CSAC 64/2/79

CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

under the guidance of the Royal Society's
British National Committee for the History of Science, Medicine and Technology

# Catalogue of the papers of

# DONALD DEVEREUX WOODS, FRS.

(1912 - 1964)

Microbiologist

Compiled by: Jeannine Alton
Julia Latham-Jackson

Deposited in the Bodleian Library, Oxford, 1979

LIST OF CONTENTS


| | | Items | Page |
|---|---|---|---|
| Description of the collection | | | 2 |
| Summary of the Career of D.D. Woods | | | 3 |
| A. | Biographical and personal | A.1 - A.13 | 4 |
| B. | Laboratory notebooks and working papers | B.1 - B.35 | 7 |
| | Ipswich School 1926 B.1 - B.2 | | |
| | Cambridge University 1930-39 B.3 - B.19 | | |
| | Bland-Sutton Institute, Middlesex Hospital, London 1939-41 B.20 - B.21 | | |
| | Chemical Defence Research Establishment, Porton Down 1942-45 B.22 - B.26 | | |
| | Oxford University 1946-64 B.27 - B.35 | | |
| C. | Scientific lectures and papers 1946-62 | C.1 - C.17 | 17 |
| D. | Correspondence | D.1 - D.2 | 20 |
| | Index of correspondents | | 21 |

## DESCRIPTION OF THE COLLECTION

The material was received from Mrs. A. Woods (widow), and from Woods's colleagues and secretary at Oxford.

The letters from P. Erlich to Sir Paul Fildes (D.1) were received from Miss A. Pearce-Gervis.

The collection includes a full set of Woods's laboratory notebooks for his work in Cambridge 1933-39 on bacterial metabolism (B.3 - B.19), and less complete but still useful material documenting his later research at Oxford on folic acid and $B_{12}$ (B.27 - B.35). There is very little correspondence, most of which was destroyed after Woods's death in 1964.

Woods is best known for his determining in 1939 of p-aminobenzoic acid (PAB) as an anti-sulphanilamide factor; this work is documented in C.15 - C.17, which assembles the original laboratory notes and other contemporary records as they were used by Woods for a historical lecture at Oxford in 1961. See also B.21.

The Collection also includes some material relating to Dr. Marjory Stephenson FRS, who inspired Woods's interest in biochemistry and supervised his early research. See the Index of Correspondents. There is also a little material relating to Sir Paul Fildes FRS, to whom in 1939 Dr. Stephenson recommended Woods to work at the M.R.C. Unit in Bacterial Chemistry at the Bland-Sutton Institute, Middlesex Hospital, where his work on PAB was carried out. Unfortunately, none of Fildes's own papers have been traced, but D.1 includes three letters written to Fildes by Paul Erlich in 1912, on Salvarsan. These short communications refer distantly to the clinical trials of Erlich's new drug Salvarsan (606) in the treatment of syphilis, conducted by McIntosh and Fildes, and subsequent publications and controversy. See D.1 for a note and reference to the letters.

The help of Dr. M.A. Foster and Dr. M.G. Ord in identifying and describing documents is very gratefully acknowledged. Several of Dr. Foster's descriptions are incorporated, with acknowledgement, in the entries below.

Summary of the career of Donald Devereux Woods

| | |
|---|---|
| b.1912 | Ipswich |
| educ. | Northgate School, Ipswich |
| 1930 - 33 | Trinity Hall, Cambridge |
| 1933 - 39 | Research with Dr. Marjory Stephenson at Sir William Dunn School of Biochemistry, University of Cambridge |
| | Work on indole production, and bacterial metabolism |
| 1936 - 39 | Beit Memorial Research Fellow, University of Cambridge |
| 1937 | Ph.D., Cambridge |
| 1939 | Married Alison L. Woods (née Halls) |
| 1939 - 40 | Halley-Stewart Research Fellow, Medical Research Council Unit for Bacterial Chemistry (Director: Sir Paul Fildes), Bland-Sutton Institute, Middlesex Hospital |
| | Determination of p-aminobenzoic acid (PAB) as anti-sulphanilamide factor |
| 1940 - 45 | Member of scientific staff, Medical Research Council, seconded to Biology Section, Chemical Defence Research Establishment, Ministry of Supply (Porton Down) |
| 1945 | Demonstrator, Department of Biochemistry, University of Oxford |
| 1946 - 55 | Reader in Microbiology, Department of Biochemistry, University of Oxford |
| | Work on folic acid, and metabolism of PAB |
| 1951 | Guinness Research Fellow, Trinity College, Oxford |
| 1955 - 64 | Iveagh Professor of Chemical Microbiology, Department of Biochemistry, University of Oxford (first holder of the Chair) |

For a more detailed account of Woods's research, see the Memoir by E.F. Gale and P.G. Fildes (Biographical Memoirs of Fellows of the Royal Society, 11, 1965, pp.203-219) a copy of which is included in A.1. Woods's own account of his career and work to date appears in his application for the Whitley Professorship of Biochemistry, University of Oxford, in A.7

SECTION A BIOGRAPHICAL AND PERSONAL A.1 - A.13

The material is presented chronologically. It relates principally to Woods's career at Cambridge and Oxford.

A.1 Obituaries, press-cuttings, biographical notes prepared by Woods, photographs.

A copy of the Memoir of Woods by E.R. Gale and P. Fildes (Biographical Memoirs of Fellows of the Royal Society, 11, 1965), is included here.

A.2 Question papers of Natural Sciences Tripos sat by Woods at Cambridge 1932.

Letter (1934) admitting Woods as Research Student under supervision of M. Stephenson from October 1933.

A.3 Application for appointment at Wellcome Physiological Research Laboratories, 1935.

Includes ms. letter of recommendation from M. Stephenson and Woods's copy of similar letter from F.G. Hopkins.

Postcard from F.G. Hopkins to H.A. Krebs arranging examination of Woods's Doctorate thesis, 1936.

A.4 Beit Memorial Fellowship, 1936-39.

Ms. draft of letter of recommendation for Fellowship by F.G. Hopkins, n.d. [1936].

Letter of election to Fellowship, 1936.

Woods's Reports to the Trustees:

October 1936 - June 1937

June 1937 - June 1938

June 1938 - April 1939

A.5 Application for appointment at Runwell Hospital, 1937.

Includes letters of recommendation from F.G. Hopkins and M. Stephenson.

Postcard from M. Stephenson suggesting Woods should apply for post of lecturer in Agricultural Bacteriology, Leeds University, 1938.

Biographical and personal

A.6 Woods's notes of 'Speakers invited to take part in Discussion' (probably at meeting of Society for General Microbiology, 1946-47).

The speakers include Lwoff, Fildes, Chain, Monod, Pontecorvo, etc. See also C.2, C.3.

A.7 Application for Whitley Professorship of Biochemistry, Oxford University, 1954.

Ms. drafts of application, biographical data, lists of publications, typescript versions as submitted, letter from E.C. Dodds agreeing to act as referee.

A.8 Appointment as first Iveagh Professor of Chemical Microbiology, Oxford University, 1955-64.

Includes: Ms. draft letter to Iveagh by Woods on his appointment, 1955.

Letter from Iveagh acknowledging Woods's congratulations on his FRS, 1964.

Misc. charts of personnel in Microbiology Unit showing its growth, and those lost in 'sea of matrimony', 1945-49.

Copy of Architect & Building News, October 1961, featuring the Microbiology Unit, Oxford.

A.9, A.10 Visit to Canada and USA, August-September 1962.

Woods attended the International Microbiological Congress in Montreal (19-26 August 1962) and arranged visits and lectures at various Canadian and US research institutes and universities.

A.9 Schedule of visits.

Correspondence with colleagues arranging visits. In alphabetical order:

| | |
|---|---|
| L. Berlinguet | (Quebec) |
| J.M. Buchanan | (M.I.T.) |
| B. Davy | |
| J.O. Lampen | (Rutgers) |
| S.A. Narrod | (Bethesda) |
| D.B. Sprinson | (Columbia) |
| K.V. Thimann | (Harvard) |
| H.J. Vogel | (Rutgers) |
| D.W. Woolley | (Rockefeller Institute. Correspondence includes information about Woods's recent work on methionine and $B_{12}$) |

Biographical and personal

A.10 Woods's paper read at Montreal, on methionine and $B_{12}$.

Woods's ms. notes of other papers read.

Typescript abstracts of papers.

A.11 Sixth International Congress of Biochemistry, New York, 1964.

Travel arrangements, receipts for lectures given in course of visit at other Institutes and Universities in US.

A.12 Letter from D.W.W. Henderson, telling Woods he would be elected President of Society for General Microbiology in 1965.

Correspondence re Leeuwenhoek Lecture which Woods was invited to give to the Royal Society in December 1964. See also B.35.

Woods did not live to discharge either of these.

A.13 Misc. items of biographical interest.

Includes: education certificates;

receipt for marriage fees, 1939;

A.R.P. duties, 1940;

Woods's account book, 1952-64;

and other items.

## SECTION B LABORATORY NOTEBOOKS AND WORKING PAPERS B.1 - B.35

| | | |
|---|---|---|
| B.1, B.2 | Ipswich School | 1926 |
| B.3-B.19 | Cambridge University | 1930-39 |
| B.20-B.21 | Bland-Sutton Institute, Middlesex Hospital, London | 1939-41 |
| B.22-B.26 | Chemical Defence Research Establishment, Porton Down | 1942-45 |
| B.27-B.35 | Oxford University | 1946-64 |

See also A.4 for Woods's annual Reports on his research to the Trustees of the Beit Fellowships, 1936-39.

B.1 Notebook inscribed 'D.D. Woods 6 B Science. Inorganic Chemistry Theory Notes I.'

Pages numbered by Woods, with notes on chemical properties and experiments, some carefully revised and amended. 1926

B.2 Ipswich School notebook headed 'Organic Analysis'. n.d.

B.3 Green loose-leaf notebook, inscribed 'D.D. Woods, Trinity Hall, 4th November 1930'.

Notes on the literature, summaries of articles, etc., kept up to 1938.

Woods kept detailed bibliographies, usually on large format record cards, throughout his life.

See also B.22-B.26.

B.4 Red notebook.

Work on indole: notes on the literature, of experiments and preparations, of 'Suggested work' for investigation and 'Suggested technique'.

Experiments begin December 1931 (not all are dated) when Woods was still an undergraduate at Cambridge. The last dated experiments are on indole (May 1934) and tryptophane (June 1934) when he had begun graduate work with M. Stephenson.

Laboratory notebooks and working papers

B.5 Envelope of notes on indole.

Notes on the literature, summaries of articles, etc.

These are not in Woods's hand, and were probably compiled and passed on to him by M. Stephenson when he began work on indole production. The spelling 'Indol', used throughout these notes, is also found in letters and notes by her elsewhere in the collection.

B.6 Dark green notebook.

'Acetic Bug Experiment'.

Notes and tables of experiments (not all in Woods's hand), August 1933–October 1934.

B.7 Black notebook.

Work on Clostridium putreficus.

The book includes a letter from P. Fildes to M. Stephenson on the best growth method for Cl. putreficus, dated 10.1.35.

Woods's notes begin 'Directions for growth from Fildes' and cover 18 experiments beginning February 1935.

At rear of book is another series of 39 experiments, October–December 1935, and a series dated June–July (no year given).

B.8 Black notebook.

Work on Spirogenes, especially ornithin (sic), leucine, alanine and other amino-acids.

Contains notes, tables, comments and calculations on several series of experiments, numbered but only a few dated, March 1935–July 1936.

Pages are numbered, and used to p.152; other notes occur at rear of book.

Loose pages at front of book contain Woods's account of the work in tabulated form with references to page and experiment numbers.

See B.9 below.

Laboratory notebooks and working papers

B.9 Correspondence relating to B.8, originally kept loose in the notebook. 1935

| From: | | |
|---|---|---|
| | L.H. Stickland, on leucine | February |
| | F.C. Happold | May |
| | P. Fildes, on ornithin and cysteine | July |

B.10 Black notebook, inscribed 'Charles E. Clifton' (with some loose pages inserted).

Work on Clostridium tetanomorphum.

Notes, calculations and tables of a series of 72 experiments, in the hands of Clifton, Woods and another.

Work begins September 1936, and continues to March 1937.

(Woods published collaborative papers on Cl. tetanomorphum with Clifton in 1937 and 1938.)

Work continues in B.15, B.16 below.

B.11, B.12 'Studies in the metabolism of bacteria'.

Woods's thesis for the degree of Doctor of Philosophy at Cambridge, October 1936.

B.11 Summary, and text of thesis, typescript.

B.12 Folder inscribed 'Thesis. Section II'. Misc. ms. drafts, tables and diagrams.

B.13 'Gasometric methods for analysis of blood and other solutions'.

Laboratory preparations book, typescript, 42 pp. n.d.

B.14 University of Cambridge School of Biochemistry.

Bound volume of typescript guides to experiments, preparations and methods for practical work, Michaelmas, Lent and Easter Terms, 1937-38, with a timetable of practicals and lectures, and those giving them.

B.15-B.18 4 ledger-type notebooks, probably a sequence though only II and III are numbered as such.

B.15 Notebook, pages numbered 1-286, notes on preparations, and (beginning p.17) a series of experiments on Cl. tetanomorphum.

Experiments are numbered 1-78, dated 1 October [1936] - 15 April [1937].

Laboratory notebooks and working papers

B.16 Notebook II, pages numbered 1-288, notes on manometer and methods, and continuing series of experiments 79-110, dated 16 April-22 October [1937].

A new series of 46 experiments on Cl. welchii begins on p.128, dated November 1937-June 1938.

At rear of book is a series of 12 undated experiments.

B.17 Notebook III, pages numbered 1-200, notes on manometer volumes, and continuing series of experiments on Cl. welchii 47-121, dated June 1938-January 1939.

B.18 Notebook, pages not numbered, notes on series of experiments '2nd go with amino acids' numbered 122-142, dated January-March [1939].

On 1 April 1939, Woods began work as a Halley-Stewart Research Fellow at the M.R.C. Unit in Bacterial Chemistry under P. Fildes at the Bland-Sutton Institute, Middlesex Hospital, London.

See also B.20, C.16.

B.19 Ms. notes, drafts, summary of experiments, graphs of findings on Cl. welchii.

N.d. but probably for paper published 1938 'The relation of nitrate to ammonia in Cl. welchii', though work may continue to later research, 1942.

B.20 Loose-leaf binder, inscribed 'This binder is the personal property of D.D. Woods, May 1939. Bland-Sutton Institute (MRC Dept. Bacterial Chemistry), Middlesex Hospital W.1.'

Woods left Cambridge in April 1939 to work with Fildes at the above Unit. It was here that he did his important work on p-aminobenzoic acid (PAB), see C.16.

The binder contains notes on the literature, begun soon after Woods's arrival in London and kept up to c.1945.

## Laboratory notebooks and working papers

B.21 Large loose-leaf binder, with some loose pages, containing details of experiments on various inhibitors of micro-organisms, April 1939-February 1941.

Though several entries refer to p-aminobenzoic acid, on which Woods continued to work until early 1940, these experiments mark the conclusion of his work on PAB and the start of his 'war work' - begun in London and later carried on at Porton. Most of the entries bear a War Office number as well as a date and description.

Included on a loose page is Woods's tabulated information on the dates on which experiments were carried out.

The entry for Biotin (5.8.40.) is interesting in being accompanied by correspondence requesting and accompanying samples from J. Williams (Texas) and J.R. Porter (Iowa), July 1940.

Woods's ms. draft of his letter to J. Williams explains that: 'I have under way an investigation into the conditions of maximum and consistent production of toxin by anaerobes such as tetanus and welchii. Under present war conditions such work may have important practical application from the point of view of antitoxin production for use in wound infections'.

B.22 Loose-leaf binder, inscribed 'D.D. Woods, Porton, Salisbury, May 1942'.

Mainly notes on the literature; includes 4 pp. ms. note on metabolism, perhaps for paper or lecture by Woods.

Laboratory notebooks and working papers

B.23-B.26 Work on penicillin, 1944-45

3 loose-leaf binders and one folder, all of similar miscellaneous content and roughly similar date. All deal with research by Woods using staphylococcus in order to test modes of action of penicillin, and penicillin resistance.

All the books contain notes on the literature, some carefully indexed by topic as well as by name, notes of conversations, visits to laboratories, sources of specimens, progress of research, etc.

Attention is drawn to matters of special interest, or datable material in each book, but it is not possible to give a full account of their contents and it should be emphasised that they form part of a single project and should be considered as a whole.

B.23 Green loose-leaf binder.

Mainly notes on the literature of penicillin (latest references 1945), but also includes the following ms. notes by Woods:

'Present position regarding structure penicillin', 3 pp. dated February 20, 1944, and marked 'Private Commun. (Various sources)'. Includes a page of '?'s for Oxford', probably for a visit (see B.24).

'Penicillinase and the mode of action of penicillin. Some hypothetical possibilities'. 9 pp. dated 13 June 1944.

'Penicillin Project'. Notes on various aspects of project, 4 pp. dated 17 July 1944.

'Penicillin Research [Enzyme blockage theory]'. 9 pp. dated 21 July 1944.

B.24 Green loose-leaf binder.

Misc. notes of varying date and content, not grouped in any chronological or subject order.

Material includes:

'Notes on visit to Florey et al, Oxford 12.7.44.' with information on penicillin given by H.W.F. (Howard Florey, later Lord Florey), N.G.H. (Heatley), M.A.J. (Margaret Jennings, later Lady Florey), E.C. (Ernst Chain).

These are probably the answers to '?'s for Oxford' in B.23 above.

'Notes on conversation with Harington and King, 5th July 1944'.

6 numbered pages.

continued

Laboratory notebooks and working papers

B.24 continued

'Queries for visit to Porton, November 1st', perhaps 1941.

Notes on teaching and equipment, perhaps for Woods's move to Oxford on his appointment as Reader in Microbiology in 1946.

At rear of book is a full index on the literature of Chemotherapy, especially action of sulphonamides and p-aminobenzoic acid (to 1946).

B.25 Large green loose-leaf binder (rear board missing).

Indexed by Woods under 14 headings.

This gives the clearest account of various strains of staphylococcus used by Woods for his project, the sources of supply, experiments and results.

Dating runs July 1944-March 1945.

B.26 Folder of notes and diagrams, 1945.

Ms. account 'Penicillin work - Summary 12/4/45', with 18 graphs, tables and diagrams.

Laboratory notebooks and working papers

B.27-B.35 Oxford University, 1946-64.

Woods's work at Oxford, as Reader in Microbiology 1946-55 and Iveagh Professor of Chemical Microbiology 1955-64, continued on the metabolism of PAB, the synthesis of folic acid, the relation of folic acid and vitamin $B_{12}$ and related research, much of it collaborative.

The following notebooks are a partial record of this work.

Some of the descriptions and information below were received from Dr. M.A. Foster, and are acknowledged in the relevant entries.

B.27 Large green loose-leaf binder.

Notes on preparations, growth methods, experiments and results on folic acid, various dates 1946-49.

The contents are described by Dr. Foster as work on: 'Folic acid (and related compounds) as a growth factor and anti-sulphanamide agent for a wide variety of microbes. [Clostridia, E. coli., Acetobacter, Neurospora, Streptococci and some others].'

The work is in the hand of Woods and some others.

Note The laboratory notes are preceded by 4 pp. of notes on assays of $B_{12}$ relevant to Woods's work from c.1954. They have been left bound in as found, but do not relate to the rest of the book.

B.28 Large green loose-leaf binder (inscribed 'Bland-Sutton Institute, Middlesex Hospital').

Notes on experiments and results, in the hand of Woods and others, various dates 1949-54.

Several sets of pages, dealing with a specific medium, are clipped together with a note by Woods.

The contents are described by Dr. Foster as: "Very detailed analysis of growth of Clostridium tetanomorphum in fully defined media. [? attempting to establish optimum conditions for using this organism for assaying folic acid derivatives]."

B.29 Folder of notes, diagrams and tables, 1949.

By Woods, and by C. Duff, a visitor collaborating briefly with Woods; mainly research for evidence of a co-enzyme required for serine metabolism in Cl. welchii. (Information from Dr. Foster.)

A letter from C. Duff, on the work and on his results, is included.

Laboratory notebooks and working papers

B.30 Folder of notes, in the hand of Woods and others, various dates 1950-51.

The material is described by Dr. Foster as: 'Sheets removed from a bench notebook and clipped together on the basis of which organism was being studied.

Early experiments on growth-promoting activity of folinic acid for Staph. aureus, E. coli and 'yeast', followed by examination of compounds (e.g. purines, serine) which might replace the growth requirement for folinic acid of Neurospora, Acetobacter suboxydans, E. coli, Leuconostoc mesenteroides and Lactobacillus plantarum'.

B.31,B.32 2 folders of notes on creatine.

B.31 Details and results of experiments on oxidation of creatine by Pseudomonas eisenbergii. Bundles of notes clipped together by Woods have been retained as found. Various dates mainly March-June 1950.

B.32 Details of experiments and results on the oxidation of creatine and sarcosine. Various dates, mainly February-June 1956.

B.33 Large green loose-leaf binder.

Notes of experiments and results, in the hand of Woods and others, various dates 1952-54.

Bundles of notes clipped together by Woods have been retained as found.

The contents fall into two sections, described by Dr. Foster as follows:

'Collated experiments on a pAB-requiring mutant of Saccharomyces cerevisiae.

I: Interactions between components of defined growth media such as to depress growth. Deals mainly with vitamin/purine interactions such as the "adenine-nicotinic" acid antagonism.

II: Growth in defined media, apparently attempting to define those compounds which reversed the inhibitory action of sulphanilamide on the mutant, to gain some insight into likely metabolic roles of folic acid.'

Laboratory notebooks and working papers

B.34 Folder of notes.

The notes, on pages removed from a loose-leaf binder, record titration curves for PAB under a variety of conditions and with different organisms.

The notes are in the hands of Woods and others, various dates February-March 1954.

B.35 Black loose-leaf binder.

Notes and ideas, some intended for the Leeuwenhoek Lecture of the Royal Society, which Woods had been invited to deliver in December 1964, but did not live to complete. 1964

See also A.12.

## SECTION C SCIENTIFIC LECTURES AND PAPERS 1946-62 C.1 - C.17

The material is presented chronologically as far as possible. Not all the lectures are dated, and Woods frequently re-ordered his notes to incorporate new material or for delivery on different occasions. There are sometimes several series of numbers on each sheet, in various colours of crayon, in addition to (partial) sequential page numbers. The presentation is therefore tentative.

Except when otherwise stated, all items are autograph ms., in pencil.

Attention is drawn especially to C.15-C.17, Woods's semi-autobiographical account of his discovery of PAB.

C.1 Book review, n.d., c.1938.

'Medical Consilia Talk', 27 November 1946.

C.2, C.3 'S.G.M. Oxford', 19-20 September 1947. [Society for General Microbiology]

See also A.6.

C.2 Introductory survey on 'Amino-acids in the Economy of Micro-organisms'. 4 pp. typescript.

C.3 Talk by Woods and Nimmo-Smith on 'p-AB and Folic acid derivatives in relation to bacterial growth and sulphonamide action'. 4 pp. typescript and ms.

C.4 Lectures for 'Hons. Physiol. and Chemists 1947'. 22 numbered pages.

C.5 'Biochemistry of Micro-organisms 1947'.

An extended course of lectures, of which 1-5, 10-15 survive.

C.6 Lectures for 'Hons. Physiol. and Chemists 1948'. 33 numbered pages.

C.7 Extensive bundles of lecture notes, labelled by Woods 'Pre 1952'.

C.8 2 lectures on Chemotherapy, n.d.

C.9 2 lectures on Immunology, n.d.

Scientific lectures and papers

C.10 Lecture on Streptomycin, n.d.

C.11 Lectures on 'Heterotraphic energy yielding mechanisms', n.d. (Lectures 1, 6 and 7 of a course.)

C.12 5 lectures labelled 'Summer School', n.d.

On Natural Antibiotics, Oxidative Mechanisms II, Bacterial Metabolism, Biological Nitrogen Fixation, Autotraphic Bacteria.

C.13 Notes for an advanced lecture course on microbiology, c.1952-53.

Refers to important classical experiments by McCarty et al c.1944 - the first report on Transformation - and analyses their results.

C.14 Notes for a lecture on $B_{12}$, n.d.

Included here are 3 pp. ms. 'Research Suggestion' for lines of enquiry on $B_{12}$.

C.15-C.17 'The biochemical mode of action of the sulphonamide drugs'.

This was a lecture delivered in Oxford, 17 May 1961 in a series on 'Case histories in biological discovery' and published in J. gen. Microbiol.(1962), 29, 687-702.

The lecture included reminiscences of Woods's early career and the influence on him of Dr. M. Stephenson's broadcast talk on Biochemistry which he heard as a schoolboy. When preparing his lecture, Woods obtained a transcript of the talk, which is included here as C.17.

C.15 Notice of lecture, plan and 27 pp. ms. draft, set of plates and figures, copy of published version. Includes a photograph of Fildes.

C.16 Woods's original laboratory notes made 1939 for his work on PAB, probably originally included in B.21, 14 and 15 December 1939.

Included here is material related to the meeting of the Biochemical Society in February 1940 at which Woods and Fildes presented their findings on PAB.

The material is accompanied by an explanatory letter from A. Pearce-Gervis (Woods's Secretary), 1965.

Scientific lectures and papers

C.17 'Biochemistry: what it is and what it does'.
Transcript of talk broadcast on 9 May 1930 by M. Stephenson.
(See C.15 above.)

## SECTION D CORRESPONDENCE D.1 - D.2

Much of Woods's correspondence was destroyed periodically by him during his lifetime, and more was destroyed after his death. The following items, and a few letters included and noted elsewhere in the collection, are all that remain.

D.1

| | |
|---|---|
| C.E. Clifton | n.d. |
| P. Fildes | 2 short notes, on a paper (1938) and answering Woods's congratulations on Fildes's Copley Medal, 1953 |

Included here are three letters (in German) to Fildes from P. Erlich, 1912:

June, enquiry about approximate number of patients treated by Fildes with Neosalvarsan;

December (2 letters), request to include collaborative paper on Salvarsan (by Fildes, McIntosh and Dearden) in a volume of articles on Salvarsan, and thanks for permission received.

For a short account of Fildes's and McIntosh's clinical trials of Erlich's new drug Salvarsan (606) in the treatment of syphilis, and subsequent controversy, see the Memoir by G.P. Gladstone, B.C.J.G. Knight and Sir Graham Wilson (Biographical Memoirs of Fellows of the Royal Society, 19, 1973, pp.317-347, especially pp.322-324).

These letters were received from A. Pearce-Gervis (Woods's Secretary), who had preserved them from Fildes's period of research in Oxford 1949-64.

| | |
|---|---|
| M. Flavin | 1962 |
| H.A. Krebs | n.d. |

D.2

M. Stephenson

Miscellaneous items including:

Letter to M. Stephenson from P.H.H. Gray on tryptophan, 1940.

3 letters to Woods on setting up microbiology unit in Cambridge (1946) and on publications and journals (1947).

Copy of a talk by M. Stephenson on 'Levels of Microbiological Investigation', probably given to Society for General Microbiology.

INDEX OF CORRESPONDENTS


| | |
|---|---|
| BERLINGUET, Louis | A.9 |
| BUCHANAN, John M. | A.9 |
| CLIFTON, Charles Egolf | D.1 |
| DAVIS, Bernie | A.9 |
| DODDS, Sir (Edward) Charles | A.7 |
| DUFF, Cecil | B.29 |
| ERLICH, Paul | D.1 |
| FILDES, Sir Paul (Gordon) | B.7, B.9, D.1 |
| FLAVIN, Martin | D.1 |
| HAPPOLD, Frank Charles | B.9 |
| HENDERSON, David Willis Wilson | A.12 |
| HOPKINS, Sir Frederick Gowland | A.3-A.5 |
| IVEAGH, Rupert Edward Cecil Lee Guinness, Earl Iveagh | A.8 |
| KREBS, Sir Hans (Adolf) | D.1 |
| LAMPEN, J. O. | A.9 |
| MORGAN, Walter Thomas James | A.12 |
| NARROD, Stuart A. | A.9 |
| PORTER, J. R. | B.20 |
| SPRINSON, David B. | A.9 |
| STEPHENSON, Marjory | A.5, D.2. See also A.3, B.5, C.17 |
| STICKLAND, Leonard Hubert | B.9 |
| THIMANN, Kenneth V. | A.9 |
| VOGEL, Henry J. | A.9 |
| WOOLLEY, D. Wayne | A.9 |