Report on the papers of PROFESSOR DAVID KEILIN, FRS (1887-1963)

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THE ROYAL COMMISSION ON HISTORICAL MANUSCRIPTS

Committee on Scientific and Technological Records

CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

Papers of

Professor DAVID KEILIN, F.R.S. (1887 - 1963)

Listed by: Jeannine Alton

Harriot Weiskittel

Deposited in the University Library, Cambridge. 1973

Description of the collection

The papers cover the years 1867 - 1963.

They were received from Mrs. Joan Whiteley (daughter), who retains during her lifetime the biographical material listed as Items 1 - 6.

Professor Keilin was of Russian-Jewish extraction brought up in Warsaw. He was a student at the Sorbonne and began his scientific work in Paris before moving to Cambridge; his cosmopolitan background is reflected in the many foreign languages used in his notebooks, publications and correspondence, which are noted in the handlist.

Professor Keilin began his scientific career as an entomologist and parasitologist, and retained his interest in these subjects throughout his working life in addition to his developing concentration on the biochemistry of cell respiration. For this reason it has not always been possible to date working papers precisely. He suffered from asthma and travelled little; this, together with the very wide range of his scientific interests, was responsible for his extensive correspondence.

The collection includes material belonging or relating to other scientists, for example Dr. C.A. MacMunn, an early and neglected precursor of Keilin's work on cytochrome; there are also correspondence and drawings of Sir Ronald Ross and Professor G.H.F. Nuttall, Keilin's predecessor as Quick Professor of Biology and Director of the Molteno Institute, Cambridge University (Items 223 - 228).

The numerous drawings, especially of parasitological subjects, are by Nuttall, Keilin and perhaps others. The high quality of the execution has been thought justification for retaining them (Items 220 - 222, and 229).

Material relating to the Royal Society, the Agricultural Research Council, and the Chemical Defence Research Department, Ministry of Supply, has been returned to the appropriate authorities.

A selection of books from Keilin's library, and much of his large collection of off-prints, are in the library of the Department of Zoology, Oxford University.

Summary of the career of Professor Keilin

ъ. 1887	Moscow
1897 - 1904	Educated at Gorski Gymnasium, Warsaw
1904	Liege University
1905	Paris University Began work with Maurice Caullery in Laboratoire d'Evolution des Etres Organisés, Paris, on <u>Pollenia</u> <u>Rudis</u>
1913	Married

Summary of career (cont)

- 1914 D.Sc. (Sorbonne) Prix Passet, Société entomologique de France
- 1914 23 Work on morphology and biology of protists
- 1915 Invited to Cambridge to work with G.H.F. Nuttall, Quick Professor of Biology Work on <u>Pediculus humanus</u>
- 1920 25 Beit Memorial Research Fellow, Cambridge
- 1920 Began work on cellular respiration using mainly spectroscopic methods
- 1921 Moved with Nuttall to Molteno Institute for Research in Parasitology, Cambridge
- 1925 University lecturer in Parasitology, Cambridge Work on cytochrome published
- 1928 Fellow of the Royal Society
- 1931 52 Quick Professor of Biology and Director of the Molteno Institute; Professorial Fellow, Magdalene College
- 1934 Croonian Lecturer, Royal Society
- 1934 63 Editor, Parasitology
- 1934 Work on enzymes, collaborating principally with E.F. Hartree (1934-58) and T. Mann (1937-44)
- 1939 Royal Medal, Royal Society

1946 Work on Anabiosis

1952 Copley Medal, Royal Society

- 1955 Membre Associé Etranger, Académie des Sciences, Paris
- 1957 Honorary Fellow, Magdalens College, Cambridge
- 1958 Leeuwenhoek Lecture, Royal Society

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*Biographical and scientific material relating to Dr. C.A. MacMunn, Sir Ronald Ross, Professor G.H.F. Nuttall

Handlist

Cambridge

I	Biographical material (Items 1 - 6 retained by Mrs. Joan Whiteley, c/o Jesus College, Oxford)
1.	Miscellaneous memoirs - Royal Society, Parasitology, Biochemical Journal, Enzymology.
2.	Diary of Mrs. Anna Keilin. 1921 (Polish), 1947 (English)
3.	Autograph book of Mrs. Anna Keilin (Polish)
4•	Four packets of private family letters, mainly in Polish, some French and English, numbered I - IV
5.	2 sets of Cambridge University diaries
6.	Green wallet file concerning Molteno Institute 1906 - 63. (Keilin died 27 February 1963 at a meeting to discuss the Molteno)
7.	Miscellaneous photographs of Professor Keilin, his laboratories, and his associates, dated and identified when known.
8.	Miscellaneous letters and newspaper clippings (1 letter in Polish)
9.	Miscellaneous letters and documents including naturalisation papers.
10.	Miscellaneous souvenirs of Royal Society tercentenary celebration in

- 11. Miscellaneous correspondence of Anna Keilin.
- 12. Miscellaneous epigraphs collected by Keilin.
- Letter 1915, from J. Stanley Gardiner inviting Keilin to Cambridge. Correspondence in French and English 1914 - 16 relating to offer of job with U.S. Department of Agriculture.
- 14. Miscellaneous letters of sympathy written by Keilin.
- 15. Magdalene College, Cambridge: dimners and guests.
- Magdalene College, Cambridge: letter of election to Research Studentship 1916; correspondence with Master and President; Pepys Library Appeal.
- 17. Autobiographical notes during illnesses.

1960 - 61

- Miscellaneous private correspondence: mainly letters of congratulations to and from Keilin (in English, French, Polish, Chinese.)
- 19. Certificates: D.Sc. (Sorbonne) 1918; M.A. Cambridge 1923.
- Certificate: Liège 20. 1951 1959 Certificate: Polish Academy of Sciences 21. 22. The Copley Medal 1951 1939 23. The Royal Medal 24. Honours, appointments and awards (in English and French) Société entomologique de France 1911 Prix Passet (see also 107, 141) 1915 1928 Royal Society
- Membre Correspondant, Société de Biologie, Paris 1928 Election to Quick Professorship 1931 Medical Research Council 1942 Letters re Royal Medal 1939 Honorary Doctorate, Brussels 1947 Académie des Sciences, Institut de France 1947 & 1955 Honorary Doctorate, Bordeaux 1947 1951 Letters re Copley Medal
- 25. Honours and awards (in English and French)

 Letters re Liège
 Letters re nomination for Nobel Prize
 Honorary Doctorate, Bologna
 Letters and Certificate, Académie des Sciences, Institut de
 1955

 France
- 26. Honours and awards (in English, French, Italian, Dutch) 1956 Letters re Doctorate, Utrecht 1957 St. Vincent Prize, Turin Letters re Polish Academy of Sciences 1959 Foreign Honorary Member, American Academy of Arts and Sciences 1959 New York Academy of Sciences (declined) 1960 American Society of Biological Chemists 1961 1962 British Society for Parasitology 1952 Royal Society of the Arts (declined)
- 27. Obituaries and letters of sympathy. Letters re Keilin Memorial Lecture

II. Address books

28 — Miscellaneous address books of scientific correspondents.
 32.

III. Bibliographies

- 33 6 looseleaf notebooks, annotated bibliography (in English,
 38. French, German).
- 39 2 sheaves of unbound bibliographies on parasites (in English,
 40. French, German).
- 41. Looseleaf notebook, bibliography (in English, French, German).
- 42. Card-index bibliography.
- 43. Sheaf of bibliographical cards (in English, French, German).
- 44. Wallet file of miscellaneous annotated bibliographies (in English, French, German).
- 45. Sheaf of bibliographical cards (in English, French, German).

IV. Working notebooks

46.	Sheaf of cards describing field excursions and observations.	1911
47.	Ms. notebook (in French, German).	1908
48.	Ms. notebook, Paris (in French, English, German).	? 1910
49.	2 notebooks of observations on larvae, Pariz (in French).	1911 - 15
50.	Ms. notebook, Paris (in French).	1913 - 15
51.	Ms. notebook on larvae (in French).	1915 - 17
52.	Ms. notebook on larvae (in French, German, Polish, English).	1915 - 18
53.	Ms. notebook on larvae (in French, English, German).	1921 - 24
54.	Ms. notebook on haematin and porphyrin.	1925 - 26
55.	Ms. notebook on miscellaneous biochemical experiments (Keilin, Hartree, Mann and others).	1926 - 40
56.	Ms. notebook on cytochrome and other experimental observations (Keilin and Hartree).	1929 - 42
57.	Ms. notebook on biochemical observations.	1930
58.	Ms. notebook on oxidases (in English, French, German).	1930 - 33

 59. Ms. notebook on haemoglobin and spectroscope observations. 60. Ms. notebook inscribed 'Respiration of Gastrophilus. Y.L. Wang.' 1 	
60. Ms. notebook inscribed 'Respiration of Gastrophilus. Y.L. Wang. ' 1	
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61. Ms. notebook on cytochrome observations. 1	1934
 Ms. notebook II 'Reversion Spectroscope. Peroxidase. Apo-zymase and Co-zymase. T.Mann' (in English, German, and Polish). 	1935 – 36
63. Ms. notebook (Hartree) 'Reconstruction of Hexosemonoplasphoric 1' system.'	1936
64. Ms. notebook (Hartree) 'Methaemoglobins and Haemoglobin with 1' nitrate.'	1936 - 54
	1936
66. Ms. notebook 'III Peroxidase. T. Mann.'	1936 - 38
67. Ms. notebook 'I Polyphenoloxidase. T. Mann.'	1937
68. Ms. notebook 'II Polyhenoloxidase. T. Mann' (in English, German) 1	1937
69. Ms. notebook (Hartree) 'Insoluble enzymes of heart-muscle etc. 19 bacteria'	1937 - 39
70. Ms. notebook (Hartree) 'Oxidation systems.'	1937
71. Ms. notebook (Hartree) 'Catalase II.'	1937 - 43
72. Ms. notebook 'III Polyphenoloxidase. T. Mann' (with Ms. notes 19 by Keilin).	1938 - 39
73. Ms. notebook (Hartree) 'Coupled oxidation,' 'Notatin' 1	1938 - 46
74. Ms. notebook (Hartree) 'Insoluble enzymes of heart muscle etc. 1	1939
75. Ms. notebook (Hartree) 'Insoluble enzymes of heart muscle etc.' 1	1939 - 42
76. Ms. notebook 'IV Polyphenoloxidase. T. Mann.'	1939 - 44
77. Ms. notebook 'IV Peroxidase. T. Mann' (Mann and Keilin) 1	1940
78. Ms. notebook (Hartree) 'Spectroscopy.'	1940 - 49
79. Ms. notebook (Keilin and Hartree) 'Catalogue of Parasitic 19 Bacteria'; also biochemical experiments.	1940 - 42
80. Ms. notebook (Hartree) 'Yeast and Bacteria, Vol.I' 1	1940 - 46
81. Ms. notebook (Hartree) 'Yeast and Bacteria, Vol.2'	1946 - 48
82. Ms. notebook (Hartree) 'Insoluble Enzymes of heart muscle' 19	1942 - 45
83. Ms. notebook (Hartree) 'D.S.I.R.' 1	1941 - 42
84. Ms. notebook 'Different Observations' by Keilin, Dr. Joan 19 Keilin, E.F. Hartree.	1943 – 48

85.	Ms. notebook (Hartree) "Notatin (applications)"	1945 - 51
86.	Ms. notebook (Hartree) 'Succinic Cytochrome Vol. 6'	1946
87.	Ms. notebook on miscellaneous biochemical observations.	1947 - 57
88.	Ms. notebook on miscellaneous experiments with yeast.	1950
89.	Ms. notebook (Keilin and Hartree) 'Peroxidase Catalase, vol.7'	1954 - 55
90.	Ms. notebook (Hartree) 'Glutathione Uricase Xanthinoxidase'	1956
91.	Ms. notebook (unidentified) on miscellaneous experiments	1957
92.	Ms. notebook (unidentified) on miscellaneous experiments	1957 - 58
93.	Ms. notebook on 'Manometric Experiments.'	1958 - 59
94.	Ms. notebook (unidentified) on experiments.	1958
95.	Ms. notebook on hemerythrin. Urechrome.	1958 - 59
96.	Ms. notebook of parasitological drawings. Early work? (French)	n.d.
97.	Ms. notebook on oxidases (in English, German, French)	n.d.
98.	Ms. notebook (Hartree) biochemical notes	n.d.
99.	Ms. notebook on cytochromes and enzymes	n.d.
100.	Ms. notes 'Experiments' (Parasitology)	n.å.
101.	Ms. notebook 'Respiratory Carriers and Enzymes'	n.d.
102.	Ms. notebook (Keilin and Mann) notes on books and journals read (in English, German).	n.d.
103.	Ms. notebook on metalloporphyrins and haematin	n.d.
104.	Box file 'Cytochrome and other haemoproteins'(Manuscript and typescript)	n.d.
105.	Sox file 'Laccase'; bibliographies, correspondence, offprints, articles, Ms. draft on laccase by T. Munn. (in English, French)	1939
106.	Box file 'Cytochrome and other haemoproteins' (manuscript notes and corrected typescript.)	n.d.
107.	Box file 'Old Mss.' 3 envelopes. 'Recherches sur les larves de Diptères cyclorhaphes I Cycle évolutif de <u>Pollenia rudis</u> .' Manuscript, notes, errata. (Awarded Prix Passet 1914. See also nos. 24, 141) (French)	
	Cytochrome and Respiratory Enzymes.' Proceedings of the Royal Society B, 104, 206-252. Typescript with Ms. corrections and additions.	1929
108	Miscellaneous biochemical notes, bibliographies and working	n.d.

108. Miscellaneous biochemical notes, bibliographies and working n.d. papers (in English, French, German)

109.	Ms. draft. (in English, French, Portuguese)	n.c.
110.	Miscellaneous working papers on parasitology and respiration (in English, French, German)	n.d.
111.	Ms. notes and drawings on various parasites, malaria	n.d.
112.	*Aseptic life literature' notes (early work perhaps assembled later for work on Anabiosis) (in English, French)	n.d.
113.	'Physiology of respiration in insects, 'miscellaneous notes, draft, bibliography of paper. (in English, French, German)	ń,d.
114.	Larvae and respiration in insects. Miscellaneous notes and drawings. (mainly in French)	1910 - 44
115.	Early work on parasitology in London and Cambridge, drawings, notes and scientific correspondence (in English, French)	n.d.
116.	Notes on classification of larvae, Paris (French)	n.d.
117.	Miscellaneous notes and working papers on larvae; Paris and Cambridge. (in French and English)	n.d.
118.	Symbiosis. Notes and working papers (perhaps for lecture)	n.d.
119.	Spectroscopic drawings and observations.	n.d.
120.	Miscellaneous notes and working papers, biochemical	c.1955
121.	Miscellaneous notes and working papers. Enzymes and haemo- proteins	n.d,
122.	Miscellaneous notes and working papers. Enzymes and haemo- proteins	n.d.
123.	Experiments and notes on role of catalase	1958
124.	Laboratory observations and graphs	1959 - 60
125.	Miscellaneous working papers: immunity, cytochrome	n.d.
126.	Miscellaneous notes and working papers: biochemistry	n.d.
127.	Miscellaneous notes and working papers: biochemistry	n.d.
<u>v.</u>	Cambridge University	
128.	Lecture on Symbiosis	n.d.
129.	Miscellaneous lecture notes: metallo-protein compounds; perox- idase, dehydrogenase, carbonic anhydrase, porphyrin	n.d.
130.	Lecture on porphyrin	n.d.
131.	Lecture on cellular respiration	n.d.
132.	Lecture on bile pigments	n.d.

133.	Lecture on haemoglobin	n.d.
134.	Notebook: lectures on parasitology, protozoa, and helminths	1933
135.	Notebook: lectures on cytochrome	n.d.
136.	Notebook: lectures and demonstrations	1956 - 57
137.	Notebock: lectures on oxidases	n.d.
138.	Notebook: examination questions	n.d.
139.	Reports of Quick Professor and Molteno Institute	1932 - 58
140.	Syllabus, reading lists, practical experiments, lecture abstracts	n.d.

VI. Publications

141.	Recherches sur les larves de Dipteres cyclorhaphes, <u>Bulletin</u> scientifique de la France et de la Belgique, 1915. Awarded Prix Passet, Société entomologique de France, 1914. (see also 24, 107) (in French). Manuscript	1915
142.	'On cytochrome, a respiratory pigment common to animals, yeast and higher plants,' <u>Proceedings of the Royal Society</u> B, <u>98</u> , 312-339, 1925. 2 typescripts with Ms corrections.	1925
143.	'Parasitology, 'Encyclopaedia Britannica, 14th edition, <u>17</u> , 276-280, 1929. Typescript with Ms corrections	1929
144.	'Cytochrome and respiratory enzymes,' <u>Proceedings of the</u> <u>Royal Society</u> B, <u>104</u> , 206-252, 1929. 2-page outline	1929
145.	'Mechanisms of cellular respiration,' Croonian Lecture, The Royal Society, 1934. Drafts with Ms corrections	1934
146.	'Respiratory systems and respiratory adaptation in larvae and pupae of Diptera,' <u>Parasitology</u> , <u>36</u> , 1-66, 1944. Notes and drafts 'Haemoglobin of <u>Gastrophilus</u> larvae,' (with Y.L.Wang), <u>Bio- chemical Journal</u> , <u>40</u> , 855-866, 1946. Notes and drafts. 'Stability of haemoglobin and of certain endoerythrocytic enzymes,' (with Y.L. Wang), <u>Biochemical Journal</u> , <u>41</u> , 491-500, 1947. Notes and drafts.	1944 1946 1947
147.	Work on blood formation (1946 - 54): correspondence with Dr. S.H. Wajda and Sir Solly Zuckerman; comments on review of Wajda's Ms. and published work, with Ms. and corrected type- script; related offprints by Wajda, Whitby and others; mis- cellaneous notes. (in English, Japanese)	1946 – 54
148.	Work on enzymes 'Carbonic anhydrase. Purification and nature of the enzyme,' (with T. Mann), <u>Biochemical Journal</u> , <u>34</u> , 1163-1176, 1940. Notes and drafts.	1940 - 51 1940
	'Specificity of glucose-oxidase (notatin)' (with E.F. Hartree) <u>Biochemical Journal</u> , <u>50</u> , 331-341, 1951. Draft and notes.	1951

148. (cont)	'Purification of horseradish peroxidase and comparison of its properties with those of catalase and methaemoglobin,' (with E.F. Hartree), <u>Biochemical Journal</u> , <u>49</u> , 88-106, 1951. Ms notes and draft	1951
	'Cytochrome oxidase and the "Pasteur enzyme,"' (with E.F. Hartree), <u>Nature</u> , <u>171</u> , 413, 1953. Ms draft	1953
149.	'Biological catalysis of mutarotation of glucose,' (with E.F. Hartree), <u>Biochemical Journal</u> , <u>50</u> , 341-348, 1951. Proof with Ms corrections, drawings.	1951
150.	Work on nomenclature of cytochromes: correspondence, papers and comments.	1953 – 54
151.	'The aerobic oxidation of dihydroxyfumaric acid in presence of peroxidase,' (with E.F. Hartree), Ms notes and drafts for article	1954 - 58
152.	Work on cyanide: Ms notes and bibliographies c.	1955
153.	'Distribution and diversity of haemoglobin,' <u>Acta Biochemica</u> <u>Polonica, 3</u> , 439-457, 1956. Ms notes, drafts, typescript with Ms corrections.	1956
154.	'Reactions of catalase with hydrogen peroxide and hydrogen donors,' (with P. Nicholls), <u>Biochemical Biophysica Acta</u> , 29, 302-307, 1958. Manuscript, experimental results, typescript with Ms corrections	1958
	'The problem of anabiosis or latent life,' The Leeuwenhoek Lecture, The Royal Society, 1958. Ms notes, working papers, drafts, bibliographies, correspondence, proofs with Ms cor- rections, 1st typed draft, printed copy. (in English, French, German, Italian)	1959
158.	'Effect of inhibitors on the activity of soluble succinic dehydrogenase and on the reconstitution of the succinic de- hydrogenase-cytochrome systems from its components,' (with Tsoo E. King), <u>Proceedings of the Royal Society</u> B, <u>152</u> , 163-187, 1960. Correspondence, Ms notes, proof with Ms cor- rections.	1960
159.	'Haemerythrin,' Acta Biochemica Polonica, 7, 415-424, 1960. Ms drafts, annotated bibliography, notes, calculations, reprints and related correspondence. (in English, French, German)	1960
160.	'The problem of language in publications of works of scientific and other fields of learning,' <u>Nature</u> , <u>186</u> , 912, 1960. Ms drafts, notes, bibliography and correspondence.	
161.	[*] Maurice Caullery 1868-1958, [*] <u>Biographical Memoirs of Fellows of</u> <u>the Royal Society</u> , 6, 13-31, 1960. Ms notes, correspondence, proof with Ms corrections. (in English, French)	1960

162. Work on cyanide. Ms drafts, notes; annotated bibliographies, 1961 - 63 correspondence, and related offprints. (in English, German)

- 163. 'Reactions of haemoproteins with hydrogen peroxide and the 1961 supposed formation of hydrogen peroxide during the autoxida-tion of haemoglobin,' <u>Nature</u>, <u>191</u>, 769-770, 1961. Manuscript, laboratory observations (in another hand), proof with Ms corrections.
- 164. 'Metabolism of haemoglobin and haematin compounds in Ascaris 1962 Lumbricoides, ' (by M.H. Smith and D.L. Lee). Keilin's discussion of paper, correspondence.
- 165. 'Absorption spectra and some other properties of cytochrome 1962 <u>c</u> and of its compounds with ligands,' (with W.D. Butt), <u>Pro-</u> <u>ceedings of the Royal Society</u> B, <u>156</u>, 429-458, 1962. Ms notes, report by Butt.
- 166. Miscellaneous reviews of books and papers: Ms notes and drafts n.d.
- 167.- 'The History of Cell Respiration and Cytochrome,' Cambridge 1964
 170. University Press, 1964. Ms notes and drafts, typescripts with Ms corrections. (in English and German)
- 171. <u>Parasitology</u>: correspondence with Cambridge University Press 1933 62 on editorial matters
- 1933 62 172 .- Parasitology: correspondence with authors and referees 172. Articles numbered by Keilin 1139 - 1219 175. 11 11 11 11 1221 - 1231173. 11 11 11 11 1232 - 1253 174. 11 17 11 " 1255 - 1294 175.

VII. Conference

176. International Union of Biochemistry Symposium, Canberra, 1959
 6 and 7 September, 1959. Correspondence, reports, Ms comments on cytochrome nomenclature, sub-commission meetings reports.

VIII. Correspondence

177.	Miscellaneous correspondence with colleagues in other countries (in French, German, Polish, Russian)	1911 - 38
178.	re: protozoa (in English, French, Italian)	1921 - 24
179.	re: sample analyses	·
180 199.	Files of scientific correspondence arranged alphabetically according to correspondent. See Index, page 13. (in English, French, German, Russian, Polish)	
200.	Correspondence re grants for Keilin's early work (including letters from Nuttall to Royal Society and M.R.C.); Keilin's application for Quick Professorship.	1918 – 31
201.	Correspondence of Keilin and Nuttall with Sir James Fowler re Beit Memorial Fellowship; Keilin's annual reports on work.	1920 – 26

202.	Correspondence with Sir Edward Mellanby re: M.R.C. grant; with Sir Henry Dale re: personal grant from Wellcome Trust, Keilin's annual reports on work.	1947 – 61
203.	Correspondence re: continuing research grants from Nuffield Foundation	1951 - 55
204.	Correspondence re various articles written for Proceedings of the Royal Society (including correspondence with Dr. W.D. Butt for 1962 article)	1939 – 62
205.	Correspondence re various articles for <u>Nature</u> and the <u>Biochem</u> - <u>ical Journal</u>	1949 - 62
206.	Miscellaneous correspondence with Cambridge University Press, with L.P. Wilkinson re: Keilin's obituary for Professor L.P. Pugh; with Geoffrey LaPage	1951 – 63
207.	Miscellaneous correspondence with various scientific journals	1953 - 62
208.	Miscellaneous invitations to lecture (in English, French)	1932 - 60
209.	Miscellaneous request to visit the Molteno Institute	1954 - 62
210.	Miscellaneous undated letters	n.d.
211.	Requests for Keilin's offprints	

212.- Files of confidential correspondence to be consulted only with 219. permission of the Keeper of Manuscripts, Cambridge University Library. A detailed list is included with the collection.

IX. Drawings

220.- Miscellaneous parasitological drawings relating to work by 222. Keilin, Nuttall, Ross. (some dated)

X. Historical material

223.	Material relating to C.A. MacMunn	1867 - 1925
224.	'Physiological Atlas,' pen, ink and watercolor anatomical drawings by C.A. MacMunn	1873 to
225.	Scientific correspondence of Professor G.H.F. Nuttall (in Eng- lish, French)	1899 - 1910
226.	Letters from Sir Ronald Ross to Professor Nuttall	1899 - 1901
227.	Ms notes by Nuttall: 'Mosquito breeding places'	n.d.
228.	Obituaries of Nuttall; application for Quick Professorship	1906
229.	Water-colour drawings of parasitological subjects by Mrs. Anna Keilin, signed and dated.	1919, 1929

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