecine.  
Correspondence, two ms. drafts (in French) for speeches. (Bibliog. 164).
- J.146-J.148 'Penicillamine - International Symposium', sponsored by Bayer and held at Royal Society of Medicine, 25 and 26 October.  
Chain served on the Scientific Advisory Committee, and spoke on 'The Discovery of D(-) Penicillamine' (the full title was 'D-penicillamine: its discovery and chemical properties possibly relevant to its therapeutic use'). It was intended to edit and publish the proceedings, and a German version appeared, but delays occurred in the English publication.
- J.146 Correspondence with organisers and colleagues, draft programmes, arrangements, abstract of Chain's talk, editorial correspondence re English and German publication of proceedings, 1973-76.
- J.147 Miscellaneous ms. and typescript drafts for Chain's talk, including extensive bibliography.
- J.148 Typescript version, 11 pp.

Visits and conferences

- J.149, J.150 Visit to Marburg, 18-20 November.  
Chain was invited to visit and lecture at Behring-Werke; he suggested instead a discussion meeting for a small number of senior scientists, and a 'Forum Philippinum' on 'Immunologie und Gesellschaft' was organised.  
During his visit, Chain was also the guest of Chemiewerk Homburg, and accompanied a cello recital, which was recorded.
- J.149 Correspondence, programme of events, editorial correspondence, press-cuttings, letters of thanks, etc., and a little correspondence re other visits and consultancies.
- J.150 Ms. and typescript drafts of Chain's talk at the 'Forum Philippinum', on 'Entwicklung und Gegenwärtiger Stand der Antibakteriellen Antibiotikatherapie'.

Invitation for 1974

- J.151 Discussion on food and drug industries, and Symposium on 'Applied Biology Research Oriented to Pharmaceuticals and Foods', M.I.T., 11 and 12 December.

1975

- J.152-J.155 46th Congress of Australian and New Zealand Association for the Advancement of Science (ANZAAS), held at Canberra, 20-24 January.  
Chain was President, Pharmaceutical Sciences Section, and gave a Presidential Address, 'The pharmaceutical sciences, Government and the people' (Bibliog. 171).
- J.152 Correspondence re Congress, Chain's Presidency, travel arrangements, publication of address, letters of thanks, etc. Includes arrangements for visits to laboratories and institutions after the Congress. July 1974-March 1975.
- J.153 Programme and abstracts of Congress, press statement by Chain, press notices, photograph, itinerary for visits after Congress.
- J.154 'The pharmaceutical sciences, Government and the people', Chain's Presidential Address.  
Ms. and heavily-corrected typescript draft, 36 pp.  
Miscellaneous references.
- J.155 Two typescript versions (not identical).

Visits and conferences

- J.156 Visit to Hoechst A.G., Frankfurt, 12 March.  
Correspondence re arrangements and research.
- J.157 'Fifth Biennial Symposium of Biochemistry and Nutrition',  
Shiraz, Iran, 5-7 May.  
Invitation, travel arrangements, programme, letters of  
thanks, photographs.  
Includes typescript of paper given by Chain under the  
title 'Studies on heart metabolism'.
- J.158, J.159 Ninth International Congress of Chemotherapy, 13-19 July.  
The Scientific Sessions were held at Imperial College.  
Chain was a Vice-President and gave the opening address,  
subsequently published under the title 'Reflections on  
research in chemotherapy' in Chemotherapy, 1, 1976  
(Bibliog. 175).
- J.158 Correspondence with organisers re arrangements, entertain-  
ment of visitors by Beechams, publication.
- J.159 Ms. and typescript versions of Chain's opening address.
- J.160, J.161 International Symposium on Enzymatic Mechanisms in  
Biosynthesis, Barcelona - Madrid, 23-27 September.  
The Symposium was in honour of the 70th birthday of  
Severo Ochoa, and the Proceedings were published as  
'Reflections on Biochemistry' by Pergamon Press, 1976.  
Chain chaired and introduced Session III, on metabolic  
regulation, and contributed an essay, 'Reminiscences  
of Severo Ochoa from our Oxford days' to the published  
volume.
- J.160 Correspondence with organisers, programme, travel arrange-  
ments, publication of papers, copy of Chain's essay.
- J.161 Typescript of Chain's introductory remarks to Session III,  
photocopy of published version of his essay on Ochoa,

Visits and conferences

- J.162 International Symposium 'La Ricerca Scientifica nell' Industria Farmaceutica in Italia: Risultati e Ruolo Internazionale', Rome, 2-4 October.  
The Symposium was organised by Gruppo Incentivazione Ricerca Farmaceutica and Società Italiana di Scienze Farmaceutiche.  
Chain gave the opening address 'Scienze farmaceutiche, Governo e Popolo', an Italian version, with some modifications, of his address to ANZAAZ (Bibliog. 171), see J.152-J.155. The Italian version was also published.  
Correspondence with organisers.  
English and Italian texts of address.
- J.163 Visit to Madrid, October.  
The visit was one of the annual awards of the Miguel Servet prizes of the Fundación General Mediterránea (see E.65). On this occasion Chain was asked to act as president, and to give a lecture on 'Science, Government and the people'.  
Correspondence with colleagues, guest-list for lecture, Spanish text of lecture, press comment, etc.
- Invitations for 1975
- J.164 Third Congress, World Organisation of General Systems and Cybernetics, Bucharest, August.  
Invitation to visit Gesellschaft für Molekularbiologische Forschung, October.

Visits and conferences

1976

- J.165-J.171 Visit to Japan, April-May.
- Chain was invited to visit Japan by H. Umezawa, Director, Microbial Chemistry Research Foundation Institute of Microbial Chemistry, preliminary arrangements being made during the Ninth International Congress of Chemotherapy (J.158). The visit was financed by the Japan Society for the Promotion of Science.
- Chain visited several universities and research institutes, and gave lectures on fungal viruses (Bibliog. 148), the action of insulin on metabolism, and the history of penicillin. He was accompanied by Lady Chain, who lectured on insulin and obesity.
- During his visit, Chain met the Emperor, and was decorated with the Order of the Rising Sun.
- J.165 Correspondence re invitations, arrangements, draft itineraries, biographical notes, etc., June-December 1975.
- J.166 Similar material, January-April 1976.
- Correspondence with J.M. Sime in March refers to Chain's wish to have a piano made available for him to practice for a recital.
- J.167 Copy of itinerary as finally determined.
- J.168 'Action of insulin on carbohydrate and protein metabolism in the perfused working heart, and its recovery from anoxia', 18 pp. typescript for talk given in Japan.
- 'The penicillin discovery past and present', 1 p. only for talk given to Japanese Antibodies Association.
- J.169 Letters of thanks exchanged after visit; includes Chain's report on his visit, prepared for the Japan Society for the Promotion of Science.
- Photographs.
- J.170 Continuing correspondence arising from visit, mainly on research and exchanges. Includes photograph of Chain, and invitation to him to join the Advisory Council of the International Committee on Economic and Applied Microbiology.
- J.171 Later correspondence, 1978, 1979, re honours for H. Umezawa.

Visits and conferences

- J.172, J.173 Conference on 'The Biotechnological Applications of Proteins and Enzymes', on the occasion of the 60th birthday of President Ephraim Katzir, Kibbutz Kiryat Anavim, Israel, 23-28 May.
- Chain gave the Inaugural Lecture, on 'The position of applied research in non-industrial laboratories', which was published in the conference proceedings (Academic Press, 1977) (Bibliog. 177).
- J.172 Correspondence with organisers, programme of conference, abstracts of papers, travel arrangements. Chain went to Israel straight from Japan (see J.165-J.171) and arrived only a few hours before the opening dinner after which he gave his address.
- J.173 Typescript version of Chain's lecture (slightly different from published version), 31 pp.

Invitations for 1976

- J.174 World Zionist Organization seminar on 'The Problems of the Jewish People and the State of Israel in our day', Tel Aviv, June-July.
- Fondazione Internazionale Menarini, Conference on 'La Responsabilità della Scienza nella Società Moderna', Florence, October. Includes programme and list of speakers.

1977

- J.175, J.176 Semaine de Rhumatologie d'Aix-les-Bains, April.
- Chain lectured, in French, on 'The penicillin discovery and its implications for rheumatology', and his talk was published in Rhumatologie.
- J.175 Correspondence with colleagues and organisers re visit, lecture and publication. Includes two versions of draft biographical note by F. Françon, ms. draft of Chain's speech of thanks, etc.
- J.176 Ms. and typescript drafts of Chain's lecture, and French translation prepared by F. Forestier with many ms. revisions.

Visits and conferences

- J.177 Fifth Aaron Katzir-Katchalsky Conference, on Interferons and the Control of Cell-Virus Interactions, Rehovot, 2-6 May.  
Chain chaired the session on 'Induction of Interferon Synthesis : mRNA and Inducers'.  
Correspondence with organisers, programme of events.
- J.178 Sixth National Congress of Microbiology, Santiago de Compostela, Spain, 6-9 July.  
Chain gave the opening address, 'Antibiotics in Perspective' and also received an Honorary Doctorate from the Faculty of Medicine.  
Correspondence with organisers, programme of events, abstract of Chain's lecture, text of Chain's short discourse after conferral of degree on himself and on H. Umezawa.
- J.179, J.180 Seventh International Freeze-Drying Course, Lyons, 19-24 September.  
The Director was L. Rey, who invited Chain to give one of the Inaugural Lectures; his title was 'Observations on present state of basic and applied research and their interactions'.
- J.179 Correspondence with organisers, programme of events, list of participants; includes a little background material and L. Rey's opening speech of welcome.
- J.180 Ms. and typescript versions of Chain's lecture.
- J.181 Visit to Instituto de Investigaciones Citológicas, Valencia, October.  
The visit was inspired by Chain's appointment to the Scientific Advisory Board of the Institute.  
Correspondence with colleagues re appointment and visit, newspaper interview with Chain, etc.  
See also J.190.

Invitations for 1977

- J.182 Invitation to lecture, Lima University, Peru, August.  
International Symposium for Sexually-Transmitted Diseases, Montreal, November.

Visits and conferences

1978

- J.183 Visit to Marine Research Laboratories, Toulon (with L. Rey, D. Bovet and M. Herry), 29-31 May.

Schedule of arrangements, brief correspondence, ms. draft of speech in French, perhaps given by Chain at a dinner during the visit.

- J.184 Visit to Madrid, November, to make television programme re penicillin.

Correspondence arising from programme, mainly with members of the family of J. Trueta. Includes recollections of 'the first injection of penicillin into a mouse by John Barnes.'

Invitations for 1978

- J.185 Course on Fermentation Technology, London (organised by M.I.T.), January.

Invitation to visit Hoechst, June.

Fourth International Congress of Cybernetics and Systems, 'Open Forum' on 'Science and Society', Amsterdam, August.

Sixth Aaron Katzir-Katchalsky Conference, on 'Molecular Mechanism of Biological Recognition', Göttingen, September. Chain intended to go, but had to cancel for reasons of health. Includes programme, list of participants.

1979

- J.186-J.189 Symposium on the History of Antibiotics, April.

The Symposium was held during the joint meeting of the American Chemical Society (Division of History of Chemistry and the Division of Medicinal Chemistry) and the Chemical Society of Japan, Honolulu, 1-6 April. The organiser was J. Parascandola.

Chain gave the Keynote Lecture, 'A Short History of the Penicillin Discovery from Fleming's Original Observation to the Present State', and the Proceedings were published.

Chain's travel expenses were paid by Beecham.

- J.186 Correspondence with organisers and colleagues, travel arrangements and schedules preceding symposium.

Visits and conferences

- J.187 Correspondence following symposium re publication, requests for published version, letters of thanks, etc.
- J.188 Programme of symposium, circulars re arrangements, list of speakers, etc.
- J.189 Miscellaneous typescript drafts of Chain's lecture.
- J.190 Visit to Instituto de Investigaciones Citológicas, Valencia.  
The visit, to attend a lecture and receive a silver medal as Scientific Adviser, was planned for May, but postponed until September for reasons of health. Chain died in August.  
The correspondence includes discussion of future research programmes and indicates how actively Chain remained involved in scientific problems right to the end of his life.  
A little correspondence re S. Grisolia is included here.  
See also J.181.

Invitations for 1979

- J.191 Symposium on 'Developments in Antiviral Therapy', organised by British Society for Antimicrobial Chemotherapy, London, 30 November. Chain had agreed to chair the session on 'Cellular Biology'. Includes correspondence with organiser, programme, etc.
- J.192 World Congress Alternatives and Environment, Vienna.  
Visit to Bell Laboratories, New Jersey.  
Eleventh International Congress of Chemotherapy, Boston.
- J.193 Formal or unanswered invitations to conferences and meetings, 1953-79.

CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

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British National Committee for the History of Science, Medicine and Technology

Catalogue of the papers and correspondence of

SIR ERNST BORIS CHAIN FRS

(1906 - 1979)

Compiled by:

Jeannine Alton and Julia Latham-Jackson

VOLUME III

Section K

List of Publications

Index of Correspondents, Organisations and Firms

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SECTION K

GENERAL CORRESPONDENCE K.1 - K.341

The material is presented in 3 sequences as follows:

- K.1 -K.291 Correspondence with individuals, in alphabetical order. The correspondence is dated and indexed, and an indication is given of any information of particular biographical, scientific or historical interest.
- K.292-K.311 Shorter unindexed correspondence: brief exchanges of information, reprint requests, etc.
- K.312-K.341 Examining, references and appointments.

K.1-K.291

CORRESPONDENCE WITH INDIVIDUALS

- K.1 Alexander, P. 1969, 1971, 1973  
1969 correspondence includes 9 pp. typescript on 'Anti-Leukaemic Action of L-Asparaginase' and copy of letter to Beecham Research Laboratories outlining proposals for collaborative research.
- K.2 Alper, T. 1970  
Enclosing draft of paper on 'Inactivation of the Scrapie Agent by Near-Monochromatic Ultraviolet Light'.
- Altman, M. 1971
- K.3 Ammon, R. 1953-59  
Ammon was one of Chain's oldest friends and colleagues; they had worked together in P. Rona's laboratory 1930-33 and written collaborative papers.  
Early correspondence does not survive and the remaining letters are chiefly re lectures and papers to be given by Chain.  
See also G.14, G.15, G.21.
- K.4 Anfinsen, C. B. 1955-77  
Mainly personal correspondence.

General correspondence

- K.5            Aschberg, O. and Aschberg, F.            1946-52  
                  Olof Aschberg was a banker who negotiated consultancies for Chain with various firms and government departments wishing to become involved in penicillin production.  
                  Folder includes correspondence re negotiations in Sweden, Denmark, Poland and India, miscellaneous re taxation (particularly in relation to Chain's contract with Astra) and some personal letters from Olof's son Folke.
- K.6            Aykroyd, W.    R.            1975  
                  Bach, S.    J.            1953  
                  Backus, M.    P.            1952  
                  re Penicillium chrysogenum.
- Bacq, D.    E.            n.d., 1950  
                  Bailey, K.                            1953  
                  re hexokinase.
- K.7            Baker, J.    R.            1970, 1978  
                  1970 correspondence is re The Society for Freedom in Science.
- Balliri, S.                            1954  
                  Balogh, T.                            1950  
                  Bamonte, N.                           1968
- K.8            Barber, M.                            1960-64  
                  Includes correspondence re the problem of resistance to penicillin and copies of correspondence with Beecham Research Laboratories re collaborative research on the new penicillins.  
                  See also F.95.



General correspondence

K.15	Beznák, A. B. L.	1948
	Bhatnagar, S. S.	1954
	Includes drafts of letter from an Italian firm offering to supply fermentation equipment to Bhatnagar's laboratory.	
	Binkerd, E. F.	1974
	<u>re</u> relative costs of soy and other protein products.	
	Blackett, P. M. S.	1964, 1965
	Błaszczak, J.	1953
K.16	Blaxter, K. L.	1967-71
	Includes correspondence <u>re</u> agreement with Nestlé for collaborative work on microbial proteins conducted at the Rowett Research Institute.	
K.17	Blond, E.	1970
	Bonino, G. B.	1958
	Bonventre, P.	1958
	Mainly <u>re</u> plans for research on diphtheria toxin.	
	Born, G. V. R.	1967, 1970-72
	Includes some personal correspondence.	
	Bovet, D.	1954 (Chain's carbon only), 1957, 1970, 1975, n.d.
	Includes letter from F. Bovet (wife).	
K.18	Brachet, J.	1952-53
	<u>re</u> Italian research students working in Brachet's laboratory. Includes letters from G. Pinto and F. Gavosto.	
K.19	Bragg, W. L.	1965
	Brander, G. C.	1966
	<u>re</u> veterinary use of antibiotics.	

Continued

General correspondence

- K.19 (cont'd.) Britton, R. H. W. 1949-50  
Includes comments on the research policy of Aspro Limited.
- Bronowski, J. 1953, 1955
- K.20, K.21 Burkitt, D. P. 1971-73  
re research on the importance of fibre in diet.  
Includes correspondence from the British Nutrition Foundation and Beecham Research Laboratories, re drafts of papers by Burkitt, arrangements for discussion meetings and research projects, etc.  
See also J.118.
- K.20 September-December 1971.
- K.21 1972-73  
Includes drafts of letter from Burkitt and others to the Flour Advisory Bureau.  
Also included here is 2 pp. typescript, referring to Burkitt's work, for speech at unidentified congress, n.d., c.1975.
- K.22-K.25 Burton, H. S. 1955-71  
re cephalosporin. Burton collaborated with Abraham and others in early work on the cephalosporins at the Sir William Dunn School of Pathology, Oxford, but later became involved in a dispute over patent rights. K.25 contains several duplicated typescript 'Press Releases' by Burton setting out his side of the dispute.
- K.22 1955, 1958-59
- K.23 1961-62, 1969
- K.24 1970-71
- K.25 Duplicated typescript 'Press Releases' (numbered 1-8) and other statements re the early work on cephalosporin, various dates, c.1962-66.

General correspondence

- K.26      Burn, J. H.      1949, 1953
- Bustinza, F.      1949-62
- Mainly re exchanges of reprints, and information.  
            Includes brief comments on Bustinza's book 'Ten  
            years of friendship with Sir Alexander Fleming' and  
            some personal correspondence.
- K.27      Butlin, K. R.      1951, 1954
- Butterfield, W. J. H.      1969, 1973-78
- 1969 correspondence is re HL523 ( $\gamma$ -guanidino-  
            butyramide).
- K.28      Calder, N.      1972
- re proposal to build giant human model for educa-  
            tional purposes.
- Calder, R.      1953, 1959
- Includes requests to Chain to contribute to the News  
            Chronicle and other publications.
- K.29      Callow, D.      1948, 1950, 1954
- Callow was Chain's technician for many years in both  
            Oxford and Rome. Letter to Chain, August 1950,  
            describes fermentation work in progress during Chain's  
            absence from the laboratory. 1954 correspondence  
            follows Callow's return to England and includes copy  
            of letter from Chain with news of the laboratory inclu-  
            ding research in progress.
- K.30      Canonica, L.      1969
- re supply of ophiobolin A and B. Includes comments  
            on student disturbances in continental universities.
- Cantarelli, C.      1950
- Capraro, V.      1954
- (Chain's carbon only)
- Carleton, J.      1965

Continued

General correspondence

- K.30 (cont'd.) Chance, B. n.d.  
re work on insulin.
- Chandrasekhar, S. 1959  
(Chain's carbon only)
- K.31 Chargaff, E. 1949-50
- Cherwell, Viscount 1954  
(Chain's carbon only) re facilities for technical training in England.
- Cheymol, J. 1959  
(Chain's carbon only)
- Chibnall, A. C. 1960, 1971  
1971 letter contains reminiscences of H. Raistrick.
- K.32 Christopherson, D. G. 1969  
Correspondence arising from enquiry into the use of time by academic staff conducted by the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom.
- Ciccarone, A. 1961-63  
re work on Fusicoccum amygdali. Includes correspondence from A. Graniti.
- K.33 Cleave, T. L. 1971-72  
re metabolic effects of lack of fibre in diet and excessive sugar consumption, particularly in relation to coronary thrombosis and diabetes.
- K.34 Clore, C. 1964, 1971, 1975  
1964 correspondence is re proposal to create an Israel Sieff Foundation.
- Cohen, H. see K.39.

General correspondence

- K.35-K.38 Cohen, M. M. 1961-75  
Correspondence re collaborative research, publications, grant applications, etc.  
See also C.69.
- K.35 April-December 1961  
re publication of collaborative work on glutamate metabolism, and exchange of visits between Rome and Minnesota. Includes copy of letter from Cohen to the National Institute of Neurological Diseases and Blindness submitting a grant application for collaborative research on the relationship between carbohydrate and amino acid metabolism in the central nervous system.
- K.36 January-December 1962  
Continuing correspondence re research, publications, visits, etc. Includes letter from Chain with additional information in support of the joint grant application.
- K.37 January-April 1963  
Mainly re arrangements for visits. Includes some personal correspondence.
- K.38 November 1964-April 1975  
Mainly arrangements for meetings and visits and some personal correspondence.
- K.39 Cohen, H. 1959, 1965, 1973  
Cohn, J. 1958-72  
Includes correspondence re fund-raising and other activities in support of the Weizmann Institute of Science.
- K.40 Cohn, W. 1970  
re death of his father (H. Cohn).  
Colebrook, L. 1945  
re methods of air filtration.  
Coleraine, R. K. L. 1965

Continued

General correspondence

- K.40 (cont'd.) Collier, H. O. J. 1954  
re induced resistance to penicillin.
- Colman, E. A. 1975-76
- K.41 Conant, J. B. 1949  
re Conant's election as a Foreign Member of the  
Accademia Nazionale dei XL.
- Consolazio, W. V. 1960  
12 pp. typescript headed 'Privileged communication.  
Subject: A Summary of Some Observations on  
European Biology'.
- Cook, R. 1949
- Coppini, M. A. 1961
- K.42 Cottrell, A. H. 1971-72  
re various aspects of scientific policy in Britain  
including the position of the Research Councils and  
the decision to join the European Molecular Biology  
Organisation [EMBO] project. Includes copy of  
typescript by Cottrell on 'The formulation of national  
scientific policy'.
- K.43 Cox, H. T. 1971  
re fibrinolytic substance extracted from a marine  
worm. Includes letter from L. Poller.
- Cremer, J. E. 1963  
re arrangements for collaborative work on brain meta-  
bolism. Includes some correspondence with J.M. Barnes.
- Cutolo, C. 1950
- Cutting, W. 1963  
re formulae for helevolic acid, cephalosporin P<sub>1</sub>  
and fucidic acid.
- K.44 Dahmen, K. 1969, 1972
- Dahmen, R. 1969
- Dainton, F. S. 1971

Continued

General correspondence

- K.44 (cont'd.) Danckwerts, P. V. 1962  
(Chain's carbon only) re chemical engineering research.
- D'Arcy Hart, P. 1972  
re activity of the semi-synthetic penicillinase-resistant penicillins against the tubercle bacillus.
- K.45 Datta, N. 1970  
re transfer of R factors from S. typhimurium to S. typhi, and ethics of accepting consultancies.
- Davenport, H. W. 1976
- Davies, R. E. 1958  
re effects of metabolism on phosphate uptake in muscle.
- Daymond, J. 1958  
Personal correspondence.
- K.46 Debré, R. 1965, 1969
- De Caro, L. 1954  
re work on glucose metabolism.
- Delaunay, A. 1978
- Delcambe, L. 1969  
re nomenclature of antibiotics.
- K.47 Dentice di Accadia, F. 1965-67  
Includes news of the Istituto Superiore di Sanità and the progress of the Marotta trial (q.v.).  
1966-67 correspondence is mainly re drafts for an article on antibiotics for the Italian International Chemical Encyclopaedia.
- K.48 Dietrich, K. R. 1957
- Dion, W. 1954, 1955
- Dirscherl, D. 1957-62







General correspondence

- K.72      re Ehrlich, P.      1955  
                         Letter from M. Landau (Ehrlich's daughter).
- Eidus, L.      1975
- Elefant, M.      1961-63, 1966  
                         Includes letters re project for translation and publica-  
                         tion of Maimonides Medical Manuscripts.
- K.73      Ennor, A.    H.      1962
- Evans, D.    G.      1971  
                         Enclosing article on Edward Jenner.
- K.74      Falini, R.      1964-65, 1972,  
                         1974 correspondence is Chain's carbon only.      1974
- Feilden, G.    B.    R.      1969
- Feld, B.    T.      1975  
                         re Pugwash Conferences.
- Feldman,      1979  
                         Chain's carbon only, re biography of J.B.S. Haldane.
- K.75      Feldman, W.    H.      1946-68  
                         Personal and scientific correspondence. Includes  
                         arrangements for visits to Rome by various friends  
                         and colleagues.
- Fischgold, R.    see K.78
- K.76, K.77      Fishbein, M.      1961-75
- K.76      1961-64  
                         Includes correspondence re invitation to Sir Isaac  
                         Wolfson to visit Chicago to receive a citation from  
                         the City of Hope Institute for Advanced Learning.
- K.77      1968, 1970, 1974-75  
                         1974 correspondence is re editorial policies of World  
                         Medicine particularly in regard to the food industry.

General correspondence

- K.78 Fischgold, R. 1945  
(brother of H. Fischgold) re arrangements for a visit to Oxford.
- Fisher, R. B. 1957  
re mode of action of insulin.
- Fleming, A. 1953  
1 letter only - thanks for hospitality in Rome.
- K.79-K.82 Fleming, Lady Amalia 1955-71
- K.79 1955-58  
Thanks for Chain's letter of condolence on the death of Sir Alexander Fleming, March 1955; personal correspondence re plans for visit to Greece by Chain and his family; correspondence arising from the biography of Fleming by André Maurois. Includes copy of 5 pp. letter to Maurois from Chain containing reminiscences of the early penicillin work and letters from Maurois and R. Dubos who was asked to write the preface for the French edition of the book.
- K.80 1963  
re Lady Fleming's plans for building a scientific research institute in her native Greece. Includes arrangements for Chain to visit Athens in order to discuss the project and accounts of negotiations with various government ministers.  
  
There is no correspondence for 1964.
- K.81 1965  
Further correspondence about the institute (Hellenic Institute for Fundamental Biological Research). Includes copy of the government decree authorising its establishment, 19 February 1965, and letter confirming Chain's membership of the Scientific Committee of the Institute.
- K.82 1967-71  
Copy of letter from Lady Fleming to M. Perutz re possible collaboration between the Hellenic Institute and EMBO; photograph of the Institute, December 1970; correspondence re proposed letter to The Times appealing to the Greek Government to release Lady Fleming from prison, September 1971.



General correspondence

- |            |  |                           |
|------------|--|---------------------------|
| K.88       | Ghilchick, M. W.   | 1971                      |
|            | Includes typescripts of 2 papers on insulin responses in patients with vascular disease.   |                           |
|            | Giacomello, G.   | 1965                      |
| K.89       | Ginsburg, D.   | 1972                      |
|            | Ginsburg, J.   | 1959-64                   |
|            | Ginsburg, S.   | 1938, 1943, 1944,<br>1970 |
| K.90       | Giri, K.   | 1954                      |
|            | Glees, P.  | 1969-70                   |
|            | Mainly <u>re</u> problem of causality in drug action and the testing of drugs.   |                           |
|            | Gluschkov, R. G.   | 1968                      |
|            | <u>re</u> A. Haddow. Includes communications with the Home Office <u>re</u> Gluschkov's visit to England, 1967.  |                           |
| K.91, K.92 | Goldblith, S. A.   | 1967-76                   |
|            | Mainly <u>re</u> food technology and the food industry.  |                           |
| K.91       | 1967-68  |                           |
|            | Includes invitation to conference on 'Single Cell Protein' at M.I.T., October 1967.  |                           |
| K.92       | 1969-76  |                           |
|            | Arrangements for meetings and visits and miscellaneous personal correspondence. Letter of 7 October 1971 introduces G.C. Seybolt (President, Wm. Underwood Co. - see F.1 - F.3). |                           |
| K.93       | Goldman, M.  | 1965, 1971                |
|            | <u>re</u> Goodman, A. A.   | 1977                      |
| K.94       | Goodman, L. R.   | 1971                      |
|            | <u>re</u> research in the textile and clothing industries. Includes letter from the Research Director of the Shirley Institute (L.A. Wiseman).                                   |                           |



General correspondence

- K.101 Haigh, M. 1970, 1972  
Personal correspondence.
- Hall, E. T. 1957  
re two-dimensional radiochromatography.
- Halsbury, J. A. H. G. 1953-54  
Includes thanks for hospitality during visit to Rome, 1953.
- K.102 Hamelin, R. 1976-77  
Mainly re proposals for training Iranian students in French scientific and technical institutions. Includes some personal correspondence.
- Hammarsten, E. 1951  
(Chain's carbons only) re supply of heavy water and chemicals and Hammarsten's proposed visit to Rome.
- Hampson, C. P. 1962  
re possible use of surplus potatoes in fermentation processes.
- K.103 Harris, L. J. 1953, 1955
- Hastings, J. J. H. 1955, 1957-58  
Includes correspondence re supply of proportioning pumps to Chain's laboratory in Rome.
- Hauduroy, P. 1949, 1954, 1955, 1962  
1962 correspondence is re granting of licences to French firms for production of the new penicillins.
- K.104 Hayward, A. 1976-77  
re draft chapters of book by Hayward on science and religion.
- K.105 Hearse, D. J. 1972-78  
Mainly re funding for the Myocardial Metabolism Research Laboratories at the Rayne Institute, St. Thomas's Hospital.

General correspondence

- |       |  |               |
|-------|--|---------------|
| K.106 | Hechter, O.  | 1959          |
|       | <u>re</u> mode of action of insulin.   |               |
| K.107 | Hedén, C.-G.   | 1951, 1963-70 |
|       | 1951 correspondence is <u>re</u> experiments with <u>E. Coli</u> and arrangements for Hedén to work in Rome.   |               |
|       | Later correspondence is mainly <u>re</u> the activities of the International Organisation for Biotechnology and Bioengineering.  |               |
| K.108 | Hedges, R. W.  | 1976          |
|       | Henderson, D. W.   | 1954, 1959    |
|       | Herold, M.   | 1950-60       |
|       | Heseltine, N.  | 1959          |
|       | <u>re</u> occurrence of ergots in West Africa.   |               |
|       | Hevesy, G. de  | 1949          |
|       | Includes later correspondence from Pia de Hevesy (1954, 1976).   |               |
| K.109 | Heymans, C.  | 1956-61       |
|       | Includes correspondence <u>re</u> government sponsorship of scientific research, and later letters from colleagues <u>re</u> commemoration of Heymans's 70th birthday and his death in 1968. |               |
| K.110 | Hickman, K. C. D.  | 1948          |
|       | Himmelweit, F. <u>and</u> Himmelweit, H. T.  | 1944-79       |
|       | Himsworth, H. P.   | 1967, 1970    |
|       | Hinckley, J. O. N.   | 1969          |
|       | Includes letter from A.J.P. Martin.  |               |
| K.111 | Hinshelwood, C. N.   | 1958, 1966    |
|       | Hirsch, J.   | 1945          |
|       | Hobby, G. L.   | 1978-79       |



General correspondence

- K.118      Jacobson, F.      1954
- James, W.    O.      1961  
(Chain's carbon only) re funding for new mycological  
laboratory at Silwood Park.
- Jenkins, T.    P.    N.      1976  
re abdominal surgery.
- Jewkes, J.      1968  
re historical background to the development of  
the semi-synthetic penicillins.
- K.119      Johnson, E.    I.      1969  
re wording of the Drugs (Prevention of Misuse)  
Act, 1964.
- Jones, B.    R.      1979  
re arrangements for discussions with Italian researchers  
on interferon.
- K.120      Jones, F.    E.      1970  
re text of memorandum to the Prime Minister on the  
position of the Research Councils.  
See also K.70, K.71.
- K.121      Joseph, D.      1957  
re possibility of establishing an antibiotics industry  
in Israel.
- Kahane, E.      1949  
re the Centre National de la Pénicilline.
- Kaplan, A.      1969
- Kardos, N.      1974  
re prospects for development of antibiotics industry  
in Israel.
- K.122      Katzir, E.      1976  
Correspondence with Katzir and members of his  
staff, mainly re arrangements for seminars on various  
aspects of Jewish life.

General correspondence

- |       |  |            |
|-------|--|------------|
| K.123 | Kendrew, J. C.<br><u>re</u> Z. Medvedev.   | 1970       |
|       | Kenner, G. W.<br><u>re</u> use of peptides as drugs.   | 1978       |
|       | King, B. E.<br><u>re</u> textile research associations.  | 1971       |
| K.124 | King, E. J.<br>Correspondence 1953 is <u>re</u> arrangements for visit to Rome.<br>Chain's draft letter of condolence on King's death is also included in the folder.  | 1953-58    |
| K.125 | King, H.   | 1949       |
|       | Kirkness, J. M.<br><u>re</u> antibiotics in China.   | 1961       |
|       | Kissin,  | 1974, 1976 |
|       | Klejner, G. I.   | 1963, 1966 |
|       | Kögl, F.<br>Mainly <u>re</u> invitation to Kögl to lecture at the VII National Congress of the Italian Chemical Society, with an account by Kögl of research in progress. Some personal correspondence is also included. | 1954, 1957 |
| K.126 | Kohn, R.   | 1969       |
|       | Kollek, T.<br>Includes correspondence with E. Bachrach <u>re</u> Chain's interest in purchasing a house in Israel.   | 1977-79    |
|       | Kornberg, A.<br>Mainly <u>re</u> plans for a holiday in Ireland.   | 1976       |
|       | Kováč, A. G. B.  | 1957       |

General correspondence

- |             |  |               |
|-------------|--|---------------|
| K.127       | Krasil'nikov, N. A.  | 1964          |
|             | Krebs, H. A.   | 1957-63, 1975 |
|             | Includes discussion of experimental results reported by Chain and M. Cohen on brain metabolism, 1962, and some personal correspondence.  |               |
|             | Krebs, R. H.   | 1950, 1957    |
| K.128-K.132 | Krim, M.   | 1977-78       |
|             | Correspondence <u>re</u> funding and organisation of research on interferon at the Memorial Sloan-Kettering Cancer Center, New York. (Chain was a member of the Board of Consultants.)   |               |
| K.128       | May-August 1977  |               |
|             | Includes 12 pp. typescript 'History and Description of the International Laboratories for the Molecular Biology of Interferon Systems' and copies of agreement and correspondence <u>re</u> arrangements for collaboration between the Sloan-Kettering Institute and the Theodor Kocher Institute of the University of Berne on 'research in the production, extensive purification and characterization of human leukocyte interferon in preparation for controlled clinical trials'. |               |
| K.129       | September-December 1977  |               |
|             | Includes 12 pp. typescript by Chain on 'The urgent need for the larger scale production of interferon from human leucocytes'.  |               |
| K.130       | January-June 1978  |               |
| K.131       | July-December 1978   |               |
|             | Includes copy of draft grant application for collaborative work by the Egyptian Organisation for Biological and Vaccine Production and the Sloan-Kettering Institute on the use of interferon in the treatment of human rabies.  |               |
| K.132       | January-May 1979.  |               |

General correspondence

K.133	Krüger-Thiemer, E.	1963
	Kühnau, J.	1968
	<u>re</u> proposed reform of medical curriculum.	
	Kula, M.-R.	1976
K.134-K.137	Kulaev, I. S.	1975-79
	Mainly <u>re</u> arrangements for English translation and publication of a book by Kulaev on polyphosphates. Includes correspondence with John Wiley & Sons Ltd.	
K.134	1975-76	
K.135	1977	
K.136	1978	
	Includes request to Chain to write a foreword to Kulaev's book.	
K.137	1979	
K.138	Larsen, H.	1954
	<u>re</u> fermentation pilot plant techniques.	
	Lasker, A. D.	1977
	(Chain's carbon only).	
	Laviolette, P.	1976
	(Chain's carbon only).	
	Leather, E.	1973
K.139	Leese, H. J.	1973, 1974
	Levine, B. B.	1961
	Levinson, M. L.	1976-77
	<u>re</u> 6-APA.	
	Personal correspondence.	



General correspondence

- K.144(cont'd.) Malagarne, O. n.d.  
Written from Prisoner-of-War camp in Algeria,  
asking Chain to send him scientific books.
- Mandelstam, J. 1973-74
- Mann, T. 1957
- K.145 Mantle, P. G. 1960-61, 1963  
re collaborative work on ergot alkaloids. Includes  
correspondence with W.O. James.
- K.146-K.149 Marotta, D.  
Correspondence with and re Marotta.
- K.146 Correspondence with C.N. Hinshelwood and  
B. Lockspeiser, 1954-55, re arrangements to have  
Marotta invited to visit various laboratories and  
institutions in the U.K., including the Royal Society.
- K.147 Correspondence with the Society for Visiting Scientists  
and the British Council re arrangements for Marotta's  
visit in May 1955. Also included here are letters  
from colleagues unable to attend the Royal Society  
meeting on 12 May 1955 at which Chain and Marotta  
gave an account of work at the Istituto Superiore di  
Sanità.
- K.148 Correspondence with Marotta and others, 1957-58.  
Includes arrangements with the British Ambassador in  
Rome for a lunch to celebrate the award of the C.B.E.  
to Marotta.
- K.149 Letters from Marotta and family to Chain, 1964-70.  
Folder also includes press-cuttings re the 'Marotta  
trial', ms. draft of letter from Chain to Marotta  
regretting his absence at the Royal Society anniversary  
dinner, n.d., c.1967, and press-cutting of obituary  
by G. Sermonti, n.d.

General correspondence

- |       |  |                           |
|-------|--|---------------------------|
| K.150 | Marre, A.  | 1970                      |
|       | Marshall, J. J.  | 1971                      |
|       | <u>re culture of <i>Pseudomonas stutzeri</i>.</u>  |                           |
|       | Marshall, W. R.  | 1953                      |
|       | <u>re spray-drying of biochemical materials.</u>   |                           |
|       | Martelli, P.   | 1972                      |
| K.151 | Mascherpa, P.  | 1954, 1962-63             |
|       | 1954 letters are <u>re</u> 'Sostanza M' discovered by Mascherpa.   |                           |
|       | Later correspondence includes announcement of Chain's election as Honorary Fellow of the Società Farmaceutica del Mediterraneo Latino. |                           |
|       | Maske, H.  | 1973, 1975, 1978          |
| K.152 | Massam, A.   | 1970                      |
|       | <u>re proposed news service for medical specialists.</u>   |                           |
|       | Matthews, J. W.  | 1939                      |
|       | <u>re communication to <i>Mikrochemie</i>.</u>   |                           |
|       | Maurois, A.  | 1957, n.d.                |
|       | May, B.  | 1949-50                   |
|       | <u>re funding of scientific research.</u>  |                           |
| K.153 | Medawar, P. <u>and</u> Medawar, J.   | 1965, 1976                |
|       | Mehrishi, J. N.  | 1970                      |
|       | <u>re L-Asparaginase.</u>  |                           |
|       | Meleny, F. L.  | 1957                      |
|       | Meyer, K.  | 1950                      |
| K.154 | Miles, A. A. <u>and</u> Miles, E.  | 1934-35, n.d.,<br>1950-65 |
|       | Personal and scientific correspondence.<br>Includes 2 pp. letter from Chain summarising his research work 1950-65.                     |                           |

General correspondence

- |              |   |               |
|--------------|---|---------------|
| K.155        | Mintz, L. J.  | 1968-69       |
|              | <u>re</u> Medintron, pH telemetering capsule.<br>Includes letter from B. Sayers.  |               |
| K.156        | Mirsky, I. A.   | 1957-58, 1961 |
|              | Personal and scientific correspondence, mainly<br><u>re</u> work on insulin.  |               |
| K.157        | Mittwoch, U.  | 1969-70       |
|              | Mainly <u>re</u> grant application for work on sex<br>chromosomes in embryos.   |               |
|              | Monroy, A.  | 1958, 1961    |
|              | 1958 correspondence is <u>re</u> arrangements for Monroy<br>to use radiochromatography facilities in Chain's<br>laboratory.               |               |
| K.158        | Morton, O.  | 1969          |
|              | <u>re</u> Lucidril.   |               |
|              | Munday, K. A.   | 1969          |
|              | <u>re</u> policy of the Research Councils.  |               |
|              | Murray, I. G.   | 1970          |
|              | <u>re</u> work on isolation of antigens from pathogenic<br>fungi. Includes correspondence with J.M. Dewdney.                              |               |
| K.159, K.160 | Nachmanson, D.  | 1953-70       |
|              | Personal and scientific correspondence.   |               |
| K.159        | 1953-59   |               |
|              | Includes arrangements for exchange of visits, accounts<br>of research in progress, etc.   |               |
| K.160        | 1965-70   |               |
|              | Includes correspondence <u>re</u> lawsuit against S. Ochoa,<br>and undated ms. of speech by Chain introducing a<br>lecture by Nachmanson. |               |
| K.161        | Naftalin, J. M.   | 1948, 1953-55 |

General correspondence

- |             |  |               |
|-------------|--|---------------|
| K.162       | Nathan, 1st Baron  | 1954-63       |
|             | Mainly personal correspondence.  |               |
|             | Includes letter from S. Berwin following Nathan's death in October 1963.   |               |
| K.163       | Nathan, 2nd Baron  | 1973, 1977    |
| K.164       | Neri, P.   | 1973-74, 1979 |
|             | Includes comments on progress of research on interferon at the Istituto Sieroterapico e Vaccinogeno Toscano "Sclavo".  |               |
| K.165       | Neuberger, A.  | 1954-79       |
|             | Mainly personal correspondence.  |               |
| K.166       | Nowinski, W. W.  | 1963          |
|             | Ochoa, S.  | 1974          |
| K.167-K.169 | Okami, Y.  | 1976-79       |
|             | Correspondence resulting from Chain's meeting with Okami during his visit to Japan in 1976 (see J.165-J.171).  |               |
| K.167       | 1976   |               |
|             | Mainly <u>re</u> arrangements for Okami and colleagues to visit the fermentation pilot plant at Imperial College.  |               |
| K.168       | 1977   |               |
|             | Arrangements for a visit by Okami to the I.C.I. laboratories at Billingham (cancelled at the last minute). Includes correspondence with the Kakenyaku Kako Co. Ltd. <u>re</u> supply of Myroridin. |               |
| K.169       | 1978-79  |               |
|             | Includes correspondence <u>re</u> toxicity of <u>Monascus rubrus</u> .   |               |

General correspondence

- |              |   |                  |
|--------------|---|------------------|
| K.170        | Olbert, T.  | 1950-51, n.d.    |
|              | Personal correspondence.  |                  |
|              | Olson, J. A.  | 1952, 1958, 1969 |
|              | 1952 correspondence consists of a letter from H. Koffler, addressed to Olson at the Istituto Superiore di Sanità, <u>re</u> paper by Olson on glutamic acid dehydrogenase. The letter also refers to work by Chain in the same field. |                  |
| K.171        | Opie, L. H.   | 1979             |
|              | Opitz, D.   | 1976             |
| K.172, K.173 | Painter, N. S.  | 1971-75          |
|              | <u>re</u> fibre and diverticular disease.   |                  |
| K.172        | 1971  |                  |
|              | Includes draft of paper by Painter and others on treatment of diverticular disease.   |                  |
| K.173        | 1972-75   |                  |
| K.174        | Pauling, L.   | 1955, 1957       |
|              | 1957 correspondence is <u>re</u> appeal to ban testing of nuclear weapons.  |                  |
| K.175        | Pekeris, C. <u>and</u> Pekeris, L.  | 1954, 1971, 1972 |
|              | Pendse, C. G.   | 1938             |
|              | Personal correspondence.  |                  |
|              | Penick, S. B.   | 1970             |
|              | Penn, J.  | 1970, 1972       |
|              | Includes typescript reports on visits to Taiwan and the Gabon.  |                  |



General correspondence

- K.181-K.183 Pirt, S. J. 1949-75  
Personal and scientific correspondence.
- K.181 1949-57  
Includes several letters from Pirt re grant applications for research to be done in Chain's laboratory in Rome (1949-50), and news of research and personal affairs.
- K.182 1958-60  
Includes correspondence re negotiations for Pirt to be seconded to assist in setting up Chain's new department at Imperial College.
- K.183 1961-69, 1975  
Mainly re research in progress at Queen Elizabeth College, London (including work on interferon) and possibilities for collaboration with Imperial College.
- K.184, K.185 Pocchiari, F. 1957-77  
Personal and scientific correspondence.
- K.184 1957-68  
re research methods and results, suppliers of equipment (for Imperial College), publications, etc.  
Includes comments on the progress of the 'Marotta case' (q.v.).
- K.185 1971-77  
Includes photocopy of typescript draft by Chain on 'The Case for the Creation of an Independent European Research Institute for Physiological Biochemistry in Italy', sent to Pocchiari, 14 June 1973, and letters re negotiations with Montedison and others.  
See also F.195, F.266, K.65.
- K.186 Pollock, M. R. 1950, 1961-75  
1950 letter is re penicillinase. Remaining correspondence includes letters re policy of the Medical Research Council, requests for help with research projects, and arrangements for meetings and visits.

General correspondence

- |       |  |                              |
|-------|--|------------------------------|
| K.187 | Polonovski, M.   | 1949-54                      |
|       | Personal correspondence. Includes arrangements for visits and lectures.  |                              |
| K.188 | Popják, G. J. <u>and</u> Popják, H.  | 1963, 1969, 1971, 1972, n.d. |
|       | Popper, H.   | 1963                         |
|       | Porrirt, A.  | 1971                         |
|       | <u>re</u> visit of H. Ford to New Zealand.   |                              |
|       | Porter, G.   | 1970, 1972                   |
|       | Includes invitation to Chain to become a member of the Royal Institution (declined).   |                              |
| K.189 | Postgate, J.   | 1958-59                      |
|       | Pragier, G.  | 1974                         |
|       | (Chain's carbon only) <u>re</u> innovation in the development of the semi-synthetic penicillins.   |                              |
|       | Pullinger, B. D.   | 1937                         |
|       | Quastel, J. H.   | 1953, 1957, 1973             |
| K.190 | Quayle, J. R.  | 1974, 1978                   |
|       | 1974 correspondence is <u>re</u> experiments with yeast growing on methanol.<br>1978 correspondence is <u>re</u> undergraduate courses in industrial microbiology. |                              |
| K.191 | Radi, I.   | 1977                         |
|       | Rajan, V. S. G.  | 1954                         |
|       | <u>re</u> arrangements for supply of stainless steel fermentors and other equipment to the National Chemical Laboratory of India.                                  |                              |
|       | Raper, K. B.   | 1959                         |

General correspondence

- K.192 Rayne, M. 1976-77  
Includes correspondence re the Museum of the Diaspora (Beth Hatefutsoth) and the Max Rayne Institute.
- Reading, H. W. 1961
- Reid, L. 1973
- K.193 Reith, W. S. 1959  
re work on fat absorption and transport.
- K.194-K.196 Rey, L. 1975-79  
Most of Chain's earlier correspondence with Rey is in Section F, as he was Research Director of Nestlé Alimentaria S.A. until his early retirement due to ill health in 1974. The following letters cover a wide variety of topics and refer to various scientific and industrial projects in which both Chain and Rey were involved.
- K.194 1975-76  
Includes copy of a letter from R. Hamelin re possibility of developing a 'Service de Biosynthèse' at the Institut National des Sciences Appliquées de Lyon (I.N.S.A.) and correspondence re progress of other projects including development and production of synthetic proteins.
- K.195 1977  
Includes discussion of various projects and arrangements for meetings and visits.
- K.196 1978  
Includes personal correspondence and arrangements for meetings and visits as well as reports on progress of various projects in hand.
- K.197 Ribbons, D. W. 1969  
re fermentations of Pseudomonas aeruginosa and Pseudomonas testosteroni to be carried out at Imperial College.
- Riccoboni, L. 1958
- Richards, G. 1979
- Richter, D. 1954

General correspondence

- |             |  |            |
|-------------|--|------------|
| K.198       | Riley, M. V.   | 1963       |
|             | Rittenberg, D.   | 1957, 1964 |
|             | Robertson, I. R. T.  | 1969, 1970 |
|             | Includes letter from D.F. de Almeida.  |            |
|             | Robinson, D.   | 1969       |
| K.199-K.202 | Robinson, R.   | 1945-75    |
|             | Personal and scientific correspondence.  |            |
| K.199       | 1945, 1951-61  |            |
|             | Includes letter from Chain <u>re</u> arrangements for visit to Rome by Robinson, 1951, information <u>re</u> research in progress, etc. 1961 correspondence <u>is re</u> negotiations with Marks and Spencer for formation of consultancy panel consisting of Chain, Robinson and E.C. Dodds.  |            |
| K.200       | 1965-67  |            |
|             | Includes correspondence <u>re</u> Nobel Prize nominations and availability of cultures of <u>Helminthosporium gramineum</u> and <u>Helminthosporium cynodontis</u> .   |            |
| K.201       | 1969-72  |            |
|             | Includes exchanges <u>re</u> research, Nobel Prize nominations and social activities. Robinson's letter of 22 December 1971 mentions the forthcoming absorption of Glaxo by Beechams and the controversy over the research record of the two companies.  |            |
| K.202       | 1973-75  |            |
|             | Most of Chain's letters for this period were written in response to requests for information required by Robinson during the writing of his autobiography. Chain's letter of March 1973 contains an outline of his career including a description of scientific and musical life in Berlin during the 1920s. His letter of 28 March 1974, for which there are several drafts, contains a description of his work in Oxford and an outline of his subsequent scientific research. |            |

General correspondence

- |              |   |                                  |
|--------------|---|----------------------------------|
| K.203        | Rothschild, A.  | 1970, 1972                       |
|              | Rothschild, E. de   | 1975                             |
|              | Rothschild, J.  | 1971                             |
| K.204        | Rothschild, M. (Miriam Lane)  | 1971-78                          |
|              | Includes correspondence about the Scheu Foundation for Asthma and Respiratory Diseases.   |                                  |
| K.205, K.206 | Rothschild, N. M. V.  | 1966-76                          |
| K.205        | 1966, 1970-71   |                                  |
| K.206        | 1972, 1976  |                                  |
|              | Includes two drafts of a long letter from Chain, February 1972, in reply to a request from Lord Rothschild for 'a brief note about the discovery of cephalosporin and its commercial exploitation'. An earlier letter (January 1972) contains comments on the Medical Research Council's attitude to the development of penicillin. |                                  |
| K.207        | Rowley, D.  | 1948, 1957                       |
|              | 1948 letter is <u>re</u> research on penicillin.<br>1957 letter is <u>re</u> lysozyme.  |                                  |
|              | Rubbo, S. D.  | 1961                             |
|              | Includes discussion of Fleming's view of the therapeutic uses of penicillin.  |                                  |
| K.208        | Sabin, A. B.  | 1965 (Chain's carbon only), 1969 |
|              | 1969 correspondence is <u>re</u> development of oral polio vaccine in the U.S.S.R.  |                                  |
|              | Sampson, M. T.  | 1952                             |
|              | (Chain's carbons only).   |                                  |
|              | Schindel, L.  | 1957                             |
|              | <u>re</u> request to Chain to write a preface to a book by Schindel on antibiotics. Includes letters from A.L. Olitzki and K. Burg.   |                                  |

General correspondence

- |       |   |            |
|-------|---|------------|
| K.209 | Schlitter, C.   | 1954       |
|       | <u>re</u> visits to India and Japan.  |            |
|       | Schwartzkopf, O.  | 1934, 1973 |
|       | Schweiger, A.   | 1975       |
|       | Includes correspondence <u>re</u> Farmitalia and Montedison.  |            |
| K.210 | Sellinger, O. Z.  | 1961-62    |
|       | <u>re</u> publication of papers in <u>Biochimica et Biophysica Acta</u> and <u>Proceedings of the Royal Society</u> .   |            |
|       | Includes correspondence with the editors of both journals.  |            |
| K.211 | Semerano, G.  | 1950, 1955 |
|       | Serlupi, G.   | 1961       |
|       | Sermonti, G.  | 1958, 1962 |
| K.212 | Shannon, R. B. B.   | 1971       |
|       | <u>re</u> the Conference of Industrial Research Associations.<br>(Includes duplicated material.)  |            |
|       | Shelesnyak, M. C.   | 1952       |
|       | Sime, J. M.   | 1973       |
|       | Personal correspondence.  |            |
| K.213 | Sinclair, H. M.   | 1972       |
|       | <u>re</u> plans for an Institute of Human Nutrition. Also includes draft of grant application for study of 'The relation of dietary fatty acids, sugars and fibre to coronary heart disease'. |            |
|       | Sinker, P.  | 1955       |
| K.214 | ✓<br>Skola, V.  | 1949-62    |
|       | Mainly <u>re</u> industrial production of antibiotics in Czechoslovakia. Includes personal correspondence.  |            |

General correspondence

- |       |  |               |
|-------|--|---------------|
| K.215 | Skryabin, G. K.  | 1959-72       |
|       | Letters from Chain to Skryabin only, with one exception (1964). Includes one letter to K.J. Skryabin (father).   |               |
| K.216 | Slater, W.   | 1952          |
|       | (Chain's carbons only).  |               |
|       | Smith, H. G.   | 1967-68       |
|       | <u>re</u> request to Chain to write foreword to book by Smith on antibiotics.  |               |
|       | Smith, J. H. C.  | 1957          |
|       | <u>re</u> infrared derivative spectroscopy. Includes letter from C.S. French.  |               |
|       | Smythe, F. T.  | 1970          |
|       | <u>re</u> research projects in fermentation technology.  |               |
| K.217 | Sokhey, S. S.  | 1952-54       |
|       | <u>re</u> organisation of penicillin production in India.  |               |
| K.218 | Sorsby, A.   | 1957-59, 1961 |
|       | <u>re</u> arrangements for collaborative work on carbohydrate metabolism in the retina. Includes letter from J.P. Newhouse (1958) with details of the proposed research. |               |
| K.219 | Sporn, P.  | 1971          |
|       | Includes letter from R.S. Edwards.   |               |
|       | Springer, A.   | 1974, 1976    |
| K.220 | Squire, J. R.  | 1963          |
|       | Starkey, R. L.   | 1953          |
|       | Enclosing ms. on 'Quantitative Determination of Methyl Mercaptan, Dimethyl Disulfide and Dimethyl Sulfide in a Gas Mixture'.   |               |

General correspondence

- K.221 Steinman, H. G. 1961  
Mainly re 6-APA.
- Stern, K. G. 1939, n.d.
- Stewart, G. T. 1961, 1965  
1965 correspondence is re request to Chain to write preface to book by Stewart on 'The Penicillin Group of Drugs'.
- K.222 re Stickings, C. E. 1969, 1971-72  
Mainly re fund-raising for the C. Ewart Stickings Memorial Fund established to provide two annual prizes at Imperial College 'for excellence in Biochemistry'.
- K.223 Strohmaier, K. 1968  
re ultrafiltration apparatus.
- Stromas, A. 1974
- K.224 Stulman, S. L. 1970  
re possible collaboration between the proposed Institute of Society, Ethics and the Life Sciences and the Weizmann Institute of Science. Includes copy of a letter from I. Sieff to C. Weizmann written on the occasion of the opening of the Daniel Sieff Institute at Rehovoth in 1934 and 2 letters from D.M. Singer.
- K.225 Swet, G. 1957-58, 1966
- Swinburne, J. K. 1970
- Sykes, G. 1958  
re plans for Anglo-Italian meeting in Rome on fermentation problems.
- K.226 Tahourdin, P. A. I. 1949-61  
Includes brief correspondence, 1950, re Chain's proposed visit to U.S.A., ms. draft of talk about the International Research Centre for Chemical Microbiology (on verso of letter from Tahourdin, 11 December 1950) and some personal correspondence.

General correspondence

- |             |   |                  |
|-------------|---|------------------|
| K.227       | Tayeau, F.  | 1963-76, n.d.    |
|             | Mainly personal correspondence.   |                  |
| K.228-K.230 | Theorell, H.  | 1949-75          |
|             | Personal and scientific correspondence.   |                  |
| K.228       | 1949-54   |                  |
| K.229       | 1955-59   |                  |
| K.230       | 1962-75   |                  |
| K.231       | Thomas, A.  | 1975             |
|             | Copy of letter to the Editorial Board of the <u>Biochemical Journal</u> in reply to criticisms of papers submitted by Thomas and colleagues.  |                  |
|             | Thompson, K. W.   | 1974             |
|             | Thompson, R. H. S.  | 1958, 1971, 1976 |
|             | 1958 letter is Chain's carbon only <u>re</u> plans for holding an International Biochemical Congress in Rome.   |                  |
|             | Thornton, G.  | 1955             |
| K.232       | Tiselius, A.  | 1949-63          |
| K.233       | Todd, A. R.   | 1957-79          |
|             | Fragmentary correspondence, mainly replies to letters of congratulation from Chain. Includes arrangements for a visit to Todd in September 1979. (Chain died in August.)  |                  |
| K.234       | Tödt, F.  | 1954-55          |
|             | Mainly <u>re</u> arrangements for a member of Chain's laboratory (G. Gualandi) to visit Tödt's laboratory in order to compare methods of measuring concentrations of dissolved oxygen.  |                  |
| K.235       | Tonolo, A.  | 1950-55, 1965    |
|             | Mainly reports on progress of research in Zürich where Tonolo spent most of 1955 improving his knowledge of mycology. Folder also includes a letter from R. Falini, December 1954, describing a visit to Astra (q.v.) with Tonolo, and a letter from Zeltia S.A. <u>re</u> a visit by Tonolo in 1961. |                  |



General correspondence

- K.241-K.245 Umezawa, H. 1969-79
- For correspondence re Chain's visit to Japan in 1976 see J.165-J.171.
- K.241 1969
- Brief correspondence only re Chain's plans for a visit to Japan.
- K.242 1972-73
- re visit to England by Umezawa with other members of the Japan Academy in March 1973. Includes correspondence with the Royal Society re schedules and other arrangements and letters of thanks from Umezawa after visit to Imperial College. There is also an exchange in July and August 1973 about the Japanese Government's attitude to the production of yeast from paraffin.
- K.243 1976-78
- Includes letters of introduction for colleagues visiting England or Japan.
- K.244 1978
- Correspondence with E.P. Abraham re proposal to recommend Umezawa for the award of an Honorary Doctorate by Oxford University.
- K.245 1979
- Includes long letter from Umezawa discussing his work with T. Akiba, and correspondence re award of the Paul Ehrlich Prize to Akiba and Umezawa in June 1979.
- K.246 Van Beusekom-Kits van Heijningen, A. J. M. 1961-63, 1977
- Arrangements to do some research in Chain's laboratory in Rome and correspondence with colleagues re publication of a paper on glycogen. Includes a letter of introduction from W.E. van Heyningen (q.v.).
- 1977 letter is mainly personal news.
- K.247 Van Heyningen, W. E. 1954, 1959
- Personal and scientific correspondence.

General correspondence

- K.248, K.249 Venkataraman, K. 1953-77
- K.248 1953-58  
Includes arrangements for Venkataraman to work in Chain's laboratory.
- K.249 1963, 1977  
Mainly personal correspondence. Includes exchange with K.R.L. Mansford re supply of Amoxycillin for Venkataraman's personal use.
- K.250 Vernon, C. A. 1974  
re future of biochemical research in England.
- Vickrage, J. D. M. 1973  
re work on the biochemistry of the crystalline lens.
- K.251, K.252 Virtanen, A. I. 1949-71
- K.251 1949-55  
Includes arrangements for Virtanen to give a lecture in Rome, April 1950, and personal correspondence re further visits to Rome.
- K.252 1957-59, 1963, 1971  
Mainly re arrangements for Chain to lecture in Helsinki in March 1959. 1971 correspondence contains exchanges of personal news.
- K.253 Virtanen, O. E. 1953, 1959  
News of work on penicillin, requests for samples of penicillium chrysogenum. Copy of an undated article in Finnish on 'Penicillin and Penicillinase' (with English translation) is also included here.
- K.254 Vlitos, A. J. 1969-72, 1977  
Includes arrangements for visit to Imperial College by the Soviet Delegation on Protein Synthesis, invitations to Chain to visit the Tate and Lyle Research Centre, and some more personal correspondence.

General correspondence

K.255	Volke, W.	1968
	Vonderbank, H.	1952
K.256	Waelsch, H.	1962
	<u>re</u> metabolism of glutamic acid.	
K.257, K.258	Waksman, S. A.	1948-76
K.257	1948-55	
	<u>re</u> meetings, visits, research, etc. Includes correspondence with the Science Attaché of the American Embassy <u>re</u> prospects of obtaining a visa to attend the opening of Waksman's new Institute of Microbiology, and some personal correspondence.	
K.258	1959-68, 1976	
	Includes correspondence <u>re</u> the activities of the Committee on Antibiotics of the World Health Organisation (q.v.) and ms. drafts of message to Waksman on his 80th birthday. In addition the folder contains a request to Chain to join the Advisory Board of the Organising Committee for the Selman A. Waksman Memorial Lectureship (1976).	
K.259	Walker, N.	1955, 1958
	Includes copy of report to the Agricultural Research Council on work done in Chain's laboratory on 2 : 4-D and naphthalene.	
	Wall, P. D.	1972
	<u>re</u> proposed Clinic and Research Centre on Pain to be set up in Israel.	
K.260	Walters, A. H.	1969
	<u>re</u> proposed research and information centre on antimicrobials, biocides and disinfectants.	
	Warburg, O.	1961
	Ward, P. S.	1969

General correspondence

- |             |  |            |
|-------------|--|------------|
| K.261       | Wartenberg, F.   | 1950, 1953 |
|             | Waterworth, P.<br>(Chain's carbon only).   | 1977       |
|             | Weber, H. H.   | 1963       |
|             | Weiss, D. W.<br>(Chain's carbon only).   | 1972       |
| K.262       | Weiss, E.<br><u>re</u> use of enzyme preparations for preventive<br>medical purposes.  | 1971       |
| K.263       | Weissberger, A.<br>Personal and scientific correspondence.   | 1949-70    |
|             | Wells, G. W.<br><u>re</u> supply of radioactive isotopes to institutions in<br>Italy and Sicily.   | 1951       |
| K.264-K.268 | Westphal, O.<br>Personal and scientific correspondence. Includes<br>copies of several letters to F.P. Doyle and J.M.<br>Dewdney of the Beecham Research Laboratories <u>re</u><br>collaborative research projects.   | 1970-77    |
| K.264       | 1970-71<br>Includes copies of letters to F.P. Doyle and J.M.<br>Dewdney (Beecham Research Laboratories) and<br>P. Alexander (Chester Beatty Research Institute)<br><u>re</u> preparations for collaborative work on 'Lipid A'.   |            |
| K.265       | 1972<br>Includes copies of correspondence with F.P. Doyle and<br>J.M. Dewdney <u>re</u> negotiations to include Sandoz in<br>collaborative research on further developments of the<br>'Lipid A' work, and invitation to Chain to attend<br>Westphal's 60th birthday celebrations in February 1973. |            |
| K.266       | 1973<br>Includes correspondence <u>re</u> nominations for the Paul<br>Ehrlich Prize, further correspondence with Beechams<br>and copy of a letter from Westphal to M. Beloff<br>accepting membership of the International Advisory<br>Council of the Independent University (q.v.)                 |            |





General correspondence

- K.280      Woodruff, M.      1976  
re plans for research after his retirement from active clinical work.
- Woods, D.    D.      1952  
(Chain's carbons only).  
Also included is ms. draft of letter of condolence to Mrs. Woods on the death of her husband, 1964.
- Work, E.      1952, 1961  
1952 correspondence is Chain's carbons only, re arrangements for growing bacteria in Chain's laboratories for Dr. Work.
- K.281      Wren-Lewis, J.      1969
- Wright, P.    H.      1961
- Wrinch, D.      1961
- K.282      Yaakov, I.      1976-77  
Includes correspondence re anti bovine mastitis drug, 'Abimasten 100'.
- K.283, K.284    Young, F.    G.      1953-74  
Personal and scientific correspondence.
- K.283      1953, 1957-62  
Includes several letters re publication arrangements for lecture given by Young in Rome (see C.92) and suggestions for collaborative work on glucose metabolism.
- K.284      1965-74  
Includes correspondence re affairs of the British Nutrition Foundation (q.v.).

General correspondence

- |             |   |               |
|-------------|---|---------------|
| K.285-K.288 | Yudkin, J.  | 1935-78       |
|             | Personal and scientific correspondence. Includes some letters from Yudkin's wife, Milly.  |               |
| K.285       | 1935-45   |               |
|             | Letters from John and Milly Yudkin (Milly's letters usually in German). Includes news of John Yudkin's career and work in Cambridge and Sierra Leone.   |               |
| K.286       | 1948-50   |               |
|             | Correspondence with J. Yudkin and others <u>re</u> proposals for the establishment of a state-owned organisation in Britain for the production of penicillin and other essential drugs, and for research and development work on new therapeutic substances. Includes letter from H. Wilson, and copies of letters from Chain to H.P. Himsworth and A. Bevan. |               |
|             | See also B.47, K.14.  |               |
| K.287       | 1949-59   |               |
|             | Includes proposal for collaborative work on anti-mitotic compounds (1958).  |               |
| K.288       | 1961-78   |               |
|             | Mainly personal correspondence.   |               |
|             | 3 letters from Michael Yudkin, 1965-66, are also included here.   |               |
| K.289       | Zerilli-Marimò, G. M.   | 1958-77       |
|             | Mainly personal correspondence.   |               |
| K.290       | Zucker, H.  | 1967-69, 1975 |
| K.291       | Zuckerman, S.   | 1951          |
|             | <u>re</u> Chain's 'Memorandum on the necessity for pilot plant facilities in the field of chemical microbiology in England', sent to Zuckerman with covering letter, 2 May 1951, and <u>re</u> people to be invited to the inauguration of the International Research Centre for Chemical Microbiology at the Istituto Superiore di Sanità.                   |               |

General correspondence

K.292-K.311 SHORTER UNINDEXED CORRESPONDENCE

K.292-K.303 Shorter scientific correspondence: mainly requests for equipment, specimens, brief exchanges of information, etc., 1949-78. In alphabetical order. Not indexed.

K.292 A

K.293 B

K.294 C - D

K.295 F - G

K.296 H - J

K.297 K

K.298 L

K.299 M - N

K.300 P

K.301 R - S

K.302 T - V

K.303 W - Z and unidentified

K.304-K.311 Shorter correspondence re exchange of reprints, 1948-79. In chronological order. Not indexed.

K.304 1948-54

K.305 1957-59

K.306 1962-64

K.307 1968-69

K.308 1970-71

K.309 1972-73

K.310 1974-76

K.311 1977-79

General correspondence

- K.312-K.341      EXAMINING, REFERENCES AND APPOINTMENTS
- K.312, K.313    Correspondence and reports on various doctoral theses from  
                         Indian universities, 1948-62. Not indexed.
- K.312      1948-57
- K.313      1958-62
- K.314          Correspondence re examining of doctoral theses for London  
                         University, 1970. Not indexed.
- K.315-K.329    Correspondence re references and appointments, c.1950-78.  
                         Not indexed.
- K.315      B
- K.316      C
- K.317      D
- K.318      E
- K.319      F
- K.320      G
- K.321      H
- K.322      J - L
- K.323      M
- K.324      O
- K.325      P - Q
- K.326      R
- K.327      S
- K.328      T
- K.329      V - Y, unidentified

General correspondence

- K.330-K.339 Correspondence re refereeing of grant applications, etc. for societies and organisations.
- |                 |  |            |
|-----------------|--|------------|
| K.330           | Australian Research Grants Committee   | 1976       |
| K.331           | Cambridge University   | 1973-74    |
| K.332           | J.S. Cohen Foundation  | 1973       |
| K.333           | Department of Scientific and Industrial Research   | 1963, 1964 |
| K.334           | J.S. Guggenheim Memorial Foundation  | 1975       |
|                 | Harvey Prize Fund  | 1977       |
|                 | Leverhulme Trust Fund  | 1971       |
|                 | Mental Health Research Fund  | 1969       |
| K.335,<br>K.336 | Nobel Prize Committee  | 1954-73    |
| K.335           | 1954-63  |            |
| K.336           | 1967-73, n.d.  |            |
| K.337,<br>K.338 | Rothschild Prizes Organization in Israel   | 1978       |
| K.337           | Correspondence.  |            |
| K.338           | Ms. and typescript notes and drafts.   |            |
| K.339           | Wolfson Foundation   | 1970       |
| K.340           | Requests for references from members of Beecham Research Laboratories, 1965-68. Not indexed.                   |            |
| K.341           | Miscellaneous requests for advice or information on careers, some with replies by Chain, 1968-75. Not indexed. |            |

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The following list was prepared at Imperial College immediately after Chain's death in 1979, and corresponds to the contents of the box of publications at G.1 where the original list is enclosed. References to the list, in Section G and elsewhere, are given in the form (Bibliog. . . .). It is recognised that the list is not a complete bibliography (see the Introduction to Section G), but it is the only currently available guide to Chain's publications.

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## INDEX OF CORRESPONDENTS

The index includes the names of individuals, and of organisations, learned societies and industrial firms.

In cases where only Chain's carbon copy survives, the name of the correspondent is not included in the index.

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