

Catalogue of the papers and correspondence of

Peter Dennis Mitchell FRS

(1920 - 1992)

VOLUME II

Sections D - F

by Alan Hayward, Adrian Nardone and Timothy E.
Powell

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SECTION D

PUBLICATIONS, LECTURES AND BROADCASTS

D.1-D.481

D.1-D.330

PUBLICATIONS

D.1-D.223 Drafts

D.224-D.322 Editorial correspondence:

D.323-D.330 Letters to *The Times* and *Financial Times*

D.331-D.455

LECTURES

D 456-D.470

BROADCASTS

D.471-D.477

NON PRINT MATERIAL

D 478-D.481

REPRINTS

Publications, lectures and broadcasts

PUBLICATIONS

Drafts

A chronological sequence of material relating to publications, or to the intention to publish. Where applicable reference has been made to the bibliography in the Royal Society Biographical Memoir of Mitchell (A.1) in the form *Bibliog.* ... Initial capital letters represent the surnames authors; the lower case letter after the date indicates the sequence of publication within the year. Thus MM1967a is co-authored with J.M. Moyle and is the first paper published in 1967.

Reference may also be found to 'Grey Books'. These were special scientific papers published by the Glynn Research Institute. Two such publications were produced. See D.60, D.61.

Additional material relating to publications, lectures and broadcasts can be found in Section G.

At D.217-D.223 are undated drafts.

- D.1 'The positive acids of staphylococcus aureus and other gram-positive penicillin-sensitive bacteria: hydrolytic products and possible backbone structure' with J.M. Moyle, *Bibliog.* MM1958e.
8pp typescript with manuscript annotations.
- D.2 'The mechanism of coupling in oxidative and photosynthetic phosphorylation', ca.1960.
Folder with manuscript annotations; 6pp manuscript draft; manuscript notes with bibliographical references.
- D.3 'Approaches to the analysis of specific membrane transport', *Bibliog.* M1961e.
32pp annotated typescript early draft of paper with tables and captions.
- D.4, D.5 'Molecule and group and electron translocation through natural membranes', *Bibliog.* M1962c.

Publications, lectures and broadcasts

- D.4 'Symp. Biochem. Soc. 9 March 1962 (Copy) My original copy. (Biochem J. 83. 22p-23p)', 49pp typescript with tables.
- D.5 Correspondence *re* publication of *Biochemical Society Symposium 22*.
- D.6 'Group translocation and the intrinsic vectorial character of group transfer reactions', *ca.*1962.

9pp typescript draft; 10pp manuscript draft; further manuscript draft notes and figures.
- D.7 'The chemical asymmetry of membrane transport processes', *Bibliog.* M1963b.

'Chicago old copy diagrams etc.'. Contents of folder so inscribed.

22p typescript with manuscript corrections and additions with captions and figures, annotated with corrections.
- D.8 'The effects of pH and uncoupling of oxidative phosphorylation on the entry and oxidation of succinate by strain L fibroblasts' with R. A. Reid, *ca.*1964. No reference in *Bibliog.*

18pp typescript with figures, annotated with corrections.
- D.9, D.10 'Stoichiometry of proton translocation through the respiratory chain and adenosine triphosphatase system of rat liver mitochondria', with J. M. Moyle, *Bibliog.* MM1965a.
- D.9 Galley proof with corrections; correspondence *re* publication and request to reprint Mitchell's article, May 1983.
- D.10 'Evidence discriminating between the chemical and chemiosmotic mechanisms of electron transport phosphorylation', with J. M. Moyle, *Bibliog.* MM1965b.

Galley proof; correspondence *re* publication.

Publications, lectures and broadcasts

- D.11 'Metabolic flow in the mitochondrial multiphase system: an appraisal of the chemi-osmotic theory of oxidative phosphorylation', *Bibliog.* M1966a. See F.12.

1p addendum; correspondence *re* publication.
- D.12 'Chemiosmotic coupling in oxidative and photosynthetic phosphorylation', *Bibliog.* M1966b and M1966d. See also G.88.

Manuscript draft pages, captions and figures.
- D.13 'Synthesis of adenosine triphosphate', with R. A. Reid and J. M. Moyle, *Bibliog.* RMM1966e.

Correspondence *re* publication.
- D.14 'Translocations through natural membranes', *Bibliog.* M1967a.

Correspondence *re* publication and request to quote from published article.

Annotated folder with figures.
- D.15 'The chemiosmotic hypothesis of oxidative phosphorylation: question and answer' with J. M. Moyle, *Bibliog.* MM1967b.

Correspondence *re* publication and request for reprints.
- D.16 'Intramitochondrial pH: a statistical question of hydrogen ion concentration in a small element of space-time', *Bibliog.* M1967c.

Correspondence *re* publication and request for reprints.
- D.17 'Proton current flow in mitochondrial systems', *Bibliog.* M1967f.

7pp typescript with figure; galley proof with corrections; 3pp typescript entitled 'Oxidative phosphorylation: fact versus hypothesis' including covering letter to *Nature* seeking its publication; correspondence *re* publication; subsequent erratum insertion and invitation to reply to published letter by H. Baum *re* Mitchell's paper; etc.

Publications, lectures and broadcasts

- D.18, D.19 'Acid-base titration across the membrane system of Rat-Liver Mitochondria' with J.M. Moyle, *Bibliog.* MM1967g.
- D.18 53pp typescript with captions, tables and figures, annotated with corrections.
- D.19 Correspondence *re* publication; galley proof with corrections.
- D.20-D.22 'Respiration-driven proton translocation in Rat Liver Mitochondria' with J.M. Moyle, *Bibliog.* MM1967i.
- D.20 Galley proof with corrections; correspondence *re* publication.
- D.21 60pp typescript with captions and figures.
- D.22 49pp typescript with corrections; part of bibliography with corrections; manuscript captions.
- D.23 Contents of single folder: ' H^+ translocator oxido-reductases', manuscript, *ca.* 1961, (not listed in *Bibliog.*). 'Translocation Catalysis', 10pp typescript, *ca.* 1966.
- D.24 'Book on Transferral'. Contents of folder so inscribed. Unidentified typescripts and manuscript draft contents. Not listed in *Bibliog.*

Two unidentified 12pp typescripts with corrections: 'Introduction', *ca.* 1965; Untitled, *ca.* 1967.
- D.25-D.27 'Bromthymol blue as a pH indicator in mitochondrial suspensions' with J.M. Moyle and L. Smith, *Bibliog.* MMS1968a.
- D.25 Correspondence *re* publication; galley proof with corrections.
- D.26 Further correspondence *re* publication; diagrams.

Publications, lectures and broadcasts

- D.27 52pp typescript with captions and figures.
- D.28-D.30 'Proton translocation coupled to ATP hydrolysis in Rat Liver Mitochondria' with J.M. Moyle, *Bibliog.* MM1968b.
- D.28 Correspondence *re* publication; galley proof with corrections.
- D.29 35pp typescript with corrections; 'Discussion and Conclusions, the Two Stage Time Cause of Δ pH Decay', 5pp manuscript of section of paper so inscribed.
- D.30 47pp typescript with captions and figures.
- D.31, D.32 'Permanent and impermanent anions and acids in rat liver mitochondria' with J.M. Moyle, rejected by *FEBS Letters* 17 October 1968.
- D.31 Comments by referee and 6pp typescript with captions and figures.
- D.32 Correspondence *re* publication; 6pp typescript with captions and figures annotated 'penultimate version'.
- D.33 'Estimation of membrane potential and pH difference across the cristae membrane of rat liver mitochondria' with J.M. Moyle, *Bibliog.* MM1969a.

Correspondence *re* publication; referee's report; typescript corrections for text; captions and figures;
- D.34, D.35 'The polarity of proton translocation in some photosynthetic microorganisms' with J.M. Moyle and P. Scholes, *Bibliog.* SMM1969b.
- D.34 Correspondence *re* publication including corrections and alterations.
- D.35 22pp typescript with captions and figures

Publications, lectures and broadcasts

- D.36-D.38 'Translocation of some anions, cations and acids in rat liver mitochondria' with J.M. Moyle, *Bibliog.* MM1969c.
- D.36 Correspondence *re* publication including corrections and alterations; referee's 2nd report.
- D.37 28pp typescript with captions and figures.
- D.38 Galley proof with illustrations attached; 33pp typescript with captions and figures.
- D.39-D.41 'Chemiosmotic coupling and energy transduction' *Bibliog.* M1969d.
- D.39 Correspondence *re* publication; 1p typescript with corrections.
- D.40 Further correspondence *re* publication; 1p typescript of preface to published volume; 'Chemiosmotic Coupling', 2pp typescript and 2pp manuscript drafts so inscribed.
- D.41 Galley proof with corrections.
- D.42 'Aspects of chemiosmotic hypothesis', *Bibliog.* M1969f.

26pp typescript with table, annotated with corrections; list of papers in preparation; manuscript diagram.
- D.43, D.44 'Effect of membrane potential on equilibrium poise between cytochrome *a* and cytochrome *c* in Rat Liver Mitochondria' with P. Hinkle, *Bibliog.* HM1970d.
- D.43 Correspondence *re* publication; report on Mitchell and Hinkle's paper.
- D.44 38pp typescript with captions and graphs, annotated with corrections.

Publications, lectures and broadcasts

- D.45 'Influence of aurovertin on affinity of mitochondrial adenosine triphosphatase for ATP and ADP' with J.M. Moyle, *Bibliog.* MM1970b.
- Correspondence *re* publication; 9pp typescript with captions and graphs.
- D.46 'Acid-base titration across the plasma membrane of micrococcus denitrificans: factors affecting the effective proton conductance and the respiratory rate' with P. Scholes, *Bibliog.* SM1970c.
- 27pp typescript with captions, graphs and tables.
- D.47, D.48 'Effect of membrane potential on equilibrium poise between cytochrome *a* and cytochrome *c* in Rat Liver Mitochondria' with P. Hinkle, *Bibliog.* HM1970d. See also G.418.
- D.47 Correspondence *re* publication and scientific discussion with P. Hinkle; 36pp typescript with captions, tables and graphs.
- D.48 Manuscript notes for figures and text.
- D.49 'Aurovertin-sensitive phosphate activation of mitochondrial adenosine triphosphatase' with J.M. Moyle, *Bibliog.* MM1970f.
- Correspondence *re* publication; 6pp typescript with captions and graphs.
- D.50-D.57 'Reversible coupling between transport and chemical reactions', *Bibliog.* M1970h.
- D.50-D.52 170pp typescript with list of corrections and draft contents. 3 folders.
- D.53-D.55 170pp typescript with draft contents annotated 'Final'. 3 folders.
- D.56, D.57 Correspondence *re* publication; galley proof with corrections; glossary of symbols etc. 2 folders.

Publications, lectures and broadcasts

- D.58 ' "Energy-Linked" reactions of b cytochromes', ca.1970. Not listed in *Bibliog*.
Typescript with corrections; manuscript draft.
- D.59 'Possible carrier function of adenine nucleotides in ion transport', ca.1970.
Not listed in *Bibliog*.

16pp typescript with figures.
- D.60, D.61 'Biochemical aspects of chemiosmotic coupling', unpublished third 'Grey
Book', ca. 1970. See introduction.
- D.60 50pp typescript with corrections.
- D.61 50pp typescript, an earlier version of the paper with original title of
'Chemiosmotic coupling and porterology'.
- D.62, D.63 'Activation and inhibition of mitochondrial adenosine triphosphatase by
various anions and other agents' with J.M. Moyle, *Bibliog*. MM1971a.
- D.62 Galley proof with corrections; correspondence etc. *re* publication.
- D.63 20pp typescript with tables and graphs.
- D.64, D.65 'Structure and function of the respiratory chain of mitochondria and
bacteria', *Bibliog*. M1971b.

'Original draft'. Contents of folder so inscribed, divided into two for ease of
reference. 50pp typescript with captions, diagrams and tables, annotated
with corrections.
- D.66, D.67 'Proton-coupled β -galactoside translocation in non-metabolizing *Escherichia*
coli' with I.C West, *Bibliog*. MW1972a.
- D.66 Correspondence *re* publication; 'Proton movements coupled to the transport
of β -galactosides into *Escherichia coli*' (running title) by I.C. West, 16pp
typescript with captions and graphs.

Publications, lectures and broadcasts

- D.67 Galley proof with corrections; 21pp typescript with captions and graphs, annotated with corrections.
- D.68, D.69 'Chemiosmotic coupling in energy transduction: a logical development of biochemical knowledge', *Bibliog.* M1972b.
- D.68 Correspondence *re* publication.
- D.69 33pp typescript.
- D.70 'Proton-translocating pyrophosphatase of *Rhodospirillum rubrum*' with J.M. Moyle and R. Mitchell, *Bibliog.* MMM1972c.

Correspondence *re* publication; 6pp typescript with captions and graphs.
- D.71 'Self-electrophoretic locomotion in microorganisms: Bacterial flagella as giant ionophores: a hypothesis', *Bibliog.* M1972d.

Correspondence *re* publication; 7pp typescript with captions and diagrams.
- D.72, D.73 'Performance and conservation of osmotic work by proton-coupled solute porter systems', *Bibliog.* M1973a.
- D.72 Correspondence *re* publication; 10pp typescript with corrections appended.
- D.73 45pp typescript with captions and diagrams, annotated with corrections.
- D.74, D.75 'The proton-translocating nicotinamide-adenine dinucleotide (phosphate) transhydrogenase of Rat Liver mitochondria' with J.M. Moyle, *Bibliog.* MM1973b.
- D.74 Correspondence *re* publication.
- D.75 31pp typescript with captions and table, annotated with corrections.

Publications, lectures and broadcasts

- D.76, D.77 'Stoichiometry of lactose-H⁺ symport across the plasma membrane of *Escherichia coli*' with I.C. West, *Bibliog.* WM1973c.
- D.76 Correspondence *re* publication; galley proof with corrections.
- D.77 15pp typescript with captions and graphs.
- D.78 'Proton translocation quotient for the adenosine triphosphatase of rat liver mitochondria' with J.M. Moyle, *Bibliog.* MM1973d.
- Correspondence *re* publication; 7pp typescript with captions, graphs and table.
- D.79, D.80 'Cation-translocating adenosine triphosphatase models. How direct is the participation of adenosine triphosphate and its hydrolysis products in cation translocation?', *Bibliog.* M1973f.
- D.79 Correspondence *re* publication.
- D.80 14pp typescript with captions and diagrams.
- D.81 'The proton-translocating ATPase of *Escherichia coli*' with I.C. West, *Bibliog.* WM1974b.
- Correspondence *re* publication; copy of corrected galley proof; reprint with corrections; 10pp typescript with captions and graphs.
- D.82, D.83 'A chemiosmotic molecular mechanism for proton-translocating adenosine triphosphatases', *Bibliog.* M1974d.
- D.82 Correspondence *re* publication; corrected typescript version of page 8.
- D.83 Two proof copies with corrections; 15pp typescript with captions and diagrams; miscellaneous new page versions.

Publications, lectures and broadcasts

- D.84-D.86 'Proton/sodium ion antiport in *Escherichia coli*' with I.C. West, *Bibliog.* WM1974e.
- D.84 Correspondence *re* publication; galley proof with corrections.
- D.85-D.86 Five different typescript versions with corrections. 2 folders.
- D.87, D.88 'Proton translocation mechanisms and energy transduction by adenosine triphosphatases: an answer to criticisms', *Bibliog.* M1975a.
- D.87 Correspondence *re* publication.
- D.88 7pp typescript; reprint of *Bibliog.* M1974d with corrections found therewith.
- D.89 'Active/inactive state transitions of mitochondrial ATPase molecules influenced by Mg^{2+} anions and aurovertin' with J.M. Moyle, *Bibliog.* MM1975b.

Correspondence *re* publication.
- D.90 'Protonmotive redox mechanism or the cytochrome *b-c*₁ complex in the respiratory chain: protonmotive ubiquinone cycle: Hypothesis', *Bibliog.* M1975c.

Correspondence *re* publication.
- D.91, D.92 'The protonmotive Q cycle: a general formulation', *Bibliog.* M1975d.
- D.91 Correspondence *re* publication.
- D.92 6pp typescript with captions and diagram and corrected version of page five.

Publications, lectures and broadcasts

- D.93, D.94 'Vectorial chemistry and the molecular mechanics of chemiosmotic coupling: power transmission by proticity', *Bibliog.* M1976a, see also D.386-D.391.
- Found in Mitchell's folder inscribed 'SGM paper previous efforts, refs. etc. 1976 Ciba Medal Lecture'.
- D.93 'Vectorial Chemistry...', draft typescript versions.
- D.94 'Partially reversible coupling between chemical transformation and physical translocation in vectorial biochemical systems: general theory of vectochemical and chemiosmotic processes', incomplete manuscript and typescript draft. Not listed in *Bibliog.*
- D.95-D.97 'Possible molecular mechanisms of the protonmotive function of cytochrome systems', *Bibliog.* M1976b.
- D.95 Correspondence *re* publication.
- D.96 Galley proof with corrections.
- D.97 77pp typescript with captions and diagrams.
- D.98 'Electric charge stoichiometry of calcium translocation in rat liver mitochondria' with J.M. Moyle, *Bibliog.* MM1977a.
- Correspondence *re* publication; 10pp typescript with table and graphs.
- D.99 'The lanthanide-sensitive calcium phosphate porter of rat liver mitochondria' with J.M. Moyle, *Bibliog.* MM1977c.
- Correspondence *re* publication; 6pp typescript with captions, graphs and tables.
- D.100, D.101 'A commentary on alternative hypotheses of protonic coupling in the membrane systems catalysing the oxidative and photosynthetic phosphorylation', *Bibliog.* M1977d.

Publications, lectures and broadcasts

- D.100 Correspondence *re* publication; draft printed and manuscript diagrams.
- D.101 44pp typescript with captions and diagrams.
- D.102-D.108 'Vectorial chemiosmotic processes', *Bibliog.* M1977e.

This paper was intended for a 'joint review', along with a number of leading scientists, of oxidative phosphorylation and photophosphorylation to feature in the *Annual Review of Biochemistry* 46 edited by Boyer *et al.* See G.76-G.81, G.170.
- D.102-D.104 'Boyer Review and Correspondence File 1'. Contents of folder so inscribed. 3 folders.
- D.102 Correspondence *re* publication. 'Electron transfer reactions and their control by structural, chemical and electrical changes' [by B. Chance], 7pp typescript.
- D.103 Further correspondence *re* publication. 'Introduction oxidative and photosynthetic phosphorylation' by E. Racker, 1p typescript; 'Oxidative phosphorylation' by E. Racker, 11pp typescript with figures.
- D.104 Further correspondence *re* publication.
- D.105-D.108 Contents of two pocket wallets. The first wallet has been divided into two folders D.105, D.106, the second into two folders D.107, D.108.
- D.105 Correspondence *re* publication; manuscript diagrams and notes.
- D.106 Various draft versions of 'Oxidative phosphorylation' with corrections.
- D.107 Correspondence with E.C. Slater *re* his paper and publication of the joint review; 'Energy conservation in the respiratory chain' by Slater, 17pp typescript with captions, tables, and diagrams.

Publications, lectures and broadcasts

- D.108 Correspondence with P.D. Boyer *re* Mitchell's paper and publication of the joint review; two typescript versions of 'Oxidative phosphorylation...' by Boyer; page entitled 'Introduction, oxidative phosphorylation and photophosphorylation', author unidentified. 14pp typescript with caption and diagram annotated as being a preliminary draft.
- D.109 'Lanthanide-sensitive calcium-monocarboxylate symport in rat liver mitochondria' with J.M. Moyle, *Bibliog.* MM1977f.
- Correspondence *re* publication; galley proof copy with corrections; 11pp typescript with captions and tables; draft figures, graphs and tables.
- D.110 'Protonmotive chemiosmotic mechanisms in oxidative and photosynthetic phosphorylation', *Bibliog.* M1978a.
- Mitchell's paper led to the publication of a Letter by R.J.P. Williams in the same journal, *Trends in Biochemical Sciences*, (*TIBS*) and a resumption of their private discussion on the origins of the chemiosmotic hypothesis. Mitchell prepared an open letter in response to that of Williams but decided not to publish it. See also D.294.
- Correspondence 1975-1976 between the editors and Mitchell *re* the possibility of establishing a scientific debate between himself and Williams in *TIBS* (Mitchell declined); related proofs of papers by Williams and H. Morowitz; correspondence 1978 between Mitchell, Williams and editors *re* Williams's Letter and Mitchell's proposed response; manuscript and typescript drafts of Mitchell's Letter of response; photocopy of Williams's published Letter.
- D.111 'Protonmotive Q cycle mechanism in photosynthetic bacteria: hypothesis', *Bibliog.* M1978b.
- 'rejected by FEBS Letters 27.2.78. Later published by Glynn Research Ltd' original folder so inscribed.
- Correspondence *re* publication; two typescript versions with corrections.
- D.112 'Cytochrome *c* oxidase is not a proton pump' with J.M. Moyle, *Bibliog.* MM1978c.
- Correspondence *re* publication; galley proof copy with corrections.

Publications, lectures and broadcasts

- D.113 'Measurements of mitochondrial $\leftarrow H^+/O$ Quotients: Effects of phosphate and *N*-ethylmaleimide' with J.M. Moyle, *Bibliog.* MM1978d.
- Correspondence *re* publication; 8pp typescript with caption and graphs, annotated with corrections.
- D.114-D.117 'Philadelphia July 1978'. Contents of Mitchell's four folders so inscribed.
- D.114 'Vectorial electron, hydrogen, proton and oxyanion conduction in chemiosmotic reaction mechanisms', *Bibliog.* M1978e.
- Copy of letter *re* publication; 10pp typescript with captions and diagrams, annotated with corrections.
- D.115 'Electron translocating function of cytochrome oxidase' with J.M. Moyle, *Bibliog.* MM1978f.
- Copy of letter *re* publication; three typescript versions with corrections.
- D.116 'Protonmotive stoichiometry of redox and ATPase systems' with J.M. Moyle and R. Mitchell, *Bibliog.* MMM1978g.
- Copy of letter *re* publication; incomplete typescript versions with corrections.
- D.117 'Calcium-anion symport systems in mitochondria' with J.M. Moyle, *Bibliog.* MM1978h.
- Copy of letter *re* publication; four typescript drafts with corrections.
- D.118 'Electronmotive function of cytochrome oxidase' with J.M. Moyle, *Bibliog.* MM1979a.
- Correspondence *re* publication; 12pp typescript with diagrams.
- D.119 'Measurement of $\rightarrow H^+/O$ in mitochondria and submitochondrial vesicles' with J.M. Moyle and R. Mitchell, *Bibliog.* MMM1979c.
- Correspondence *re* publication; part of corrected typescript; 21pp typescript with captions and diagrams.

Publications, lectures and broadcasts

- D.120 'David Keilins konzept der atmungskette und dessen chemiosmotische konsequenzen (nobel-vortrag)', *Bibliog.* M1979d (G[erman]).
- Correspondence *re* publication; galley proof copy with diagrams, annotated with corrections.
- D.121 'The cyclic electron transport pathway in chloroplasts. Reduction of plastiquinone by reduced nicotinamide adenine dinucleotide phosphate in the dark' with J.D. Mills and J. Barber, *Bibliog.* MMB1979f.
- Correspondence *re* publication.
- D.122 'Protonmotive cytochrome system of mitochondria', *Bibliog.* M1980b.
- Original folder was inscribed 'Roy Inst. Prepⁿ /paper'.
- Manuscript notes *re* 'Discourse on 13th March'; 28pp typescript with captions and diagrams, annotated with corrections; draft typescript and manuscript pages.
- D.123 'Davy's electrochemistry: Nature's protochemistry', *Bibliog.* M1981a. This was a published version of Mitchell's Davy Memorial Lecture of 1980 (see D.414, D.415). For correspondence *re* publication see D.414, D.415.
- Letters published in *Chemistry in Britain* and related correspondence arising from debate between Mitchell, R.J.P. Williams and D.B. Kell *re* issues arising from Mitchell's published lecture; typescript of Mitchell's 'Response', *Bibliog.* M1981c.
- D.124 'Biochemical mechanism of proton motivated phosphorylation in F₀F₁ adenosine triphosphatase molecules', *Bibliog.* M1981d.
- Correspondence *re* publication etc.
- D.125 'From black-box bioenergetics to molecular mechanics; vectorial ligand-conduction mechanisms in biochemistry', *Bibliog.* M1981e. See also G.265.
- Correspondence *re* publication; 23pp typescript with additional corrected pages.

Publications, lectures and broadcasts

- D.126-D.138 'Bioenergetic aspects of unity in biochemistry: Evolution of the concept of ligand conduction in chemical, osmotic, and chemiosmotic reaction mechanisms', *Bibliog.* M1981g.
- This was part of a series of books intended to chart the evolution of biochemistry. R.J.P. Williams was also asked to contribute and correspondence etc. *re* his involvement can be found at D.128-D.132.
- D.126-D.132 'Revised text requested by end of 1979'. Contents of Mitchell's folder so inscribed divided into seven for ease of reference.
- D.126, D.127 Correspondence with G. Semenza (editor) and Wiley and Sons, publishers *re* publication; part of corrected draft. 2 folders.
- D.128, D.129 Correspondence with G. Semenza, Wiley and Sons and Williams *re* publication. 2 folders.
- D.130-D.132 Typescript copy of intended contribution of Williams entitled 'The origins of proton-driven atp-formation: a personal analysis'. 3 folders.
- D.133 Various typescript pages with manuscript corrections of Mitchell's paper.
- D.134, D.135 Galley proof copy of Mitchell's paper with corrections.
- D.136-D.138 Typescript of Mitchell's paper. 3 folders.
- D.139 'An exercise in the difference between money and currency', October 1981. Not listed in *Bibliog.*
- 12pp manuscript draft.
- D.140, D.141 Foreword for *Topics in Photosynthesis*, Vol. 4, *Bibliog.* M1982b.
- D.140 Correspondence *re* publication.

Publications, lectures and broadcasts

- D.141 4pp typescript draft.
- D.142 'Science and humanity: an essay on analytic and appreciative communication', *Bibliog.* M1982g.
Correspondence *re* publication.
- D.143 'Chemiosmotic ATPase mechanisms' with W.H. Koppenol, *Bibliog.* MK1982i.
Correspondence *re* publication including discussions with Koppenol *re* scientific matters in paper; manuscript notes headed 'Definition of um force of chemical and osmotic pressures'; 8pp typescript copy with corrections; manuscript notes and diagram; draft diagrams.
- D.144-D.146 'A commentary on alternative hypotheses of proton ejection in cytochrome oxidase vesicles: transmembrane proton pumping or redox-linked deprotonation of phospholipid-cytochrome *c* complexes' with J.M. Moyle, *Bibliog.* MM1983a.
- D.144 Galley proof copy with corrections and list of recipients of copies.
- D.145 24pp typescript draft with captions and graph, annotated with corrections.
- D.146 Correspondence *re* publication.
- D.147 'The role of thioredoxin in the regulation of the reversible protonmotive ATPase of chloroplasts' with J.V. Mills and P. Schurmann, *Bibliog.* MMS1983b.
Correspondence *re* publication.
- D.148-D.151 Preparatory work for unidentified paper dated May 1983.
- D.148 'New appendix', 9pp manuscript draft.

Publications, lectures and broadcasts

- D.149 8pp manuscript draft and calculations.
- D.150 Manuscript drafts and calculations.
- D.151 Manuscript calculations.
- D.152 'Chemiosmosis: a term of abuse', *Bibliog.* M1984b.

Galley proof copy with corrections; correspondence *re* publication; 3pp typescript.
- D.153-D.157 'Bacterial flagellar motors and osmoelectric molecular rotation by an axially-transmembrane well and turnstyle mechanism', *Bibliog.* M1984d.
- D.153 Typescript with corrections dated 24 July 1984.
- D.154 Manuscript drafts of captions; corrected typescript pages; draft manuscript diagrams.
- D.155 Incomplete typescripts with corrections dated 13 and 18 July 1984; incomplete typescript draft (2pp) and manuscript drafts.
- D.156 Typescript 20 July 1984; manuscript drafts etc.; correspondence *re* publication; galley proof copy with corrections.
- D.157 14pp typescript draft with captions, annotated with corrections.
- D.158, D.159 'Outstanding problems of stoichiometry and mechanism in mitochondrial oxidative phosphorylation'. Not listed in *Bibliog.*

This was a review article for the *Biochemical Journal*.

Publications, lectures and broadcasts

- D.158 Correspondence *re* publication including the decision of the publishers and Mitchell not to publish.
- D.159 3pp typescript.
- D.160, D.161 'The correlation of chemical and osmotic forces in biochemistry', *Bibliog.* M1985a.

Also a plenary lecture to the Japanese Biochemical Society, October 1984. See F.173-F.182.
- D.160 Manuscript draft captions and notes.
- D.161 Correspondence *re* publication; galley proof with corrections.
- D.162-D.164 'Molecular mechanics of protonmotive F₀F₁ ATPases: rolling well and turnstyle hypothesis', *Bibliog.* M1985b.
- D.162 List of recipients of copies; 13pp typescript with captions and diagrams, annotated with corrections.
- D.163 Correspondence *re* publication; manuscript captions and diagrams; typescript with corrections.
- D.164 Manuscript drafts and typescript drafts with corrections.
- D.165-D.169 'The role of ubiquinone and plastoquinone in chemiosmotic coupling between electron transfer and proton translocation' with J.M. Moyle, *Bibliog.* MM1985c.
- D.165-D.167 Correspondence *re* publication. 3 folders.
- D.168 27pp typescript with captions and diagrams; brief typescript and manuscript notes.

Publications, lectures and broadcasts

- D.169 Draft manuscript diagrams.
- D.170, D.171 'Chemiosmotic coupling in cytochrome oxidase: Possible protonmotive O loop and O cycle mechanisms' with R. Mitchell, A.J. Moody, I.C. West, H. Baum and J.M. Wrigglesworth, *Bibliog.* M-W1985d.
- D.170 'Cytox Paper in preparation'. Contents of folder so inscribed also labelled 'misc. drafts of papers and figures':
- Correspondence *re* paper; 12pp typescript draft with table; 39pp manuscript notes and diagrams, paginated and dated 16-24 April 1985 (pages 35 and 36 are written on the reverse of two photocopied pages inscribed 'Diary' and dated 17 March and 26 February 1985 respectively); manuscript calculations, diagrams and tables etc.; 4pp incomplete draft with corrections.
- D.171 Correspondence *re* publication; galley proof copy with corrections.
- D.172 'Oxygen-pulse measurements of the chemiosmotic stoichiometry of cytochrome oxidase action in (Antimycin + Myxothiazol)-treated rat liver mitochondria using ferrocyanide or hexammineruthenium as electron donor', 6pp typescript draft, annotated, 24 June 1985. Not listed in *Bibliog.*
- D.173 'Citation Classic' in *Current Contents*, Vol. 29, No. 46, 17 November 1986. Not listed in *Bibliog.*
- Correspondence *re* publication; typescript draft. See also D.247.
- D.174-D.176 'New redox loop formalities involving metal-catalysed hydroxide-ion translocation: Hypothetical Cu loop and Cu link mechanisms for cytochrome oxidase', *Bibliog.* M1987f.
- D.174 Typescripts of paper with diagrams, annotated with corrections; 26pp typescript with corrections.
- D.175 Manuscript notes and diagrams; printed diagrams.
- D.176 Correspondence *re* publication; galley proof copy with corrections.

Publications, lectures and broadcasts

- D.177 'Protonmotive stoichiometry of rat liver cytochrome c oxidase: determination by a new rat/pulse method' with A.J. Moody, R. Mitchell, and I.C. West, *Bibliog.* MMWM1987h.
- Typescript of paper with captions, tables and graphs, annotated with corrections.
- D.178 'Cu_B loop mechanisms for cytochrome oxidase using a hydroxide or oxide e⁻ / H⁺ antiport gate', *Bibliog.* M1988b.
- Correspondence *re* publication; manuscript and typescript notes.
- D.179-D.181 'Respiratory chain systems in theory and practice', *Bibliog.* M1988f.
- D.179 Incomplete typescript of Mitchell's paper with manuscript corrections; manuscript and printed figures.
- D.180 Manuscript draft pages.
- D.181 16pp typescript with 2pp manuscript corrections.
- D.182, D.183 'Strategy of research on the chemiosmotic mechanism of cytochrome oxidase', *Bibliog.* M1988g.
- This paper was published as an 'explanation' to criticisms by B.G. Malmström in his paper 'Redox loops and proton pumps' which analysed an earlier publication by Mitchell (*Bibliog.* M1987f).
- D.182 Typescript pages with corrections; manuscript drafts.
- D.183 Galley proof copy with corrections; correspondence *re* publication; 'Redox loops and proton pumps' by B.G. Malmström.

Publications, lectures and broadcasts

- D.184 'Possible protonmotive osmochemistry in cytochrome oxidase', *Bibliog.* M1988m.
- This was Mitchell's lecture at a conference entitled 'Cytochrome oxidase: structure, function and physiopathology', Rome, 20-21 June 1988. See also F.264-F.267 and C.189-C.193.
- Correspondence *re* publication.
- D.185, D.186 'Science as a pursuit of humanity', *Bibliog.* M1989b. See also G.261.
- Up-dated version for special issue of *Kagaku To Kogyo* (Chemistry and Chemical Industry) entitled 'New Year Gifts from Nobel Laureates' January 1989.
- D.185 Correspondence *re* publication.
- D.186 Biographical note about Mitchell; 19pp typescript with captions and diagrams.
- D.187 'Discovering a niche for discovery' 3pp typescript. This was an article intended for the opinion section of *The Scientist* ca. late 1989/1990. See also D.236. Not listed in *Bibliog.*
- Science and Engineering Research Council newsletter, June 1989; correspondence *re* publication; two articles by B. Dixon from the opinion section of *The Scientist*; draft of letter by Mitchell to the *Financial Times* 21 April 1989 entitled 'Who knows best' but published under the title 'Control of education' (see D.326).
- D.188 'Avoiding the dead hand of central research planning'. Not listed in *Bibliog.*
- Annotated as having been revised on 6 November 1989.
- 1p typescript with corrections; 2pp manuscript drafts.
- D.189-D.194 Foreword to a book on 'Ion-coupled sugar transport in microorganisms' edited by P. Henderson and M. Page, 1990. Not listed in *Bibliog.*
- D.189 Correspondence *re* publication.

Publications, lectures and broadcasts

- D.190-D.194 Typescript draft of publication. 5 folders.
- D.195 'The vital protonmotive role of coenzyme Q', *Bibliog.* M1991f.
Abstract; 8pp typescript.
- D.196-D.201 'Osmochemistry of solute translocation', *Bibliog.* M1990b.

Mitchell's contributed to this collection of contributions known as the 6th Forum in Microbiology which was published in *Research Microbiology* 141.
- D.196 Correspondence *re* publication; galley proof copy with corrections; 3pp typescript of Mitchell's discussion contribution to the forum publication.
- D.197 8pp typescript of Mitchell's paper with corrections.
- D.198-D.201 Typescripts of other contributions to publication with Mitchell's annotations. 4 folders.
- D.202-D.206 Material relating to the proposed book 'Science and Humanity' *ca.* 1990. Not listed in *Bibliog.*

This book was intended to be the product of the 25th year celebratory symposium of the Glynn Research Institute. The book was not published and instead 'Perspectives in vectorial metabolism and osmochemistry' was produced see D.207-D.216 and B.173-B.177.
- D.202 List of invited contributors; secretarial note *re* funding of symposium; outline of meeting.
- D.203 Correspondence with K.R. Popper with brief reference to publication
- D.204, D.205 Correspondence etc. *re* invitations to contribute to publication. 2 folders.

Publications, lectures and broadcasts

- D.206 Manuscript notes; working copy of list of contributors; authors' addresses.
- D.207-D.216 'Perspectives in vectorial metabolism and osmochemistry', *Bibliog.* M1991k.

An earlier concept of this publication went under the title of 'Science and humanity', see D.202-D.206. A hard cover edition of the final product appeared in 1992 which Mitchell described as the 'Silver-Grey Book', see D.213-D.216 and B.173-177.

Mitchell's contribution was originally published in *Bioscience Reports* 11, No. 6 1991 as 'Foundations of vectorial metabolism and osmochemistry', *Bibliog.* M1991k.
- D.207, D.208 Correspondence *re* invitations to contribute to book including parts of annotated draft versions. 2 folders.
- D.209-D.212 Galley proof copies with corrections; typescript draft pages.
- D.213-D.216 Material from box file inscribed 'Symp. General Info and Instructions', 'Bioscience Rep. Vol 11 No. 6 1991' and 'Hard cover Book 1992: Correspondence, Plenum; Printer; Editorial Sec. and all general info'.
- D.213 'Hard cover book only'. Contents of file so inscribed.

Correspondence *re* publication; typescript notes and letters with annotations; galley proof copies of foreword and opening symposium remarks with corrections.
- D.214 Check list for hard cover book with annotations; correspondence *re* publication of hard cover version and Bioscience Reports version.
- D.215 'Symposium book-Anns file, Publishing, estimates, length etc'. Contents of file so inscribed.

Typescript secretarial notes *re* sale of Jubilee book and publication procedure; typescript page entitled 'Symposium Proceedings'; manuscript notes estimating the number of pages in the publication.

Publications, lectures and broadcasts

- D.216 Correspondence *re* publication of *Bioscience Reports* and 'Perspectives...'; annotated programme for Glynn Silver Jubilee International Symposium and *Conversazione*, 10-12 October; manuscript notes *re* discussion; instructions for submission of discussions for publication.

Undated drafts

- D.217 'A Description of Penicillin' 5pp typescript with diagrams and annotated 'Sent Oct 15'.
- D.218 Contents of Mitchell's folder: typescript pages post 1977; manuscript draft page; photocopies of three abstract papers by other authors two from 1975 and one from 1977 found therewith.
- D.219 'Uncoupling and coupling of o/r to P'. Contents of folder inscribed.

'A new conception of the coupling and uncoupling between electron transport and phosphorylation' manuscript draft with manuscript notes, diagrams, graphs and tables, post 1946.
- D.220 3pp typescript annotated with 'Sub-heading, energy transduction and energy dissipation in "chemically coupled" and "centrally coupled" reactions'.
- D.221 'Dyadics from Fitts nonequilibrium thermodynamics'. Contents of folder so inscribed.

'Appendix A Dyadics' 19pp typescript.
- D.222 Unidentified manuscript page with corrections, *ca.*1978 (bibliographical reference on reverse).

Diagrams and manuscript notes possibly relating to plans for a series of volumes on 'Aspects of osmochemistry'.

Publications, lectures and broadcasts

- D.223 'Article for Horizons in Biochemistry and Biophysics' and 'The protonmotive respiratory chain and oxidative phosphorylation'. Contents of folder so inscribed.
- 'The chemiosmotic redox and ATPase systems of oxidative and photosynthetic phosphorylation: studies in vectorial biochemistry', 3pp manuscript.

Editorial correspondence

Arranged alphabetically by publisher or journal title.

- | | | |
|-------------|--|-----------|
| D.224 | Academic Press | 1967 |
| | Invitation to contribute a section on antimetabolites to a proposed book (declined). | |
| D.225 | <i>Angewandte Chemie</i> | 1979 |
| | Request from translator for information on publication history of Mitchell's article 'David Keilin's respiratory chain concept and its chemiosmotic consequences', <i>Bibliog.</i> M1989d. | |
| D.226 | <i>Archives of Biochemistry and Biophysics</i> | 1974-1975 |
| | Refereeing. | |
| D.227 | Edward Arnold (Publishers) Ltd | 1961-1988 |
| | Correspondence <i>re</i> the possibility of writing a book; manuscript draft pages. | |
| D.228-D.233 | <i>Biochimica et Biophysica Acta</i> | 1972-1992 |
| | From 1972 Mitchell was on the Editorial Advisory Board. | |

Publications, lectures and broadcasts

- D.228-D.231 'BBA Reviews on Bioenergetics'. Contents of folder so inscribed.

Correspondence etc *re* advisory editorship, invitations to write articles, refereeing. 4 folders.
- D.232, D.233 'Review for BBA Reviews on Bioenergetics (promised for 1.6.90)'. Contents of folder so inscribed.

Correspondence *re* untitled review article to be written by Mitchell.
- D.234 *Biochemical Journal* 1967-1985

Correspondence *re* the concept of Information Exchange Groups and a recently published paper by Mitchell, possibly *Bibliog.* MM1967g or MM1967i; refereeing.
- D.235 *Biochemistry* 1978-1982

Refereeing.
- D.236 *Biological Reviews* 1962-1966

Invitation to write a review article (declined); correspondence *re* printing error in one of Mitchell's papers and request to reprint figures from paper, possibly *Bibliog* M1966d.

Biologist 1987, 1989

Invitation to write article for the 'Famous Laboratories' feature on the occasion of the 25th anniversary celebrations of the Glynn Research Foundation, 1989; update on the progress of Mitchell's 'Opinion' piece for the *Scientist* entitled 'Discovering a Niche for Discovery', see D.187.
- D.237 *Bioscience Reports* 1985-1987

Mitchell was honorary editorial advisor from 1985.

Correspondence *re* advisory editorship.

Publications, lectures and broadcasts

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|-------|--|-----------|
| D.238 | <i>British Medical Bulletin</i> | 1967 |
| | Invitation to contribute article on the chemiosmotic theory (declined). | |
| D.239 | Cambridge University Press | 1961-1985 |
| | Enquiry about the possibility of writing a book; correspondence <i>re</i> reprints. | |
| D.240 | Chapman and Hall Ltd | 1972-1976 |
| | Correspondence <i>re</i> Mitchell's role as advisor for a book on 'Techniques used in Membrane Studies'. | |
| D.241 | <i>Chemico-Biological Interactions</i> | 1974 |
| | Refereeing. | |
| D.242 | <i>Chemtracts</i> | 1990-1991 |
| | Invitation to write paper. | |
| D.243 | <i>Comments on Molecular and Cellular Biophysics</i> | 1979-1982 |
| | Invitation to write article (declined). | |
| D.244 | <i>Comprehensive Biochemistry</i> , Vol. 22 | 1966-1967 |
| | Correspondence <i>re</i> Mitchell's chapter on 'Active Transport and Ion Accumulation', <i>Bibliog.</i> M1967d. | |
| D.245 | <i>Comparative Biochemistry and Physiology</i> | 1979 |
| | Invitation to contribute to Festschrift in honour of M. Florkin's 80th birthday. Mitchell withdrew due to illness. | |

Publications, lectures and broadcasts

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|--------------|---|-----------|
| D.246 | CRC Press, Inc | 1975 |
| | Invitation to contribute article to the 'CRC Handbook of Nutrition and Food' (declined). | |
| D.247 | <i>Current Contents</i> | 1977-1980 |
| | Correspondence <i>re</i> Mitchell's article for Citation Classics section. See also D.173. | |
| D.248 | <i>Ecologist</i> | 1970-1987 |
| | Invitations to write articles (declined); Mitchell's request to take out a subscription. | |
| D.249, D.250 | Elsevier/North-Holland Publishers B.V. | 1971-1991 |
| D.249 | Invitation to write a book on bioenergetics (declined). | |
| D.250 | Correspondence <i>re</i> Mitchell's contribution on 'Chemiosmotic molecular mechanisms' to 'Molecular mechanisms in bioenergetics'. Mitchell withdrew due to illness. | |
| D.251-D.253 | <i>European Journal of Biochemistry</i> | 1967-1991 |
| | Mitchell was a member of the Advisory Board 1967-1989 | |
| D.251 | Correspondence <i>re</i> refereeing and with C. Liébecq concerning his history of the journal (1991). | |
| D.252 | Refereeing 1970-1978. | |
| D.253 | Refereeing 1981-1982. | |

Publications, lectures and broadcasts

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| D.254 | <i>Experientia</i> | 1982 |
| | Invitation to join the advisory board (declined). | |
| D.255-D.257 | <i>FEBS Letters</i> | 1970-1984 |
| D.255 | Refereeing 1970. | |
| D.256 | Refereeing 1974-1976. | |
| D.257 | Refereeing 1977-1984. | |
| D.258 | Fontana Press | 1989 |
| | Correspondence <i>re</i> definition of 'Chemiosmosis' in the 2nd edition of the 'Fontana Dictionary of Modern Thought'. | |
| D.259 | <i>Interdisciplinary Science Reviews</i> | 1986-1989 |
| | Correspondence <i>re</i> Mitchell's intention to publish 'Science as an imaginative pursuit of humanity' (<i>Bibliog.</i> M1989b) and Mitchell's subsequent withdrawal. | |
| D.260 | <i>International Review of Cytology</i> | 1959-1979 |
| | Invitations to write articles; invitation to become advisory editor. | |
| D.261 | <i>JB Review</i> | 1990-1992 |
| | Invitation to contribute (Mitchell was unable to contribute owing to his final illness). | |
| D.262, D.263 | <i>Journal of Bioenergetics</i> | 1969-1976 |
| | Mitchell was a member of the editorial advisory board from 1969 but appears to have resigned in 1975. For details of <i>Bibliog.</i> HM1970d see G.418 and D.47, D.48. | |

Publications, lectures and broadcasts

- D.262 Correspondence *re* invitation to write article for special issue on the structure-function relationship in energy-transducing membranes, 1972-1973.
- D.263 Refereeing 1969-1976.
- D.264, D.265 *Journal of Bioenergetics and Biomembranes* 1991-1992
- D.264 Invitation to write paper (withdrew), 1991-1992.
- D.265 Invitation to join the editorial board (declined), 1991.
- D.266 *Journal of Biological Chemistry* 1980
Invitation to referee paper (declined).
- D.267 *Journal of Biophysical and Biochemical Cytology* 1961
Refereeing.
- D.268 *Journal of General Microbiology* 1961-1978
Mitchell was a member of the editorial advisory board from *ca.*1962.
Correspondence *re* refereeing and Mitchell's own contribution to the *Journal* (*Bibliog.* M1962b).
- D.269-D.271 *Journal of Membrane Biology* 1972-1986
- D.269 Correspondence *re* invitation to write a topical review on 'Stoichiometry and mechanisms of proton translocation in mitochondria' (no evidence of publication).

Publications, lectures and broadcasts

D.270	Refereeing 1972.	
D.271	Refereeing 1974-1986.	
D.272	<i>Journal of Membrane Science</i> Invitation to referee (declined).	1981-1991
	<i>Journal of Molecular Evolution</i> Invitation to referee (declined).	1983
D.273-D.276	<i>Journal of Theoretical Biology</i> Refereeing.	1961-1989
D.273	1961, 1976, 1979.	
D.274	1964-1989.	
D.275	1975-1980.	
D.276	1977-1981.	
D.277	Alan R. Liss, Inc. Correspondence <i>re</i> a book on bioenergetics to which Mitchell was asked to contribute.	1983
D.278	<i>Membrane Biochemistry</i> Mitchell was an advisory editor from 1976. Correspondence <i>re</i> editorial board matters and refereeing.	1978-1992

Publications, lectures and broadcasts

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| D.279 | <i>Nature</i> | 1966-1989 |
| | Correspondence <i>re</i> possible review of a Glynn Research Institute publication (probably <i>Bibliog.</i> M1966b); refereeing; typescript secretarial notes <i>re</i> obtaining permission to quote from a paper published in <i>Nature</i> paper. | |
| D.280 | North-Holland Publishing Company | 1964-1970 |
| | Invitations to contribute to the 'Frontier in Biology' series (declined). | |
| D.281 | <i>Pharmacological Research Communications</i> | 1984 |
| | Invitation to review paper (declined). | |
| D.282 | <i>Photochemistry and Photobiology</i> | 1984-1985 |
| | Request for contribution to a yearly review on 'Structure and function of the coupling factor of photophosphorylation'. Mitchell responded with a short paper but there is no evidence of its publication. | |
| D.283 | <i>Photosynthesis Research</i> | 1991-1992 |
| | Mitchell was invited to contribute a 'Personal Perspective' but died before completing it. | |
| D.284 | Physical Society of Japan | 1981 |
| | Correspondence <i>re</i> the reprinting of a paper by Mitchell which appeared in <i>Biological Reviews</i> (<i>Bibliog.</i> M1966d). | |
| D.285 | <i>Physiological Review</i> | 1983-1985 |
| | Correspondence <i>re</i> a review on 'Proton Pump Mechanisms: A General Survey', original folder annotated 'Not done'. | |
| D.286 | <i>Proceedings of the National Academy of Sciences</i> | 1977-1989 |
| | Correspondence <i>re</i> refereeing. | |

Publications, lectures and broadcasts

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| D.287 | <i>Proceedings of the Royal Society Series B</i> | 1985-1991 |
| | Correspondence <i>re</i> refereeing. | |
| D.288 | <i>Progress in Biophysics and Molecular Biology</i> | 1972-1974 |
| | Invitation to write paper on 'Oxidative mechanisms in mitochondria' (declined). | |
| D.289 | <i>Prometeus</i> | 1984-1985 |
| | Invitation to write paper on 'membrane exchange of energy' (declined). | |
| D.290 | <i>Quarterly Review of Biology</i> | 1977 |
| | Invitation to review paper (declined). | |
| D.291 | <i>La Recherche</i> | 1979 |
| | Invitation to write paper on 'The energetics of the cell' (declined). | |
| D.292 | Rizzoli-Corriere della Sera | 1983 |
| | Invitation to write paper on 'human physiology' (declined). | |
| D.293 | <i>Trends in Biochemical Sciences</i> | 1985-1987 |
| | Invitation to write paper for 'Reflections on Biochemistry' section (declined). | |
| D.294 | <i>What's New in Plant Physiology</i> | 1979-1981 |
| | Proposal for Mitchell to rewrite an article first published in <i>Trends in Biochemical Sciences</i> (Bibliog. M1978a), the project was not completed. See also D.110. | |

Publications, lectures and broadcasts

D.295	<i>Zeitschrift für Naturforschung</i>	1981-1982
	Invitation to write a paper. Mitchell was unable to meet deadline.	
D.296-D.322	Shorter editorial correspondence. Arranged chronologically.	
D.296	1966.	
D.297	1967.	
D.298	1969.	
D.299	1970.	
D.300	1971-1972.	
D.301	1972.	
D.302	1973.	
D.303	1973.	
D.304	1973-1976.	
D.305	1974.	

Publications, lectures and broadcasts

D.306	1975.
D.307	1976.
D.308	1976-1979.
D.309	1977.
D.310	1978.
D.311	1978-1979.
D.312	1979.
D.313	1980.
D.314	1981.
D.315	1982.
D.316	1983.
D.317	1984-1985.
D.318	1987.
D.319	1988.

Publications, lectures and broadcasts

D.320 1990-1991.

D.321 1991-1992.

D.322 1992.

Letters to *Financial Times* and *The Times*

Mitchell developed an interest in economics with special reference to inflation. He communicated some of his ideas via letters to *The Times* and *Financial Times*.

D.323-D.326 *Financial Times*

D.323 Mitchell's published letters, with related material, 1971-1976:

'Industrial democracy', *Financial Times*, 31 March 1971.

'A question of definition', *Financial Times*, 24 April 1974.

'Fundamental weevils', *Financial Times*, 5 December 1974.

'Protection for producers', *Financial Times*, 12 January 1976.

'Measuring in pax', *Financial Times*, 23 January 1976.

D.324 Correspondence with *Financial Times* re publication of letters; correspondence arising from published letters, 1976, 1986.

D.325 Unpublished letters to the *Financial Times* by Mitchell, with related material, 1974-1986.

Publications, lectures and broadcasts

- D.326 Mitchell's published letters, with related material, 1981-1987:
- 'Money from Mars-the case for chocolate coated ingots', *Financial Times*, 27 November 1981.
- 'Wrappers', *Financial Times*, 5 December 1981.
- 'It's only make believe', *Financial Times*, 15 December 1981.
- 'The culture of science', *Financial Times*, 25 January 1986.
- 'Control of education', *Financial Times*, 21 April 1987.
- D.327-D.329 *The Times*
- D.327 Four unpublished letters to *The Times*, 1981-1985; correspondence with contributors to *The Times* on economic matters, 1976.
- D.328, D.329 Open Letter to Sir Jeremy Morse.
- On 23 December 1981, Morse, as Chairman of the Committee of London Clearing Banks, wrote an article in *The Times* 'Don't blame the banks' on industrial lending policies of the banks. Mitchell was critical of Morse's arguments and responded by means of an Open Letter, which he submitted to *The Times* for publication. *The Times* were willing to publish Mitchell's letter and a reply by Morse as a debate within the columns of the paper. However, Morse declined further involvement and Mitchell's letter was not published. Mitchell instead circulated it privately.
- See also G.713.
- D.328 Photocopy of Mitchell's manuscript draft, 1 January 1982; 2pp typescript copy; correspondence with *The Times*; etc
- D.329 'Jeremy Morse letters to reply to'. Contents of folder so inscribed. Correspondence with recipients of the Open Letter.
- D.330 Printed background material: Mitchell's newspaper and magazine cuttings relating to economics, 1969-1984; three booklets by D.J. Slingsby sent to Mitchell possibly ca. 1971; etc.

Publications, lectures and broadcasts

LECTURES

Arranged chronologically. Invitations declined or for which there is no evidence of acceptance are placed at the end of the sequence for each year. Material relating to unidentified or undated lectures may be found at D.444-D.455.

1960

- D.331-D.343 Contents of Mitchell's thirteen folders: twelve lectures on chemical aspects of biology ca. 1960. Probably course lectures delivered by Mitchell at Edinburgh University. The inscriptions on Mitchell's folders have been retained in the catalogue entries.
- D.331 'Chemical and physical fact and concept in relation to biological fact and concept', 13pp typescript with annotations; 18pp manuscript draft; list of 12 lectures.
- D.332 'The anatomy of atoms and molecules in terms of the elementary sub-atomic particles', 20pp manuscript draft including diagrams; manuscript section of the periodic table of elements; cut-out card shapes for illustrating lecture.
- D.333 'The structure and properties of the main types of monomers and polymers found in living cells', manuscript diagrams and manuscript book list.
- D.334 'Definition of physical and chemical variables used for describing conditions in biological systems', manuscript diagrams and incomplete drafts of lecture.
- D.335 'Simple kinetics of chemical reactions', 19pp manuscript draft including diagrams.
- D.336 'Enzymes as selectors of chemical particles', 13pp manuscript draft including diagrams.

Publications, lectures and broadcasts

- D.337 'General facts about enzyme-catalysed reactions', 19pp manuscript draft including diagrams.
- D.338 'Some pathways of chemicals through metabolism', 18pp manuscript draft.
- D.339 'The meaning of energetic coupling in biochemistry', 12pp manuscript draft including diagrams.
- D.340 'Fermentation, oxidative phosphorylation, and photosynthesis', 13pp manuscript draft including diagrams.
- D.341 'The chemical meaning of growth and replication', 15pp manuscript draft.
- D.342 'The relationship between chemical process and movement in biology: transport and morphogenesis', 13pp manuscript draft.
- D.343 'Chemical Biology. Zoology III Lectures', found with the preceding chemical biology lecture series, 31pp manuscript draft.
- D.344 Lecture given to the Biochemical Colloquium, University of Leeds, 25 November 1960.

Correspondence *re* arrangements.

1961

- D.345-D.347 Contents of folder inscribed 'Recent talks Jan 1961'.

Publications, lectures and broadcasts

- D.345 Two untitled 12pp manuscript drafts; 'The capture of food molecules by bacteria' 13pp.
- D.346 Two manuscript drafts: 'A new outlook on the functions of natural membranes' 7pp; 'A new but biochemically orthodox approach to the problems of ion and metabolic transport in living organisms' 19pp.
- D.347 Untitled 11pp manuscript draft. 'Active transport coupled to cell growth' 7pp typescript with annotations; 'The cytochrome system in the plasma membrane of *Staphylococcus aureus*' with J.M. Moyle, 2pp typescript annotated as having been read at the Biochemical Society, Cambridge, 28-29 June 1956.
- D.348 Correspondence *re* lecture on 'Amino-acid transport and the concept of spatially organised chemistry' to be given by Mitchell at the Conference on 'Free Amino Acids', City of Hope Medical Center, California, *ca.* 1961.

Invitations 1961

- D.349 Lecture Courses at the National College of Food Technology, Weybridge, Surrey, 25-29 March 1961.

'Structure of the bacterial cell'.
- D.350 Informal visit and lecture at the Laboratoire de Chimie Biologique, Paris, April 1961.
- D.351 'Active Transport' at a Physiology Colloquium, University of Sheffield, Summer term, 1961.

'The chemistry of the cell surface', Glaxo Laboratories, Ulverston, Lancashire, 1961.

Publications, lectures and broadcasts

1962

D.352 'Biochem Soc Symp paper' and 'Some ideas 1962'. Contents of folder so inscribed.

'Chemiosmotic coupling in oxidative and photosynthetic phosphorylation', reprint, *Bibliog.* M1961a; 'Molecule, Group, and Electron Translocation Through Natural Membranes', 19pp typescript, with various annotated typescript pages; manuscript note; 'Catalytic Systems for the Escape of Chemical Particles' typescript page.

D.353 Two lectures on 'Transport systems with particular reference to bacteria', Biochemical Society Meeting, University of Sheffield, 28 November 1962. The lectures were subsequently postponed. See G.205.

Correspondence *re* arrangements.

Invitations 1964-1965

D.354 Biological Society, University of St. Andrews, 3 or 17 November 1964.
Temple University, Philadelphia, 15 or 22 November 1965.

1966

D.355 'Oxidative and photosynthetic phosphorylation: how does it work?', University of Helsinki, 4 February 1966.

Correspondence *re* arrangements. The lecture was subsequently cancelled.

Federation of European Biochemical Societies (FEBS) third meeting, Warsaw, 4-7 April.

Mitchell spoke on 'Experimental evidence for proton transport phosphorylation', later published as 'Proton Transport Phosphorylation: some experimental results', *Bibliog.* MM1967e. (See also F.14).

'Warsaw Figs. for slides and P.M.'s original version of text'. Contents of folder so inscribed. 28pp annotated typescript with captions, figures and graphs.

Publications, lectures and broadcasts

Invitations 1966

- D.356 Graduate Department of Biochemistry, Brandeis University, Massachusetts, ca. 29 November 1966.

1967

- D.357 'Some qualitative experimental tests of the chemiosmotic hypothesis of coupling between oxio-reduction and hydro-dehydration in mitochondria and bacteria', Oxford Biochemical Society Meeting, 19 January 1967.

Correspondence *re* arrangements.

For details of the Seminar at the Technische Universität Berlin, 7-8 February 1967 where Mitchell spoke on 'Some aspects of the chemiosmotic hypothesis of oxidative and photosynthetic phosphorylation' see G.1204.

- D.358, D.359 'Proton Translocation Phosphorylation in Mitochondria, Chloroplasts and Bacteria: Natural fuel-cells and solar-cells', American Society of Biological Chemists (ASBC) lecture, 51st Annual Meeting of the Federation of American Societies for Experimental Biology (FASEB), Chicago, Illinois, 16-21 April 1967.

Mitchell's lecture was published as *Bibliog.* M1967h.

While in America Mitchell visited the Johns Hopkins University, Maryland, 23-29 April where he gave an informal seminar.

- D.358 Correspondence *re* arrangements etc.; 21pp typescript with annotations.

- D.359 Manuscript preparation for lecture; pages 17 and 18 from a typescript version of lecture. See D.357.

Experimental results and graphs with top page headed 'Paper 4. Warsaw paper' found with preceding. See also F.14.

Publications, lectures and broadcasts

Invitations 1967

D.360 Student Microbiology Society at the University College of South Wales, Cardiff, between 14 November 1967 and 26 March 1968.

Department of Botany, University of Texas, spring semester 1967.

1968

D.361 'Measurements of electric potential and pH difference across the cristae membrane of mitochondria', Biochemical Society of Stockholm, 20 March, and University of Helsinki, 21 March 1968. Mitchell also lectured to students at Helsinki University the same day on 'Translocation of substances through natural membranes'.

Correspondence *re* arrangements.

Invitations 1968

D.362 'Mechanism of oxidative phosphorylation', Biochemical Society, University of Sheffield, between 19 January and 15 March 1968.

1969

D.363-D.365 'Fact and fiction in oxidative and photosynthetic phosphorylation', Joint Biological Sciences Society, University College London, 21 January 1969.

D.363 Correspondence *re* arrangements.

D.364 30pp typescript draft with annotations and manuscript addition at end.

D.365 24pp typescript.

Publications, lectures and broadcasts

- D.366 'The coupling of chemical transformation reactions and physical translocation reactions in biology', Society for Biochemistry, University College of North Wales, Bangor, 30 January 1969. The lecture was postponed.

Correspondence *re* arrangements.

- D.367 'Oxidative and photosynthetic phosphorylation in microorganisms', Student Microbiology Society, University College of South Wales, Cardiff, 4 February 1969. The lecture was postponed.

Correspondence *re* arrangements.

- D.368 'Proton translocation phosphorylation', Biochemical Tea Club Meeting, University of Cambridge, 19 February 1969.

Correspondence *re* arrangements.

- D.369 Informal talk on 'Energy metabolism and transport reactions', Biochemistry Division, National Institute for Medical Research, London, 25 February 1969.

Correspondence *re* arrangements.

Invitations 1969

- D.370 Student Microbiology Society, University College of South Wales, Cardiff, 11 February or 11 March 1969.

- D.371 Department of Botany, University of Michigan, Ann Arbor, August 1969.

Department of Biochemistry and the Atomic Energy Commission Plant Research Laboratory, Michigan State University, East Lansing, 4 September 1969.

Department of Biology, Yale University, Connecticut, 8 September 1969.

'The Chemiosmotic Hypothesis', Student Microbiology Society, University College of South Wales, Cardiff, date of invitation 30 October 1969.

Publications, lectures and broadcasts

1970

- D.372 Lecture on 'Chemiosmotic coupling and energy transduction', Biophysical Colloquium, Nottingham University, 26 October 1970.

Correspondence *re* arrangements.

Invitations 1970

- D.373 Biology Society, York University, Summer 1970. The lecture was subsequently cancelled.

Invitation to lecture, Biochemical Society, St. Andrews University, April 1970, dated 13 April 1969.

- D.374 Biochemical Society, Imperial College London, 24 April and 8 May 1970. A further invitation was extended for June but this also was declined.

- D.375 Graduate students of the Johnson Research Foundation, Department of Biophysics and Physical Biochemistry, University of Pennsylvania, between September 1970 and April 1971.

Colloquium at the Department of Pharmaceutical Chemistry, University of Bradford, 7-27 October 1970.

Membrane Discussion Group, University of Minnesota, 12 October to 7 December 1970.

- D.376 'Mitochondrial energy production and utilisation', Norwegian Biochemical Society, Oslo Branch, invitation dated 11 July 1970.

Open invitation to lecture, Johnson Research Foundation, Department of Biophysics and Physical Biochemistry, University of Pennsylvania, dated 19 August 1970.

Publications, lectures and broadcasts

1971

- D.377-D.379 Two special lectures on 'The function of the cytochrome system and related redox chain components in bacteria and mitochondria' entitled 'Biochemical functions of the components' and 'Functional activity of the complex system', microbiology students of the University of London, 15 and 16 February 1971.
- D.377 Correspondence *re* arrangements.
- D.378 'Biochemical functions of the components', 23pp typescript; manuscript note on slide order; diagrams and note.
- D.379 'Functional activity of the complex system', 20pp typescript with tables and list of references for both lectures.
- D.380, D.381 'So-called energy-coupling mechanisms associated with activity of the respiratory chain', Department of Biochemistry, Chelsea College London, 7 February 1971.
- D.380 Correspondence *re* arrangements.
- D.381 Incomplete typescript and manuscript draft, 22pp.

Invitations 1971-1973

- D.382 University of Bristol Microbiology Society, 19 or 26 January 1971.
- Department of Botany, University of Liverpool, November or December 1971.
- Royal Institute of Chemistry, London, 10 February 1972.
- Department of Biology, University of York, Autumn 1972 or Spring 1973 terms.
- Bristol University Biochemical Society, 1972/1973 academic year.

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Publications, lectures and broadcasts

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'Oxidative Phosphorylation', Department of Physiology and Biochemistry, University of Southampton, between 15 January and 19 March 1973.

Student Biochemical Society, University College of South Wales, Cardiff, January 1973.

Society for Biochemistry and Soil Science, University College of North Wales, Bangor, Spring term 1973.

Oxford University Biochemical Society, Michaelmas term 1973.

1974

D.383, D.384 Warren Triennial Lecture on 'Proticity and protonics: the living cell's version of electricity and electronics', Massachusetts General Hospital, Boston, 22 October 1974.

D.383 Correspondence *re* arrangements; itinerary

D.384 Manuscript and typescript drafts with annotations; manuscript diagram.

D.385 'Some thoughts and observations on proton-translocating ATPases', Seminar at Cornell University, Ithaca, New York, 25 October 1974.

21pp typescript with annotations; manuscript notes *re* lecture arrangements.

D.386-D.391 553rd Meeting of the Biochemical Society, Ninth CIBA Medal Lecture, Charing Cross Hospital Medical School, 18 December 1974. Mitchell lectured on 'Vectorial chemistry and the molecular mechanics of chemiosmotic coupling: power transmission by proticity', (*Bibliog.* M1976a). See also D.93, D.94.

D.386 Correspondence *re* CIBA Medal Lecture arrangements and publication of lecture; invitation card to CIBA Medal Lecture dinner, 19 December.

Publications, lectures and broadcasts

- D.387 Itineraries; invitation to informal dinner on 18 December; 1p lecture abstract; *Biochemical Society Agenda Papers*, University of St Andrews, 12-20 September 1974 containing notification of Ninth CIBA Medal Lecture; programme.
- D.388 Further correspondence *re* arrangements and publication; draft figures and diagrams.
- D.389 Draft figures, captions and diagrams.
- D.390, D.391 66pp typescript of lecture with captions and diagrams. 2 folders.

Invitations 1974-1975

- D.392 'The future in biochemistry?' or 'Current thinking about biological transport', Student Biochemical Society, University of Edinburgh Medical School, February, April-May 1974.
- Seminar Series of the Department of Biological Chemistry, Harvard Medical School, Boston, February-March, May 1974.
- Graduate Student Association, Johns Hopkins University School of Medicine, Maryland, 1974-1975.
- Student Biochemical Society, University College, Cardiff, 23 or 30 January 1975.
- Department of Applied Biochemistry and Nutrition, University of Nottingham, 3 or 10 March 1975.
- 25th Mosbach Colloquium on 'Biochemistry of Sensory Functions', Germany, 25-27 April 1974.
- 'Oxidative Phosphorylation', Biochemical Society Meeting, University College Cork, Ireland, 2-3 October 1975.
- Third International Symposium on Bioelectrochemistry, Nuclear Research Centre, Juelich, Germany, 27-31 October 1975.

Publications, lectures and broadcasts

1976

- D.393, D.394 'Power transmission by proticity in living cells', Biochemical Society, University College Wales, Aberystwyth, 12 February 1976.
- D.393 Correspondence *re* arrangements
- D.394 22pp typescript and manuscript; 'Structures' manuscript diagram.
- D.395, D.396 'Chemiosmotic reactions: chemical, conformational and translocational aspects', Biochemical Society of University College London, 24 February 1976.
- D.395 Correspondence *re* arrangements.
- D.396 17pp typescript and manuscript draft; 9pp typescript noted as 'Longer version' and headed '7. Molecular Mechanics of Protonmotive Redox Reactions'; 5pp typescript noted as 'Shorter version' and headed 'Molecular-Mechanical and Conformational Aspects of Chemiosmotic Coupling'; photocopies of abstracts by others with annotations.
- D.397 'Coupling mechanisms in metabolism and bioenergetics', Wilhelm Feldberg Foundation Prize Lecture, Wilhelmshaven, Germany, 15 June 1976. See also A.52.
- Correspondence *re* arrangements; itinerary; manuscript list of references; 22pp manuscript and typescript with figures and slides, annotated.

Invitations 1976

- D.398 Chemical Society, University of Essex, 22 January 1976 and 13 January 1977.
- Microbiology Society, Queen Elizabeth College, London, 26 February 1976.
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Publications, lectures and broadcasts

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Biochemical Society Lecture, Queen Elizabeth College, London, 28 April or 5 May 1976.

Biochemical Society Meeting, Trinity College Dublin, 2 September 1976.

To be visiting lecturer for the Irish Area Biochemical Society, 1976.

Wallenberg Laboratory, University of Uppsala, Sweden, Autumn 1976-Spring 1977.

The annual 'Da Vinci Lecture', Scientific Society, Oxford University, 17, 24 or 31 October 1976.

EMBO-workshop on 'Transduction mechanism of photoreceptors' 1976.

1977

D.399

'Stoichiometry of proton translocation in respiratory chain and ATPase systems of mitochondria' with J.M. Moyle, Department of Biochemistry Colloquium, University of Bristol, 10 March 1977.

Correspondence *re* arrangements.

D.400

'Brandeis lecture II. Oxidative and Photosynthetic Phosphorylation: A Problem of Mistaken Identity'. Inscription on note appended to 26pp typescript with corrections. This lecture was given during a visit by Mitchell to the United States to collect the Lewis S. Rosentiel Award, 16 March 1977. See also A.56, A.57.

Invitations 1977

D.401

Annual Biological Lecture, University of Glasgow, between 4 and 18 March 1977.

Biochemical Society, Imperial College London, 10 or 24 March 1977.

Society for Biochemistry and Soil Science, University College of North Wales, Bangor, Spring Term 1977.

14th Biochemical Society Lecture, Union Biochemical Society, Leeds University, May 1977.

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Publications, lectures and broadcasts

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Chelsea College Biochemistry Club, Chelsea College London, 2 or 9 November 1977.

1978

- D.402-D.406 Ninth Sir Hans Krebs Lecture on 'Compartmentation and communication in living systems. Ligand conduction: a general catalytic principle in chemical, osmotic and chemiosmotic reaction systems', Dresden, July 1978 (*Bibliog.* M1979b). See also F.79, F.80.
- D.402 48pp typescript with galley proof diagrams and captions.
- D.403 Captions and diagrams.
- D.404-D.406 Draft diagrams. 3 folders.
- D.407-D.409 Gesellschaft für Biologische Chemie, 4th Fritz Lipmann Lecture entitled 'Some consequences of Fritz Lipmann's concept of chemical group potential', Konstanz, Switzerland, 10-13 September 1978.
- D.407 16pp typescript inscribed '1st Draft'; manuscript note; annotated title page and summary.
- D.408 Annotated title page; list of abbreviations; summary; 30pp manuscript with figures.
- D.409 Correspondence *re* arrangements.
- D.410 'Proticity and protonics: the living cell's version of electricity and electronics', Peninsula Section of the Chemical Society, Exeter, 3 November 1978.
- Programme of 'Chemical Meetings in the South Western Counties', 1978-1979; correspondence *re* arrangements; photograph of Mitchell lecturing.

Publications, lectures and broadcasts

Invitations 1978

- D.411 Oxford University Biochemical Society, 28 or 30 November 1978.
Oslo Biochemical Society, late 1978.
Anglo-Swedish Society, London, late 1978.
Biochemistry Society, University of York, open invitation.

1979

- D.412 'The culture of imagination: an essay on creativity in the sciences, in the arts, and in life', Royal Institution of Cornwall, Truro, 8 December 1979, (*Bibliog.* M1980c).
Correspondence *re* arrangements and publication;

Invitations 1979

- D.413 Oxford University Alembic Club, 29 January 1979.
Special University Lecture in Biochemistry, University of London, 1979/1980 academic year.
Biological Society, University of Essex, 1979/1980 academic year.
Student Biochemistry and Nutrition Society, University of Surrey, Guildford, 1979/1980 academic year.
Frontiers of Science Series Lectures, University of Utah, Salt Lake City, 1979/1980 academic year.
Department of Biochemistry, University of Aberdeen, 1979/1980 academic year.
University Special Lecture, Department of Chemistry, Birkbeck College, London, 1979/1980 academic year.
Biological Sciences Department, Southern Illinois University at Edwardsville, July 1979.

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Publications, lectures and broadcasts

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Cori Lecture, Roswell Park Memorial Institute, Buffalo, New York, July 1979.

Centro de Biología Molecular, Madrid, between October and December 1979.

Groupement d'Études Biologiques de Lausanne, Hôpital Cantonal Universitaire, open invitation from November 1979.

1980

D.414

Humphrey Davy Memorial Lecture on 'From Davy's electromotive power in Chemistry to Nature's protonmotive power in Biology', Royal Institute of Chemistry, London, 20 May 1980. Published as 'Davy's electrochemistry: Nature's protochemistry', *Bibliog.* M1981a. See C.197.

The publication of this lecture resulted in an exchange of letters to the editor of *Chemistry in Britain* involving R.J.P. Williams, D.B. Kell and Mitchell. (Mitchell's 'Response', *Bibliog.* M1981c). See D.123.

Correspondence *re* arrangements and publication including draft figures.

D.415

'Cytochrome oxidase function and the quest for true proton pumps', State University of New York, Albany, 31 October 1980. This lecture was repeated at Cornell University on 3 November 1980. See F.106-F.109.

D.416

James Rennie Bequest Lecture, 'Some recent advances in bioenergetics: a case of parallel evolution of intellectual concepts and experimental knowledge', 28 November 1980. Given while at the University of Edinburgh to receive an honorary degree on 29 November 1980. See A.66.

6pp manuscript notes for lecture; typescript note *re* lecture.

Invitations 1980

D.417

Lecture series at the Biochemistry Department, University of California, Riverside, Winter and Spring Quarters of 1980.

Oxford University Biochemical Society, 7 February or 6 March 1980.

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Publications, lectures and broadcasts

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Student Biochemical Society, University of Hull, February or March 1980.

39th Annual Frontiers in Chemistry Series, Case Institute of Technology,
Case Western Reserve University, Cleveland, Ohio, 1 May 1980.

Harvey Lecture, Mount Sinai School of Medicine, New York, 1980/1981
academic year.

Imperial College London Biochemical Society, 1980/1981 academic year.

Oxford University Alembic Club, 10 November 1980.

University of Calcutta, late 1980.

1981

D.418-D.420

Royal Institution Discourse on 'Living solar cells and fuel cells, and the vital
power of proticity in nature', London, 13 March 1981.

D.418

Notes; itineraries etc. *re* Mitchell's preliminary visit to the Royal Institution *re*
discourse.

D.419

Correspondence *re* arrangements; lecture summary with biographical note;
itinerary.

D.420

Figures and draft figures for discourse.

D.421

'Osmoenzymology: The study of molecular engines', Biochemical Society
Lecture, University of Bristol, 26 March 1981.

Correspondence *re* arrangements; itinerary.

Publications, lectures and broadcasts

Invitations 1981-1983

D.422

Lecture series on 'Application of chemi-osmotic concepts to oxidative phosphorylation as well as photosynthesis', Biochemistry Department, University of California, Riverside, Winter or Spring Quarter 1981.

Oxford University Biochemical Society, Summer or Autumn Term 1981.

Oxford University Scientific Society, Summer Term 1981.

9th Goodman Lecture, Society of Opticians-Aitchison Memorial Trust, 10 June 1981.

Lawrence Berkeley Laboratory, University of California, Berkeley, between 28 September and 12 December 1981.

Biochemical Society, Imperial College London, 1981/1982 academic year.

Frontiers of Science Lecture Series, University of Utah, Salt Lake City, 1981/1982 academic year.

Public Lecture, University of Newcastle Upon Tyne, Michaelmas or Epiphany Terms.

Department of Anatomy, Albert Einstein College of Medicine, October 1981.

Oxford University Biochemical Society, 4 or 11 March 1982.

Open Lecture, Department of Biochemistry, University of Leeds, 7 May 1982.

Mill Hill Laboratories, Imperial Cancer Research Fund, September 1982.

International Conference on 'Photochemistry and Photobiology', Alexandria, Egypt, 5-10 January 1983.

Biophysics Colloquium, Institut für Biophysik, Winter Semester 1982/Summer Semester 1983.

Frontiers of Science Lecture Series, University of Utah, Salt Lake City, 1982/1983 academic year.

School Lecture, School of Biological Sciences, University of Bath, Autumn Term 1982.

Twentieth Biochemical Society Lecture, University of Leeds, May 1983.

Publications, lectures and broadcasts

1984

D.423, D.424 'Chemiosmotic hypothesis mark II', Student Biochemical Society of Chelsea College London, 14 November 1984.

This lecture also given as 'Biochemical Function...'. See D.425.

D.423 Correspondence etc. *re* arrangements; itinerary.

D.424 14pp manuscript and typescript draft of lecture.

D.425 'Biochemical function of cytochrome oxidase: chemiosmotic hypothesis mark II', Laboratory of Molecular Biology, Medical Research Council Centre, Cambridge, 29 November 1984. See D.424 for lecture script.

Correspondence *re* arrangements; itinerary; photocopies of manuscript notes; transparency diagram of the mitochondrial cytochrome system.

Invitations 1984

D.426 School Lecture, School of Biological Sciences, University of Bath, Spring or Autumn term 1984.

Oxford University Scientific Society, separate invitations were extended for Hilary and Trinity Terms 1984.

1985

D.427, D.428 School Lecture, School of Biological Sciences, University of Bath, 'Microprotonics in biology: the counterpart of microelectronics in technology', 8 October 1985.

D.427 Correspondence *re* arrangements.

D.428 4pp manuscript notes for lecture; 4 transparencies, illustration and diagrams.

Publications, lectures and broadcasts

Invitations 1985

- D.429 Department of Zoology, University of Cambridge, Lent Term 1985.
Biochemistry, Nutrition and Nursing Society, University of Surrey, Guildford, open invitation received 21 October 1985.

1986

- D.430 Memorial Lecture for Robert Reid on 'The science of life and the life of science', University of York, 26 February 1986.
22pp typescript with reading list and manuscript note on slide order; correspondence *re* arrangements.

Invitations 1986

- D.431 Marine Biological Laboratories, Woods Hole, Massachusetts, the week of 28 July 1986.
Kaiser Lectureship, University of Hawaii at Manoa, between 13 October and 4 November 1986.
Student Biochemical Society, University of Dundee, between 10 November 1986 and 11 May 1987.
Nobel Laureate Series on 'Perspectives for the future', sponsored by J.T. Baker Chemical Company at Stanford University, November 1986.

1987

- D.432, D.433 Royal Society Croonian Lecture, London, 'Protonmotive osmoenzyme mechanisms in cytochrome systems: Variations on a theme by Keilin', 14 May 1987.
D.432 Correspondence *re* arrangements and publication of lecture in the *Proceedings of the Royal Society, Series B*; abstract; biographical note; list of those invited; itinerary.

Publications, lectures and broadcasts

- D.433 37pp manuscript and typescript draft of lecture; background material on D. Keilin: photographs of Keilin in his study, working with a microspectroscope, 1938 and experimental readings annotated on reverse as 'Keilin. Plate VI'.

1988

- D.434-D.436 'Hydroxide or oxide ions and cytochrome oxidase', Student Biochemical Society, King's College London, 17 February 1988.
- D.434 Correspondence *re* arrangements; itinerary.
- D.435 Abstract; 13pp manuscript of lecture with diagrams.
- D.436 'Prep of talk for King's'. Contents of folder so inscribed.
Manuscript diagrams and note.
- D.437 'Theories as tools for experiments', Advanced Experimental Biochemistry Course, King's College London, 25 February 1988.
Correspondence *re* arrangements; itinerary; 8pp manuscript of lecture; manuscript note of further reading; 6 transparencies.
- D.438 [?Conference on 'Cytochrome oxidase: Structure, Function and Physiology', Rome, 20-24 June]. 'Transparencies for Rome talk. *Re* Oxidase'. Contents of plastic sleeve so inscribed. Divided into two for ease of reference. See also C.201-C.203, F.264-F.267.
Transparencies, the first entitled 'Postulates for Cu_B Zoop Mechanisms'.
- D.439 Fourth Barker Lecture on 'The chemiosmotic rationale in theory and practice', School of Biological Sciences, University of Manchester, 29 November 1988.
Correspondence *re* arrangements; poster advertisement; itinerary; photocopy of G.R. Barker obituary ca. June 1988; 11pp typescript with 2pp photocopies of lecture slides, annotated; list of material for further reading.

Publications, lectures and broadcasts

Invitations 1988

- D.440 'Origins and development of the chemiosmotic theory', Plymouth Polytechnic Biological Society, Summer Term 1988.

Mitchell expressed interest in giving the lecture but there is no evidence of his going to Plymouth. A further letter from the Biological Society dated 19 December 1988 invited Mitchell to lecture in 1989 but this was declined.

1989

- D.441, D.442 'Heuristic procedures in Biochemistry', Department of History and Philosophy of Science, King's College London, 29 November 1989. See also G.435.

- D.441 Correspondence *re* arrangements; itinerary.

- D.442 'A fundamental dichotomy', 1p typescript; 9pp manuscript.

Invitations 1989-1991

- D.443 Juan March Foundation, Madrid, 'Membranes and cell compartments', 1989.
Biological Society, University of Kent at Canterbury, March 1990.
Oxford University Biochemical Society, February, April or June 1991.
Lecture *re* scientific understanding, Oslo, 1991.

Unidentified or undated lectures

- D.444 Wayne State University spiral-bound notebook containing lecture on 'General Principles of Function of Bioenergetic and Transport Systems', also related scientific diagrams and notes. Further notes including loose leaf notes at rear of notebook, ca. 1960s.

Publications, lectures and broadcasts

- D.445 'Some facts and some thoughts about the protonmotive ATPase mitochondria'; 9pp typescript with manuscript note, latest reference 1966.
- D.446, D.447 'Paper meant for Montreal. 1963?'. Contents of envelope so inscribed: draft versions of 'Vectorial Metabolism: The Cause of Membrane Transport'
- D.446 Abstract; 25pp typescript; 22pp manuscript.
- D.447 34pp manuscript and additional manuscript draft pages with annotations.
- D.448 'PMs old popular talks'. Contents of folder so inscribed. *ca.* 1955-1967:

'On being a research scientist here and now' 9pp manuscript draft with copy of newspaper article entitled 'Universities that "shelter bone idle"'.

'The faith of a scientist or On foretelling the future', manuscript notes.
- D.449 6pp manuscript draft for lecture.
- D.450 15pp manuscript draft for lecture.
- D.451 '1970 or 71. Bari paper as adapted for Eindhoven'. Contents of folder so inscribed:

Typescript of pages 28 to 50 of unidentified lecture or paper. Latest reference 1970.
- D.452 Manuscript notes and manuscript and typescript captions with diagrams for unidentified lecture, possibly 1970s or 1980s.
- D.453-D.455 Contents of folder: mainly miscellaneous material relating to lectures *ca.* 1976 to 1987:

Publications, lectures and broadcasts

- D.453 'Physical science and philosophy of nature in the romantic period' 11pp typescript of Open University Arts Faculty broadcast (ref AMST.283 II Level Course); 4pp manuscript notes of slide order for unidentified lecture.
- D.454 Lectures given by Mitchell and J.M. Moyle:
- 'Chemiosmotic stoichiometry of cytochrome oxidase in Rat Liver Mitochondria' (from an unpublished paper with J.M. Moyle, I. West and R. Mitchell), 2pp typescript.
- 'Chemiosmotic stoichiometry of exogenous cytochrome *c* oxidation by the cytochrome oxidase of Rat Liver Mitochondria' (by J.M. Moyle), 2pp typescript.
- Transparencies, diagrams, lecture notes and two typescripts *re* lectures given by Mitchell and J.M. Moyle, date and location of lectures unknown *ca.* 1984.
- Manuscript draft abstract entitled 'Protonmotive cytochrome system of mitochondria: energetics and mechanism'.
- D.455 'Osmoenzymology: the study of molecular engines', manuscript draft.

BROADCASTS

- Correspondence and papers *re* broadcasts on television and radio arranged in chronological order.
- D.456 'The origin of life and the formation and organising functions of natural membranes', an unscripted discussion, 'Research' series, BBC Radio, 1958.
- 15pp typescript; correspondence *re* arrangements for Mitchell's participation; manuscript notes.
- D.457 'Rheumatic diseases and tissue cell behaviour': part one titled 'Rheumatic disease as a pattern of cell behaviour'; part two titled 'What controls the behaviour of tissue cells'. The two talks were presented in the 'Frontiers of Knowledge' series, BBC European English Service, 26 July and 2 August 1960.
- Two 7pp typescript drafts of talks, annotated; two 6pp broadcast scripts; correspondence *re* arrangements; two 1p typescript summaries of Mitchell's papers.

Publications, lectures and broadcasts

- D.458 Science survey: rheumatism and tissue cells, two talks. Talk one titled 'Patterns of behaviour' and talk two titled 'What controls the behaviour of tissue cells?'. The two talks were revisions of two Mitchell had broadcast earlier in 1960 on the causes of rheumatism, 'Science Survey' series, BBC Net Work Three, broadcast on 3 and 10 November 1960, see D.457
- Correspondence *re* talks, 1960; 7pp typescript draft with corrections; 5pp typescript draft with corrections; 8pp typescript draft with corrections; 7pp broadcast script with annotations.
- Correspondence *re* the translation of Mitchell's 'Science Survey' talks for broadcasting on Italian Radio's 'The International University of the Air', 1961.
- D.459 Proposed series on amateur and independent scientists, Yorkshire Television.
- Typescript note, 22 January 1976
- D.460 Documentary film on mitochondria and the chemiosmotic theory proposed by R. Buono, 1979.
- Correspondence *re* proposal for Mitchell to act as narrator.
- D.461 Mitchell's development of the chemiosmotic theory, Radiotelevision Beograd, Belgrade, 1979. Mitchell declined to participate.
- Correspondence *re* proposed programme.
- D.462 Proposed programme on the Glynn Research Institute, 'Breakthrough' regional television series, BBC Television, 1979.
- Letter of invitation to participate, 12 January 1979.
- Proposed programme on conceptual advances in science, BBC Television. Mitchell decided not to contribute.
- Correspondence, 28 February and 8 March 1983.
- 'The story of the cell' educational television series proposed by V.G. DelVecchio, University of Scranton, Pennsylvania. Mitchell declined to participate.
- Correspondence September 1983.

Publications, lectures and broadcasts

- D.463 'Spotlight', BBC Television.

Note *re* possibility of Glynn Research Institute featuring, 24 June 1986.
- D.464 Japanese Broadcasting Corporation NHK.

Note *re* approach made to obtain Mitchell's opinion on education issues in his capacity as a Nobel prize winner, 13 September 1988.
- D.465, D.466 Interviews with Mitchell on 'Proticity' and 'Bacteria and the wheel', 'Discovery' series, BBC World Service. See D.472.
- D.465 Transcripts of Mitchell's contributions transmitted on 9 and 16 December 1985 respectively; note *re* interviews recorded by Mitchell for 'Discovery', October 1985.
- D.466 'Vectorial chemical action in biology' manuscript note so inscribed; correspondence and notes *re* arrangements
- D.467 Interview with Ted Gundry, 'Duchy Today' series, Radio Cornwall, 14 May 1986.

5pp transcript; correspondence *re* arrangements for interview; itinerary for Mitchell's visit to Truro to record interview.

See also D.473

Interview with Dennis Nightingale, Radio Cornwall, 30 July 1987.

Typescript note.
- D.468 An interview between Mitchell and Lewis Wolpert, 'Gardens of the mind' series, BBC Radio Science Programmes, broadcast 15 February 1989. See also D.474.

Correspondence *re* arrangements; typescript introduction for audio tape recording.

Publications, lectures and broadcasts

- D.469 Proposed television documentary on Mitchell as a Nobel prize winner and how it affected his life, Independent Communications Associates Limited.
- Correspondence, 10 November 1987-3 November 1988. Mitchell withdrew.
- Proposed drama series centring on scientific endeavour and Nobel prize winners in particular, BBC Television.
- Brief correspondence and secretarial notes, 1990.
- D.470 Interviews with Nobel prize winners, International Media Productions. The programme was transmitted on the Second German Channel on 28 February 1991.
- Correspondence with Heinrich Walter *re* a feature on Mitchell, 1987-1991.

NON PRINT MATERIAL

- D.471 VHS audio-visual tape entitled 'Conversations with eminent biochemists: the chemiosmotic theory of oxidative phosphorylation'. A 58 minute discussion between Mitchell and J.M. Moyle. Produced by the Biochemical Society. June 1984. See A.19.
- D.472 Two audio tapes entitled 'Discovery 26 November 1985' and 'Discovery 3 December 1985' respectively. These are sound recordings of Mitchell's contribution to the BBC's 'Discovery' programme. Transmitted 9 and 16 December 1985. See D.465.
- D.473 Audio tape of Mitchell's interview for BBC Radio Cornwall's 'Duchy Today' programme. 14 May 1986. See D.467.
- D.474 Two audio tapes. A master and copy from the master of 'Gardens of the Mind' a BBC Radio production featuring Mitchell in conversation with Lewis Wolpert. Broadcast 15 February 1989. See D.468.
- D.475 VHS audio-visual tape entitled 'Silent Stars' featuring interviews with Mitchell and James Edward Meade Nobel prize winning economist. The video was a German production but the interviewees speak in English. 1989.

Publications, lectures and broadcasts

- D.476 VHS audio-visual tape (Hi-packing format) featuring Mitchell and other Nobel Prize winners who attended the Third Nobel Laureates Forum in Japan 26-31 October 1990. The programme was produced by the Japanese broadcasting company NHK. November 1990. See B.165 and F.330-F.341.
- D.477 Four VHS audio-visual tapes produced during the Glynn Research Institute Silver Jubilee in October 1990 featuring lectures given by participants. (See also B.173-B.177 for details of Jubilee Symposium). Lecture titles given below are taken from the publication 'Perspectives in Vectorial Metabolism and Osmochemistry' edited by Mitchell and C.A. Pasternak:
- Cassette one labelled 'B. Weber Tape' featuring a lecture on 'Glynn and the conceptual development of the chemiosmotic theory: a retrospective and prospective view' by B.H. Weber.
- Cassette two labelled 'Tape 2. Skulachev' featuring a lecture on 'Chemiosmotic systems in bioenergetics: H^+ -cycles and Na^+ -cycles' by V.P. Skulachev.
- Cassette three labelled 'Tape 3. Garland/Henderson' featuring lectures on 'Chemiosmotic systems in medicine' by P.B. Garland and 'Studies of Translocation Catalysis' by P.J.F. Henderson.
- Cassette four labelled 'Tape 4. Rich/Pasternak' featuring lectures on 'The osmochemistry of electron-transfer complexes' by P.R. Rich and 'Closing symposium remarks' by C.A. Pasternak.

REPRINTS

- D.478 19pp typescript list of Mitchell's publications.
- D.479 Reprints 1943-1965.
- D.480 Reprints 1966-1980
- D.481 Reprints 1981-1992

SECTION E

SOCIETIES AND ORGANISATIONS

E.1-E.175

- | | |
|------------|---|
| E.1-E.3 | ACADÉMIE DES SCIENCES, DE L'INSTITUT DE FRANCE |
| E.4 | ACADEMY OF CREATORS, USSR |
| E.5 | AMERICAN ACADEMY OF ARTS AND SCIENCES |
| E.6,E.7 | AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS |
| E.8 | ANTI-CANCER FOUNDATION OF THE UNIVERSITIES OF SOUTH AUSTRALIA |
| E.9 | AORANGI INTERNATIONAL UNIVERSITY |
| E.10 | ATHENAEUM CLUB |
| E.11 | J.T. BAKER CHEMICAL COMPANY |
| E.12-E.15 | BIOCHEMICAL SOCIETY (including BIOENERGETIC ORGANELLE GROUP) |
| E.16 | BIOTECHNICAL PROCESSES LTD. |
| E.17 | BRITISH BIOPHYSICAL SOCIETY |
| E.18, E.19 | BRITISH BROADCASTING CORPORATION (BBC) |
| E.20 | BRITISH INSTITUTE OF MANAGEMENT |
| E.21 | BRITISH SOCIETY FOR CELL BIOLOGY |
| E.22 | BRITISH UNION AGAINST VIVISECTION (BUAV) |

Societies and organisations

E.23	CAMBRIDGE UNIVERSITY NATURAL SCIENCE CLUB
E.24	CIBA FOUNDATION
E.25	COMITÉ YOURI TARNOPOLSKI
E.26-E.32	COMMISSION OF THE EUROPEAN COMMUNITIES
E.33	CORNWALL ANIMAL RIGHTS ASSOCIATION
E.34	CORNWALL TECHNICAL COLLEGE: SCIENCE ADVISORY SUB-COMMITTEE
E.35	COUNCIL FOUNDATION 'FOR THE FUTURE OF THE WORLD'S CHILDREN'
E.36	DEPARTMENT OF SCIENCE AND TECHNOLOGY, AUSTRALIA
E.37	ECONOMIC RESEARCH COUNCIL
E.38-E.44	EUROPEAN MOLECULAR BIOLOGY ORGANISATION (EMBO)
E.45	FEDERATION OF AMERICAN SCIENTISTS (FAS)
E.46	FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (FASEB)
E.47	FOOD AND DISARMAMENT INTERNATIONAL
E.48	HELLENIC INFORMATION COMMITTEE
E.49-E.52	HUMAN FRONTIER SCIENCE PROGRAM ORGANISATION (HFSPPO)

Societies and organisations

E.53	HUNGARIAN HUMAN RIGHTS LEAGUE
E.54	INSTITUTE FOR SCIENTIFIC INFORMATION
E.55	INSTITUTE FOR SOCIAL INVENTIONS
E.56	INTERNATIONAL CAMPAIGNS
E.57	INTERNATIONAL CELL RESEARCH ORGANISATION (ICRO)
E.58	INTERNATIONAL CENTRE OF THEORETICAL BIOLOGY
E.59.	INTERNATIONAL COMMITTEE 'SCIENCE FOR PEACE' (ICSP)
E.60	INTERNATIONAL COUNCIL FOR SCIENTIFIC DEVELOPMENT (ICSD)
E.61	INTERNATIONAL CULTURAL FOUNDATION
E.62	INTERNATIONAL OF LOVE
E.63	INTERNATIONAL SOCIETY OF RESEARCHERS AND INVENTORS FOR THE ADVANCEMENT OF WORLD PEACE
E.64	JAPANESE BIOCHEMICAL SOCIETY
E.65-E.69	JESUS COLLEGE, CAMBRIDGE
E.70	LIGUE DES DROITS DE L'HOMME
E.71	LISTER INSTITUTE OF PREVENTIVE MEDICINE
E.72	MEDICAL COMMITTEE FOR SOVIET JEWRY

Societies and organisations

E.73-E.76	MEDICAL RESEARCH COUNCIL (MRC)
E.77-E.80	NATIONAL ACADEMY OF SCIENCES (NAS), USA
E.81-E.96	NATIONAL SCIENCE FOUNDATION, USA
E.97-E.99	NORTH ATLANTIC TREATY ORGANISATION (NATO), SCIENTIFIC AFFAIRS DIVISION
E.100	NUFFIELD FOUNDATION
E.101	OFFICE OF TECHNOLOGY ASSESSMENT (of the US CONGRESS)
	OPEN UNIVERSITY, see E.18-E.19
E.102, E.103	PROTEUS MOLECULAR DESIGN LTD.
E.104	PUGWASH CONFERENCES ON SCIENCE AND WORLD AFFAIRS
E.105, E.106	RESEARCH CORPORATION
E.107	ROCHE INSTITUTE OF MOLECULAR BIOLOGY
E.108-E.110	ROYAL INSTITUTION OF GREAT BRITAIN
E.111-E.128	ROYAL SOCIETY
E.129	ROYAL SOCIETY OF CHEMISTRY (formerly CHEMICAL SOCIETY and ROYAL INSTITUTE OF CHEMISTRY)
E.130, E.131	ROYAL SOCIETY OF EDINBURGH
E.132, E.133	ROYAL SWEDISH ACADEMY OF SCIENCES

Societies and organisations

E.134-E.144	SCIENCE AND ENGINEERING RESEARCH COUNCIL (SERC)
E.145	SCIENCE AND TECHNOLOGY FOUNDATION OF JAPAN
E.146	SCIENCE MUSEUM, LONDON
E.147-E.151	SCIENCE RESEARCH COUNCIL (SRC)
E.152	SCIENTISTS FOR SOVIET REFUSENIKS
E.153	SCOTTISH HOSPITAL ENDOWMENTS RESEARCH TRUST
E.154	SOCIETY FOR EXPERIMENTAL BIOLOGY
E.155	SOCIETY FOR GENERAL MICROBIOLOGY
E.156	THIRD WORLD ACADEMY OF SCIENCES
E.157	UNITED NATIONS ASSOCIATION IN CANADA
E.158	UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANISATION (UNESCO)
E.159, E.160	UNIVERSITY OF EAST ANGLIA (UEA)
E.161	WELCH FOUNDATION
E.162-E.164	WELLCOME TRUST
E.165-E.171	WINNICOTT RESEARCH UNIT
E.172	WOLF FOUNDATION

Societies and organisations

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| E.173 | WOLFSON FOUNDATION |
| E.174 | WORLD CONGRESS ALTERNATIVES AND
ENVIRONMENT |
| E.175 | WORLD FUTURE SOCIETY |

E.1-E.3 ACADÉMIE DES SCIENCES, DE L' INSTITUT DE FRANCE 1989-1992

E.1 Election as Foreign Associate, 1989.

Biographical notes prepared for the Académie des Sciences, 1989, 1991, 1992 etc.

E.3 Newsletters of the Institut de France, 1989, 1990.

Invitation to Institut de France lunch, 4 December 1990, Paris (declined).

Newsletter of the Academy of Creative Pursuits, 1990.

General correspondence.

Societies and organisations

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| E.6, E.7 | AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS | 1975-1983 |
| | Mitchell was elected an Honorary Member in 1975. | |
| E.6 | Membership, 1975-1983. | |
| | Invitation to present a plenary lecture at American Society of Biological Chemists meeting, 7-10 June 1976, San Francisco (declined). | |
| E.7 | Elections, 1982. | |
| E.8 | ANTI-CANCER FOUNDATION OF THE UNIVERSITIES
OF SOUTH AUSTRALIA | 1989 |
| | Refereeing grant application. | |
| E.9 | AORANGI INTERNATIONAL UNIVERSITY | 1983-1984 |
| | Aorangi International University (AIU) was established in New Zealand in 1983. It aimed to set up an international multilingual databank and provide a centre from which to resolve the nuclear weapons issue. Mitchell accepted an invitation in 1983 to become a member of the University's International Board of Directors. | |
| | Membership, 1983. | |
| | Correspondence <i>re</i> the role of AIU and the threat posed by nuclear weapons, includes articles on these subjects, 1983-1984. | |
| E.10 | ATHENAEUM CLUB | 1988-1990 |
| | Membership, includes photocopy of completed personal details form. | |

Societies and organisations

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| E.11 | J.T. BAKER CHEMICAL CO. | 1979-1991 |
| | Request for permission to use Mitchell's signature on the Nobel Laureate Signature Award plaque (granted) etc., 1979. | |
| | Invitations to attend the Nobel Laureate Lecture Series (declined), 1979, 1980, 1982, 1984-1991. | |
| E.12-E.15 | BIOCHEMICAL SOCIETY (including BIOENERGETIC ORGANELLE GROUP) | 1972-1990 |
| E.12 | Membership of the Biochemical Society etc., 1979-1990. | |
| E.13-E.15 | Papers <i>re</i> Mitchell's involvement with the Bioenergetic Organelle Group. Mitchell was a committee member of the Bioenergetic Organelle Group of the Biochemical Society from 1972, when it was founded, until 1975. | |
| E.13 | Correspondence <i>re</i> formation of the Bioenergetic Organelle Group, including proposed constitution, 1972. | |
| E.14 | Proposals and arrangements for committee meetings and colloquia of the Bioenergetic Organelle Group: correspondence; agendas; programmes; manuscript notes. 1972-1975. | |
| E.15 | Invitation to informal discussion meeting of the Bioenergetic Organelle Group, Cambridge, 16 December 1976 (declined). | |
| | Circular letter, polling members of the Group (some annotations), 1977. | |
| | Invitation to the Annual One Day Meeting of the Bioenergetics Group, Cambridge, 31 March 1987 (declined). | |

Societies and organisations

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| E.16 | BIOTECHNICAL PROCESSES LTD. | 1978-1979 |
| | Correspondence, seeking a brief meeting with Mitchell to discuss the feasibility of hydrogen fuel production by the biophotolysis of water (declined). | |
| E.17 | BRITISH BIOPHYSICAL SOCIETY | 1971-1976 |
| | Papers for 11th, 15th and 16th Annual General Meetings. | |
| E.18, E.19 | BRITISH BROADCASTING CORPORATION (BBC) | 1973-1981 |
| E.18 | Correspondence arising from requests from BBC Production Directors for Mitchell's advice on the content of television programmes produced for Open University courses, 1973, 1976. | |
| E.19 | Copy of an outline for an oxidative phosphorylation programme, sent by the Open University with a letter dated 3 September 1976; 5pp of Mitchell's manuscript notes found therewith. | |
| | Requests for permission to reproduce copyright material in Open University course textbooks (granted by Mitchell), 1977, 1981. | |
| E.20 | BRITISH INSTITUTE OF MANAGEMENT | 1982 |
| | Enquiry about membership. | |
| E.21 | BRITISH SOCIETY FOR CELL BIOLOGY | 1973-1975 |
| | Constitution and list of members, 1973. | |
| | Correspondence <i>re</i> cancelling membership, 1975. | |

Societies and organisations

- E.22 **BRITISH UNION AGAINST VIVISECTION (BUAV)** 1989
- Request from BUAV to complete a questionnaire for use in a guide to medical research charities; photocopy of completed questionnaire.
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- E.23 **CAMBRIDGE UNIVERSITY NATURAL SCIENCE CLUB** 1971-1981
- Mitchell was a member of the Club during the 1940s and in 1974 was elected an Honorary Member.
- Invitation to Centenary Dinner, 17 March 1972, (declined).
- Correspondence *re* election as an Honorary Member, 1974-1975.
- Invitation to give a talk to the Club during Easter term, 1977 (declined) etc.
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- E.24 **CIBA FOUNDATION** 1973-1975, 1982, 1985
- Invitation to give a paper at a Ciba Foundation Symposium on Energy Transformation in Biological Systems, London, 2-4 July 1974 (declined), etc.
- Invitation to meet the members of an international meeting on 'Mobility and Function in Proteins and Nucleic Acids', 2 March 1982 (no reply extant).
- Refereeing a proposal for a Ciba Foundation Symposium, 1985.
- See also D.386-D.391 for material *re* Mitchell's Ninth CIBA Medal Lecture.
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- E.25 **COMITÉ YOURI TARNOPOLSKI** 1985-1986
- Invitation to join the Comité Youri Tarnopolski (no reply extant), 1985.
- Bulletins of the Comité etc., 1985-1986.

Societies and organisations

E.26-E.32	COMMISSION OF THE EUROPEAN COMMUNITIES	1984-1990
E.26-E.30	Refereeing grant applications, 1984-1990.	
E.26	1984-1987.	
E.27	1988.	
E.28	1989.	
E.29	1990 (1).	
E.30	1990 (2).	
E.31	Assessment by Mitchell of the scientific results achieved by the research work carried out under his co-ordination as part of the Stimulation Action programme. Correspondence and photocopy of completed forms, February-April 1989.	
E.32	Informal invitation to a Science Day, dealing with Chemistry and Earth Sciences, Lyon, France, 18-19 May 1989 (declined). Invitation to a Science Day dealing with Life Sciences, Munich, Germany, 19-20 June 1989 (declined), includes photocopy of a form completed by Mitchell indicating his desire to attend the Munich meeting, January 1989.	
E.33	CORNWALL ANIMAL RIGHTS ASSOCIATION	1984
	Correspondence <i>re</i> experiments carried out at the Glynn Research Institute.	

Societies and organisations

- E.34 **CORNWALL TECHNICAL COLLEGE: SCIENCE ADVISORY SUB-COMMITTEE** 1968-1971
- Mitchell was a member of the College's Science Advisory Sub-Committee. He resigned in 1971.
- Correspondence *re* attendance at meetings of the Science Advisory Sub-Committee and resignation; agendas; minutes. 1968-1971.
- E.35 **COUNCIL FOUNDATION 'FOR THE FUTURE OF THE WORLD'S CHILDREN'** 1989-1990
- Requests for Mitchell's involvement in various activities organised by the Council (all declined).
- E.36 **DEPARTMENT OF SCIENCE AND TECHNOLOGY, AUSTRALIA.** 1981-1983
- Refereeing for the Australian Research Grants Committee.
- E.37 **ECONOMIC RESEARCH COUNCIL** 1986, 1991
- Mitchell was a member of the Economic Research Council from 1975.
- Correspondence *re* ERC Dinner on 27 January 1986 and Annual General Meeting on 24 March 1986 (Mitchell unable to attend either function), etc.
- See also F.63, F.64, F.115, F.122, F.124, F.126, F.242 for material concerning Mitchell's attendance at Economic Research Council Meetings and Dinners.

Societies and organisations

E.38-E.44	EUROPEAN MOLECULAR BIOLOGY ORGANISATION (EMBO)	1988-1992
	Mitchell was elected a member of EMBO in 1973.	
E.38-E.42	Elections, 1988-1991.	
E.38	1988 (1).	
E.39	1988 (2).	
E.40	1989.	
E.41	1990.	
E.42	1991.	
E.43	Request to review a paper (declined), 1988. Completed ballot sheet <i>re</i> proposals to expand EMBO activities; accompanying enclosures, 1990.	
E.44	Request to referee fellowship application, 1992 (declined).	
E.45	FEDERATION OF AMERICAN SCIENTISTS (FAS)	1975-1976
	Correspondence seeking Mitchell's support, as a Fellow of the Royal Society, in defending scientists denied human rights; FAS report etc.	

Societies and organisations

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| E.46 | FEDERATION OF AMERICAN SOCIETIES FOR
EXPERIMENTAL BIOLOGY (FASEB) | 1977, 1988-1991 |
| | <p>General correspondence, 1977, 1988-1991.</p> <p>Invitation to write an editorial for the FASEB Journal (declined), 1990-1991.</p> | |
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| E.47 | FOOD AND DISARMAMENT INTERNATIONAL | 1982, 1984 |
| | <p>Correspondence seeking Mitchell's support, as a Nobel laureate (declined); related enclosures.</p> | |
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| E.48 | HELLENIC INFORMATION COMMITTEE | 1981 |
| | <p>The Hellenic Information Committee gave as its stated purpose 'to inform the international public opinion on certain vital Greek problems which concern humanity as a whole...'.

Request for Mitchell's personal views on the problems of the Cypriot people (declined).</p> | |
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| E.49-E.52 | HUMAN FRONTIER SCIENCE PROGRAM ORGANISATION
(HFSP) | 1989-1991 |
| | <p>The Human Frontier Science Program was originally proposed by the Japanese Government at the Venice Economic Summit Meeting, June 1987. It was launched in 1989 to support research in the areas of neurobiology and molecular biology.</p> | |
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| E.49 | <p>Secretarial and manuscript notes <i>re</i> Human Frontier Science Program (HFSP) as a source of funding for basic research; pamphlets <i>re</i> HFSP, 1989.</p> | |
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| E.50 | <p>Refereeing, 1990-1991.</p> | |

Societies and organisations

- E.51 Invitation to join the Review Committee for Research Grants in 'Basic Research for the Elucidation of Biological Functions through Molecular Level Approaches' (declined); notes *re* the work involved, 1991.
- E.52 Recommendation, 1991.
- E.53 **HUNGARIAN HUMAN RIGHTS LEAGUE** 1988
- Invitation to join the Committee of Honour for the establishment of a memorial for 'Imre Nagy and his companions' (declined).
- E.54 **INSTITUTE FOR SCIENTIFIC INFORMATION** 1980-1988
- Correspondence *re* preparation of 'The 1,000 Contemporary Scientists Most-Cited 1965-1978' produced by the Institute for Scientific Information; Mitchell's completed questionnaire, 1980-1981.
- Request for Mitchell's permission to reprint an article published in *Current Contents* as 'This Week's Citation Classic' in 1978 (granted), 1985.
- Invitation to the ISI Mason Conference debate on the usefulness of citation analysis, Oxford, 6 September 1988, held during the 150th Annual Meeting of the British Association for the Advancement for Science (declined) etc.
- E.55 **INSTITUTE FOR SOCIAL INVENTIONS** 1987-1989
- The main aim of the Institute for Social Inventions was to promote imaginative solutions to existing social problems.
- Correspondence seeking Mitchell's support for and opinion on the Hippocratic-style oaths for scientists drafted by the Institute for Social Inventions, including enclosures sent by the Institute, 1987-1989. Mitchell's reply, dated 12 August 1987, includes copies of two chain letters he drafted in 1984.

Societies and organisations

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| E.56 | INTERNATIONAL CAMPAIGNS | 1982-1991 |
| <p>Mitchell agreed to sign statements for various International Campaigns.</p> <p>Correspondence seeking Mitchell's support for human rights campaigns; bulletins.</p> | | |
| E.57 | INTERNATIONAL CELL RESEARCH ORGANISATION (ICRO) | 1963 |
| <p>Mitchell was invited to become a member of ICRO's Panel II and initially accepted but was forced to withdraw several months later owing to ill-health.</p> <p>Correspondence <i>re</i> membership of ICRO and arrangements for Panel II's first meeting, New York, 5 November 1963 (Mitchell withdrew) etc.</p> | | |
| E.58 | INTERNATIONAL CENTRE OF THEORETICAL BIOLOGY | 1986 |
| <p>Invitation to join the Scientific Committee of a proposed International Centre of Theoretical Biology to be established in Venice (declined); preliminary proposal for the Centre.</p> | | |
| E.59 | INTERNATIONAL COMMITTEE 'SCIENCE FOR PEACE' (ICSP) | 1988-1989 |
| <p>Invitation to become a member of ICSP (reply not extant) etc.</p> | | |
| E.60 | INTERNATIONAL COUNCIL FOR SCIENTIFIC DEVELOPMENT (ICSD) | 1981-1987 |
| <p>Invitation to participate in founding ICSD (declined), 1981</p> <p>Invitations to become an Honorary Member (both declined), 1983, 1987.</p> | | |

Societies and organisations

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| E.61 | INTERNATIONAL CULTURAL FOUNDATION (ICF) | 1990 |
| | <p>The ICF was founded by the Rev. Dr. Sun Myung Moon in 1968 'to promote cultural and academic exchanges between the nations of the world'.</p> <p>Correspondence seeking Mitchell's support for various projects (no replies extant); enclosures.</p> | |
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| E.62 | INTERNATIONAL OF LOVE | 1979 |
| | <p>The International of Love was an organisation, based in Athens, seeking to build a 'just and peaceful society'.</p> <p>Request to sign a declaration (declined).</p> | |
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| E.63 | INTERNATIONAL SOCIETY OF RESEARCHERS AND INVENTORS FOR THE ADVANCEMENT OF WORLD PEACE | 1982 |
| | <p>Invitation to join the Organising Committee and become a nominee for the Presidency of the Society (declined).</p> | |
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| E.64 | JAPANESE BIOCHEMICAL SOCIETY | 1984-1985, 1992 |
| | <p>Mitchell was elected an Honorary Member of the Japanese Biochemical Society in 1984.</p> <p>General correspondence.</p> | |

Societies and organisations

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| E.65-E.69 | JESUS COLLEGE, CAMBRIDGE | 1980-1992 |
| | Mitchell was elected an Honorary Fellow of Jesus College, Cambridge in 1980. He had studied there as an undergraduate, 1939-1943. | |
| E.65 | Correspondence <i>re</i> election as Honorary Fellow etc., 1980-1981. | |
| | Jesus College 76th Annual Report, 1980, containing a short biographical sketch of Mitchell. | |
| E.66 | Invitations (declined) to Jesus College Dinners etc., 1980-1992. | |
| E.67 | Arrangements for Mitchell to stay and dine in College, 28 October 1981; itinerary for visit to Cambridge, 27-29 October. | |
| | Arrangements for Mitchell to attend Jesus College Audit Dinner, 16 December 1981; itinerary for visit to Cambridge, 16-17 December. | |
| E.68 | Arrangements for Mitchell to attend Jesus College Commemoration of Benefactors Dinner, 12 March 1982; itinerary for visit to Cambridge, 12-13 March (unable to attend due to illness). | |
| | Arrangements for Mitchell to attend Jesus College Audit Dinner, 15 December 1982; itinerary for visit, 15-16 December. | |
| E.69 | Refereeing application for a Jesus College Research Fellowship, 1985. | |
| E.70 | LIGUE DES DROITS DE L'HOMME | 1989 |
| | Request for Mitchell to sign a declaration, calling for the liberation of Wei Jingsheng and all other Chinese dissidents (declined). | |

Societies and organisations

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| E.71 | LISTER INSTITUTE OF PREVENTIVE MEDICINE | 1983-1984 |
| | Information <i>re</i> Lister Institute Research Fellowships. | |
| E.72 | MEDICAL COMMITTEE FOR SOVIET JEWRY | 1986 |
| | Request for Mitchell to sign a declaration against the restrictions placed on scientists in Russia (declined). | |
| E.73-E.76 | MEDICAL RESEARCH COUNCIL (MRC) | 1966-1989 |
| | Refereeing, 1966-1989. | |
| E.73 | 1966-1967. | |
| E.74 | 1976-1979. | |
| E.75 | 1979. | |
| E.76 | 1989. | |
| E.77-E.80 | NATIONAL ACADEMY OF SCIENCES (NAS), USA | 1977-1991 |
| | Mitchell was elected a Foreign Associate of the National Academy of Sciences in 1977 and became a Correspondent of its Committee on Human Rights in 1986. | |
| E.77 | Election as Foreign Associate, 1977; letters of congratulation (with replies), 1977. | |

Societies and organisations

- E.78 General correspondence, 1977-1984.
- Includes notes about whether Mitchell should attend the 1978 Annual Meeting.
- E.79 General correspondence, 1985-1991.
- Includes autobiographical sketch, 1985; invitation to the regional roundtable for NAS foreign associates and members resident in the UK, the Royal Society, London, 24 September 1991 (declined).
- E.80 Invitation to become a Correspondent of the Committee on Human Rights (accepted), 1986.
- Newsletters of the Committee, 1986-1987.
- E.81-E.96 **NATIONAL SCIENCE FOUNDATION, USA** 1967-1992
- Refereeing, 1967-1992.
- E.81 1967.
- E.82 1968.
- E.83 1971.
- E.84 1972.
- E.85 1973.
- E.86 1975 (1).

Societies and organisations

E.87	1975 (2).	
E.88	1976-1977, includes two assessments by JMM [Jennifer Moyle].	
E.89	1978.	
E.90	1979 (1).	
E.91	1979 (2).	
E.92	1979 (3).	
E.93	1979 (4).	
E.94	1980-1983.	
E.95	1984-1987.	
E.96	1991-1992.	
E.97-E.99	NORTH ATLANTIC TREATY ORGANISATION (NATO), SCIENTIFIC AFFAIRS DIVISION	1977-1987
	Refereeing, 1977-1987.	
E.97	1977, by JMM [Jennifer Moyle].	

Societies and organisations

E.98 1983.

E.99 1987.

E.100 **NUFFIELD FOUNDATION** 1961, 1963

Correspondence *re* Nuffield Foundation's grant in support of work on tissue cells and rheumatic disease and the need to purchase Potentiometric Recording Equipment, 1961 etc.

E.101 **OFFICE OF TECHNOLOGY ASSESSMENT (of the US CONGRESS)** 1978

Request for Mitchell to identify issues in American or world society, suitable for study and evaluation (accepted); completed response form; newsletter etc.

E.102, E.103 **PROTEUS MOLECULAR DESIGN LTD.** 1988-1991

Mitchell acted as an independent adviser and consultant for Proteus from 1990. In November 1991 he was appointed an Associate Director.

E.102 Correspondence *re* possibility of Mitchell undertaking consultancy work etc., 1988-1989.

E.103 Correspondence *re* Mitchell's consultancy work, 1990-1991. Includes report by Mitchell on Proteus's activities, May 1990.

Societies and organisations

- E.104 **PUGWASH CONFERENCES ON SCIENCE AND WORLD AFFAIRS.** 1976, 1982
- Invitation to a discussion meeting on 'The fast breeder reactor in relation to energy policy', the Royal Society, 28 September 1976 (accepted).
- Correspondence asking Mitchell to sign a declaration *re* the dangers of nuclear war (Mitchell's name appears on an accompanying leaflet as one of 97 Nobel laureates to have signed), 1982.
- E.105, E.106 **RESEARCH CORPORATION** 1977-1991
- Research Corporation was a 'nonprofit foundation for the advancement of academic science and technology'.
- E.105 Refereeing grant application, 1977.
- E.106 General correspondence, 1980-1991.
- E.107 **ROCHE INSTITUTE OF MOLECULAR BIOLOGY** 1979-1987
- Invitations to submit a nomination for the V.D. Mattia Award (no replies extant) etc.
- E.108-E.110 **ROYAL INSTITUTION OF GREAT BRITAIN** 1974, 1981-1991
- Mitchell was elected a Life Member of the Royal Institution in 1981.
- E.108 Correspondence *re* membership and election etc., 1974, 1981-1982.
- See also D.418-420 for material relating to the Friday Evening Discourse given by Mitchell at the Royal Institution, 13 March 1981.

Societies and organisations

E.109 Arrangements for the visit to London by Mitchell and his wife to attend an evening party in honour of Sir George and Lady Porter, the Royal Institution, 6 December 1985; itinerary; etc.

E.110 Mitchell served on the Davy Faraday Laboratory Committee of the Royal Institution from 1982-1985.

Invitation to serve on the Committee (accepted), 1982 etc.

See also F.147, F.148, F.165, F.166, F.196-F.198 for material relating to meetings of the Davy Faraday Laboratory Committee

E.111-E.128

ROYAL SOCIETY

1965-1992

Mitchell was elected a Fellow of the Royal Society in 1974, awarded the Copley Medal in 1981 and further honoured as the Croonian Lecturer for 1987.

The material is presented as follows:

E.111-E.119 General and miscellaneous.

E.120-E.128 Elections and awards.

General and miscellaneous

Includes, invitations to functions, correspondence *re* Year Book entries.

E.111 1965, 1973.

E.112 1974. Letters of congratulation upon Mitchell's election as a Fellow of the Royal Society (1).

Societies and organisations

- E.113 1974. Letters of congratulation (2) etc.
- E.114 1975-1977. Correspondence *re* arrangements for the photographs taken of Mitchell for the Royal Society Portfolio, 1976; note attached *re* copyright of the photographs, 1986.
- Arrangements to attend a Royal Society 'Conversazione', London, 12 May 1977 etc.
- E.115 1978, 1979. Arrangements to attend a Discussion Meeting, 'Neutron scattering in Biology, Chemistry and Physics', London, 26-27 September 1979, a Special General Meeting, London, 15 November 1979 and the Anniversary Meeting, London, 30 November 1979 etc.
- E.116 1980-1982. Correspondence seeking Mitchell's views on subjects for discussion meetings etc.
- E.117 1983-1985. Request by Council to prepare a memorial of J.F. Danielli for publication in *Biographical Memoirs of Fellows of the Royal Society* (declined), 1984 etc.
- E.118 1986. Completed copy of Mitchell's Personal Records booklet etc.
- E.119 1987-1992.

Elections and awards

- E.120 1975-1978.
- E.121 1983, 1985-1987.
- E.122 1989 (1).

Societies and organisations

E.123 1989 (2).

E.124 1990 (1).

E.125 1990 (2).

E.126 1990 (3).

E.127 1991 (1).

E.128 1991 (2).

E.129 **ROYAL SOCIETY OF CHEMISTRY** 1979, 1982-1986

The Royal Society of Chemistry was formed in 1980 following the merger between the Chemical Society and Royal Institute of Chemistry.

Incomplete application form for Fellowship of the Chemical Society, ca.1979; correspondence *re* Royal Society of Chemistry circulars, 1982-1986.

E.130, E.131 **ROYAL SOCIETY OF EDINBURGH** 1979-1989

Mitchell was elected an Honorary Fellow of the Royal Society of Edinburgh in 1979.

E.130 General correspondence, 1979-1983.

Includes correspondence *re* election, 1979; invitation to deliver an address at an Ordinary Meeting of the Society, 22 November 1982 (declined).

Societies and organisations

- E.131 General correspondence, 1984-1989.
- Includes copy of Mitchell's completed Personal Records booklet, 1984; correspondence *re* Royal Society of Edinburgh's Appeal, 1989.
- E.132, E.133 **ROYAL SWEDISH ACADEMY OF SCIENCES** 1981-1991
- Mitchell was awarded the Nobel Prize for Chemistry in 1978 by the Royal Swedish Academy of Sciences.
- E.132 General correspondence.
- E.133 Correspondence *re* Nobel Prize nomination, 1983.
- Invitations to submit proposals for the Nobel Prize awards for Physics and Chemistry in 1984 (no replies extant).
- E.134-E.144 **SCIENCE AND ENGINEERING RESEARCH COUNCIL (SERC)** 1987-1989
- See also Science Research Council (SRC), E.147-E.151.
- E.134 Refereeing grant application, 1987.
- E.135-E.144 Assessment Panel work, 1988-1989.
- Mitchell served on an IRC (Interdisciplinary Research Centre) Panel, assessing proposals by various groups for the establishment of Research Centres.
- E.135-E.139 Papers *re* panel meetings and visits.
- E.135 Meeting, 8 November 1988, to shortlist proposals.

Societies and organisations

- E.136-E.137 Meetings and visits, 24-25 November 1988. 2 folders.
- E.138-E.139 Meeting and visit, 5 December 1988. 2 folders.
- E.140-E.143 Submissions December 1988. 4 folders.
- E.144 Correspondence, including Mitchell's concluding assessment, December 1988-June 1989.
- E.145 **SCIENCE AND TECHNOLOGY FOUNDATION OF JAPAN** 1984, 1986-1987

Requests for Mitchell to recommend candidates for the 'Japan Prize' (declined).
- E.146 **SCIENCE MUSEUM, LONDON** 1983, 1985-1986

Correspondence, seeking Mitchell's help in providing objects for display in the Science Museum.
- E.147-E.151 **SCIENCE RESEARCH COUNCIL (SRC)** 1972-1981

See also Science and Engineering Research Council (SERC), E.134-E.144.

Refereeing.
- E.147 1972.
- E.148 1975.

Societies and organisations

E.149 1978.

E.150 1979-1980.

E.151 1981.

E.152 **SCIENTISTS FOR SOVIET REFUSENIKS** 1982

Scientists for Soviet Refuseniks was the successor organisation to the Medical and Scientific Committee for Soviet Jewry. It sought to publicise the situation of scientists in the USSR, refused the right to emigrate.

Invitation to become a patron of Scientists for Soviet Refuseniks (declined).

E.153 **SCOTTISH HOSPITAL ENDOWMENTS RESEARCH TRUST** 1992

Mitchell received a grant from the Trust, during his period at Edinburgh University. In 1992 the Trust produced a brochure which mentioned its support for Mitchell's work.

Correspondence seeking Mitchell's approval of references to him in the Trust's brochure; photocopy of the relevant pages.

E.154 **SOCIETY FOR EXPERIMENTAL BIOLOGY** 1964,1971

Papers for Annual General Meeting, 1971; proposal for revision of Articles of Incorporation, n.d. etc.

Societies and organisations

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|---|--|------------|
| E.155 | SOCIETY FOR GENERAL MICROBIOLOGY | 1984-1988 |
| <p>Mitchell became an Honorary Member of the Society in 1984.</p> <p>General correspondence. Includes invitation to become an Honorary Member (accepted), 1984; request for a contribution by Mitchell for a volume about the early days of microbiology in the UK (Mitchell referred the enquirer to Jennifer Moyle), 1988; etc.</p> | | |
| E.156 | THIRD WORLD ACADEMY OF SCIENCES | 1986 |
| <p>The Third World Academy of Sciences aimed to improve the health and vitality of the basic and applied sciences in the Third World.</p> <p>Request for Mitchell to referee grant applications in the field of Molecular Biology and/or Biochemistry; copy of completed 'Referee - Biodata' form (this copy of the completed form, lacking only Mitchell's signature, suggests that the request was accepted).</p> | | |
| E.157 | UNITED NATIONS ASSOCIATION IN CANADA | 1984-1985 |
| <p>Correspondence, requesting Mitchell to endorse the Association's 'Appeal for Peace' (declined); related enclosures.</p> | | |
| E.158 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANISATION (UNESCO) | 1988, 1990 |
| <p>Request for Mitchell to contribute his views on global energy issues to a UNESCO brochure on the subject (no reply extant);</p> <p>Secretarial notes <i>re</i> fund raising.</p> | | |

Societies and organisations

E.159, E.160	UNIVERSITY OF EAST ANGLIA (UEA)	1986-1992
	The University of East Anglia awarded Mitchell the Honorary Degree of Doctor of Science in 1981. He became a member of the UEA Society, for graduates and friends of the University in 1986.	
E.159	Papers <i>re</i> membership of the UEA Society etc., 1986-1992.	
E.160	Request for recommendation, 1986.	
E.161	WELCH FOUNDATION	1986-1990
	Invitations to submit a nomination for the Robert A. Welch Award in Chemistry (no replies extant).	
E.162-E.164	WELLCOME TRUST	1984-1990
	Refereeing.	
E.162	1984-1986.	
E.163	1987.	
E.164	1989-1990.	

Societies and organisations

E.165-E.171

WINNICOTT RESEARCH UNIT

1988-1992

The Winnicott Research Unit was set up in the Department of Psychiatry, University of Cambridge in October 1990 through a benefaction from the Tedworth Charitable Trust. This followed on from an earlier initiative of the Winnicott Trust which established a Research Fellowship in Cambridge to encourage research in areas of concern to D.W. Winnicott. Mitchell was interested in the work of the Winnicott Research Unit and in 1991 agreed to become Chairman of its Advisory Committee. The material includes correspondence with Martin James (Director of the Winnicott Trust), Dr Lynne Murray (Director of the Winnicott Research Unit in Cambridge), and James Sainsbury of the Tedworth Charitable Trust.

E.165

Correspondence between Mitchell, James and Murray *re* research work and its funding by the Winnicott Trust, arrangements for the 1st Advisory Committee Meeting etc., December 1988-November 1991.

Includes papers *re* 5th Meeting of the Trustees of the Winnicott Trust, 15 July 1991 and 9th Joint Meeting of the Trustees, Editors and Literary Agents, 16 July 1991.

E.166

Correspondence, mostly between Mitchell and Sainsbury, *re* Mitchell's agreement to act as Chairman of the Advisory Committee for the Winnicott Research Unit, the structure and administration of the Unit, Mitchell's mediation over the issue of the Unit's funding etc., February-October 1990.

E.167

Arrangements for Mitchell to attend a dinner to celebrate the establishment of the Winnicott Research Unit and to honour its benefactor, James Sainsbury, Gonville and Caius College, Cambridge, 29 April 1991; invitation; itinerary etc.

E.168

Copies of correspondence *re* the Winnicott Research Unit and its Director, 1990-1991, sent to Mitchell in October 1991.

E.169

Manuscript notes by Mitchell (found amongst various reprints of articles by Murray, the front pages of which have been retained), 28 June 1990.

E.170 Papers *re* biannual meeting of the Advisory Committee for the Winnicott Research Unit, Cambridge, 20 November 1991. Includes:

Correspondence *re* arrangements, February-November 1990.

Agendas (annotated); attached to 2pp Mitchell's manuscript notes *re* plans for the Committee meeting, financial matters etc., *ca.* October 1991.

Correspondence *re* the content of James Sainsbury's intended talk at the meeting, 17 November 1991.

Transcript of the Advisory Committee Meeting, 18pp typescript.

E.171 Two sets of printed notes entitled 'The Winnicott Research Unit of the University of Cambridge', (some annotations) giving details of the Unit's history, aims and personnel, October-November 1991.

Copies of financial tables and notes, with 1p Mitchell's manuscript notes attached etc., *ca.* 1991-1992.

E.172 **WOLF FOUNDATION** 1983

The Wolf Foundation was based in Israel and awarded prizes to outstanding scientists and artists in order to promote science and art for the benefit of mankind.

Invitation to become a member of the Wolf Prize Committee in Chemistry for 1983-1984 (declined).

E.173 **WOLFSON FOUNDATION** 1992

Request to referee grant proposal (declined).

E.174 **WORLD CONGRESS ALTERNATIVES AND ENVIRONMENT** 1985-1989

Invitations to World Congresses on peace and the environment (declined, 1985, unanswered, 1987, 1988); request to sign a statement against nuclear weapons, addressed to Presidents Gorbachev and Bush (no reply extant), 1989 etc.

Societies and organisations

E.175

WORLD FUTURE SOCIETY

1987

Request to answer two questions for a poll of Nobel laureates views about the challenges facing humanity (declined).

SECTION F

VISITS AND CONFERENCES

F.1-F.357

This section documents Mitchell's attendance at conferences, seminars and workshops as well as visits to colleagues at other research centres covering the period 1958-1992. Material primarily relating to Mitchell's publications and lectures which may have arisen from said occasions is to be found in section D, Publications, Lectures and Broadcasts. Visits of individuals to Glynn House are documented in section B, Glynn Research Institute. Further material relating to visits and conferences may also be found in section G, Correspondence.

The presentation is arranged chronologically as far as possible. Material relating to invitations either declined or for which there is no evidence of acceptance is placed at the end of the sequence for each year.

Where applicable reference has been made to the bibliography in the Royal Society memoir of Mitchell (A.1) in the form of *Bibliog...* Capital letters used in the bibliographical references, such as MM1967a refer to the first letter in the surnames of the authors, the lowercase letter to the sequence of publication in that year.

1958

- F.1 Biochemical Society Meeting, Oxford, 13-14 July.
- Mitchell spoke on 'Metabolism transport and morphogenesis: Which Drives Which?', *Bibliog.* M1962b.
- 2pp typescript summary.

1960

- F.2 Symposium on 'Membrane transport and metabolism', Prague, 22-27 August. See also G.554.
- Photocopied pages from the published proceedings entitled 'Symposia Csav' edited by A. Kleinzeller and A. Kotyk.
- Mitchell's contribution to the discussion is included, *Bibliog.* M1962d.

Visits and conferences

1961

- F.3, F.4 First meeting of the American Society for Cell Biology, Chicago, Illinois, 2-4 November.
- Mitchell spoke on 'The chemical asymmetry of membrane transport processes' at the session on 'Characteristics of cell interfaces', 4 November, *Bibliog.* M1963b.
- F.3 Outline of programme; correspondence *re* arrangements; brief manuscript notes on lectures given by other participants.
- F.4 24pp typescript and figures.

Invitations 1961

- F.5 Gordon Conference on 'Cell structure and metabolism'.
- Cambridge Philosophical Society symposium on 'The origins of life' to be held at the AGM, 30 October.
- Joint meeting of the Society of Chemical Industry and the Society of Cosmetic Chemists, London, 20 November.

1962

- F.6, F.7 British Biophysical Society symposium on 'The supramolecular structure in relation to biological activity and function', 12 and 15 April.
- Mitchell spoke on 'Anisotropic systems and the catalysis of vectoral processes in Chemistry and Biology'.
- F.6 Manuscript draft of Mitchell's paper.

Visits and conferences

- F.7 Typescript draft of Mitchell's paper; provisional programme.
- F.8 International symposium on 'Injury, inflammation and immunity', Slough, Buckinghamshire, 5 May.

Correspondence and provisional programme.
- F.9 Biology Study Group, University of Sussex, May.

Correspondence *re* arrangements.
- F.10 Letter from Nuffield Foundation *re* Mitchell's attendance at unidentified conference, 17 May. Not otherwise documented.

Gordon Research Conference on Cell Structure and Metabolism, Kimball Union Academy, Meriden, New Hampshire, 18-22 June.

Letter *re* travel expenses.

Invitations 1963

- F.11 Symposium on 'Surface active agents and micro-organisms', Society of Chemical Industry, London.

Summer course on 'Regulatory mechanisms in bacterial cell', Debrecn, Hungary, July. Informal invitation. See also G.1032.

Sixteenth Annual Symposium of the Society of General Physiologists on 'Cellular function of membrane transport', Woods Hole, Massachusetts, 4-7 September.

Visits and conferences

1965

- F.12 Symposium on 'The regulation of metabolic processes in mitochondria', Bari, Italy, 26 April-1 May.
- Mitchell spoke on 'Metabolic flow in the mitochondrial multiphase system: an appraisal of the chemi-osmotic theory of oxidative phosphorylation', *Bibliog. MM* 1965b.
- Drafts of Mitchell's paper; symposium programme; correspondence *re* arrangements, Mitchell's paper and subsequent visit to Philips Research Laboratories, Eindhoven, Netherlands, 3-4 May.

Invitations 1965

- F.13 Symposium on 'Cell Surfaces', Israel, 23-26 March.
- Symposium meeting of the SGM [Society for General Microbiology?] on 'Function and structure of micro-organisms', Reading University, 6-7 April.
- Symposium on 'Biophysics and physiology of biological transport', Milan, May-June.

1966

- F.14 Third meeting of the Federation of European Biochemical Societies (FEBS), Warsaw, 4-7 April.
- Mitchell spoke on 'Experimental evidence for proton transport phosphorylation', later published as 'Proton transport phosphorylation: some experimental results', *Bibliog. MM* 1967e.
- Preliminary programme; invitation; correspondence *re* arrangements and Mitchell's paper; corrected page from galley proof; poster probably for lecture. See also D.358.

Visits and conferences

Invitations 1966

- F.15 Symposium on 'Organisational Biosynthesis'.
- Letter of refusal *re* unknown conference addressed to H.J. Vogel, New Jersey, 8 September.
- Brook Lodge Conference on 'Protoplasts and 'L' Forms', Kalamazoo, Michigan, 10-11 November.

1967

- F.16, F.17 Seventh International Congress of Biochemistry, Tokyo, 19-25 August.
- Mitchell was to speak on 'Protonmotive respiration and protonmotivated phosphorylation in mitochondria' but he cancelled his plans to attend.
- F.16 Correspondence *re* Mitchell's cancellation, his paper and the outcome of the conference.
- 2pp manuscript abstract of Mitchell's paper; 1p printed abstract.
- F.17 Printed matter including a tentative programme, announcement, and information on post congress tours.

Invitations 1967

- F.18 Office of Saline Water conference on 'Biological ion transport', Washington, D.C., 1 May.
- Fifteenth Annual Colloquium on 'Protides of the biological fluids', Brugge, Belgium, 3-7 May.
- Society for Experimental Biology summer meeting, Symposium on 'Membrane transport', University of Sussex, 18 July.

Visits and conferences

1968

- F.19, F.20 Fifth meeting of the Federation of European Biochemical Societies, Prague, 15-20 July.
- Mitchell spoke on 'The chemical and electrical components of the electrochemical potential of H^+ ions across the mitochondrial cristae membrane', *Bibliog.* M1969e.
- F.19 Figures and drafts of Mitchell's paper; correspondence *re* arrangements and the publication of Mitchell's paper.
- F.20 Annotated reprint of Mitchell's paper and an invitation outlining the scientific and social programme.
- F.21-F.23 Symposium on 'The molecular basis of membrane function', Duke University Medical Centre, Durham, North Carolina, 20-23 August.
- Mitchell spoke on 'Orientated chemical reactions and ion movements in membranes', *Bibliog.* M1969h.
- F.21 Correspondence *re* arrangements and the publication of Mitchell's paper in *The Molecular Basis of Membrane Functions*.
- F.22 Printed matter *re* conference details including programme.
- F.23 Copy of Mitchell's paper.
- F.24, F.25 Summer Course on 'The properties of biological membranes', Portugal, 4-13 September. Organised by Centro de Estudos de Bioquímica do Instituto de Alta Cultura, Universidade do Porto.
- Mitchell withdrew due to illness.
- F.24 Invitation and tentative programme; photocopied summaries of presentations by other scientists; correspondence *re* arrangements and Mitchell's intended lectures.

Visits and conferences

- F.25 Correspondence *re* Mitchell's cancellation.
- F.26 International Symposium on 'Transport and distribution of matter in cells of higher plants', Castle Reinhardsbrunn, Thuringia, East Germany, 14-19 October.
- Conference programmes; correspondence *re* arrangements and Mitchell's subsequent cancellation.

Invitations 1968

- F.27 International Congress of Photosynthesis Research, Freudenstadt, West Germany, 4-8 June.
- Seminar and Conference on 'The physical principles of biological membranes', Miami, Florida, December.

1969

- F.28 Discussion on 'Membranes and oxidative phosphorylation', University College London, 28 February.
- Correspondence *re* arrangements and payment of travel expenses.
- F.29, F.30 Round Table Discussion on 'Electron transport and energy conservation', Università degli Studi di Bari, Torre Canne, Italy, 12-15 May.
- 'The Intrinsic Anisotropy of the cytochrome oxidase region of the mitochondrial respiratory chain and the consequent vectorial property of respiration' joint paper with J.M. Moyle presented by Mitchell, *Bibliog.* MM1970g.
- F.29 Correspondence *re* arrangements and paper; programme and conference details.
- F.30 'Copy manuscript'. Contents of folder so inscribed.
- Manuscript notes; manuscript bundle of references; incomplete manuscript draft of text and printed copy; memos *re* paper.

Visits and conferences

- F.31 Colloquium on 'The biochemistry of mitochondria', Biochemical Society, University of Warwick, 14 November.
- 'Inhibition of mitochondrial ATPase by ADP: release of ADP inhibition by aurovertin' joint paper with J.M. Moyle presented by Mitchell, *Bibliog.* MM1969g.
- Copy of paper; correspondence *re* arrangements and paper; programmes.

Invitations 1969

- F.32 Twentieth Mosbach colloquium, Mosbach, West Germany, 13 April.
- Sixth Annual Pathobiology Conference, Aspen, Colorado, 4-13 August.
- Eleventh International Botanical Congress, University of Washington, Seattle, Washington, 24 August-2 September.
- F.33 Invitation to speak to the graduate students of the Johnson Foundation, University of Pennsylvania, Philadelphia, September.
- British Biophysical Society Meeting, Imperial College London, 17-18 December.

1970

- F.34 Twentieth Symposium of the Society for General Microbiology, 'Organisation and control in prokaryotic and eukaryotic cells', Imperial College London, 6-8 April.
- Mitchell spoke on 'Membranes of cells and organelles: morphology, transport and metabolism'.
- Correspondence *re* arrangements and Mitchell's paper; programmes and printed matter *re* conference; programme for the 57th meeting of the Society for General Microbiology, Norwich, 6-7 January, found with symposium papers.

Visits and conferences

- F.35 Presymposium on 'Physico-chemical basis of ion transport through biological membranes', Riga, Latvia, 19-20 June.
- Correspondence *re* arrangements and subsequent cancellation.
- F.36 Biological Colloquium, Institut für Biochemie der Universität Köln, 2 July.
- Correspondence *re* arrangements and cancellation.
- F.37 Eight International Biochemical Congress, Lucerne, Switzerland, 3-9 September. It was originally planned to hold the congress in Rome.
- Mitchell was to speak on 'Structure and function of the respiratory chain of mitochondria and bacteria', *Bibliog.* M1971b. For details of publication see F.38, F.39.
- Correspondence etc. *re* arrangements and Mitchell's paper; tentative list of speakers and scientific programme; programme of pre and post congress tours; preliminary programme; abstract of paper.
- F.38, F.39 International Colloquium on Bioenergetics: 'Energy transduction in respiration and photosynthesis', Bari, Italy, 11-14 September.
- Mitchell spoke in summary on 'Structure and function of the respiratory chain of mitochondria and bacteria', *Bibliog.* M1971b. See F.37.
- F.38 Correspondence *re* arrangements; announcement *re* publication of colloquium; announcement with list of participants.
- F.39 Volume of published abstracts.
- Correspondence *re* publication of proceedings of the colloquium including Mitchell's paper.

Visits and conferences

- F.40 Second Harden Conference on 'Structure and function of cell walls and cell membranes', Wye College, Ashford, Kent, 27 September-2 October.

Mitchell was to speak on 'Proton translocating function of the respiratory chain and its relationship to proton-coupled solute translocation by passenger-specific porters', but withdrew due to illness.

Correspondence *re* arrangements; three preliminary programmes and a list of participants.

Invitations 1970

- F.41 'The biochemistry of photosynthesis', British Photobiology Society, 10 June.

Meeting of the British Association for the Advancement of Science, Durham, September.

1971

- F.42 23rd International Congress of Pure and Applied Chemistry, Boston, USA, 25-30 July.

Mitchell was to speak on 'The chemiosmotic hypothesis of membrane function' but withdrew due to illness.

Circular II: Scientific programme; correspondence *re* arrangements.

Invitations 1971

- F.43 International Congress on 'Photosynthesis research', Stresa, Italy, 24-29 June.

International Conference on Biological Membranes on 'The role of membranes in secretory processes', Italy, July.

Symposium on 'Biophysics of transport processes, Baden, 14-17 September.

Seventh Federation of European Biochemical Societies Meeting, Varna, Bulgaria, 20-25 September.

Visits and conferences

1972

- F.44 Joint Meeting of the Biochemical Society and the Society for General Microbiology, University of Hull, 5-6 January.

Agenda and Proposed Programme; correspondence *re* arrangements.
- F.45, F.46 International Conference on 'Mechanisms in bioenergetics', Bari, 1-4 May.

Mitchell spoke on 'The chemiosmotic theory of solute transport and metabolism', *Bibliog.* MM1973e.
- F.45 Correspondence *re* arrangements and Mitchell's paper; notes and correspondence *re* permission to reproduce figures; abstract of Mitchell's paper; announcements including lists of participants and final programme.
- F.46 Programme; typescript draft of Mitchell's paper with manuscript annotations and alterations; published abstracts.
- F.47 Eighth meeting of the Federation of European Biochemical Societies, Amsterdam, 20-25 August.

Mitchell spoke on 'Structural and functional organisation of energy transducing membranes and their ion-conducting properties', *Bibliog.* M1972e.

Correspondence *re* arrangements; Mitchell's paper and abstract.

Invitations 1972

- F.48 Miami Winter Symposium, January.

Fourth International Biophysics Congress, Moscow, 7-14 August.

Visits and conferences

1973

- F.49 New York Academy of Sciences Conference on 'Mechanism of Energy Transduction in Biological Systems', New York City, 7-9 February.

Mitchell was a co-sponsor of this conference, but withdrew due to illness. See G.51.

Correspondence *re* arrangements, Mitchell's initial position as co-sponsor and Mitchell's comments on a manuscript by D.E. Green; copy of Green's article on the conference entitled 'Membrane Structure'; preliminary programmes; list of participants; Mitchell's memorandum *re* further developments in his position as co-sponsor; Green's resultant memorandum; correspondence arising. See G.297-G.304.

- F.50 543rd meeting of the Biochemical Society, University of Bristol, 27-28 September.

Mitchell spoke on 'The stoichiometry and molecular mechanism of ADPase systems of mitochondria, chloroplasts and bacteria', *Bibliog.* M1974a.

Correspondence *re* arrangements; provisional programme; copy of Mitchell's abstract and paper; itinerary and programme; etc.

Invitations 1973

- F.51 Ninth International Congress of Biochemistry, Stockholm, 1-7 July.
First International Congress for Bacteriology, Jerusalem, 2-7 September.

1974

- F.52-F.54 Biochemical Society Colloquium on 'The Relationship of Membrane ATPases to Transport Processes', University of York, 10 January. See also G.860.

Mitchell spoke on 'The mechanism of proton translocation in reversible proton-translocating adenosine triphosphatases', a joint paper with J.M. Moyle, *Bibliog.* MM1974c.

Visits and conferences

- F.52 Correspondence *re* arrangements and Mitchell's paper; preliminary programmes and lists of participants; brief manuscript notes *re* colloquium; programme of associated trade exhibition.
- F.53 Draft copy and abstract of paper.
- F.54, F.55 Biochemical Society Colloquium, Cambridge, 1-3 July.

The colloquium was organised by W.A. Hamilton with advice from Mitchell. Mitchell did not attend.
- F.54 Correspondence *re* arrangements, Mitchell's position as advisor; Mitchell's comments on Hamilton's introductory note; copy of Chairman's introduction; copy of paper by S. Roseman.
- F.55 Colloquium papers.

Invitations 1974

- F.56 Celebration of 80th Birthday of A. C. Chibnall, 1 February.
- Annual Chemical Society Congress, London, 3-4 April.
- Boerhaave Committee Meeting on 'The application of thermodynamics on oxydative phosphorylation', University of Leiden, 13 September.
- Conference on 'Electrochemical aspects of biological transport', Liblice, Czechoslovakia, 19-24 May.
- Science Research Council Warwick Rencontre on 'Topological models in Biology', Kenilworth, Warwickshire, 21-24 May.
- First Intersectional Congress of the International Association of Microbiological Societies, Tokyo, 1-7 September.
- Conference on 'The Molecular Aspects of Membrane Phenomena', Battelle Seattle Research Center, Seattle, Washington, 4-6 November.

Visits and conferences

1975

- F.57, F.58 Joint meeting of the British Photobiology Society and the International Solar Energy Society (UK Section), on 'Solar energy; biological conversion systems', Imperial College London, 27 June.
- Mitchell withdrew.
- F.57 Correspondence *re* arrangements; programme; Science Research Council grant application.
- F.58 Copy of Proceedings of the Workshop on 'Bio-Solar Conversion'.
- F.59, F.60 International Symposium on 'Electron-transfer chains and oxidative phosphorylation', Fasano, Bari, 15-18 September.
- Mitchell spoke on 'Protonmotive function of cytochrome systems', *Bibliog. M1975e*. See C.198.
- F.59 List of participants; tentative programme; programme; draft abstracts; correspondence *re* arrangements and Mitchell's paper.
- F.60 Itinerary; correspondence and manuscript notes *re* arrangements for travel; printed and manuscript figures.

Invitations 1975

- F.61 Student Biochemical Society, University of Hull, February, March.
- Roussel-Uclaf Round Table Conference on 'Transport processes in chemistry', Paris, 20-21 March.
- Fourth Federation of American Society for Experimental Biology Symposium on 'Evolution of transport through membranes', 13-18 April.
- Study week on 'Biological and artificial membranes and desalination', 14-19 April.

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Visits and conferences

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Ninth Heyrvsky Discussion, Castle Liblice, Prague, 19-23 May.

Twelfth International Botanical Congress, Leningrad, 3-10 July.

Tenth Meeting of the Federation of European Biochemical Societies, Paris, 20-25 July.

Symposium on 'Bioenergetics', Japanese Biochemical Society, Tokyo, November.

1976

F.62 Seminar on 'Gold and currency reform, campaign for alternatives in money', London, 6 September.

Correspondence *re* arrangements; advertisement including programme; manuscript notes of papers presented; graph handout; two copies of articles by F.A. von Hayek; paper by S.W. Alexander entitled 'Save the Pound-Save the Pound'.

F.63 Discussion meeting of Economic Research Council *re* 'Housey-Housey' an occasional paper by V.T. Kinacre, London, 11 October.

Annotated copy of paper; itinerary.

F.64 Annual General Meeting of the Economic Research Council, Westminster, 30 November.

Correspondence *re* arrangements; Honorary Secretary's Report; Minutes of Previous Meeting; Financial Report and accounts.

F.65 Biochemical Society Agenda Papers, University of Cambridge, 14-16 December.

Correspondence *re* arrangements; draft copies of colloquium papers; proposed programme; reprint of Biochemical Society Agenda Papers, Trinity College Dublin, 2-3 September, annotated *re* Cambridge colloquium.

Visits and conferences

Invitations 1976

- F.66 Swedish Biochemical Society Meeting, Lund, 10-11 June.
- 29th international meeting of the Society of Physical Chemistry, Paris, 12-15 October.
- Inaugural Lecture on 'The Evolution of an Enzymologist' by B.S. Hartley, Imperial College London, 23 November.
- Workshop on 'Transmembrane ionic exchanges in plants'. Initially planned for 8-13 July 1974 the correspondence suggests it finally took place in 1976 at Rouen and Paris, 5-12 July. Mitchell declined an invitation to attend but played a role in the organisation of the workshop.

1977

- F.67-F.71 Society for General Microbiology Symposium 27 on 'Microbial Energetics', London, 28-31 March.
- Mitchell spoke on 'From energetic abstraction to biochemical mechanism', *Bibliog.* M1977b.
- F.67 Correspondence *re* arrangements, abstracts, Mitchell's paper and its publication in the proceedings; list of contributors and provisional programmes; brief manuscript note *re* symposium contributions.
- F.68 Abstract of Mitchell's paper.
- F.69, F.70 Typescript draft of Mitchell's paper. 2 folders.
- F.71 Draft figures and captions for Mitchell's paper.

Visits and conferences

- F.72 International Symposium on 'Membrane Bioenergetics', Spetsai, Greece, 10-15 July.
- Mitchell was to speak on 'Protonmotive and protonosmotic reaction mechanisms' but withdrew due to illness.
- Correspondence *re* arrangements, Mitchell's paper, and his cancellation; abstract of Mitchell's paper; tentative programme and general information; 2pp typescript introduction.
- F.73 Workshop on 'Structure and function of energy-transducing membranes', in honour of E.C. Slater's sixtieth birthday, Amsterdam, 10-13 August.
- Mitchell was to speak on 'Stoichiometric aspects of protonosmotic coupling' but withdrew due to illness.
- Programme and tentative programmes; correspondence *re* arrangements, Mitchell's paper and Mitchell's cancellation.
- F.74, F.75 Eleventh meeting of the Federation of European Biochemical Societies, Copenhagen, 15-19 August.
- Mitchell was to speak on 'Chemicomotive forces and flows via enzymes and carriers in aqueous media and lipid membranes' and on 'The proton pumping activity of the mitochondrial ATPase' but withdrew due to illness.
- F.74 Correspondence *re* arrangements, and Mitchell's cancellation; abstracts.
- F.75 Programmes; itinerary; travel arrangements etc.
- F.76 Symposium on 'Unity in biochemistry', Amsterdam, 20-21 October.
- Mitchell spoke on 'Chemicomotive and chemiosmotic group translocation systems in biochemistry: a marriage of theory and practice'.
- Correspondence *re* arrangements; programme; preliminary programmes; four photographs of Mitchell in informal conversation; symposium poster; 3pp typescript of paper.

Visits and conferences

Invitations 1977

- F.77 Conference on 'Molecular aspects of membrane transport', Keystone, Colorado, 13-20 March.
- Meeting of the European Working Party for Fractionation and Reassembly of Biological Units on 'Membrane ATPases', Bruges, 30 April and 1 May.
- 27th Congress of Physiological Sciences on 'Interaction of intra and extracellular acid-base balance', Paris, 18-23 July.
- Symposium on 'Gastric ion transport', Uppsala, Sweden, 26-28 July.
- Workshop on 'Biochemistry on bacterial transport', 14-19 August.
- Linderstrøm-Lang conference on 'Biochemical control mechanisms of respiration at the molecular and tissue level', Espoo, Finland, 25-28 August.
- 32nd Annual Meeting of the Society of General Physiologists, Woods Hole, Massachusetts, 22-25 September.

1978

- F.78 Biochemical Society Meeting, University of Hull, 4-6 January.
- Programme; forms *re* conference details; manuscript notes on lectures by other participants.
- F.79, F.80 Twelfth meeting of the Federation of European Biochemical Societies, Dresden, East Germany, 2-8 July.
- Mitchell was invited to give the Hans Krebs Lecture and spoke on 'Compartmentation and communication in living systems', *Bibliog.* M1979b. See also D.434-D.438.
- F.79 Correspondence *re* arrangements etc.; preliminary programmes including First Announcement.
- F.80 Correspondence *re* further arrangements.

Visits and conferences

- F.81, F.82 Frontiers of Biological Energetics Conference on 'From electrons to tissues', in honour of the 65th birthday of Britton Chance, University of Pennsylvania, 20-22 July.
- Mitchell presented four papers: 'Vectorial electron, hydrogen, proton and oxyanion conduction in chemiosmotic reaction mechanisms', *Bibliog.* M1978e, 'Electron translocating function of cytochrome oxidase', *Bibliog.* MM1978f, 'Protonmotive stoichiometry of redox and ATPase systems', *Bibliog.* MMM1978g and 'Calcium-anion symport systems in mitochondria', *Bibliog.* MM1978h.
- F.81 Correspondence *re* arrangements and publication of papers; programme and preliminary programme.
- F.82 Annotated abstract book.
- F.83 Biochemical Society Meeting, Oxford, 20-21 September.
- Travel arrangements.
- F.84 The Japanese-American Seminar on 'Cytochrome Oxidase', Kobe, Japan, 29 August-2 September.
- Mitchell spoke on 'Electronmotive function of cytochrome oxidase', *Bibliog.* MM1979a.
- Correspondence *re* arrangements; information *re* seminar and list of participants; abstract of Mitchell's paper.
- F.85 Biochemical Society Meeting, Shell Centre, London, 8-10 November.
- Itinerary of travel arrangements including meeting details; correspondence and notes *re* travel arrangements; manuscript notes of lectures; Biochemical Society Agenda Papers.

Invitations 1978

- F.86 Biophysical Society discussion on 'Fast biochemical reactions in solutions, membranes and cells', Airlie, Virginia, 3-5 April.

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Visits and conferences

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Michigan State University Biochemistry Department Colloquium on 'Membranes', 22 or 29 May.

Joint Meeting of the American Society of Biological Chemists and the American Association of Immunologists, Atlanta, Georgia, 5-8 June.

Lucia Celebration and award of the Supreme Order of the Jumping and Smiling Frog, Students Union, University of Stockholm, 13 December.

1979

F.87-F.89

New York Academy of Science Conference on 'Anion and proton transport', New York, 18-21 June.

Mitchell spoke on 'Protonmotive cytochrome system of mitochondria', *Bibliog.* M1980b.

F.87

Annotated draft of Mitchell's paper.

F.88

Correspondence *re* arrangements, conference discussion, publication of paper and Mitchell's abstract; 2pp drafts of Mitchell's contribution to discussion; abstract of Mitchell's paper; notes on travel arrangements; preliminary programme.

F.89

Correspondence *re* arrangements; published abstracts; programme.

F.90

Bioenergetics Group Colloquium on 'Proton Translocation', Cambridge, 29 June.

Mitchell spoke on 'Respiratory chain protonmotive stoichiometry', *Bibliog.* MM1974e.

Correspondence *re* arrangements, Mitchell's paper and abstract; programme and provisional programme; manuscript notes *re* paper; two annotated drafts of Mitchell's abstract.

Visits and conferences

- F.91-F.94 International Symposium on 'Oxidases and Related Redox System', (ISOX-III), Albany, New York, 1-4 July.
- Mitchell presented two papers: 'Some comments on the protonmotive Q cycle', *Bibliog.* M1982d and 'A critique of $\leftarrow H^+/2e^-$ and $\rightarrow e^-/2e^-$ measurements', *Bibliog.* M1982e.
- F.91, F.92 Preparatory figures for Mitchell's papers. 2 folders.
- F.93 Correspondence *re* arrangements, Mitchell's papers, publication of papers and discussion; annotated drafts of Mitchell's contribution to discussion.
- F.94 Travel and conference details; programme; manuscript note *re* Tsou King and Mitchell's paper.
- F.95, F.96 International Workshop on 'Membrane Bioenergetics', in honour of the sixty-fifth birthday of Efraim Racker, Michigan, 5-7 July.
- Mitchell spoke on 'Direct chemiosmotic ligand conduction mechanisms in protonmotive complexes', *Bibliog.* M1979g.
- Mitchell and J.M. Moyle presented a poster on ' $\leftarrow H^+/O$ ratio of the mitochondrial cytochrome system'.
- F.95 Correspondence *re* arrangements, Mitchell's paper and publication of paper; programme including list of participants; abstract.
- F.96 Preparatory figures for Mitchell's paper.
- F.97 Eleventh International Congress of Biochemistry, Toronto, 8-13 July.
- Mitchell spoke on 'General principles of function of bioenergetic and transport system', (not published).
- Mitchell and J.M. Moyle presented a poster on ' $\leftarrow H^+/O$ ratio of the mitochondrial cytochrome system'.
- Correspondence *re* arrangements, Mitchell's paper and its possible publication; manuscript notes *re* arrangements; itineraries; programme; draft abstracts of Mitchell's paper and manuscript note *re* abstract of poster.

Visits and conferences

- F.98 Informal Seminar Meeting, Brock University, Canada, 14 July.
Correspondence *re* arrangements; travel and meeting itineraries.
- F.99 Gordon Conference on Energy Coupling Mechanisms, Andover, New Hampshire, 16-20 July.
Mitchell spoke on 'General principles of chemiosmotic coupling'.
Correspondence *re* arrangements; programme; itinerary; etc.
- F.100 Royal Society meetings, London.
A meeting for discussion on 'Neutron scattering in biology, chemistry and physics', 26-27 September; Special General Meeting and review lecture on 'Stereochemical mechanism of oxygen transport by haemoglobin', 15 November and Anniversary meeting, 30 November. Mitchell later cancelled his attendance.
Correspondence *re* arrangements; programme.

Invitations 1979

- F.101 Fifteenth annual meeting of the Norwegian Biochemical Society, Bergen, 11-13 January.
Closed seminar of the Artists Market Association on 'Art against Bureaucracy', London, 27 and 28 February.
Conference on 'Growth Regulation by Ion Fluxes', Krock Foundation, Santa Barbara, California, 13-16 March.
Eighth Annual Lewis S. Rosenstiel Award Ceremonies, Brandeis University, 5 April.
Seminar by the Graduate Student association at the Johns Hopkins University School of Medicine, April.
1979 Salute to Excellence retreat, Golden Plate Awards of the American Academy of Achievement, Salt Lake City, 21-23 June.

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Visits and conferences

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Seventh International Conference on 'From Theoretical Physics to Biology', 'fluctuations, variations and development', Versailles, 9-13 July.

Eighth Congress of the Spanish Biochemical Society, Murcia, Spain, 27-29 September.

World Congress Alternatives and Environment, Vienna, 29-31 October.

Eighth International Conference on 'Unity of the Sciences', Los Angeles, 23-25 November.

1980

F.102

Review Lecture of the Royal Society on 'Photosynthetic O₂-evolving prokaryotes: a current review' by W.D.P. Stewart, London, 14 February.

Printed lecture notice; note *re* arrangements and filing.

F.103

Meeting on 'Membrane transport and neuroreceptors', Keystone, Colorado, 24-29 February. Mitchell withdrew due to illness.

Correspondence *re* arrangements, tentative programme; programme.

F.104

Symposium on 'Biological Cycles' honouring H.A. Krebs's eightieth birthday, University of Texas Health Science Center, Dallas, 17-20 March.

Mitchell was to speak on 'The still point of the turning cycle in bioenergetics', but withdrew due to illness.

Correspondence *re* arrangements; list of participants.

F.105

First European Bioenergetics Conference, Urbino, Italy, 29 June-5 July.

Mitchell withdrew due to illness.

Correspondence *re* arrangements; summary of conference topics.

Visits and conferences

- F.106-F.109 Conference on 'Function of quinones in electron transfer and energy conserving systems', Hanover, New Hampshire, 26 October-6 November. See D.415.
- Mitchell spoke on 'Protonmotive mechanisms of quinone function', a joint paper with J.M. Moyle, *Bibliog.* MM1982f.
- F.106 Correspondence *re* publication of Mitchell's paper; manuscript notes *re* corrections to draft publication; photocopy of 8pp annotated draft.
- F.107 Correspondence *re* arrangements, Mitchell's paper, letter to B.L. Trumpower *re* Mitchell and Moyle's observations on Q inhibitor; itineraries; programmes; preliminary programme; and lists of prospective participants; two annotated draft abstracts of poster presented by Mitchell and J.M. Moyle; etc.
- F.108 Figures for published paper.
- F.109 Manuscript note *re* draft corrections for paper; part (4pp) and full draft copies of paper, both annotated; note *re* informal seminar by Mitchell at Cornell, 3 November.
- F.110 Royal Society Anniversary Meeting, London, 1 December.
- Itinerary; notice of meeting; correspondence *re* arrangements.

Invitations 1980

- F.111 To visit Baylor College of Medicine, Houston, Texas, 21 January.
- 58th Milan International Fair, Milan, 18-20 April.
- Ninth Annual Lewis S. Rosenstiel Award Ceremonies, Brandeis University, 7 May.
- Meeting on 'Electrochemical phenomena in membranes and biomembranes', Liblice, Czechoslovakia, 19-23 May.
- Second Chemical Congress of the North American Continent, San Francisco, 26 August.

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Visits and conferences

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Fifth International Photosynthesis Congress, Greece, 7-13 September.

Symposium on 'Structure and function of biopolymers, biomembranes and cell surfaces', Bangalore, India, 17-18 December.

1981

F.112-F.114

Third International Congress on 'Biomedical and clinical aspects of Coenzyme Q', Austin, Texas, 18-21 January. See also G.228.

Mitchell was to speak on 'Ubiquinone, bioenergetics and the still point of the turning cycle', but withdrew due to illness, *Bibliog.* M1981f.

F.112

Correspondence *re* arrangements, Mitchell's paper; note *re* invitation to Texas Medical Center, Houston, Texas during Coenzyme Q Symposium.

F.113

Annotated programme.

F.114

Copy of Mitchell's paper with indexing specifications.

F.115

Visit to attend Economic Research Council Dinner and the Nuffield Foundation, London, 8-9 June.

Correspondence *re* arrangements; secretarial notes *re* arrangements; itineraries; programme and list of those attending; Economic Research Council May *News Letter* *re* dinner.

F.116

Visit of Mitchell and J.M. Moyle to a seminar at the laboratories of A. Azzi, Bern, Switzerland, 19-20 June.

Mitchell spoke on 'Chemiosmotic molecular mechanisms in oxidative phosphorylation'.

Correspondence *re* arrangements; annotated itineraries; secretarial notes.

Visits and conferences

- F.117 Visit of Mitchell and J.M. Moyle to see H. Baum and J.M Wigglesworth at Chelsea College London, 24 July.

Annotated itinerary.
- F.118, F.119 Gordon Research Conference on 'Energy coupling mechanisms', Plymouth, New Hampshire, 17-21 August.

Mitchell spoke on 'Mechanistic principles of ligand conduction in porterology'. J.M. Moyle also attended.
- F.118 Preliminary programmes; correspondence *re* arrangements; secretarial notes.
- F.119 Leaflet on conference regulations and general information; programme; handout *re* conference facilities including map; itineraries.

Secretarial notes *re* travel, accommodation, expenses etc.
- F.120 Visit to the Nuffield Foundation (see also B.98) and Computer Exhibition, London, 10 September.

Annotated paper entitled 'The Official Inflation Industry' by R. Marshal; itinerary; letter *re* accommodation; manuscript notes *re* economics.
- F.121 Royal Society meeting on 'New dimensions in microbiology: mixed substrates, mixed cultures and microbial communities', London, 11-12 November.

Mitchell also attended an Economic Research Council Dinner, London, 12 November.

Programme; abstract; itinerary; list of those attending; correspondence *re* arrangements.
- F.122 Economic Research Council Annual General Meeting and Dinner, London, 7 December.

Itinerary; list of participants; annotated notice of AGM; correspondence *re* arrangements.

Visits and conferences

Invitations 1981

- F.123 Tenth Annual Lewis S. Rosenstiel Award Ceremonies, Brandeis University, 8 April.
- Conference on 'Philosophical Appraisalment' organised by the Mexican Petroleum Institute, 12 May.
- Sixth International Symposium on 'Bioelectrochemistry and Bioenergetics', Israel, 27 June-2 July.
- Cornwall Schools' Technology Project Exhibition, 16 July.
- Second International School on 'Structure and function of biological membranes', Varna, Bulgaria, 28 September-4 October.
- Seventeenth Annual Nobel Conference on 'The place of mind in nature', Minnesota, 5-7 October.
- Fourth Nobel Laureate Lecture Series established by the J.T. Baker Chemical Co., on 'Life in the test-tube?', Munich, 20 November.

1982

- F.124 Economic Research Council Dinner and Discussion, London, 25 January.
- Itinerary; list of participants; correspondence *re* arrangements.
- F.125 Scientific discussion with H. Frauenfelder, London, 5 March.
- Itinerary; correspondence *re* arrangements.
- F.126 Economic Research Council Dinner and Discussion, London, 23-26 March.
- Itinerary; list of participants; correspondence *re* arrangements.

Visits and conferences

- F.127-F.129 Special Meeting of the Federation of European Biochemical Societies on 'Cell function and differentiation', Athens, Greece, 25-29 April.
- Mitchell presented two papers: 'Science and humanity: an essay on analytic and appreciative communication', *Bibliog.* M1982g and 'Osmoenzymology: the study of molecular machines', *Bibliog.* M1982h.
- F.127 Programme; list of participants; three invitation cards *re* symposium itineraries.
- F.128 Correspondence *re* arrangements, Mitchell's papers, publication of papers; secretarial notes *re* paper etc.; notes *re* draft papers; daily schedule.
- F.129 Abstract *re* the award of Medals of Honour by Athens Municipal Council to Mitchell, M. F. Perutz and F. Jacob; correspondence *re* replacement of Mitchell's medal following subsequent theft in New York, see also F.137.
- F.130-F.137 New York Academy of Sciences Conference on 'Transport ATPases', New York, 11-14 May. See also G.580.
- Mitchell spoke on 'Chemiosmotic ATPase mechanisms', a joint paper with W.H. Koppenol, *Bibliog.* MK1982i.
- F.130 Correspondence *re* arrangements and Mitchell's paper and abstract; secretarial notes *re* publication of paper; abstract.
- F.131, F.132 Annotated drafts of Mitchell's paper. 2 folders.
- F.133 'Notes for paper on: Chemiosmotic ATPase mechanisms', 3pp manuscript notes so inscribed; photocopied reference cards of W.H. Koppenol; drafts and file copy of circular letter by Mitchell addressed to conference participants to 'promote discussion about possible vectorial chemical mechanisms of the protonmotive and other cationmotive ATPases'; etc.
- F.134 Programmes; conference abstracts; itinerary; list of participants.
- F.135 Correspondence *re* publication of Mitchell's paper.

Visits and conferences

- F.136 Secretarial notes *re* publication of Mitchell's paper etc.; copies of abstracts produced by other speakers.
- F.137 Correspondence *re* theft during conference of Mitchell's bag (including Medal of Honour awarded by Athens Municipal Council, see F. 129).
- F.138 Meetings with I. West and with B. Beechey, Royal Institution, London, 15-17 September.

 Itinerary; brief correspondence *re* arrangements.
- F.139-F.141 Joint Meeting of the Nordic Biochemical Societies and Gesellschaft für Biologische Chemie, Damp, West Germany, 27-29 September.

 Mitchell at first accepted but then declined the invitation. Mitchell was to speak on 'Enzymes and porters as molecular machines'.
- F.139 Secretarial notes *re* arrangements; abstract; correspondence *re* arrangements, Mitchell's paper.
- F.140 Second circular and final programmes; conference poster; etc.
- F.141 Published abstracts.
- F.142 Visit to London 14-15 October for meetings with A. Tomei at the Nuffield Foundation (see also B.99-B.102) and with P. H. Clarke at the Royal Society 14 October; attendance at the Phillips Lecture by J. Black, Royal Society, 14 October; and meeting with G. Porter, and dinner and discourse at Royal Institution, 15 October.

 Itinerary; correspondence *re* arrangements.
- F.143, F.144 Colloquium in honour of H.T. Witt's Sixtieth Birthday, Max Volmer Institute, Berlin, 29 October.
- F.143 Correspondence *re* arrangements; secretarial note *re* arrangements; itinerary; programmes.

Visits and conferences

- F.144 Mitchell's annotated lecture paper with manuscript additions.
- F.145 Visit to London, 17-19 November for Compec 82 Computer Exhibition at Olympia, 17 and 19 November; meeting with J.M. Wigglesworth, 17 November and Special General Meeting of the Royal Society, 18 November.
- Itinerary; correspondence *re* arrangements.

Invitations 1982

- F.146 Seminar and Exhibition on 'Computer design and techniques in construction', Cornwall, 23 February.
- Symposium on 'Return to the human scale-smallness as a principle of survival', Salzburg, 28-30 April.
- Ceremony at Berkeley Castle, Gloucestershire, to celebrate a donation by the Japan Shipbuilding Industry Foundation to the Jenner Appeal, 10 May.
- Workshop on 'Membrane mediated controls', late May.
- Seminar on 'Government support for industrial robots', Plymouth, 3 June.
- Second European Bioenergetics Conference, Lyon, 9-10 July.
- Cornwall School's Technology Project Exhibition, Truro, 14 July.
- 13th International Congress of Microbiology, Boston, Massachusetts, 8-13 August.
- 12th International Congress of Biochemistry, Perth, 15-21 August.
- 25th Anniversary Pugwash Conference on Science and World Affairs, Warsaw, Poland, 26-31 August.
- Symposium on 'Chemiosmotic coupling: theoretical aspects, and applications to oxidative phosphorylation', Woods Hole, Massachusetts, 9-12 September.
- Annual meeting of the Mexican Society of Biochemistry, Guadalajara, Mexico, 31 October.
- 11th International Conference on 'The unity of the sciences: the search for absolute values and the creation of the new world', Philadelphia, 25-28 November.

Visits and conferences

1983

- F.147, F.148 Meeting of the Davy Faraday Laboratory Committee, Royal Institution, London, 22 February.
- F.147 List of Royal Institution Committees; minutes of previous meeting of 22 February; itinerary; correspondence *re* arrangements.
- F.148 Agenda.
- F.149-F.154 Collaborative Consultation on 'Electron translocation and proton ejection by cytochrome oxidase vesicles', Glynn Research Institute, 22-25 March.
- Observers from the Primary Communications Research Centre, University of Leicester were invited by Mitchell to draw up a report on the effectiveness with which the conference was conducted.
- F.149 Handout on train times and conference facilities; copy of Mitchell's completed questionnaire; correspondence *re* arrangements and consultation report with M.D. Gordon and P.K. Marstrand of the University of Leicester.
- F.150 Draft copy of consultation report by M.D. Gordon.
- F.151 Report on a Collaborative Consultation held at Glynn Research Institute, Bodmin, by M.D. Gordon and P.K. Marstrand, July 1983.
- F.152 Annotated programme; manuscript notes by Mitchell *re* arrangements; secretarial notes *re* arrangements and conference facilities; etc.
- F.153 Discussion Paper on 'Cytochrome oxidase vesicles: membrane polarity of cytochrome *c* oxidase' by J.M. Wigglesworth and P. Nicholls; copy of rough graph drawings entitled 'Hexamino ruthenium'; list of references and notes from 'Cytochrome *c* binding by proteoliposomes' by Nicholls and Wigglesworth; 12pp figures *re* cytochrome *c* oxidase.

Visits and conferences

- F.154 'Characteristics of redox-linked proton ejection in cytochrome *c* oxidase reconstituted in phospholipid vesicles. New observations support mechanisms different from proton pumping' by S. Papa *et al*, 13pp typescript with captions, figures and graphs.
- F.155 Meeting and Dinner of the Biochemistry Department, Chelsea College, London, 3 May *re* organising the forthcoming Biochemical Society Symposium for December 1984.
- Correspondence *re* arrangements; secretarial note *re* Mitchell's meeting with R.E. Godfrey of Applied Photophysics, 4 May; itinerary; correspondence and provisional programme of forthcoming Biochemical Society Symposium.
- F.156 Meeting with I. West and P.O. Williams, Director of the Wellcome Trust, London, 9-10 June.
- Itinerary; correspondence *re* arrangements; manuscript diagram and 2pp notes.
- F.157 Symposium on 'Use of liposomes in medicine' in Honour of B.E. Ryman, London, 22 September.
- Programme; correspondence *re* arrangements; itinerary.
- F.158 Meeting with J.M. Wigglesworth at Chelsea College London, 14 October.
- Itinerary.
- F.159 Conference on 'Science and Medicine 1983', Royal College of Physicians, London, 9-11 November.
- Itinerary; correspondence etc. *re* arrangements; programme; speakers references; conference advert; list of participants.
- F.160, F.161 Nobel Laureates Dinner given by the Ambassador of Sweden and Mrs. Leifland, 27 Portland Place, London, 30 November.
- F.160 Correspondence etc. *re* arrangements.

Visits and conferences

F.161 Itinerary; list of participants; invitation card.

Invitations 1983

F.162 Annual General Meeting of the West Cornwall Section of the Association for Science Education, February.

Eleventh Peter A. Leemakers Symposium on 'Energy transduction in both biochemical and chemical systems', Wesleyan University, Connecticut, 12 May.

Symposium on 'New Perspectives on membrane dynamics', Strasbourg, May.

Workshop on 'Biophysical correlates of cellular function', Baylor College of Medicine, Houston, Texas, 20-25 June.

Thirty-third gathering of the Nobel prize winners, Lindau, 27 June-1 July, see F.217-F.220, F.306 and G.61.

604th Meeting of the Biochemical Society, Cambridge, 29 June-1 July.

Fifteenth meeting of the Federation of European Biochemical Societies, Brussels, 24-29 July.

International Symposium on 'The role and future of the United Nations', Geneva, 3-6 October.

Conference on 'The plant is in peril: Nobel Laureates seek an answer', Paris, 25-29 October.

Sixth Nobel Laureate Lecture Series, University of Mexico, 31 October.

Second Meeting of the World Congress for Alternatives and Environment, Israel, 20-25 November.

1984

F.163, F.164 99th Ordinary Meeting of the Society for General Microbiology on 'The Role of pmf in microbes', University of Reading, 4 January.

F.163 Summary programme; correspondence etc. *re* arrangements.

Visits and conferences

- F.164 Detailed programme.
- F.165, F.166 Meeting of the Davy Faraday Laboratory Committee, Royal Institution, London, 21 February.
- F.165 Reports of meetings held on 21 and 22 February; itinerary; correspondence *re* arrangements.
- F.166 Manuscript note; agenda.
- F.167 Visit to York to act as external examiner, 8 March.

Itinerary and revised itinerary; report and drafts; manuscript notes; correspondence *re* thesis examination.
- F.168 Visit to the library of the Royal Institution *re* flagellar motor, London, 22 March.

Itinerary etc.
- F.169-F.171 International Workshop on 'Biochemical and Biophysical Aspects of Membrane Transport', Dortmund, West Germany, 17-18 May.
- F.169 Correspondence *re* arrangements and topics arising from conference.
- F.170 Map with manuscript notes on reverse; itineraries etc.
- F.171 Annotated programme and full programme including abstracts.
- F.172 Symposium and workshop on 'Unifying Concepts in Bioenergetics', Peking, People's Republic of China, 4-6 October.

Mitchell later withdrew.

Correspondence *re* arrangements.

Visits and conferences

- F.173-F.182 Fifty-seventh Annual Meeting of the Japanese Biochemical Society, Tokyo University, Japan, 6-9 October. Mitchell spoke on 'The correlation of chemical and osmotic forces in biochemistry', *Bibliog.* M1985a and 'Science as a pursuit of humanity', *Bibliog.* M1984f. See D.165, D.166, G.532.
- Includes material *re* visit of Tsunesuke Doi to the Glynn Research Institute *re* forthcoming lecture by Mitchell in Japan, 25 June.
- F.173 Correspondence *re* arrangements for Doi's visit to the Glynn Research Institute on 25 June.
- F.174 Draft and finished version of brochure produced by Doi's company Research Association for Basic Polymer Technology.
- F.175 Paper entitled 'A report for scientific and industrial membrane development in Japan' by Doi, 12pp.
- F.176 Secretarial notes etc. *re* Mitchell's visit to Japan; correspondence *re* arrangements and Mitchell's papers etc.; abstract of 'The correlation of chemical...'.
- F.177 Brief scientific correspondence with T. Higuti, University of Tokushima, M. Futaim, Okayama University, *re* F_0F_1 ATP synthase and Y. Anraku, University of Tokyo, *re* bioenergetics research; correspondence *re* Mitchell's paper 'Science as a pursuit of humanity', etc.
- F.178 Correspondence and notes *re* conference etc.; published abstracts; secretarial notes *re* Mitchell's lecture and travel arrangements; itinerary; etc.
- F.179 Further secretarial notes and correspondence *re* arrangements.
- F.180 Brief correspondence with S. Okamura, Director General, Japan Society for the Promotion of Science, *re* a fellowship facilitating Mitchell's visit to Japan.

Visits and conferences

- F.181 'Flagellar motor figs and figs for Japanese Lecture'. Contents of folder so inscribed. Draft figures and captions.
- F.182 Two manuscript notes and part of corrected draft of 'The correlation of chemical...'.

'Original Figs Flagellar motor, Japanese trip 1984'. Contents of folder so inscribed. Draft figures and captions.
- F.183 Visit to London to meet J.M. Moyle, 14 December.

Itinerary.
- F.184-F.187 Visit to London, 18-20 December for informal meeting with A. Goffeau and A.S. Mildvan, 18-19 December; Biochemical Society Symposium on 'Molecular basis of movement through membranes', 20 December; and *re* A. Goffeau's visit to Glynn Research Institute, 20-21 December.
- F.184 Correspondence *re* arrangements; etc.
- F.185 Abstracts from first session of Biochemical Society Symposium.
- F.186 Biochemical Society Bulletin, Vol. 6 No.4 November 1984, including programme of Symposium.
- F.187 Copy of 'Plasma membrane potential of Lettre cells does not depend on cation gradients' by C.L. Bashford and C.A. Pastemak.

Visits and conferences

Invitations 1984

F.188 Feldberg Foundation Lecture 1984 on 'The muscarinic inhibition of noradrenaline release...' by E. Muscholl, 10 February.

Invitations from the Institute of Bioelectrical Research, West Linton, Peeblesshire to: Third Seminar, 24 February, Fourth Seminar, 29 June and Fifth Seminar, 25 October.

F.189 Thirteenth Annual Lewis S. Rosenstiel Award Ceremonies, Brandeis University, 12 April.

Second International Symposium on 'Frontiers of bioorganic chemistry and molecular biology', Kazakhstan, 17-24 June.

Sixteenth Meeting of the Federation of European Biochemical Societies, Moscow, 25-30 June.

Eighth International Biophysics Congress, Bristol, 29 July-4 August.

1985

F.190-F.195 52nd Roussel UCLAF Round Table, Paris, 10-11 January.

Mitchell acted as a committee member. He spoke on 'Chemiosmotic stoichiometry of cytochrome oxidase in rat liver mitochondria'.

F.190 Published abstracts.

F.191 Correspondence and secretarial notes *re* arrangements, conference and matters arising; itineraries.

F.192 Abstract and covering letter.

F.193 List of discussants and observers; correspondence and secretarial notes *re* arrangements; invitation to lecture at Romainville Research Centre near Paris, 9 January. Mitchell declined.

Visits and conferences

- F.194 Further correspondence etc. *re* arrangements.
- F.195 Itinerary; correspondence, secretarial notes etc. *re* travel arrangements; preliminary programme.
- F.196-F.198 Meeting of the Davy Faraday Laboratory Committee, Royal Institution, London, 19 February.
- F.196 List of Royal Institution Committees; regulations.
- F.197 Correspondence and secretarial notes *re* arrangements.
- F.198 Agenda and itinerary of meeting held on 21 February 1984.
- F.199 Visits to London, 7, 12 March and 18 April for discussions with J.M. Wigglesworth, Chelsea College, 7 March, J.P. Armitage on bacterial flagellar motors, 12 March, and H. Baum and J.M. Wigglesworth, Chelsea College, 18 April.

Itineraries etc.
- F.200 Seminar on Biotechnology, Cornwall College, Cornwall, 26 April.

Mitchell was chairman.

'The Process Operator and his requirements' by S.P. Vbranch; seminar itinerary; programme; correspondence *re* arrangements; manuscript notes.
- F.201-F.203 Symposium on 'Frontiers of Learning', Netherlands Institute for Advanced Study, Rotterdam, 14 May.
- F.201 Correspondence etc. *re* arrangements.

Itinerary; manuscript notes.

Visits and conferences

- F.202 'Frontiers of Learning: The Ph.D. Octopus' by P. Hesseling, incomplete drafts with annotations by Mitchell.
- F.203 'Gutenberg and the computer' by Daniel Bell, *Encounter*, Vol. LXIV, 1985, pp.15-20, with annotations by Mitchell.
- 'Two maps on the wall: on history, education and folly' by G. Holton, *Encounter*, Vol. LVII, 1981
- F.204 Symposium on 'Achievements and perspectives in mitochondrial research', Bari, 2-6 September.
- Mitchell was to speak on 'Proton translocation during electron flow through cytochrome oxidase in intact rat liver mitochondria', but withdrew due to illness.
- Correspondence etc. *re* arrangements; itinerary; abstract.
- F.205 Personal Computer World Show, Olympia, London, 4-5 September.
- Itinerary; correspondence etc. *re* arrangements.
- F.206, F.207 International Symposium on 'Twenty-five years of research on the brush border membrane and sodium-coupled transport', Aussois, France, 18-20 September.
- Mitchell withdrew due to illness.
- F.206 Correspondence etc. *re* arrangements; preliminary programme.
- F.207 Report.
- F.208 Economic Research Council Dinner, London, 10 October.
- Itinerary; list of participants; 'Britain and Overseas' published by the Economic Research Council, Vol.15 No.2, Summer 1985.
- Correspondence etc. *re* arrangements.

Visits and conferences

- F.209 Economic Research Council Dinner, London, 28 November.

Itinerary; November news letter; correspondence etc. *re* arrangements.
- F.210 Annual Meeting of the Bioenergetics Group of the Biochemical Society,
King's College, London, 18 December.

Itinerary and programme; manuscript notes; correspondence etc. *re*
arrangements.

Invitations 1985

- F.211 Sixth Seminar of the Institute of Bioelectrical Research, Edinburgh, 11 April.

International Conference of Scientists and Scholars on 'Can we prevent
World War III?', Vienna, 26-27 July.

International Scientific Symposium for Complete Prohibition and Elimination
of Nuclear Weapons, Tokyo, 30-31 July.

Thirteenth Congress of the International Union of Biochemistry, Amsterdam,
27 August.

Seventh Seminar of the Institute of Bioelectrical Research, Edinburgh, 31
October.

Symposium in honour of H.N. Christensen's Seventieth Birthday, Ann Arbor,
Michigan, 8 November.

1986

- F.212 Visit to York for consultations with R.E. Hubbard, Department of Chemistry,
18 March followed by visit to Applied Photophysics Ltd., London, 19 March.

Correspondence etc. *re* arrangements; manuscript notes; itinerary.

Visits and conferences

- F.213 Economic Research Council Annual General Meeting and Dinner, London, 24 March.
- C.A.E. Goodhart spoke on 'The twists and turns of monetary policy'.
- Itinerary; agenda; 'Britain and Overseas' published by the Economic Research Council, Vol. 16 No.1, Spring 1986; correspondence etc. *re* arrangements.
- F.214, F.215 Biotechnology Seminar, Camborne School of Mines, Redruth, Cornwall, 25-26 March.
- F.214 Manuscript notes, 14pp; manuscript page headed 'Dr. David Anderton...The Cambridge Phenomenon-11.40'.
- Correspondence etc. *re* arrangements; preliminary programme; itinerary and list of participants; letter from unidentified correspondent writing from the Microbiology Unit, Department of Biochemistry, University of Oxford, 5 March.
- F.215 Programme; brochure on biotechnology in Cornwall; copy of Devon and Cornwall Business Link, issue 6 Summer 1986 including article that features Mitchell.
- F.216 Visit to London, 12 June for the First Medawar Lecture on 'A new interpretation of Darwinism' by K.R. Popper, Royal Society; discussions with D. Braben at BP. See also B.69-B.73.
- Correspondence etc. *re* arrangements; manuscript notes.
- F.217-F.220 36th Meeting of Nobel Prize Winners, Lindau, Germany, 30 June-4 July, see G.61, F.162 and F.306.
- Mitchell spoke on 'Science as an Imaginative Pursuit of Humanity'.
- F.217 Correspondence etc. *re* arrangements; itinerary; handout on 'Call for the establishment of a Gutenberg-Foundation for the promotion of science and the humanities'.

Visits and conferences

- F.218 Programme; printed invitation including programme; five photographs taken at conference, Mitchell appearing in four; printed copy of excerpts from '*Nobel brought them together: meetings in Lindau*' by Alexander Dees de Sterio, (1985 Verlag Friedr. Stadler, Konstanz).
- F.219 List of participants.
- F.220 Summary and copy of Mitchell's paper.
- F.221-F.226 Colloquium in honour of Professor T. E. King on 'Membrane biochemistry and bioenergetics', Albany, New York, 1-3 August.
- Mitchell spoke on 'Respiratory chain systems in theory and practice', *Bibliog.* M1988f.
- F.221 Correspondence *re* publication of Mitchell's paper.
- F.222 Correspondence etc. *re* arrangements, matters arising from colloquium, and further details *re* Mitchell's paper; programme and preliminary programme.
- F.223 Photograph of Mitchell; article from *Times Union* newspaper, Albany featuring Mitchell, 2 August article from *Schenedady Gazette* *re* colloquium, 31 July.
- F.224 Manuscript notes, 10pp.
- F.225 Annotated itineraries and programmes; conference centre facilities leaflet.
- F.226 Copyright permissions.

Visits and conferences

- F.227-F.233 Fourth Congress of the Federation of Asian and Oceanian Biochemists, Singapore, 30 November - 5 December.
- Mitchell spoke on 'Realistic Models of Transport Processes', *Bibliog.* M1987e.
- F.227 Itineraries and notes.
- F.228 Correspondence *re* arrangements; newspaper articles *re* congress; biographical note on Mitchell, 2pp; abstract entitled 'Antitumor components of Korean Basidiomycetes' by Bymong Kak Kim.
- F.229 Congress details; preliminary, interim and final announcements.
- F.230 Programme and information; list of participants.
- F.231 Correspondence *re* publication of paper.
- F.232 Copyright permission requests.
- F.233 Manuscript notes *re* presentation of paper.

Invitations 1986

- F.234 World Congress for the Synthesis of Science and Religion, Bombay, India, 10-13 January.
- F.235 Gordon Conference, on 'Sensory Transduction in Microorganisms', California, 27-31 January.
- F.236 Banbury Meeting at Coldspring Harbour Laboratory on 'Biological energy transduction: genetics structure and function', 23-26 February.

Visits and conferences

F.237 Annual National Research Council Meeting, Washington D.C., 27 April.

F.238 New York Academy of Sciences conference on 'Cellular and molecular biology of hormone and neurotransmitter containing secretory vesicles', New York, 16-18 June.

Bose Institute and scientific sessions, Calcutta, 26-27 November.

Department of Biochemistry, University of Auckland, December.

1987

F.239 International conference on 'Regulation in Bioenergetics and non-linear phenomena in Biosciences', Dortmund, 16-19 March.

Mitchell was to speak on 'Control by the proton potential' but withdrew due to illness.

Correspondence *re* arrangements and Mitchell's paper; abstract; programme and preliminary programmes.

F.240 International Symposium on 'Cytochrome systems: molecular biology and bioenergetics', Bari, Italy, 24 March-18 April.

Mitchell was to speak on 'Protonmotive mechanisms in cytochrome systems: fundamental principles' but withdrew due to illness.

Correspondence *re* arrangements and Mitchell's paper; preliminary programmes; invitation to give a lecture at the University of Bari and correspondence *re* Mitchell's non acceptance.

F.241 Visit to Norway to join committee for dissertation evaluation, University of Trondheim, 28-29 April.

Mitchell withdrew due to illness and was replaced by I. West.

Correspondence *re* arrangements; report.

Visits and conferences

- F.242 Visit to London, 20-21 May for Economic Research Council Dinner, 20 May and Unix User Exhibition at Olympia, 20 and 21 May.

Correspondence etc. *re* arrangements.
- F.243 Discussions between officers of the Royal Society and the President and officers of the US National Academy of Sciences, Royal Society, London, 5 June.

Itinerary; correspondence etc. *re* arrangements.
- F.244, F.245 Meeting, Moscow, June.

Mitchell spoke on 'Protonmotive F_0F_1 ATPases: How do they work?'.
- F.244 Draft and lecture copy of Mitchell's paper; manuscript notes *re* bibliography.
- F.245 Manuscript notes, transparencies and illustrations *re* paper.
- F.246 Reception for Small Businesses in Cornwall in the presence of H.R.H. The Prince of Wales, Duke of Cornwall, Truro, 29 July. See G.140.

Itinerary; invitation etc.
- F.247-F.251 Leadership Enhancement Forum, Pacific Institute, Seattle, 20-23 August.
- F.247 Correspondence etc. *re* arrangements; biographical notes on Mitchell.
- F.248 Notes *re* biographical details of forum participants; itineraries; Pacific Institute folders containing programme notes; conference details etc.
- F.249 Photograph of Peter and Helen Mitchell; forum group photograph; list of participants and biographical details; correspondence arising from forum; transcript of sessions; 2pp manuscript diagrams.

Visits and conferences

- F.250 Folder entitled 'Tice Seminary Ltd.' containing general information.
- F.251 Manuscript notes *re* forum sessions.
- F.252 Conference on 'Prospects for improvements in health care from medical research', London, 2-3 October.

Manuscript notes; programme; itinerary; correspondence etc. *re* arrangements.
- F.253 Discussion with Professor Stanley Roberts at the Department of Chemistry, University of Exeter, 18 November.

Itinerary; correspondence etc. *re* arrangements.
- F.254 Discourse at Royal Institution on 'The State of British Science', London, 27 November. Mitchell withdrew.

Correspondence.

Invitations 1987

- F.255 Conference on 'Carriers, gates, channels: models, myths and measurements', Dortmund, 9 January.

Gesellschaft für Biologische Chemie Conference on 'Regulation in bioenergetics control of energy-transducing proteins', Regensburg, Germany, March.

Annual Meeting of the National Research Council, Washington, D.C., 26 April.

Conference on 'Membrane transport proteins and signal transduction', Berkeley, California, 14-18 June.

First Congress of the Spanish Biophysical Society, Valladolid, Spain, 16-19 September.

Summer School on 'Membrane Biophysics', Santander, Spain, September.

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Visits and conferences

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Fourth International Symposium on 'Oxidases and related redox systems', Portland, Oregon, 4-8 October.

Invitation to Symposium entitled 'Gaia: theory, practice and implications', Cornwall, 21-24 October 1987.

Sixth Symposium of the Federation of Asian and Oceanian Biochemists on 'Biochemistry for Development', Karachi, Pakistan, 2-4 November.

Second Colloquium of Nobel Prize-winners, Rome, 7-9 November.

Lecture series to be held in honour of the opening of the Centre for Cellular and Molecular Biology, Hyderabad, India, 27 November-5 December.

1988

F.256, F.257

Nobel Laureates conference on 'Facing the twenty first century: threats and promises', Paris, 18-21 January.

Mitchell withdrew.

F.256

Preliminary programme; correspondence etc. *re* arrangements.

F.257

Conference outline; discussion topics; list of participants; preliminary programme etc.

F.258, F.259

Workshop on 'Membrane ATPases', University of Osnabruck, 28 February-3 March.

F.258

Itinerary and map; list of participants; correspondence etc. *re* arrangements.

F.259

Manuscript notes taken during conference; programme, conference details etc.

Visits and conferences

- F.260 Royal Society lecture on 'Molecular sensors' by Professor W.J. Albery, London, 22 March.

 Manuscript lecture notes; secretarial notes and lecture summary.
- F.261 Biotransformation Seminar organised by the Department of Trade and Industry, Weston-Super-Mare, Somerset, 20 April.

 Itinerary; map; preliminary programme; programme; manuscript conference notes and details of Biotransformation Club; brief correspondence etc. *re* arrangements.
- F.262-F.263 One day conference on 'The value of "useless" research', London, 29 June.
- F.262 Itinerary; biographical notes on some conference participants; synopsis of Mitchell's talk; 'Prepn of useless science talk', manuscript conference notes from plastic sleeve so inscribed; correspondence *re* arrangements.
- F.263 Unidentified article from a book by the Rev. J.S. Habgood, Mills and Boon, London, 1964, 2pp; preparation notes for paper; *New Paradigms Newsletter*, nos. 1-3; report of the International Conference on the Unity of the Sciences.
- F.264-F.267 Conference on 'Cytochrome oxidase: Structure, Function and Physiology', Rome, 20-24 June.

 Mitchell spoke on 'Possible protonmotive osmochemistry in cytochrome oxidase', *Bibliog.* M1988m. See C.190, C.201-C.203 and D.184.
- F.264 Preliminary programme and list of participants; correspondence etc. *re* arrangements.
- F.265 Details of two sessions to be held on 22 June; programme; itinerary.
- F.266 Manuscript notes in writing pad.
- F.267 Preparatory figures.

Visits and conferences

- F.268 Meeting with Mr. McMahon, Group Grants Committee of Shell, London, 13 September.
Secretarial note.
- F.269 Meeting with A. Dalton and S. Dennison of English China Clays Ltd., St. Austell, 13 October.
Notes *re* arrangements and manuscript notes by Mitchell.
- F.270 Meeting of the Science and Engineering Research Council *re* applications for an International Research Centre, London, 8 November.
Mitchell was one of the panel. See also E.134-E.144.
Itinerary; correspondence *re* arrangements.
- F.271-F.273 Charities annual conference, London, 10 November
- F.271 1987 Annual Report etc. *re* the International Standing Conference on Philanthropy.
Charities newsletter etc.
- F.272 Programme including list of participants; manuscript notes.
- F.273 Correspondence etc. *re* arrangements.
- F.274 Royal Institution Appeal Reception, London, 23 November.
Manuscript note dated 24 November; handout *re* background to appeal; correspondence etc. *re* arrangements.

Visits and conferences

Invitations 1988

- F.275 Bodmin and District Inter Agency Annual General meeting, Bodmin Community School, 6 January.
- F.276 Bi-centenary Congress on 'Biophysics', Sydney, Australia, 24-29 January.
- F.277 Exhibition of research work funded by SERC, King's College London, 20 April.
- F.278 Second Hermann-Träuble Symposium on 'Ion channels in phospholipid bilayers', Göttingen, Germany, 18-21 September.
- F.279, F.280 Launching day of the Foundation Scientific Europe, Maastricht, Netherlands, 20 September.
- F.281 Symposium on 'Cell energetics and cell differentiation', Marburg, Germany, 12-14 October.
- Symposium on 'Chemically engineered insulin-ten year perspective', Irvine, California, 1 December.

1989

- F.282-F.285 Visit to London, 21-24 February for discussion meeting at the Royal Society on 'Microbial membrane transport systems', 22-23 February and 23rd Ciba Foundation/Royal Society Discussion Meeting on 'Evolution and function of transport proteins in micro-organisms', 24 February.
- F.282 Provisional programme for discussion meeting on 'Microbial membrane...'. Itineraries, 21-24 February; programme and Abstracts of Royal Society Discussion Meeting on 'Microbial membrane transport systems'; list of participants; correspondence etc. *re* arrangements.

Visits and conferences

- F.284 Manuscript notes from discussion meeting on 'Microbial membrane...'.

F.285 Invitation and programme for discussion meeting on 'Evolution and function...'.

F.286 Bioenergetics Conference on 'Dynamics in membrane systems' in honour of Martin Klingenberg's sixtieth anniversary, Bavaria, 2-4 March.

Mitchell was to speak on 'Mobile carriers, mobile barriers and solvation substitution in osmoenzyme and porter systems' but withdrew.

Provisional programme; correspondence etc. *re* arrangements.

F.287-F.294 Visit to London to meet D.J. Drex at Glaxo Holdings to discuss fund-raising, 16 March.

F.287 Itinerary.

F.288 Brief correspondence and notes *re* arrangements.

F.289 Correspondence *re* arrangements and issues arising from meeting; manuscript note and *Who's Who* entry for D.J. Drex.

F.290, F.291 'Items for Mr. Drex'. Contents of folder so labelled, divided into two for ease of reference.

'Rational decision-making in business organisations' by Herbert A. Simon, 48 pp paper, 24 November 1978; 'Taking stock of the moral, and ethical and behavioural sciences' by Michael Skapinker, *Financial Times*, 27 January 1989 (F.291).

F.292-F.294 Material *re* Glynn Research Foundation found with preceding. See also B.25-B.32.

F.292 Memorandum and Articles of Association of Glynn Research Foundation Ltd.

Visits and conferences

- F.293 Glynn Research Foundation information pack containing proposals for ways to support the research promoted by the Foundation.
- F.294 Glynn Research Foundation report containing notice of meeting, report of the income and expenditure account etc. for year ended 31 March 1988.
- F.295-F.297 Symposium on 'Chemical and biochemical problems in molecular recognition', Exeter University, 17-21 April.
- F.295 Itinerary; correspondence *re* arrangements etc.
- F.296 Provisional programmes; annotated programme and list of participants.
- F.297 Conference details etc.; manuscript note.
- F.298-F.301 International Symposium on 'Biochemistry, bioenergetics and clinical applications of ubiquinones', Bologna, Italy, 18-22 May.

Mitchell spoke on 'The classical mobile carrier function of lipophilic quinones in the osmochemistry of electron-driven proton translocation', *Bibliog.* M1990e.
- F.298 'Dr. Mitchell's figs, Bologna meeting May 1989'. Contents of folder so inscribed. Draft figures.
- F.299 Itinerary; preliminary programmes; invitation to the conferment of a 'Laurea ad Honorem' on Karl Folkers, 22 May; correspondence etc. *re* arrangements and Mitchell's paper.
- F.300 Manuscript notes from conference; manuscript notes *re* Mitchell's chairing of Session II.
- F.301 Abstract; annotated copy of Mitchell's paper; correspondence *re* publication of Mitchell's paper.

Visits and conferences

- F.302-F.305 International Symposium on 'Molecular organisation of biological structures', Moscow, 19-24 June.
- Mitchell spoke on 'Protonmotive F_oF_1 ATPases: How do they work?', *Bibliog.* M1989j.
- F.302 Itinerary; photograph of Mitchell and unidentified individual in conversation; correspondence etc. *re* arrangements.
- F.303 Abstract book 1.
- F.304 Abstract book 2.
- F.305 Programme.
- F.306 Thirty-ninth meeting of the Nobel Prize winners, Lindau, Germany, 3-7 July. Mitchell was to speak on 'The F_oF_1 ATPase: an amazing molecular machine' but withdrew, see F.162, F.217-F.220, G.61.
- Correspondence *re* arrangements and Mitchell's withdrawal.
- F.307-F.309 Fourth International Congress of the Professors World Peace Academy, London, 25-28 August, see also G. 504.
- After the meeting Mitchell went on to Cambridge for discussions with J.C. Kendrew at Trinity College, 29 August.
- F.307 Congress programme; correspondence etc. *re* arrangements.
- F.308 Folder with full congress details.
- F.309 Copy of 'PWPA International', August 1989, *re* Congress; itinerary.

Visits and conferences

- F.310-F.313 Annual Charities Conference and Exhibition, London, 7 November.
- F.310 Itineraries; manuscript notes from speeches by Lord Whitelaw and Michael Brophy.
Correspondence etc. *re* arrangements.
- F.311 Miscellaneous printed matter *re* sources of sponsorship etc.
- F.312 'Briefing' by Mike Leibling of Saatchi and Saatchi Advertising, London.
- F.313 Programme; list of participants; guide to exhibitions; leaflet on Charities projects; Annual Report and Accounts for 1989; Annual Review 1989.
- F.314-F.316 Meeting on 'Science, Technology and 1992', London, 14 November.
- F.314 Itinerary; programme including list of participants; correspondence etc. *re* arrangements.
- F.315 Annual report 1988; manuscript notes; booklet on the Parliamentary and Scientific Committee.
- F.316 Summary programme; leaflet on the Science and Engineering Policy Studies Unit and on the Fellowship of Engineering; booklet on 'European Community Research Programmes'; brochure on Sandoz in Britain.
- F.317 Visit to London, 16 November for the Fourth Rosenheim Lecture on 'Pathways of biomolecular assembly: molecular recognition and protein engineering' by R.N. Perham, King's College London and meeting with D.J. Drex of Glaxo Holdings.
Itinerary; correspondence etc. *re* arrangements.

Visits and conferences

- F.318-F.319 Visit to London, 21-24 November for Royal Society Sectional Committee Meeting, 22 November, (see also E.111-E.128); discussions with Sir James Black at the James Black Foundation, 23 November; Save British Science Meeting, 23 November.
- F.318 Save British Science Media Report, January-July 1989; itinerary; correspondence etc. *re* arrangements.
- F.319 Speech entitled 'Paying for Science' by the Rt. Hon. Michael Heseltine, M.P., 18pp.
- F.320 Anniversary Meeting of the Royal Society, London, 30 November.

Announcement and note *re* Mitchell's intention to meet G. Porter at the meeting.

Invitations 1989

- F.321 International Conference on Drug Abuse Prevention and Control, Bombay, 14-16 April. Mitchell was asked to inaugurate it.
- Eighteenth Annual Lewis S. Rosenstiel Award Ceremonies, Brandeis University, 24 April.
- For details of the International Symposium on 'Bioenergetics in honour of Professor Kunio Yagi', Seoul, South Korea, 19-20 August, see G.533.
- Third Hermann-Träuble Symposium on 'Membranes and Musics', Göttingen, Germany, 25-27 September 1989.
- Fifteenth Science and Technology of Thailand Conference, University of Chiang Mai, Thailand, 18-21 October.
- Thinking Meeting as part of the seventy fifth anniversary of the Korean Economic Daily, Seoul, South Korea, 29 October-2 November.

Visits and conferences

1990

- F.322-F.326 Sixth International Symposium on 'Biomedical and Clinical Aspects of Coenzyme Q', Rome, Italy, 22-24 January.
- Mitchell spoke on 'The Vital Protonmotive Role of Coenzyme Q', *Bibliog.* M1991f.
- F.322 Itinerary; lecture version of paper.
- F.323 Correspondence etc. *re* arrangements and Mitchell's paper and its publication; abstract.
- F.324 Programme and preliminary programme; abstracts.
- F.325 Brochure introducing Eisai Co., Ltd. including annual report for 1989 and two appended secretarial notes.
- F.326 *Stampa Medica*, 3 July 1989 edition containing article on Mitchell; annotated drafts of paper.
- F.327-F.328 First Ciba-Geigy Biomolecular Sciences Lecture on 'What controls cell division' by Professor Paul Nurse, London, 1 May.
- F.327 Itinerary.
- F.328 Correspondence etc. *re* arrangements.
- F.329 Visit to London, 24 July for meetings with M. Morgan at the Wellcome Trust, and C.A. Pastenak.
- Itinerary; notes etc. *re* arrangements.

Visits and conferences

- F.330-F.341 Third Nobel Laureates Forum, 26-31 October, Japan.
- Mitchell spoke on 'Worlds of reality and imagination', 'Message for the young people of Japan' and 'Scientific understanding and the future of mankind'. See D.476.
- F.330 Official Forum report with covering letter.
- F.331 Open letter entitled 'A letter to my son Luke' given to Peter and Helen Mitchell by M. Corrigan-Maguire; 'Just war is a phoney theory' by M. Corrigan-Maguire, *Irish News*, [?28] June 1990.
- F.332 Itinerary; secretarial notes *re* meetings Mitchell attended while in Japan, and arrangements.
- F.333 Folder containing full conference details; list of participants; participants schedule; participants biographies; summary papers of participants; and collected articles *re* the conference from the *Daily Yomiuri*.
- F.334 Programme including biographies.
- F.335 Correspondence *re* arrangements, Mitchell's papers and their publication and arising from conference.
- Biographical material is also contained in the correspondence and includes annotated photocopies of photographs of Mitchell at various stages in his life.
- F.336 Further correspondence *re* arrangements, Mitchell's papers, and industrialists etc. whom Mitchell wished to meet *re* support for scientific research promoted by the Glynn Research Foundation; abstract of 'Scientific understanding and the future of mankind'.
- F.337 Contents of folder inscribed 'Press Publicity': Japanese newspaper cuttings *re* conference.

Visits and conferences

- F.338 Contents of folder inscribed 'Tokyo Workshop': correspondence *re* arrangements; manuscript notes etc. *re* workshop details and lectures; manuscript draft of Mitchell's opening lecture.
- F.339 Further correspondence etc. *re* arrangements including summary itinerary and letter *re* 'Japanese Models of Conflict Resolution' by Eisenstadt and Ben-Ari, Kegan Paul International, 1990; 'Scientific understanding and the future of mankind', annotated abstract.
- F.340 Master copies of the three papers presented by Mitchell in Japan.
- F.341 'Original figs. Also prep; for Japan 1.doc and Japan B1.doc'. Contents of folder so inscribed. Draft figures.
- F.342 Visit to London, 27-29 November *re* discussions with M. Green and the National Institute for Medical Research and meeting with Dr Garland at the Institute of Cancer Research.

Itinerary; secretarial note *re* arrangements.
- F.343 Royal Society discussion meeting on 'Enzymic catalysis: structure, molecular interactions and mechanisms'.

Mitchell withdrew.

Itinerary; correspondence etc. *re* arrangements; abstracts.

Invitations 1990

- F.344 Eleventh World Media Conference, Moscow, 9-13 April.

International meeting on 'Intracellular Redox Control in Animals, Plants and Microorganisms by Thioredoxin and Glutaredoxin Systems', Roscoff, France, 1-6 July.

Visits and conferences

- F.345 Fourth German Träuble-Symposium on 'Membranes and synapses',
Göttingen, 1-2 October.

First Leningrad Nobel Prize Winners Symposium, 20-22 October.
- F.346 Citizen Ambassador Program of People to People International, China,
October.
- F.347 Conference of Nobel Prize Laureates on 'Science and Technology in a
Changing World, The Role of Europe', Castelporziano, Italy, 3-4 December.

1991

- F.348 Meeting on 'Ion Motive ATPases', Gothenburg, Sweden, 11-14 August.

Mitchell was to speak on 'Ionmotive ATPases: Possible Mobile Barrier
Mechanisms' but withdrew due to illness.

Correspondence *re* arrangements.
- F.349 Visit to London, 10 December for meetings with C.A. Pastenak, and R.
Baird of Saatchi and Saatchi.

Itinerary; correspondence etc. *re* arrangements.

Invitations 1991

- F.350 Twentieth Annual Lewis S. Rosenstiel Award Ceremonies, Brandeis
University, 30 April.

International Conference on the 'Unity of the Sciences', Seoul, South Korea,
24-27 August.

Visits and conferences

F.351 International conference on 'Frontiers of Life', France, 28 August-1 September.

Fifth International Congress of the Professors World Peace Academy, Seoul, South Korea, 29 August-1 September.

Second Leningrad Nobel Prize Winners Symposium, Leningrad, 18-22 October.

F.352 Meeting entitled 'A rendezvous for talking about bioenergetics on the thirtieth birthday of the Chemiosmotic Hypothesis', Iztapalepa, Mexico, 7-9 November.

Colloque pour la Science, Paris, 3-4 December.

1992

F.353 'Scientists Meet the Media' organised by the *Daily Telegraph*, London, 30 January.

Article on conference, *Daily Telegraph*, 3 February 1992; itinerary; correspondence etc. *re* arrangements.

F.354 International Conference on 'Muscle as a machine: energy transduction in the contractile system', Bethesda, Maryland, 13-15 April.

Mitchell withdrew due to illness.

Programme; preliminary programmes and list of participants; correspondence *re* arrangements.

F.355 Symposium on 'Proton Pumps in Cells and Tissue Function', Cambridge 9-10 August.

Mitchell was unable to attend.

Correspondence *re* arrangements.

Visits and conferences

- F.356 Twenty-first meeting of Federation of European Biochemical Societies, Trinity College Dublin, 10-14 August.

Mitchell was to speak on 'Energy transduction: an overview'. When Mitchell withdrew it was suggested that P.R. Rich present the paper.

Correspondence *re* arrangements.

Invitations 1992

- F.357 Twenty-first Annual Lewis S. Rosenstiel Award Ceremonies, Brandeis University, 30 April.

Colloquium on 'Membrane Transport', organised by the Bioenergetics Group of the Biochemical Society, University of Southampton, 7-10 April.

Fifth Harden Satellite Meeting on 'Membrane Bioenergetics', Southampton, 11-12 April.

Seventh European Bioenergetics Conference, Helsinki, Finland, 26-31 July.

Symposium on 'Oxygen-Perspectives on the Element of Life', Stockholm, 5-7 December.