CURRICULUM VITAE

DAVID JAMES BURKE, *AC, MB,BS (Syd), MD, DSc (UNSW), FAA, FTSE, FRACP*

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DAVID JAMES BURKE

ACADEMIC Central Clinical School, Faculty of Medicine & Health,
University of Sydney, N.S.W. 2006, Australia
E-mail: <david.burke@sydney.edu.au>

BORN 11 May 1944, Trundle, N.S.W.

EDUCATION Sydney Grammar School (1956-1960)
University of Sydney (1961-1966)
University of New South Wales (1969-1971)

QUALIFICATIONS – *Academic*

1967	***M.B., B.S.***	University of Sydney
1972	***M.D.***	University of New South Wales
1983	***D.Sc.***	University of New South Wales
1995	***F.A.A.***	Fellow of the Australian Academy of Science
1995	***F.T.S.E.***	Fellow of the Australian Academy of Technological Sciences and Engineering [now Academy of Technology and Engineering]

– *Professional*

1972	***M.R.A.C.P.***	Member, Royal Australasian College of Physicians
1974	***Member***	Australian Association of Neurologists [now Australian and New Zealand Association of Neurologists]
1975	***F.R.A.C.P.***	Fellow (Life Member from 2014), Royal Australasian College of Physicians

– *Society*

1999 ***A.O.*** Officer, General Division, Order of Australia

For service to science and medicine, particularly in the field of clinical neurophysiology in the areas of research and education, and to the community through medical charities and lay organisations

2019 ***A.C.*** Companion, General Division, Order of Australia

For eminent service to neurophysiology, to innovative treatments for spinal cord and brain trauma injuries, and to professional medical organisations.

CURRENT APPOINTMENTS

- *Professor Emeritus,* Central Clinical School, Faculty of Medicine & Health, The University of Sydney (from 2020)
- *Honorary Neurologist,* Royal Prince Alfred Hospital
- Honorary Consultant Editor, *"Clinical Neurophysiology"*
- *Consultant Neurologist*, Institute of Neurological Sciences, Prince of Wales Hospital
- Vice-President, Board Member, *Brain Foundation*
- Chair, Scientific Advisory Committee, *Brain Foundation*
- Board Member, *Motor Neurone Disease Australia*
- Chair, Research Committee, *Motor Neurone Disease Research*
- Chairman and Board Member, *Westmead IVF Pty Ltd*
- Member, Scientific Advisory Board, *Nyrada Inc.*

SIGNIFICANT PREVIOUS APPOINTMENTS

1975 – 1978 ***C.J. Martin Travelling Fellow*** of the NH & MRC: Academic Hospital, University of Uppsala, Sweden and School of Medicine, University of New South Wales

1978 – 1980 ***NH & MRC Research Fellow/Senior Research Fellow***, School of Medicine, University of New South Wales; Neurologist, The Prince Henry & Prince of Wales Hospitals

1980 – 2002 Senior Staff Specialist Neurologist, The Prince Henry & Prince of Wales Hospitals

1980 – 1986 ***Associate Professor of Medicine*** (conjoint appointment), School of Medicine, University of New South Wales

1987 – 1991 ***Professor of Clinical Neurophysiology*** (*personal Chair*), School of Medicine, University of New South Wales

1991 – 2002 ***Professor of Neurology***, Prince of Wales Clinical School, UNSW
Chairman, Department of Neurology, The Prince Henry and Prince of Wales Hospitals
Director of Clinical Research, Prince of Wales Medical Research Institute

1997 – 2002 ***Clinical Director***, Institute of Neurological Sciences, The Prince Henry & Prince of Wales Hospitals

1997 – 2001 Member, Executive Committee, ***International Federation of Clinical Neurophysiology***

2002 – 2008 ***Professor and Dean, Research & Development (Health),*** *University of Sydney*

2002 – 2008 ***Professor of Neurology****, Royal Prince Alfred Hospital*

2003 – 2006 ***Acting Pro-Vice-Chancellor****, College of Health Sciences, University of Sydney* (March, April – September, 2003 and intermittently in 2004, 2005, 2006)

2005 – 2007 ***Interim Director, Centenary Institute for Cancer Medicine & Cell Biology*** (October 2005 to January 2007)

2008 – 2013 ***Bushell Professor of Neurology,*** *Royal Prince Alfred Hospital*

2008 – 2013 ***Associate Dean (Research),*** *Sydney Medical School, University of Sydney*

2008 – 2016 ***Editor-in-Chief, "Clinical Neurophysiology"***

2008 – 2020 Member, Executive Committee, ***International Federation of Clinical Neurophysiology***

2013 – 2020 Professor, Central Clinical School, Sydney Medical School, The University of Sydney

2015 – 2020 ***Founding Editor-in-Chief, "Clinical Neurophysiology Practice"***

2013 – 2020 Foundation Chair, Inter-Institutional Board, ***NSW Brain Banks*** [Consortium discontinued 2020]

FELLOWSHIPS, LECTURESHIPS AND HONOURS

Prizes and Honours

- Norton Manning Memorial Prize in Psychiatry, University of Sydney 1966
- Commonwealth Postgraduate Scholarship, University of New South Wales 1969-1971
- Adolph Basser Research Fellowship in Neurology, University of New South Wales 1969-1971
- C.J. Martin Travelling Fellowship from the National Health & Medical Research Council 1975-1978 (Department of Clinical Neurophysiology, Academic Hospital, University of Uppsala, Sweden)
- Fellow of Australian Academy of Science (*FAA*) 1995
- Fellow of Australian Academy of Technological Sciences and Engineering (*FTSE*) 1995
- Officer, General Division, Order of Australia (*AO*) 1999
- Mervyn J. Eadie Award for career achievement in neuroscience research, Australian Association of Neurologists 2001
- Distinguished Scientist, Faculty of Health Sciences, University of Sydney 2001
- Centenary Medal, Commonwealth of Australia "*For service to Australian society and science in neurology*" 2001
- Honorary Life Governor, Prince of Wales Medical Research Institute 2002
- BMA Medical Book Competition, "*The circuitry of the human spinal cord: Its role in motor control and movement disorders*", Prize winner: Highly Commended 2006
- Honorary ("Advisory") Professor, Shanghai Medical College, Fudan University, China 2009
- E.Graeme Robertson Award, for career achievement and contribution to neuroscience and the Australian & New Zealand Association of Neurologists 2011
- Robert S. Schwab Award, American Clinical Neurophysiology Society 2014

- ANZAN Medal, for outstanding contribution to and ambassador for, the Australian & New Zealand Association of Neurologists 2018
- James W. Lance Award and Lecture (Inaugural) for excellence in academic career achievement, Australian & New Zealand Association of Neurologists 2019
- Companion, General Division, Order of Australia (*AC*) 2019

Honorary Memberships

- Honorary Member, Svensk Förening för Klinisk Neurofysiologi (Swedish Clinical Neurophysiology Society) 1991
- Senior Fellow, American Neurological Association 2013 (Corresponding Fellow 1993)
- Honorary Member, British Society of Clinical Neurophysiology 2001
- Honorary Life Governor, Prince of Wales Medical Research Institute, 2002
- Honorary Member ("Ehrenmitglied"), German Society for Clinical Neurophysiology and Functional Imaging (DGKN) 2014
- Life Member, Royal Australasian College of Physicians 2014

Named Lectureships and Visiting Professorships

- Guest Professor, Neurological Association of New Zealand 1983
- Guest Professor, New Zealand Physiotherapy Association 1989
- Visiting Professor, Laboratoire de Neurophysiologie Clinique, Rééducation Neurologique, Hôpital de la Salpêtrière, Paris, France, annually/biennially, 1990–2013
- *Knight Visiting Professor*, The Miami Project to Cure Paralysis, University of Miami School of Medicine, September 1992
- *E.H. Lambert Lecturer*, American Association of Electrodiagnostic Medicine, October 1992
- Visiting Professor of Clinical Neurophysiology, University of Uppsala, Sweden, June 1993
- Visiting Professor of Clinical Neurophysiology, UCSF, U.S.A., September 1993
- Guest Professor, Japan Microneurography Society, Tokyo, Japan, July 1994
- *Guest Professor*, Indonesian Neurological Association, Solo, Java, Indonesia, December 1994
- *Shahani Special Lecturer*, American Academy of Clinical Neurophysiology 1999
- *Mervyn J. Eadie Lecturer* (Inaugural), Australian Association of Neurologists, May 2001
- Keynote Lecturer, British Society of Clinical Neurophysiology, June 2001
- Distinguished Lecturer, Faculty of Health Sciences, University of Sydney, 2001
- Guest Professor, Japan Microneurography Society, Tokyo, Japan, June 2003
- *Kugelberg Lecturer*, 28th International Congress of Clinical Neurophysiology, Edinburgh, 2006
- *Digitimer Lecturer*, American Society of Neurophysiological Monitoring, Chicago, 2007
- *E.Graeme Robertson Lecturer*, Australian & New Zealand Association of Neurologists, May 2011
- Guest Professor, Taiwan Association of Neurologists and Taiwanese Society of Clinical Neurophysiology, April 2013
- *Robert S. Schwab Award and Lecture*, American Clinical Neurophysiology Society, February 2014
- Guest Professor, 20th Anniversary, Korean Society of Clinical Neurophysiology, October 2016
- Guest Professor, 3rd Clinical Neurophysiology Course, Hong Kong Neurological Society, Hong Kong, November 2017
- *James W. Lance Lecture* (Inaugural), Australian & New Zealand Association of Neurologists 2019

RESEARCH GRANTS

National Health & Medical Research Council

1974-1977 *Project Grant.* Microneurographic studies of peripheral nerve function in man
1977-1978 *Project Grant.* Microneurographic studies of muscle stretch receptor activity in man
1978-1981 *Project Grant.* Microneurographic studies of muscle stretch receptor activity in normal man and patients with central motor disorders
1980-1983 *Project Grant.* Microneurographic studies of muscle stretch receptor activity in normal man and patients with disorders of motor control
1980-1983 *Project Grant.* Feedback from proprioceptive afferents to cerebral level in man (with S.C. Gandevia)

1983-1986 *Project Grant*. Reflex activation of fusimotor neurones in man
1983-1986 *Project Grant*. Selective voluntary activation of fusimotor neurones in man (with S.C. Gandevia)
1986-1990 *5-year Extended Project Grant*: Microneurography and motor control in man (with S.C. Gandevia)
1990 *Equipment Grant* (with S.C. Gandevia)
1991-1995 *5-year Extended Project Grant*: Microneurography and motor control in man (with S.C. Gandevia)
1992 *Equipment Grant* (with S.C. Gandevia and D.K. McKenzie)
1994-1996 *Project Grant*. Impulse conduction and ectopic impulse generation in human peripheral nerve (with I. Mogyoros)
1995-1999 *5-year Extended Project Grant*: Microneurography and motor control (with S.C. Gandevia) (rolled into Program Grant, below)
1996-2000 *Program Grant*: Experimental Neurology (ID: 963206; with D.I. McCloskey, S.C. Gandevia, E.K. Potter, D.K. McKenzie,V.G. Macefield)
2000-2004 *Program Grant*: Experimental Neurology (ID: 003206; with D.I. McCloskey, S.C. Gandevia, E.K. Potter, D.K. McKenzie, V.G. Macefield, J.L. Taylor, R. Fitzpatrick)
2005-2008 *Project Grant*. Changes in motoneurone properties distal to the lesion in stroke patients (D. Burke, S.K. Jankelowitz)
2008-2010 *Project Grant*: Mechanisms of autoantibody mediated axonal injury in inflammatory demyelinating neuropathies (J.D. Pollard, E. Mathey & D. Burke)
2008-2011 *Project Grant*: Neural plasticity following lesions of the central nervous system in Multiple Sclerosis (D. Burke, J.D. Pollard & K. Ng)
2011-2013 *Project Grant*: The final common channel: measurement of nerve excitability in epilepsy (S.E. Tomlinson, D. Burke, M.C. Kiernan [latter withdrew following Program Grant Award])

Australian Research Council

2004-2006 *Discovery Project* Resurgent sodium currents in peripheral nerve axons and sensory neurones (D. Burke, M.C. Kiernan & M.A. Connor)

National Institutes of Health (USA)

1991-1995 Spatial and targeted limb movements (Principal: P.J. Cordo; Associates: A. Georgopoulos, D. Burke & S.C. Gandevia)

AFM (French Muscular Dystrophy Association) Téléthon (France)

2013-2015 Electrophysiological biomarkers of spinal neural activity in amyotrophic lateral sclerosis (V. Marchand-Pauvert with H. Benali, P.-F. Pradat, M.C. Kiernan & D. Burke) €136,267

Other Research Grants

Research grants have been obtained from: Australian Brain Foundation; Asthma Foundation of N.S.W.; The Prince Henry Hospital Foundation; Ramaciotti Foundations; University of New South Wales Major Equipment Grant Scheme; Government Employees Assistance to Medical Research Fund; GlaxoWellcome Research & Development; Department of Employment, Education & Training; Department of Industry, Science & Technology; Multiple Sclerosis Society of Australia; University of Sydney Sesqui R & D Grant Scheme; Pfizer NeuroScience Research Grant Scheme; Sydney Foundation for Medical Research

Research grants supporting visiting scientists: National Institutes of Health; Wellcome-Ramaciotti Foundations; Australian-European Awards Programme

SIGNIFICANT MANAGERIAL RESPONSIBILITIES

UNIVERSITY OF NEW SOUTH WALES:

- *UNSW Committee on Experimental Procedures Involving Human Subjects*:
  - Member (Occasional Chairman) 1985 – 1989;
  - Chairman 1990 – 1995
- Member, various *UNSW* and *Faculty of Medicine Committees*, including Forward Planning Committee

THE PRINCE HENRY & PRINCE OF WALES HOSPITALS AND ***PRINCE OF WALES CLINICAL SCHOOL:***

Member of various committees, most notably

- Director of Medicine's Advisory Committee 1981– 1984; 1991– 1998
- Co-Chair, Division of Medicine: 1998 – 2002
- Clinical Services and Clinical Coordination Committees: 1997 – 1998;
- Hospital Management Committee: 1998 – 2001; Acute Services Committee: 1999 – 2002

INSTITUTE OF NEUROLOGICAL SCIENCES, THE PRINCE HENRY & PRINCE OF WALES HOSPITALS:

- Head, Clinical Neurophysiology Laboratories: 1980 – 2002
- Chairman, Department of Neurology: 1991 – 2002
- Deputy Director, Institute of Neurological Sciences 1991 – 1997
- Director, Institute of Neurological Sciences 1997 – 2002

PRINCE OF WALES MEDICAL RESEARCH INSTITUTE [NOW NEUROSCIENCE RESEARCH AUSTRALIA]:

- Founding Scientist and Director of Clinical Research 1991 – 2002
- Honorary Senior Research Associate from 2002 – 2004
- Honorary Life Governor, appointed by Board of Directors 2002

THE UNIVERSITY OF SYDNEY:

- ***Dean, Research & Development*** for the Health Faculties
  - 2002 – 2006: within the College of Health Sciences
  - 2006 – 2008: within the Faculties of Health

- ***When Acting Pro-Vice-Chancellor (Health Sciences)*** 2002, 2003 and intermittently to 2005:
  - Senior Executive Group; University Budget Planning Advisory Committee (now Budget Planning & Capital Advisory Board); Pro-Vice-Chancellors/College Administrators Coordination Meeting; Bequest Advisory Committee; *In attendance:* Chair Appointments Committee; Finance Committee; University Senate (Governing Body of The University of Sydney)
- ***Academic and research committees*** Membership of various committee, notably:
  - *Vice Chancellor's Advisory Committee;* College of Health Sciences Management Advisory Committee [sometime *Chair*]; University, College and Faculty *Research Committees* (Medicine [see below], Nursing & Midwifery, Dentistry, Pharmacy, Health Sciences) [*Chair* of College and Medicine Committees]; Member, College Research Advisory Committee, College of Science & Technology; Member, *University RQF Panel* and of the Research Strategy Advisory Group advising DVC (Research & Innovation) to 2006
  - Responsibility for College budget allocation to Faculties, budget commentaries and budget discussions in 2003 (for 2004), in 2004 (for 2005) and in 2005 (for 2006 – 2008)
  - Chair, Laboratory Animals Management Advisory Committee, and Supervisor, Laboratory Animal Services to 2006; Financial Assistance Working Group; Various academic appointment and promotion committees within the College of Health Sciences [Chairing Associate Professorial appointment committees on behalf of PVC]
  - Academic Pathways for Research Training, Member of Working Party 2007 – 2008
  - Scientific Advisory Committee and Member of Council ["Governor"], *The Medical Foundation/Sydney Medical School Foundation* to 2013
  - Various Boards of Management
    - *CRC for Asthma & Airways* [2002-2008]
    - Medical Research Institutes: *Sydney Cancer Institute* [2002 – 2013], *Woolcock Institute* [2003 – 2013], *Centenary Institute* [2005 – 2007], *Bosch Institute* [2005 – 2008], *Sydney Institutes of Health & Medical Research* [2005 – 2008], *Institute of Magnetic Resonance Research* [2005 – 2008], *Westmead Millenium Institute* [2010 – 2013], *Westmead Research Hub Council* [2010 – 2013]; *Kolling JV Advisory Board* 2010 – 2011]
    - University Foundations: *Medical Foundation* [see above]; *Dermatology Research Foundation*; *Melanoma Foundation*; *Moran Foundation*; *Nepean Medical Research Foundation; Microsearch Foundation*)
  - Member, Research Integrity Subcommittee, SEG Research Committee to 2013

- ***Sydney Medical School [Faculty of Medicine]***
  - Director of Research, Faculty of Medicine and Chair, Research Committee 2002 – 2010
  - Associate Dean (Research), Faculty of Medicine 2008–2013
  - Other Committees: Member, Medicine Management Advisory, Infrastructure Advisory, and Academic Committees to 2008 (reconstituted as Dean's Advisory Committee from 2008); Dean's Executive; Expenditure Review/Expenditure Review & Income Committees
  - University Officer (Foundations) for Melanoma Foundation, 2009 – 2013; Nepean Medical Research Foundation, 2010 – 2013; Dermatology Research Foundation, 2009 – 2011; Brain & Mind Research Foundation, 2009 – 2011
  - Chair, Rowan Nicks Russell Drysdale Fellowship in Indigenous Health and Welfare 2008 – 2013
  - MD Project Research Principal, 2013 – 2016

- Member, *Prima Facie* Committee for DMedSc, 2013 – 2017

- ***Faculty of Nursing/Sydney Nursing School***
  - Member, Research (Research & Research Training Committee) 2002 – 2013
  - Member of Faculty Board 2009 – 2013

CENTENARY INSTITUTE FOR CANCER MEDICINE AND CELL BIOLOGY:

Interim Director, October 2005 – January 2007

RESEARCH AUSTRALIA LTD:

University representative to 2005, **Board Member,** 2005 – 2008

SYDNEY FOUNDATION FOR MEDICAL RESEARCH

Research Advisory Committee, Member 2003 – 2014

ROYAL PRINCE ALFRED HOSPITAL:

RPA Foundation Medal: Member, Judging Panel 2003 – 2008, 2010
Academic Head, Department of Neurology, 2008 – 2013
Medical Board, Executive Committee Member, 2008 – 2011

NSW BRAIN BANKS:

Foundation Chair, Inter-Institutional Board, 2013 – 2020 [Consortium discontinued 2020]

WESTMEAD IVF PTY LTD

Member of Board of Governance since 2014; Chair 2015 – ***current***

MAJOR PROFESSIONAL AND COMMUNITY SERVICE

INTERNATIONAL ORGANIZATIONS

- ***International Federation of Clinical Neurophysiology:***
  Various roles, especially on Program Committees, including:
  Australian Delegate to Council and General Assembly, intermittent;
  Member, Executive Board, *Clinical Neurophysiology* 1997 – 2001; 2008 – *present*; Member, Advisory Panel, *Handbook of Clinical Neurophysiology*, 2000 – *present*
  Member, *Rules Committee* 1985 – 1990;
  Member, *Executive Committee*, 1997 – 2001; and 2008 – 2020
  Member, Organising Committee, 32nd *International Congress of Clinical Neurophysiology*, Melbourne 7th-11th November 2022 [Congress moved to Geneva due to Covid pandemic]
- ***World Federation of Neurology:***
  Major roles include:
  Member, Australian Bid Committee, 2005 World Congress of Neurology (successful bid);
  Member, Scientific Program Committee, and President, Host Society, XIIth World Congress of Neurology, Sydney, November 5 – 13, 2005
  Australian Delegate 2004 – 2007
  Member, *Constitution and Bye-laws Committee* 2006 – 2010
- ***World Medical Association:***
  Revision of the Declaration of Helsinki: advisor on behalf of IFCN 2007 – 2008
- ***World Health Organisation:***
  Member, Global Neurology Network, Advisor on *ICD-11 Diseases of the Nervous System* 2015 –

NATIONAL AND STATE ORGANIZATIONS

- ***Australian Association of Neurologists/Australian & New Zealand Association of Neurologists:***
  Committees: Various committees: Chair of Education and Scientific Program Committee 1981 – 1988
  Member, Congress bid committees:
  - XXII *World Congress of Neurology*, Sydney 2005: successful (Member, Program Committee; President of Host Society for Congress);
  - 31st *International Congress of Clinical Neurophysiology*, Melbourne 2018: unsuccessful;
  - 32nd *International Congress of Clinical Neurophysiology*, Melbourne 2022: Co-Chair and Presenter of the successful bid [but Congress moved to Geneva due to Covid pandemic]

32nd *International Congress of Clinical Neurophysiology*, Melbourne 2022: President and Co-Chair, Organising Committee

Convenor and *Organizer* (with Dr Ian Maxwell), *AAN/ANZAN Biennial Clinical Neurophysiology Workshop* 1984 – 2007; Member, Organizing Committee 2009 – 2013

Association Delegate to World Federation of Neurology 2004 – 2007, and *ad hoc* at other times

Association representative on RACP Committees (notably Specialties Board 2004 – 2007; Specialist Advisory Committee in Neurology 2004 – 2007; Overseas Trained Neurologist Assessment Panels, *ad hoc*)

Positions on Council: Honorary Assistant Secretary 1978 – 1980; Honorary Treasurer 2003 – 2004; Council Member, 1984 – 1990 and 2000 – 2007; President-elect – 2004; **President** 2004 – 2007

- ***Royal Australasian College of Physicians:***
  Various roles, recently:
  Specialties Board, 2004 – 2007, and Specialist Advisory Committee in Neurology, 2004 – 2007
- ***Australian Academy of Science:***
  Member, Sectional Committee 9, 1996 – 2001; Chairman, Sectional Committee 9, 1999 – 2001;
  Assessor, "Falling Walls Lab" Exchange Applications, 2016, 2017
  Assessor, Post-doctoral Fellowship applications, *Japan Society for the Promotion of Science,* 2018, 2019
- ***Australian Academy of Technology and Engineering:***
  Assessor, Australia China Young Scientists Exchange Program, 2016, 2017
- ***National Association of Testing Authorities, Australia:***
  Assessor, Medical Testing Registration Advisory Committee 1994 – 2005

SERVICE TO MEDICAL CHARITIES

- ***Brain Foundation (formerly Australian Brain Foundation):***
  Honorary Secretary, N.S.W. Committee 1977 – 1979, Member, N.S.W. Committee and N.S.W. Board of Directors 1977 – 2000; Member, Scientific Advisory Committee 1996 – 2000
  Member, Board of Directors 2012 – ***current***; Member, Executive Committee, 2013 – ***current***
  Vice-President, 2019 – ***current***
  Chair, Scientific Advisory Committee, 2013 – ***current***
- ***Motor Neurone Disease Research Institute of Australia Inc:***
  President, and Chairman, Executive Committee, 1994 – 1998;
  Member, Executive Committee, 1993 – 2000; Member, Scientific Advisory Committee, 1988 – 2004
  Chair, Research Committee, 2019 – ***current***
- ***Motor Neurone Disease Association of N.S.W.:***
  Medical Advisor, 1993 – 2005; Chairman, Medical Advisory Panel, 1999 – 2005
  Opening Address, MND Awareness Week 1994 – 1997, 1999, 2000
- ***Motor Neurone Disease Australia:*** Board Member, 2019 – ***current***
- ***Australasian Spinal Research Trust*** *and* ***Madeline Foundation for Neurosurgical Research:***
  Member, Scientific Advisory Committees, from 1994 – 2002 and 2000 – 2002 respectively
- ***Sydney Foundation for Medical Research:***
  Member, Research Advisory Committee 2003 – 2014
- ***Roles in various Charitable Foundations of The University of Sydney:***
  - *The Medical Foundation* Board Member, Member, Research Advisory Committee, 2003 – 2013
  - *Microsearch Foundation*: Board Member, 2008 – 2013
  - *Nepean Medical Research Foundation*: Board Member, University Officer, Chair, Research Advisory Committee 2005 – 2013
  - *Dermatology Research Foundation*: Board Member, University Officer, 2008 – 2013
  - *Melanoma Foundation*: Board Member, University Officer, to 2013
  - ***Rowan Nicks Russell Drysdale Fellowship in Indigenous Health***: Chair, 2008 – 2013

JOURNAL EDITORSHIP

- **Editor-in-Chief,** ***Clinical Neurophysiology*** (Elsevier), from December 2007 – January 2016
  Member, Editorial Board, 1990 – 2007; Member, Executive Board 1997 – 2001; 2008 – *present*; Honorary Consulting Editor, 2016 – *present*
- **Founding Editor-in-Chief,** ***Clinical Neurophysiology Practice*** (Elsevier), July 2015 – 2020

- **Associate Editor, *Muscle and Nerve*** (Wiley) 1998 – 2008 (Member, Editorial Board, 1994 – 2008)

- **Editorial Board Memberships:**
  - ***Current Opinion in Neurology and Neurosurgery,*** Section Editor, (Current Science, London) 1988 – 1990
  - ***Journal of Clinical Neuroscience*** (Elsevier) Member, Editorial Board, 1995 – 2012
  - ***Neurology & Clinical Neurophysiology*** (formerly ***Journal of Contemporary Neurology***) (MIT Press, Cambridge, Mass.) Member, Editorial Board, 1995 – 2001
  - ***Handbook of Clinical Neurophysiology series*** (Elsevier), Member, Advisory Panel, 2000 – *present*
  - ***Turkish Journal of Neurology***, Member, International Scientific Advisory Board, 2003 – 2011
  - ***Annals of Clinical Neurophysiology***, Member 2017 – *present*
  - ***Neurological Sciences and Neurophysiology,*** formerly ***Journal of Neurological Sciences (Turkish)***, Member 2017 – *present*
  - ***BMJ Neurology Open***, 2021 –

MEMBERSHIP OF PROFESSIONAL SOCIETIES

- ***Royal Australasian College of Physicians***, Member 1972 – 1975; Fellow from 1975; Life Member from 2014
- ***Australian Association of Neurologists (now Australian & New Zealand Association of Neurologists)***, Member 1974 – *present*; Honorary Assistant Secretary 1978 – 1981
  Council Member 1984 – 1990, and 2000 – 2007
  Honorary Treasurer 2003 – 2004; President-elect 2003
  President 2004 – 2007
- ***Australian Neuroscience Society*** 1983 – 2011
- ***Australian Society for Medical Research*** 1989 – 2007
- ***Svensk Förening för Klinisk Neurofysiologi*** (Swedish Clinical Neurophysiology Society)
  Member 1976 – 1991; Honorary Member, 1991
- ***American Neurological Association***, Corresponding Member (by election) from 1993;
  Senior Fellow from 2013
- ***British Society of Clinical Neurophysiology***, Honorary Member, 2001
- ***Australian Institute of Company Directors***, Member from 2005 – 2007
- ***Committee on Publication Ethics***, Member, 2008 – 2020
- ***German Society for Clinical Neurophysiology and Functional Imaging*** (DGKN),
  Honorary Member, 2014

ORGANIZATION OF SCIENTIFIC MEETINGS SINCE 2000

Organizational roles in 31 meetings up to 2000. From 2000:

- 10th European Congress of Clinical Neurophysiology, Lyon, France, August 26-30, 2000: Member, Advisory Board; Chairman, Platform Session on Somatosensory Evoked Potentials
- 9th Biennial Clinical Neurophysiology Workshop, Southport, Queensland, March 5-9, 2001: Convenor and Chairman, Programme Committee
- "Uppsala 2001 AC", International Course on Single Fibre and Quantitative EMG Techniques, Uppsala, Sweden, June 10-16, 2001: IFCN Liaison Officer for Scientific Programme
- Scientific symposium to honour Professor Gunnar Wallin "Sympathetic neural mechanisms in cardiovascular control", Satellite Symposium of "Hypertension Prague 2002: 19th Scientific Meeting of the International Society of Hypertenstion and 12th European Meeting on Hypertension", Göteborg, Sweden, June 19-20, 2002: Chairman, Session 1 ("Function Organization of the Sympathetic System")
- Scientific symposium to honour Professors Léna Jami and Emmanuel Pierrot-Deseilligny, (Satellite Symposium of 2002 Meeting of European Federation of Neuroscience Societies) Paris, France, July 9-12, 2002: Member, Scientific Council; Chairman: Session on Recurrent Inhibition
- 10th Biennial Clinical Neurophysiology Workshop, Southport, Queensland, October 6-8, 2003: Convenor and Chairman, Programme Committee

- 2004 College of Health Sciences Research Conference, Leura, November 3-4: Convenor
- 11th Biennial Clinical Neurophysiology Workshop, Southport, Queensland, April 19-23, 2005: Convenor and Chairman, Programme Committee
- 2005 Congress of World Federation of Neurology, Sydney, November 5-13, 2005: Member, Bid Committee of Australian Association of Neurologists ("Sydney 2005") at 2001 World Congress of Neurology in London; Member, Core Scientific Programme Committee, 2005 World Congress of Neurology, November 5-13, 2005
  Chair (i) Muscle & Nerve Plenary, (ii) Frontiers of Neuroscience Lecture (E. Graeme Robertson Lecture, Professor Peter Doherty), (iii) Multiple Sclerosis Main Theme.
- ANS 2006, Annual Scientific Meeting of Australian Neuroscience Society, Sydney, January 31-February 3, 2006. Chair: Eccles Lecture by F.L. Mastaglia; Chair Symposium 9: Motor Function of the Human Spinal Cord. Satellite Meeting on Motor Control, February 4-5. Chair, Motor Cortex Session.
- XXVIIIth International Congress of Clinical Neurophysiology, Edinburgh, Scotland, September 10-14, 2006: Member, Scientific Program Committee. Chair: Adrian Lecture (by Professor J.C. Rothwell); Chair: free communications, Nerve excitability. Chair: free communications, Cognitive function and EEG.
- 12th Biennial Clinical Neurophysiology Workshop, Southport, Queensland, October 1-4, 2007: Convenor and Member, Programme Committee.
- IBRO World Congress of Neuroscience, Melbourne, July 12-17, 2007, Co-convenor and Chair of Symposium on Axonal Excitability in Human Subjects.
- 13th Biennial Clinical Neurophysiology Workshop, Southport, Queensland, October 1-4, 2009: Member, Organizing and Programme Committees.
- Member, Organizing Committee of 29th International Congress of Clinical Neurophysiology, Kobe, Japan October 28-November 2, 2010; Chair, Special Lecture by Hugh Bostock; Co-Chair, Symposium on Excitability and threshold tracking"
- 14th Biennial Clinical Neurophysiology Workshop, Southport, Queensland, October 2-5, 2011: Member, Organizing Committee.
- 12th Annual Meeting, Chinese Society of EMG and Clinical Neurophysiology, Beijing, China, April 19-21, 2012: Member of the Scientific Committee.
- XIX Biennial International Society of Electrophysiology and Kinesiology Congress, Brisbane, July 19-21, 2012: Co-Chair of the *Clinical Neurophysiology* track.
- "*Spasticity and rigidity: aspects of the physiology and pathophysiology of movement*". Symposium in honour of Dr Rose Katz, Paris, France, 26th April, 2013: Member, Organizing Committee and Session Co-Chair
- 5th Asian-Oceanian Congress of Clinical Neurophysiology, Bali, Indonesia, August 28-31. Member, International Advisory Committee
- 30th International Congress on Clinical Neurophysiology – *ICCN 2014*, Berlin, Germany, April 21-24, 2014: Member of Organising Committee; Member, Teaching Program Committee; Assessor of symposia proposals and of submitted abstracts; Chair, Symposium "Neurophysiological assessment of muscle membrane properties"
- 31st International Congress of Clinical Neurophysiology, 2018: Co-Convenor of Australian bid for ICCN 2018 in Melbourne and of Local Organising Committee. Runner up. Congress awarded to Washington, DC, USA.
- 15th European Congress of Clinical Neurophysiology, Brno, Czech Republic, September 30-October 4, 2015. Member of International Scientific Advisory Board; Convenor and Chair: Session on Axonal Exctiability; Convenor and Chair: Journal Highlights Session
- XII World Congress of Neurology (WCN), Santiago, Chile. October 31 –November 5, 2015. Co-convenor, T4a Clinical Neurophysiology – Central
- 16th European Congress of Clinical Neurophysiology, Budapest, Hungary, August 30-September 2, 2017. Member of International Organizing Committee; Co-Convenor and Co-Chair: Symposium on "Recent insights into axonal excitability and ion channel redistribution in neurological diseases"
- 31st International Congress on Clinical Neurophysiology – *ICCN 2018*, Washington, DC, USA, May 1-6, 2018. Member of Scientific Advisory Board/Organising Committee
- 32nd International Congress of Clinical Neurophysiology, 2022: Member, Local Organising Committee for ANZAN bid for Melbourne to be the host city (Co-presenter of the successful bid at 31st Congress in Washington 2018). Meeting shifted to Geneva, Switzerland in 2020 due to Covid-19 pandemic.

- 17th European Congress of Clinical Neurophysiology, Warsaw, Poland, June 5-8, 2019. Member of International Scientific Advisory Board; Convenor and Co-Chair: Symposium on "Changes in axonal excitability in neurological disease"
- *Gold Coast Consensus Meeting:* Towards Earlier Diagnosis of MND/ALS, Southport Queensland, October 27-29, 2019. Oganiser (with M.C. Kiernan and R. Kaji).
- 7th Asian-Oceanian Congress on Clinical Neurophysiology, Kuala Lumpur, Malaysia January 30-February 2, 2021. Member of International Scientific Advisory Board.
- 32nd International Congress of Clinical Neurophysiology, Geneva, Switzerland, September 4–8, 2022. Member, Program Committee

INVITED PRESENTATIONS AT LOCAL, NATIONAL AND INTERNATIONAL MEETINGS SINCE 2000

72 invited presentations (and chairing roles) at 55 national and international meetings up to 2000.

Since 2000:

- 32nd International Congress of Clinical Neurophysiology, Melbourne 2022: Congress President, Co-Chair, Organising Committee. Asian-Oceanian Congress of Clinical Neurophysiology, Manila, Philippines, January 20-21, 2000:
  Invited Lecture: "Intraoperative monitoring of spinal cord function"
- 2000 Golden Jubilee Annual Scientific Meeting, Australian Association of Neurologists, Melbourne, May 15-19, 2000: Chairman: Key Note Lecture "Motor Neurone Disease"; Ethics Symposium: Invited Presentation: "End of life issues in chronic neurological illness"
- 10th European Congress of Clinical Neurophysiology, Lyon, France, August 26-30, 2000: Symposium Lecture: "Axonal excitability in peripheral neuropathies"; Advanced Course: "Axonal excitability evaluation using threshold tracking" (D. Burke and H. Bostock, UK)
- Australian Association of Neurologists, Adelaide, S.A., May 15-18, 2001:
  The Mervyn Eadie Lecture (Inaugural): "The properties and function of myelinated axons"
- British Society for Clinical Neurophysiology, London, U.K., June 15, 2001:
  Keynote Lecturer: "Excitability and impulse conduction in peripheral nerve axons"
- 17th World Congress of Neurology, London, U.K., June 17-22, 2001: Invited Presentation: "New concepts of axonal excitability"
- CNRS Unit, Université René Descartes (University of Paris V), July 19, 2001: "Excitability of peripheral and corticospinal axons in human subjects"
- "Movement and Sensation", International Symposium, (Satellite Symposium of the 2001 IUPS Congress) Cairns, Qld, Australia, September 3-6, 2001: Invited presentation: "Effects of activity on axonal excitability: implications for motor control studies"
- 12th World Congress of Neurosurgery, Sydney, September 16-20, 2001: Invited Presentation, Neurophysiology of Nerve Repair Breakfast Session: "Pitfalls in the preoperative neurophysiological assessment of peripheral nerve lesions"
- Sympathetic Neural Mechanisms in Cardiovascular Control (Official Satellite Symposium of Hypertension Prague 2002), Göteborg, Sweden, June 19-20, 2002: Chairman, Session 1: "Functional organization of the sympathetic system"
- "Motor Control and Proprioception" International Scientific Meeting in honour of Professor Léna Jami and Professor Emmanuel Pierrot-Deseilligny, (Satellite symposium of 2002 Meeting of European Federation of Neuroscience Societies) Paris, France, July 9-12, 2002: Invited Presentation, Session 6 on the Propriospinal System: "Corticospinal excitation of upper limb motoneurones of human subjects"; Chairman, Session 5, "Spinal network and its supraspinal control in humans"
- "International Symposium on Spine Surgery and Spinal Cord Monitoring" International Scientific Meeting in honour of Professor Tetsuya Tamaki, Wakayama, Japan, March 27-29, 2003: Invited Presentation: "Corticospinal volleys to transcranial electrical stimulation and their suppression by general anaesthetics"
- Japan Microneurography Society, Annual Meeting and Tribute to Professor Tadaaki Mano, Tokyo, Japan, June 28, 2003: Invited Presentation: "Microneurography, muscle spindles and fusimotor drive: past, present and future"
- 27th Congress of International Federation of Clinical Neurophysiology and Jubilee of American Association of Electrodiagnostic Medicine, Joint Scientific Meeting, San Francisco, U.S.A., September 16-20, 2003:

Invited symposium lecture: "Conduction block in demyelinated axons precipitated by normally innocuous physiological stimuli"; Chairman: Lecture "Excitability testing: past, present, future (Professor H. Bostock, UK); Hands-on Workshop "Threshold tracking" (with Professor H. Bostock)

- Postgraduate Course in Clinical Neurophysiology, Manila, The Philippines, October 11-13, 2004: Invited Presentations: "H reflex and F waves in peripheral nerves and segmental lesions: physiologic principles"; "Assessing conduction block in demyelinated axons"; Hands-on Workshop "EMG" with Professor Jun Kimura, Drs Didier Cros and Peter Siao
- 12th European Congress of Clinical Neurophysiology, Stockholm, Sweden, May 8-12, 2005: Symposium Co-Chair, and Invited presentation: "Usefulness of clinical neurophysiology in acute spinal cord injury"; Teaching Workshop: "H reflexes and F waves in the upper and lower limbs: physiology and recording principles"
- 2005 Congress of World Federation of Neurology, Sydney, November 5-13, 2005: Teaching Course "EMG Update" (Co-convenor with Professor J. Kimura and Speaker): "Assessing Conduction Block in Demyelinated Axons"; Invited symposium presentation: "Physiology of impulse conduction and conduction block"
- Australian Neuroscience Society 2006 – 5th Annual Satellite Meeting on Motor Control, February 4-5, 2006: Invited Presentation: "Abnormalities in spinal circuits in spinal cord injury"; Chair: Motor Cortex Session.
- Australian Association of Neurologists, Annual Scientific Meeting, Canberra, May 1-5, 2006.
  Invited presentation: "The future of the AAN".
- 28th International Congress of Clinical Neurophysiology, Edinburgh, September 10-14, 2006:
  Kugelberg Lecture: "Human ion channels: *in vivo* investigation".
  Workshop Lecture: "Peripheral nerve excitability".
  Chair of the *Adrian Lecture*. Chair of Free Communications on (i) Nerve excitability, and (ii) Cognitive function and EEG.
- Seminar, Laboratoire de physiologie et physiopathologie de la motricité chez l'homme - UMR S 731 (UFR 967), Hôpital de la Salpêtrière, Universitê de Paris VI Pierre et Marie Curie, September 22, 2006:
  "The effects of discharge trains on the excitability of sensory and motor axons"
- Seminar, Rehabilitation Institute of Chicago and Northwestern University, Chicago: April 27, 2007: "Changes in motor axon properties in central nervous system disorders"
- 17th ASM, American Society of Neurophysiological Monitoring, Chicago, USA, May 3-6, 2007: ***Digitimer Lecture***: "Axonal excitability: From the corticospinal system to the peripheral nerve"
- IBRO World Congress of Neuroscience, Melbourne, July 12-17, 2007:
  Chair, Symposium on "Axonal Excitability"; Invited talk: "Channels and pumps in human axons"
- Northwest Neurological Meeting, Royal North Shore Hospital, Sydney, September 5, 2007:
  Invited Lecture: "Peripheral nerve function in demyelinating disease"
- 12th Biennial Clinical Neurophysiology Workshop, Southport, Queensland, October 1-4, 2007:
  Invited talk "Conduction block"; Chair: Overseas Lecturer, and Session on Movement Disorders
- 13th European Congress of Clinical Neurophysiology, Istanbul, Turkey, May 4-8, 2008:
  Keynote Plenary Lecture: "H reflexes in the upper and lower limbs: physiology, limitations and recording principles"
  Invited "Meet-the-Expert" Lecture: "Axonal excitability"
- Department of Neurology Seminar Series, Royal Prince Alfred Hospital, Camperdown, August 7, 2008.
  Invited Departmental Seminar: "Microneurography, axonal excitability and impulse conduction in demyelinating disease"
- 5th Latin-American Congress of Clinical Neurophysiology, Puebla, Mexico, October 7-10, 2008:
  Plenary Lectures: (i) "The excitability of peripheral nerve axons in health and disease"; (ii) "The physiology and use of H reflexes in assessing neurogenic lesions in the upper and lower limbs"
- Invited Lectures in China, November 2008: multiple lectures (x11) at each venue: Huashan Hospital, Fudan University (Shanghai), Jiaxing Medical School, Second Hospital (Jiaxing); Tong Ji Medical University (Wuhan) and Peking Union Medical Centre (Beijing):
  - Microneurography, axonal excitability and impulse conduction in demyelinating disease
  - The excitability of peripheral nerve axons in health and disease
  - The physiology and use of H reflexes in assessing neurogenic lesions in the upper and lower limbs
  - Muscle spindle activity and fusimotor drive in human subjects
  - Monitoring corticospinal volleys during intra-operative surgery
  - Nerve compression and the carpal tunnel syndrome

  - Neuropathies, myopathies and their investigation
  - Abnormalities in spinal circuits in spinal cord injury
  - Research in the Faculty of Medicine, University of Sydney
  - Clinical Neurophysiology: the specialty and its no. #1 journal
- Clinical Neurophysiology Course: Rehabilitation in disorders of the Central Nervous System, Jiaxing Medical College, Jiaxing, China, April 11-12, 2009:
  Plenary Lectures: (i) Pathophysiology of spasticity in stroke and spinal cord injury; and (ii) Reflexes and F waves in assessing the integrity of the reflex arc in the upper and lower limbs
- 4th Asian and Oceanian Congress of Clinical Neurophysiology, Seoul, Korea, April 15-18, 2009:
  Plenary lecture: "The excitability of motor axons in human peripheral nerve in neurological disorders"
- Anderson-Stuart Seminar, Bosch Institute, University of Sydney, May 1, 2009.
  Invited Lecture: "The excitability of motor axons in human peripheral nerve in neurological disorders"
- Department of Neurology Seminar Series, Royal Prince Alfred Hospital, Camperdown, July 9, 2009.
  Invited Departmental Seminar: "Clinical signs and pathophysiology of spasticity in stroke and spinal cord injury"
- Institute of Neurological Sciences, Prince of Wales Hospital, Randwick, August 31, 2009:
  Invited Departmental Seminar: "Reflex mechanisms in spasticity"
- UPMC Unité 731, Université Pierre et Marie Curie (Paris VI) and Hôpital de la Salpêtrière, Paris, France, October 2, 2009. Invited departmental seminar: "Threshold tracking of the H reflex"
- Advanced Nerve Excitability Workshop, Institute of Neurology, University College London, November 5, 2009: Invited Lecture: "Impulse conduction and excitability in CNS disorders".
- Festschrift in honour of Professor Hugh Bostock, *FRS*, Institute of Neurology, University College London, November 6, 2009:
  Invited Lecture: "Changes in peripheral nerve excitability in central lesions"
- German Society of Clinical Neurophysiology, Annual Meeting, Halle, Germany, March 18-21, 2010:
  Invited lecture: "Ionic contributions to the action potential and the resting excitability of human axons in vivo"
- ICCN2010: 29th International Congress of Clinical Neurophysiology, Kobe, Japan, October 28-November 1, 2010.
  Special Lecture: "Action potential and impulse conduction in sensory and motor axons"
  Co-Chair of Symposium: "Axonal conduction and threshold tracking"
  Chair, Special Lecture 'Threshold electrotonus and related techniques' by Hugh Bostock, *FRS*
- ***E.G. Robertson Lecture***, Annual Scientific Meeting, Australian & New Zealand Association of Neurologists, May 2011. Plenary Lecture: "The primacy of the spinal cord in the control of movement"
- 14th European Congress of Clinical Neurophysiology and 4th International Conference on Transcranial Magnetic and Direct Current Stimulation, Rome, Italy, June 21-25, 2011:
  Invited Lecture: "How to optimally excite cortical neurons by transcranial stimulation from a membrane's point of view?"
- Institute of Neurological Sciences, Prince of Wales Hospital, Randwick, August 29, 2011:
  Invited Departmental Seminar: "Transition"
- 14th Biennial Clinical Neurophysiology Workshop, Southport, Queensland, October 2-5, 2011:
  Invited talk "Pitfalls of TMS: Issues to be considered when stimulating cerebral cortex through the scalp and skull"
- 6th Latin-American Congress of Clinical Neurophysiology and ASM Brazilian Society of Clinical Neurophysiology, Punta del Este, Uruguay, October 24-27, 2011:
  Invited lecture: "Issues to be considered when stimulating cerebral cortex through the scalp and skull"
- 22nd International Symposium on ALS/MND, Sydney, Australia: November 30 –December 2, 2011:
  Invited Lecture: "Neurophysiological testing: steps towards earlier diagnosis"
  Co-Chair: Session 8C, Surrogate Markers, Thursday 1 December 2011, 14.00 – 15.30
- Chinese Clinical Neurophysiology Society, Beijing April 19-21, 2012.
  Invited presentation: "Neurophysiological testing in the diagnosis of ALS"
- International Motoneuron Meeting, *Motoneurons and Beyond,* Sydney 2012, July 23-27, 2012: Invited presentation: "Measuring the excitability of the motoneurone pool "
- 3rd ANZAN EMG Workshop, Sydney, July 28-29, 2012. Invited presentation: Neurophysiological testing in motor neurone disease". Demonstration session on H reflexes.

- RPAH Reunion Week September 17-23, 2012. Symposium: Planning for the future of Academic Surgery at RPAH. Invited presentation: "What is happening at the University of Sydney?"
- 59th Annual Meeting, American Association of Neuromuscular and Electrodiagnostic Medicine, Orlando, Florida, USA, October 3-6, 2012. Invited presentation: "Excitability and action potential in human axons".
- École Nationale Supérieure d'Arts et Métiers (Arts et Métiers ParisTech), Paris, France, 30th November, 2012. Invited Lecture "Excitability and action potential in human axons"
- Joint Scientific Meeting, Australian Physiological Society, Physiological Society of New Zealand and Australian Society for Biophysics, Sydney, December 2-5, 2012: Symposium "Translational Neurophysiology": Invited presentation "Excitability and action potential in human axons"
- Department of Neurology, Royal Prince Alfred Hospital, Sydney, December 6, 2012: Seminar: "Neurophysiological testing in ALS"
- Joint Meeting, 5th International Conference on Non-invasive Brain Stimulation and 57th Annual Meeting, German Society for Clinical Neurophysiology and Functional Imaging (DGKN), Leipzig, Germany 21-23 March, 2013. Invited presentation: "Meet-the-Editor" Session.
- Wednesday Colloqium, of the Neurological Medicine Centre, Department of Neurology and Clinical Neurophysiology, Georg-August-Universität Göttingen, 26th March, 2013. Invited Departmental Seminar: "Excitability of motor axons in the median nerve in neurological disorders".
- Department of Neurology, Hannover Medical School, Invited Departmental Seminars, 3rd April, 2013: (i) "Conduction block precipitated by activity and increases in temperature in demyelinating disease" and (ii) "Pathophysiology of spasticity and other clinical signs in hemiplegia".
- Departmental Seminar, Spinal Cord Injury Centre, Balgrist University Hospital, University of Zurich, 8th April 2013. Seminar: "Implications of activity-dependent changes in axonal excitability for motor control studies"
- RITZ-Seminar Series, University of Zurich, 9th April 2013. Seminar: "Reflex mechanisms in the pathophysiology of spasticity and other clinical signs in hemiplegia".
- ***Guest Professor***, Annual Meetings of the Taiwanese Neurological Association and Taiwan Society of Clinical Neurophysiology, 13-14th April 2013, Taipei, Taiwan:
  1. Keynote Plenary Lecture: "Excitability of peripheral nerve axons in central nervous system disorders"; and
  2. Plenary 'Honor' Lecture "Clinical features and pathophysiology of spasticity".
- "*Spasticity and rigidity: aspects of the physiology and pathophysiology of movement*", Scientific meeting in honour of Dr Rose Katz, UPMC Unité 731, Université Pierre et Marie Curie (Paris VI) and Hôpital de la Salpêtrière, Paris, France, 26th April, 2013: Invited talk "The implications of changes in excitability of peripheral nerve axons due to activity for motor control studies".
- Departmental Seminar, Service de Rééducation Neurolocomotrice, Hôpital Henri Mondor, Université Paris Est Créteil, France, 29th May 2013. Seminar: "Changes in excitability of peripheral nerve axons due to activity and their importance for motor control studies"
- International Society for the History of Neurosciences, June 18th-22nd, 2013, Sydney. Invited presentation: "Microneurography and its introduction to Australia"
- 5th Asian-Oceanian Congress of Clinical Neurophysiology, Bali, Indonesia, August 28th-September 1st, 2013: Invited presentations: ***1***. Meet the Expert/Hands-on-Workshop: "Assessing the H reflex for different muscles in the upper and lower limbs" and ***2***. Lecture: "The principles underlying studies of the excitability of peripheral nerve axons in neurological diseases".
- 15th Biennial Clinical Neurophysiology Workshop, Southport, Queensland, September 29th -October 2nd, 2013: Invited talk "Pathophysiology of spasticity"
- 4th International Conference of the International Society for Intraoperative Monitoring, Cape Town, South Africa, November 14th-16th, 2013. Invited presentation: "Research and publication in intraoperative monitoring".
- ***Robert S. Schwab Lecture***, American Society of Clinical Neurophysiology, Atlanta, Ga, February 4th-9th, 2014: Invited lecture: "The excitable axon"
- 30th International Congress on Clinical Neurophysiology – *ICCN 2014*, Berlin, Germany, April 21-24, 2014: Invited presentation: Review of Highlighted Posters, Session 1: Peripheral Nerves.
- Departmental Seminar, Imaging and Neurophysiology Research Team, Université Pierre et Marie Curie (Paris VI) and Hôpital de la Salpêtrière, Paris, France, March 27th, 2014: "Issues with TMS and with establishing that changes are at cortical level".

- Human Motor Control Laboratory, National Institute of Neurological Disorders and Stroke, NIH, Bethesda, Washington, DC, USA, November 13th, 2014. Invited presentation: "Assessing the excitability of spinal motoneurones in TMS studies".
- Society of Neuroscience, Washington, DC, USA, Workshop: November 13-14th, 2014: Stroke Recovery: Connecting Neuroimmunology, Regeneration, and Engineering to Restore Functional Circuits, Break-out Group 4 – Helpful and harmful neuroplasticity
- Neurological Society of Thailand and Thai Clinical Neurophysiology Society, IFCN Clinical Neurophysiology Teaching Course, December 1st, 2014, Pattaya, Thailand: Invited presentation: "Clinical features and pathophysiology of spasticity"
- VII Latin-American Congress of Clinical Neurophysiology, Cartagena, Columbia, March 11-14th, 2015. (i) Plenary Lecture: "Excitability of peripheral nerve axons in central nervous system disorders"; (ii) Symposium 2: Peripheral nerve. Invited presentation: "Conduction block precipitated by activity and increases in temperature in demyelinating disease".
- 15th Congress of the European Chapter of Clinical Neurophysiology, Brno, Czech Republic. September 30th-October 4th, 2015. Invited presentations (i) Symposium on Axonal Excitability. "Recent insights into axonal physiology and its measurement"; (ii) Journal Highlights Session. "The journal and its impact"; (iii) Teaching Course on TMS: "Excitability of axons and paired-pulse studies".
- XXII World Congress of Neurology, Santiago, Chile. October 31st -November 5th, 2015. Invited symposium presentation: "Disynaptic corticospinal projections to upper limb motoneurons: their role in movement and recovery from stroke"
- ANZAN Registrars' Training Weekend, Sydney, 18th-20th March, 2016. Invited presentation: "How to set up a global practice"
- 32nd Clinical Neurophysiology EEG-EMG Congress, Bodrum, Turkey. April 27th-May 1st, 2016. Invited presentations: (i) "Pathophysiology of Spasticity", and (ii) "Recent insights into axonal excitability"
- Department of Neurology, Korea University, Seoul, South Korea, October 20th, 2016. Invited lecture: "H reflexes and F waves in assessing the integrity of the reflex arc in the upper and lower limbs"
- ***Guest Professor***, 20th Anniversary Meeting of the Korean Society of Clinical Neurophysiology, Seoul, South Korea, October 21st 2016. Plenary (invited) lecture: "Biophysical properties of human sensory and motor axons and the implications for disease"
- 46th Annual Scientific Meeting, Japanese Society of Clinical Neurophysiology, October 27th-29th, 2016. (i) Invited Plenary Lecture: "Axonal excitability and axonal function"; and (ii) Invited "meet-the-expert" presentation: "Testing Spinal Cord Excitability in studies using NIBS"
- Center for Basic and Translational Neuroscience, Panum Institute, Copenhagen, Denmark, November 24th, 2016. Invited Departmental Seminar: "Biophysical properties of human sensory and motor axons and the implications for disease"
- 2017 Annual Meeting, American Clinical Neurophysiology Society. Phoenix, Az, USA, February 10th-12th, 2017. Invited presentation: "Action potential and impulse conduction in human myelinated axons". Attendance cancelled due to domestic illness.
- 16th European Congress of Clinical Neurophysiology, Budapest, Hungary, August 30-September 2, 2017. (i) Symposium IV "Recent insights into axonal excitability and ion channel redistribution in neurological diseases", invited presentation: "Recent insights into the biophysical differences between human sensory and motor axons". (ii) Symposium XVIII "Axonal excitability and diabetic polyneuropathy", invited presentation "Excitability testing in the 21st Century", (iii) Author Workshop "How to get published"
- XXIII World Congress of Neurology, Kyoto, Japan, September 16th-21st, 2017, Session: M8C: Clinical Neurophysiology NCS, EMG, Evoked Potential, TMS - Invasive Studies, Invited Presentation: "Intraoperative monitoring"
- ***Guest Professor***, 3rd Clinical Neurophysiology Course of Hong Kong Neurological Society, Hong Kong 4-5th November 2017. Invited Presentations: (i) Assessment of patients with polyneuropathy in routine diagnostic practice; (ii) Assessment of patients with myopathy in routine diagnostic practice; (iii) H reflexes and F waves in assessing the integrity of the reflex arc in the upper and lower limbs; (iv) Biophysical properties of human sensory and motor axons and the implications for disease; and (v) 2-hr Hands-on Demonstration of H reflexes in the upper and lower limbs
- 6th Asian-Oceanian Congress of Clinical Neurophysiology, Bengaluru (Bangalore), India, November 9-12, 2017. Invited presentations: (i) Excitability changes in peripheral nerve disorders; and (ii) Workshop on

Nerve Conduction Studies and EMG: nerve conduction studies: 2-hr Hands-on Demonstration of H reflexes and F waves in the upper and lower limbs.

- 31st International Congress of Clinical Neurophysiology, Washington DC, USA, 1st-6th May 2018. Invited Presentations: (i) "EDX in Demyelinating Neuropathies (Action Potential and Impulse Conduction)" [Course Title: Advanced EMG]; (ii) "Meta-analysis of the sensitivity and specificity of the IFCN Awaji Criteria" [Session: Ten years of the IFCN Electrodiagnostic (Awaji) Criteria for early diagnosis of ALS]
- Departmental Seminar, Clinical Neurophysiology, Prince of Wales Hospital, Randwick, Australia, 6th June 2018: Invited presentation: "Intra-operative monitoring of neural function"
- *Together Achieving Better Health*, Nepean Blue Mountains Local Health District Conference, Penrith, Australia, 7-8th November 2018. Facilitator and Invited Presentation, Workshop 3 – "Research Integrity from a University Perspective"
- The Second Neurophysiology Conference, Egyptian Clinical Neurophysiology Society in association with IFCN, Cairo, Egypt, 2nd-3rd March 2019. Invited presentation: "Clinical features and pathophysiology of spasticity"
- Departmental Seminar, Service de Rééducation Neurolocomotrice, Hôpital Henri Mondor, Université Paris Est Créteil, France, 13th March 2019. Seminar: "The theory behind threshold tracking to measure axonal excitability, and the application of the technique to TMS and H reflexes"
- 3rd Symposium on Nerve Excitability Measurement, Taipei Medical University, Taiwan, 2nd May 2019. Invited Presentation: "Current concepts of the physiological basis of changes in axonal excitability"
- ***James W. Lance Lecture***, Annual Scientific Meeting, Australian & New Zealand Association of Neurologists, 21st-24th May 2019. Invited presentation: "James W. Lance: the science of neurology"
- 17th European Congress of Clinical Neurophysiology, Warsaw, Poland, 5-8th June 2019. (i) Plenary Lecture (invited) "Early diagnosis of ALS: can we improve on the Awaji criteria?", (ii) Symposium 11, Change in Excitability in Neurological Disease, Invited presentation: "Introduction to threshold tracking", and (iii) Author Workshop "How to get published", Invited Presentation: "How to write and revise a paper"
- Peripheral Nerve and Cortical Excitability Workshop, Aarhus, Denmark, 11th-14th June 2019. Invited presentations: (i) "The physiological basis of changes in axonal excitability" and (ii) "The application of threshold tracking to H reflexes"
- Departmental Seminar, Department of Clinical Neurophysiology, Academic Hospital, University of Uppsala, Sweden, 26th June 2019. Presentation: "H reflexes in assessing the integrity of the reflex arc in the upper and lower limbs"
- XXVI Brazilian Congress of Clinical Neurophysiology and the VIII Latin American Congress of Clinical Neurophysiology, São Paulo, Brazil, 14th-17th August 2019. Invited presentations: (i) "Practical use of axonal excitability studies", and (ii) "Radiculopathies - Beyond needle electromyography"
- Departmental Seminar, Department of Neurology, University of Chile, Santiago. 30th August 2019. Invited presentations: (i) "H reflex and F waves", and (ii) "Action potential and impulse conduction in demyelinated axons"
- IFCN Video Lecture Series, 5th December 2020: Invited Lecture: "Action potential generation and intermittent conduction block in myelinated axons"
- 7th Asian-Oceanian Congress on Clinical Neurophysiology [web-based virtual Congress], Kuala Lumpur, Malaysia 30th January-2nd February 2021. Invited presentations: (i) "The value of H-reflex and other late responses in disease", (ii) Plenary 1: "The clinical application of the ALS electrodiagnostic criteria".

SCIENTIFIC ASSESSMENT AND PEER REVIEW

National Health & Medical Research Council

Various roles, including:
Assessment Panel for NHMRC Project Grant and Fellowship Applications since 1980 – *present*;
Regional Grants Interviewing Committees (sometime Chairman), Assigners' Panel; Ad-hoc NHMRC Committee to review Medical Research Institutes in Western Australia 1991; Program Grant Review Committees; Co-opted Member, Australia Fellowships Review Panel 2007
Deputy Chair, Grant Review Panel 4F (*Neurology & Brain Imaging*) 2007, 2008, and 4E 2009
Member, NHMRC Academy, 2010
Chair, Management Committee, NHMRC Program Grant 335798 (2005-2009) *"The molecular and cellular pathogenesis of liver disease",* G.C. Farrell/G. McCaughan/J. George

Member, Scientific Advisory Board, NHMRC Program 1091302 (2016-2020) *"Musculoskeletal pain and disability: improving outcomes through conservative interventions",* P. Hodges/K. Bennell/D. Hunter/G. Vicenzino

Ad-hoc Assessor:

- *Project and Program Grants from National and International Agencies*
  Project and Program Grants from Major Agencies: Health Sciences Research Committee, University of Queensland; Australian Research Grants Scheme/Australian Research Council; National Health & Occupational Safety Commission; Medical Research Council/Health Research Council of New Zealand; Medical Research Council (of United Kingdom); Vancouver Foundation (Canada); Commonwealth Cooperative Research Centre Program; Wellcome Trust (United Kingdom); *"Bionic Ear"* Cooperative Research Centre Stage 1, 5 year Review Committee, Melbourne; ARC Centres, 2010; Prinses Beatrix Fonds (The Netherlands)
  Project Grants from Other Agencies: Postgraduate Medical Foundation, University of Sydney; National Multiple Sclerosis Society of Australia; Sir Charles Gairdner Hospital Research Fund; Clive and Vera Ramaciotti Foundations; University of Queensland Special Projects Grant Scheme; Cumberland College of Health Sciences; Sandoz Foundation for Gerontological Research; Australian Brain Foundation (NSW); Australasian Spinal Research Trust; Motor Neurone Disease Research Institute of Australia; Madeline Foundation for Neurosurgical Research
- *Research Fellowships*
  NH & MRC Career and Training Fellowships; Australian Research Council; Medical Research Council (U.K.); Sylvia and Charles Viertel Foundation; Garnett-Passe and Rodney Williams Foundation
  Others – Dawes-Curren-Hughes Research Fellowships, Royal Adelaide Hospital; Research Fellowships from Auckland Medical Research Foundation
- *Appointment, Tenure and Promotion*
  Monash University, Melbourne; CSIRO, Melbourne; University of Sydney; University of New South Wales; University of Adelaide; University of Newcastle, N.S.W.; University of Queensland.
  University of California, Irvine, U.S.A.; College of Medicine, University of Arizona, Tucson, U.S.A.; College of Medicine, University of Washington, Seattle, U.S.A.; School of Medicine, University of Toronto, Ontario, Canada; Faculty of Medicine, University of Calgary, Alberta, Canada; Faculty of Medicine, University of Auckland, New Zealand; Institute of Neurology, University College London, U.K.; University of Miami, Florida, U.S.A.; Northwestern University, Chicago; Western Sydney University; Dubai Healthcare City; Weill Cornell College of Medicine; University of Wollongong, Columbia University College of Physicians and Surgeons.

Australian Academy of Science:

- *Sectional Committee 9:* Member 1996 – 2001, Chairman 1999 – 2001
- *Falling Walls Lab Australia:* Assessment Panel Member 2016, 2017
- Assessor, Post-doctoral Fellowship applications, *Japan Society for the Promotion of Science,* 2018, 2019

Australian Academy of Technology & Engineering:

- Australia China Young Scientists Exchange Program: Member, Assessment Panel 2016, 2017

Referee/Reviewer for Scientific Manuscripts and Books:

- Regularly for: Brain, Journal of Physiology (London); Muscle and Nerve *(Editorial Board, 1994 – 1997; Associate Editor 1998 – 2008)*; Clinical Neurophysiology [formerly Electroencephalography & Clinical Neurophysiology] *(Consulting Editor 1990 - 1997; Member, Executive Board 1997 – 2001, 2008* – current*; Member, Editorial Board 2001 – 2008; Editor-in-Chief, 2008 – 2016)*; Journal of Clinical Neuroscience *(Editorial Board, 1995 – 2012);* Clinical Neurophysiology Practice *(Editor-in-Chief 2015 – current*).
- Ad-hoc for: Annals of Neurology, Journal of Neurophysiology, Neuroscience Letters, Contemporary Neurology *(Editorial Board, 1995 – present)*, Brain Research, Canadian Journal of Physiology and Pharmacology, Australian and New Zealand Journal of Medicine/Internal Medicine Journal, Australian & New Zealand Journal of Psychiatry, Diabetes, Experimental Brain Research, Journal of Computational Neuroscience, Journal of the Neurological Sciences, Medical Journal of Australia, Paraplegia, Trends in Neuroscience, Journal of Clinical Neurophysiology, Journal of the Peripheral Nervous System; Journal of Neurology, Neurosurgery & Psychiatry

Examiner, postgraduate research theses

- Monash University, University of Auckland, University of Melbourne, University of New South Wales, University of Queensland, University of Sydney, University of Western Australia.

- Lead Examiner (Rapporteur) of Jury, PhD Thesis Defence (Nicolas Roche), Université Pierre et Marie Curie (Paris VI) 2011
- Lead Examiner (Rapporteur) of Jury, PhD Thesis Defence (Maria Vinti), École Nationale Supérieure d'Arts et Métiers (Arts et Métiers ParisTech), Paris 2012
- Examiner and Member of Jury, PhD Thesis Defence (Mette Romer Rosberg), Graduate School of Health and Medical Sciences, University of Copenhagen, 2016

POSTGRADUATE HIGHER DEGREE STUDENTS

M.D. (UNSW)

Dr. S.C. Gandevia (*Graduated* 1984; Thesis: "Properties of the cortical projection of muscle and cutaneous afferents in man")
Dr. H.A. Ward (*Graduated* 1999; Thesis: "Stereotaxic removal of deep-seated or intra-axial subcortical brain lesions")

Ph.D. (UNSW)

Dr. B.B. McKeon (*Graduated* 1983; Thesis: "The muscle spindle as a length transducer in man")
Dr. D.K. McKenzie (*Graduated* 1987; Thesis: "Activation, strength and endurance of human respiratory and limb muscles")
Mr. A.M. Aniss (*Graduated* 1992: "Reflex effects onto fusimotor and skeletomotor neurones in man")
Dr. R.G. Fitzpatrick (*Graduated* 1995: "How people stand")
Dr. M.C. Kiernan (*Graduated* 1997: "Axonal excitability and impulse conduction in peripheral nerve disease")
Dr. I. Mogyoros (*Graduated* 1997: "Excitability and strength duration properties of human peripheral nerve")
Dr. S.R.D. Watson (*Graduated* 2000: "Short-latency vestibular reflexes evoked by galvanic and click stimulation in man") Co-supervisor with Associate Professor J.G. Colebatch
Dr Cecilia Cappelen-Smith (*Graduated* 2002: Topic: "Activity-dependent conduction block in demyelinating polyneuropathies")
Ms Cindy Lin (*Graduated* 2002: Topic: "Differences in biophysical properties of cutaneous afferents innervating upper and lower limbs")
Dr. S.K. Jankelowitz (*Graduated* 2004: Thesis: "Human motor control in normal subjects and post stroke") Co-supervisor with Associate Professor J.G. Colebatch

M.Sc. (UNSW)

Mr. N.F. Skuse (*Graduated* 1986: Thesis: "Methodological studies of the visual evoked potential")
Mr. R.G. Hicks (*Graduated* 1988: Thesis: "Prevention of cerebral complications of carotid endarterectomy and cardiopulmonary bypass surgery")

PhD (Sydney)

Dr Susan Tomlinson (*Graduated* 2012) "A clinical, genetic and neurophysiological study of ion channel disorders of the central nervous system"
Dr Karl Ng (*Graduated* 2014) Topic: "Abnormalities of the excitability of peripheral nerve axons in multiple sclerosis and other disorders"
Mr J.T. (Tim) Howells (*Graduated* 2014) Topic "Inward rectification in human sensory and motor axons"
Dr Luke Chen (*Graduated* 2014) Topic: "Ocular vestibular evoked myogenic potentials and electrically evoked vestibular ocular reflex in central vestibular disorders" (Primary Supervisor 2010; Associate Supervisor from 2011)
Dr Jessica Sylvester (2013) Topic: "Excitability studies in inclusion body myositis" (discontinued September 2015)
Dr Yi-Ching Lee (2013) Topic: "Antibody-mediated pain syndrome" (part-time, candidature suspended for specialist examinations)

MPhil (Sydney)

Ms. Louise Trevillion (*Graduated* 2012) Topic: "Excitability of single motor units in human subjects"
Mr Harry Irving (*Graduated* 2017) Topic: "The presence of renal antibodies in multiple sclerosis"
Ms Emily Ka Yan Cheung (*Graduated* 2018) Topic: "Lesion distribution and the excitability of peripheral nerve axons in multiple sclerosis"
Mr Chi Hang (David) Ho (2013) Topic: "Excitability of cutaneous afferents near their terminals" [suspended]

Ms Harriet Swearman (*Graduated* 2021) Topic: "The impact of the in vitro environment on the mammalian spindle" Primary Supervisor to 2019, then Supervisor), degree awarded 26th November 2020

TEACHING EXPERIENCE

Extensive experience in learning and teaching, curriculum development and course design at multiple levels, including:

Undergraduate Medicine/Graduate Medical Program

- Internal medicine, neurology and clinical neurophysiology for Medical and Science students at UNSW from 1976, involving formal lectures, bedside tutorials and demonstrations.
- Responsible for curriculum for neurosciences in Prince of Wales Clinical School 1990 – 2002.
- Stage Coordinator for Neurology, University of Sydney Graduate Medical Program 2008 – 2013
- Co-Chair for Block 6 and of Meet-the-Expert sessions, University of Sydney Graduate Medical Program. 2008 – 2013
- Clinical signs tutor in Neurology Block 6, Royal Prince Alfred Hospital 2008 – 2011
- PBL Tutor, Blocks 8 and 9 in 2010 and 2013; Blocks 6, 7, 8 and 9, 2011 and 2012
- Coordinator/supervisor for elective term placements (overseas, local, including PRINT) 2008 – 2013
- University of Sydney MD Project, Research Principal 2013 – 2016

PGR students

- Supervisor for PGR students (pages 13-14).
- Core skills and mentoring programs for PGR students and early career researchers in the former College of Health Sciences and the Sydney Medical School, University of Sydney.

Postgraduate professional training and continuing professional education

- Postgraduate training of registrars and overseas visiting Fellows in neurology and clinical neurophysiology (see pages 11-12).
- Activities on behalf of the Australian Association of Neurologists (President; Member and Chair, Education & Training Committee; Member, EEG & Clinical Neurophysiology Committee).
- Royal Australasian College of Physicians, including implementation of the new Education Strategy with respect to neurology (Member, Specialties Board; Member SAC Neurology of RACP).
- General Practitioners: Program Director and Convenor, Annual Neurology Week-ends for GPs, 1991–1996.
- National and international meetings: Conducting workshops on new diagnostic tests (somatosensory evoked potentials, unusual reflex studies, testing axonal excitability) at numerous national and international meetings (e.g., see *Invited Participation* ..., pp 8 – 11).
- Founder, Convenor and Organiser of the 3-day Biennial Clinical Neurophysiology Workshop of the Australian Association of Neurologists, 1984 – 2013.

Community

- As President of the Motor Neurone Disease Research Institute of Australia and Chairman, Medical Advisory Committee, Motor Neurone Disease Association of N.S.W.
- As a Board Member for other Medical Charities
- As a Senior Scientist at Prince of Wales Medical Research Institute

Mentored Colleagues now at full Professorial level

- *Professors of Neurology*: x2 at UNSW, x2 at University of Sydney, x1 in Essen, Germany, x1 in Chiba, Japan
- *Professor of Neurological Rehabilitation*: x1 in Paris, France,
- *Professors of Neurophysiology/Neuroscience*:: x1 at UNSW, x1 at Brain & Mind Centre, University of Sydney, x1 at Baker Institute, Melbourne, x2 in London, UK, 1 in Paris, France
- *Professor of Physiology*: x3 in Canada

OVERSEAS VISITORS ON STUDY LEAVE OR CLINICAL/RESEARCH TRAINING SINCE 1990

18 Overseas Visiting Scientists/Fellows up to 1990, since then:

- Dr E. Berrut (Department of Clinical Neurology, Hôpital Cantonal Universitaire, Geneva, Switzerland) October 1990 - October 1991
- Dr P.J. Cordo (R.S. Dow Neurological Sciences Institute, Good Samaritan Hospital and Medical Center, Portland, Oregon, U.S.A.) January - June 1991 and December 1991 - January 1992 Visiting Fellowship from National Institutes of Health, U.S.A.
- Dr H. Bostock (Sobell Department of Neurophysiology, Institute of Neurology, Queen Square, London, U.K.) September - November 1992, Visiting Fellowship from Wellcome-Ramaciotti Foundations
- Dr J.C. Rothwell (Human Movement and Balance Unit, Institute of Neurology, Queen Square, London, U.K.) November 1992 - March 1993, Visiting Fellowship from British Council
- Dr T.A. Miller (Department of Physical Medicine and Rehabilitation, University of Ottawa, Canada) July 1993 - June 1994, Visiting Fellowship from R.S. McLaughlin Foundation
- Dr J.T. Inglis (R.S. Dow Neurological Sciences Institute, Good Samaritan Hospital and Medical Center, Portland, Oregon, U.S.A.) February 1994 - February 1995
- Dr S. Meunier (Laboratoire de Neurophysiologie Clinique, Rééducation Neurologique, Hôpital de la Salpêtrière, Paris, France) August 1994 - November 1994
- Dr Zakiah Balfas (Department of Neurology, University of Indonesia, Jakarta) August - November 1994, March - April 1995
- Dr J.-M. Gracies (Laboratoire de Neurophysiologie Clinique, Rééducation Neurologique, Hôpital de la Salpêtrière, Paris, France) January 1995 - January 1997, Visiting Fellowships from Fondation Simone et Cino del Duca, Paris and Institut National de la Santé et de la Recherche Médicale, France
- Dr Amirhuddin Aliah (University of Ujung Pandung, Indonesia) February - March 1995
- Dr Handojo Pudjowijanto (Neurologist, Telogorejo Hospital, Semarang, Indonesia) March - May 1995
- Dr Hugh Bostock (Sobell Department of Neurophysiology, Institute of Neurology, Queen Square, London, U.K.) September - October 1995
- Professor E. Pierrot-Deseilligny, (Laboratoire de Neurophysiologie Clinique, Rééducation Neurologique, Hôpital de la Salpêtrière, Paris, France) February-March, 1997, AVCC Visiting Fellowship under Australian-European Awards Programme 1996/1997
- Dr N. Kohara (Department of Neurology, Kyoto University Hospital, Kyoto, Japan) March 1997 Japanese Government-funded International Collaborative Project on ALS and related diseases
- Dr J. Grosskreutz (Department of Neurology, Technical University of Munich, Germany) June - September 1997
- Dr J.-M. Gracies (Laboratoire de Neurophysiologie Clinique, Rééducation Neurologique, Hôpital de la Salpêtrière, Paris, France) October - November 1997, May 1998
- Dr N. Petersen (Panum Institute of Neurophysiology, University of Copenhagen, Denmark) October 1997 - April 1998
- Associate Professor Hilmi Uysal (Electrophysiology Unit, Department of Neurology, Sevgi Hastanesi, Ankara, Turkey) March - August 1998
- Dr. D.F. Collins (Department of Physiology, University of Alberta, Canada) February 1999 -February 2001
- Dr Satoshi Kuwabara (Department of Neurology, University of Chiba, Japan) April 1999 - April 2000
- Professor E. Pierrot-Deseilligny (Laboratoire de Neurophysiologie Clinique, Rééducation Neurologique, Hôpital de la Salpêtrière, Paris, France) September, 2001
- Dr Maria Geraldine Espiritu (Neurophysiology Laboratory, St. Luke's Medical Centre, University of The Philippines, Manilla, The Philippines) April - June 2002
- Professor Hugh Bostock, *FRS* (Institute of Neurology, University College London and National Hospital for Neurology & Neurosurgery, Queen Square, London) July 2007
- Professor Hugh Bostock, *FRS* (Institute of Neurology, University College London and National Hospital for Neurology & Neurosurgery, Queen Square, London) May/June 2010
- Dr Dirk Czesnik (Department of Clinical Neurophysiology, Georg-August-University, Göttingen, Germany) March-June 2011

- Professor Hugh Bostock, *FRS* (Institute of Neurology, University College London and National Hospital for Neurology & Neurosurgery, Queen Square, London) July 2012
- Dr Véronique Marchand-Pauvert, Laboratoire de Neurophysiologie Clinique, Rééducation Neurologique, Hôpital de la Salpêtrière, Paris, France, July 2012
- Professor Volker Dietz (Spinal Cord Injury Center, Balgrist University Hospital, University of Zurich, Switzerland) August 2012
- Professor Hugh Bostock, FRS (Institute of Neurology, University College London and National Hospital for Neurology & Neurosurgery, Queen Square, London) October 2013
- Dr Véronique Marchand-Pauvert and Mr Sina Sangari, Laboratoire de Neurophysiologie Clinique, Rééducation Neurologique, Hôpital de la Salpêtrière, Paris, France, October-November 2014

RECENT INTERNATIONAL COLLABORATIONS

- Professor **Emmanuel Pierrot-Deseilligny** and Dr **Véronique Marchand-Pauvert**, Laboratoire de Neurophysiologie Clinique, Rééducation Neurologique, Hôpital de la Salpêtrière, Paris, France
- Professor **Hugh Bostock**, *FRS*, Institute of Neurology, University College London, UK
- Professors Dimitri Kullman, M.G. (Mike) Hanna [and Hugh Bostock, *FRS*], Institute of Neurology, University College London and National Hospital for Neurology & Neurosurgery, Queen Square, London "Peripheral markers of neuronal excitability in CNS channelopathies", Wellcome Trust
- Professor J.-M. Gracies, Mount Sinai Medical Center, Neurology Department, New York, NY 10029, U.S.A. and C.H.U. Henri Mondor, 51 avenue du Maréchal De Lattre De Tassigny, 94010 Créteil, France
- Professor Yu (Patrick) Zhu, Shanghai Medical College, Fudan University and Huashan Hospital, Shanghai, China

PUBLICATIONS

A. THESES, BOOKS AND EDITED ABSTRACTS

Theses

1. Burke, D. (1972). The role of the muscle spindle in spasticity. *M.D. Thesis*, University of New South Wales, 221 pp.

2. Burke, D. (1983). *D.Sc. Submission*: Collected papers. University of New South Wales.

Authored Books

3. Pierrot-Deseilligny, E. & Burke, D., co-authors (2005). *The Circuitry of the Human Spinal Cord. Its Role in Motor Control and Movement Disorders*. Cambridge University Press: New York, 642 pages, (Prize Winner [Highly Commended], 2006 BMA Medical Book Competition).

4. Pierrot-Deseilligny, E. & Burke, D., co-authors (2012). *The Circuitry of the Human Spinal Cord: Spinal and Corticospinal Mechanisms of Movement*. Cambridge University Press: New York, 606 pages. Publication Date: 25th April, 2012. ISBN 978-0-521-19258-3.

Edited Books

5. Burke, D., editor (1992). *The Changing Face of Neurology*. Excerpta Medica: Sydney, 34 pp.

6. Gandevia, S.C., Burke, D. & Anthony, M., editors (1993). *Science and Practice in Clinical Neurology*, Cambridge University Press: Cambridge, 453 pp.

7. Thilmann, A.F., Burke, D.J. & Rymer, W.Z., editors (1993). *Spasticity: Mechanisms and Management,* Springer: Berlin, 463 pp.

Collections of Abstracts of Scientific Meetings

8. Burke, D., editor (1993). Society Proceedings: Australian Association of Neurologists Workshop on Clinical Neurophysiology, Southport, Queensland 28-30 September 1992. *Electroencephalog. clin. Neurophysiol.* 86: 52P-54P.

9. Burke, D., editor (1995). Society Proceedings: Australian Association of Neurologists Workshop on Clinical Neurophysiology, Southport, Queensland 26-28 September 1994. *Electroencephalog. clin. Neurophysiol.* 94: 62P-67P.

10. Burke, D., editor (1997). Society Proceedings: Australian Association of Neurologists Workshop on Clinical Neurophysiology, Southport, Queensland 30 September-2 October 1996. *Electroencephalog. clin. Neurophysiol.* 102: 59P-63P.

11. Burke, D., editor (1999). Society Proceedings: Australian Association of Neurologists Workshop on Clinical Neurophysiology, Southport, Queensland 7-9 September 1998. *Clinical Neurophysiol.* 110: 2298-2301.

12. Burke, D., Kiernan, M.C. & Maxwell, I.C. editors (2004). Society Proceedings: Australian Association of Neurologists Workshop on Clinical Neurophysiology, Southport, Queensland 6-8 October 2003. *Clin. Neurophysiol.* 115: 990-993.

13. Burke, D., Kiernan, M.C. & Maxwell, I.C. editors (2005). Proceedings of the 11th Biennial Clinical Neurophysiology Workshop of the Australian Association of Neurologists, Southport, Queensland 20-23 April 2005. *Clin. Neurophysiol.* 116: e19-e24.

14. Kiernan, M.C., Burke, D. & Maxwell, I.C. editors (2008). Proceedings of the 12th Biennial Clinical Neurophysiology Workshop of the Australian & New Zealand Association of Neurologists, Southport, Queensland 30 September-3 October 2007. *Clin. Neurophysiol.* 119: e17-e26.

15. Kiernan, M.C., Burke, D. & Maxwell, I.C. editors (2010). Proceedings of the 13th Biennial Clinical Neurophysiology Workshop of the Australian & New Zealand Association of Neurologists, Southport, Queensland 4-7 October 2009. *Clin. Neurophysiol.* 121: e1-e4.

16. Kiernan, M.C., Maxwell, I.C. & Burke, D. editors (2012). Proceedings of the 13th Biennial Clinical Neurophysiology Workshop of the Australian & New Zealand Association of Neurologists, Southport, Queensland 2-5 October 2011. *Clin. Neurophysiol.* 121: e69-e76.

B. BOOK CHAPTERS

1. Lance, J.W., Burke, D. & Andrews, C.J. (1973). The reflex effects of muscle vibration: Studies of tendon jerk irradiation, phasic reflex suppression and the tonic vibration reflex. In: *New Developments in Electromyography and Clinical Neurophysiology*, vol. 3, edited by J.E. Desmedt, pp. 444-462. Karger: Basel.

2. Burke, D. & Lance, J.W. (1973). Studies of the reflex effects of primary and secondary spindle endings in spasticity. In: *New Developments in Electromyography and Clinical Neurophysiology*, vol. 3, edited by J.E. Desmedt, pp. 475-495. Karger: Basel.

3. Lance, J.W. & Burke, D. (1973). The significance of spindle secondary endings and the control of their afferent pathways in spasticity. In: *Clinical Studies in Myology*, edited by B.A. Kakulas, pp. 397-403. American Elsevier: New York.

4. Lance, J.W., Andrews, C.J., Gillies, J.D., Burke, D. & Ashby, P. (1973). The use of the tonic vibration reflex in the study of supraspinal control of tonic mechanisms in cat and man. In: *Parkinson's Disease*, vol. 2, edited by J. Siegfried, pp. 59-64. Huber: Bern.

5. Hagbarth, K.-E., Burke, D., Wallin, G. & Löfstedt, L. (1976). Single unit spindle responses to muscle vibration in man. In: *Understanding the Stretch Reflex. Progress in Brain Research*, vol. 44, edited by S. Homma, pp. 281-289. Elsevier: Amsterdam.

6. Lance, J.W., Burke, D., Neilson, P.D. & Milder, D. (1978). A physiological approach to motor disorders. In: *Contemporary Clinical Neurophysiology*, edited by W.A. Cobb and H. van Duijn, pp. 501-505. Elsevier: Amsterdam.

7. Burke, D., Hagbarth, K.-E. & Wallin, B.G. (1980). Alpha-gamma linkage and the mechanisms of reflex reinforcement. In: *Progress in Clinical Neurophysiology, Vol. 8. Spinal and Supraspinal Mechanisms of Voluntary Motor Control and Locomotion*, edited by J.E. Desmedt, pp. 170-180. Karger: Basel.

8. Burke, D., Hagbarth, K.-E., Wallin, B.G. & Löfstedt, L. (1980). Muscle spindle activity induced by vibration in man: Implications for the tonic stretch reflex. In: *Progress in Clinical Neurophysiology, Vol. 8. Spinal and Supraspinal Mechanisms of Voluntary Motor Control and Locomotion*, edited by J.E. Desmedt, pp. 243-253. Karger: Basel.

9. Burke, D. (1980). A reassessment of the muscle spindle contribution to muscle tone in normal and spastic man. In: *Spasticity: Disordered Motor Control*, edited by R.G. Feldman, R.R. Young & W.P. Koella, pp. 261-278. Year Book Publishers: Chicago.

10. Burke, D. (1981). The activity of human muscle spindle endings in normal motor behavior. In: *International Review of Physiology, Volume 25, Neurophysiology IV*, edited by R. Porter, pp. 91-126. University Park Press: Baltimore.

11. Westerman, R.A., Burke, D., McKeon, B.B. & Skuse, N.F. (1981). Muscle spindle activity in man. Flexibility in skeletomotor: fusimotor balance during various movements. In: *Brain Mechanisms and Perceptual Awareness*, edited by O. Pompeiano and C. Ajmone Marsan, IBRO Monograph Series, vol. 8, pp. 211-231. Raven Press: New York.

12. Burke, D., McKeon, B. & Skuse, N.F. (1982). The muscle spindle, muscle tone and proprioceptive reflexes in normal man. In: *Proprioception, Posture and Emotion*, edited by D. Garlick, pp. 121-134. Committee in Postgraduate Medical Education, University of N.S.W.: Sydney.

13. Burke, D. (1982). Stretch reflex activity in the spastic patient. *Electroencephalog. clin. Neurophysiol. Suppl. 36, Kyoto Symposia*, edited by P.A. Buser, W.A. Cobb and T. Okuma, pp. 172-178. Elsevier: Amsterdam.

14. Burke, D. (1983). Critical examination of the case for or against fusimotor involvement in disorders of muscle tone. In: *Motor Control Mechanisms in Health and Disease, Advances in Neurology, Vol. 39*, edited by J.E. Desmedt, pp. 133-150. Raven Press: New York.

15. Burke, D. (1985). Mechanisms underlying the tendon jerk and H reflex. In: *Clinical Neurophysiology in Spasticity (Restorative Neurology Series, Vol. 1)*, edited by P.J. Delwaide & R.R. Young, pp. 55-62. Elsevier: Amsterdam.

16. Burke, D. (1985). Muscle spindle feedback in Parkinson's disease. In: *Clinical Neurophysiology in Parkinsonism (Restorative Neurology Series, Vol. 2)*, edited by P.J. Delwaide & A. Agnoli, pp. 1-8. Elsevier: Amsterdam.

17. Burke, D. (1985). Value and limitations of nerve conduction studies. In: *Clinical Neurophysiology in Peripheral Neuropathies: Contributions to Assessment and Pathophysiology (Restorative Neurology Series, Vol. 3)*, edited by P.J. Delwaide & A. Gorio, pp. 91-102. Elsevier: Amsterdam.

18. Burke, D. (1985). Muscle spindle function during movement. In: *The Motor System in Neurobiology*, edited by E.V. Evarts, S.P. Wise & D. Bousfield, pp. 168-172. Elsevier: Amsterdam.

19. Burke, D. & Lance, J.W. (1986). Function and dysfunction of the myotatic unit. In: *Diseases of the Nervous System*, edited by A.K. Asbury, G.M. McKhann & W.I. McDonald, pp. 337-351. W.B. Saunders: Philadelphia.

20. Burke, D. & Gandevia, S.C. (1986). Muscle afferent contribution to the cerebral potentials of human subjects. In: *Frontiers of Clinical Neuroscience, Vol. 3: Evoked Potentials*, edited by R.Q. Cracco & I. Bodis-Wollner, pp. 262-268. Alan R. Liss: New York.

21. Burke, D. (1987). Reflexes in neuromuscular disorders. In: *A Textbook of Clinical Neurophysiology*, edited by A.M. Halliday, S.R. Butler & R. Paul, pp. 477-494. John Wiley: Sussex.

22. Burke, D. (1987). Pathophysiological aspects of rigidity and dystonia. In: *Motor Disturbances I*, edited by R. Benecke, B. Conrad & C.D. Marsden, pp. 87-100. Academic Press: London.

23. Burke, D. (1988). Spasticity as an adaptation to pyramidal tract injury. In: *Advances in Neurology, Vol. 47: Functional Recovery in Neurological Disease,* edited by S.G. Waxman, pp. 401-423. Raven Press: New York.

24. Burke, D. (1988). The role of muscle spindles in the control of movement. In: *Muscle and Nerve. Factors Affecting Human Performance*, edited by P. Russo and R. Balnave, pp. 66-69. Cumberland College of Health Sciences: Sydney.

25. Burke, D., Aniss, A.M. & Gandevia, S.C. (1989). Reflex mechanisms in standing human subjects. In: *Motor Disturbances, Mechanisms and Implications for Therapy*, edited by M. Torode and R. Balnave, pp. 155-159. Cumberland College of Health Sciences: Sydney.

26. Burke, D. & Gandevia, S.C. (1990). The peripheral motor system. In: *The Human Nervous System*, edited by G. Paxinos, pp. 125-145. Academic Press: New York.

27. Burke, D. (1990). Exteroceptive reflexes and flexor spasms. In: *Advances in Neural Regeneration Research. Neurology and Neurobiology Series*, ed. F.J. Seil, pp. 379-389. Alan R. Liss: New York.

28. Burke, D. (1991). Fusimotor system. In: *Encyclopedia of Human Biology*, vol. 3, edited by R. Dulbecco, pp 719-724, Academic Press: San Diego.

29. Gandevia, S.C. & Burke, D. (1991). Proprioceptive reflexes. In: *Encyclopedia of Human Biology*, vol. 6, edited by R. Dulbecco, pp 157-165. Academic Press: San Diego.

30. Burke, D. (1991). Reflections from a visitor's perspective. In: *Clinical Neurophysiology at the University Hospital, Uppsala, Sweden 1958-1991: Festschrift for Professor Karl-Erik Hagbarth*, edited by E.V. Stålberg and H.E. Torebjörk, pp. 45-52, ISBN 91-630-0506-9, Uppsala.

31. Burke, D. & Lance, J.W. (1992). The myotatic unit and its disorders. In: *Diseases of the Nervous System*, 2nd Ed., edited by A.K. Asbury, G.M. McKhann and W.I. McDonald, pp. 270-284. W.B. Saunders: Philadelphia.

32. Burke, D. & Gandevia, S.C. (1992). Selective activation of human fusimotor neurones innervating human tibialis anterior. In: *Muscle Afferents and Spinal Control of Movement.* IBRO Monograph Series, edited by L. Jami, E. Pierrot-Deseilligny and D. Zytnicki, pp.151-156. Pergamon Press: Oxford.

33. Burke, D., Gracies, J.M., Mazevet, D. & Pierrot-Deseilligny, E. (1992). Descending facilitation of propriospinal-like neurones during voluntary contraction in man. In: *Muscle Afferents and Spinal Control of Movement.* IBRO Monograph Series, edited by L. Jami, E. Pierrot-Deseilligny and D. Zytnicki, pp. 367-371. Pergamon Press: Oxford.

34. Burke, D. (1993). The pathophysiological basis of paraesthesiae. In: *Science and Practice in Clinical Neurology*, edited by S.C. Gandevia, D. Burke and M. Anthony, pp. 20-38. Cambridge University Press: Cambridge.

35. Burke, D. & Gandevia, S.C. (1993). Muscle spindles, muscle tone and the fusimotor system. In: *Science and Practice in Clinical Neurology*, edited by S.C. Gandevia, D. Burke and M. Anthony, pp. 89-105. Cambridge University Press: Cambridge.

36. Burke, D.J., Hicks, R., Stephen, J., Woodforth, I. & Crawford, M. (1993). The site of activation of the corticospinal system by transcranial stimulation of the human motor cortex. In: *Spasticity: Mechanisms and Management,* edited by A.F. Thilmann, D.J. Burke & W.Z. Rymer, pp. 58-66, Springer: Berlin.

37. Burke, D.J. (1993). Spinal pathophysiology: animal models. Discussion Summary. In: *Spasticity: Mechanisms and Management,* edited by A.F. Thilmann, D.J. Burke & W.Z. Rymer, pp. 233-236, Springer: Berlin.

38. Gandevia, S.C. & Burke, D. (1994). Does the nervous system depend on kinesthetic information to control natural limb movements? In: *Movement Control*, edited by P. Cordo & S. Harnad, pp. 12-30, Cambridge University Press.

39. Burke, D. & Gandevia, S.C. (1995). The human muscle spindle and its fusimotor control. In: *Neural Control of Movement*, edited by W.R. Ferrell & U. Proske, pp. 19-25, Plenum: New York.

40. Burke, D. (1996). Paraesthesiae and ectopic impulse activity. In: *Recent Advances in Clinical Neurophysiology*. edited by J. Kimura & H. Shibasaki, pp. 28-33. Elsevier: Amsterdam.

41. Burke, D. & Hicks, R.G. (1997). Intraoperative monitoring with motor and sensory evoked potentials. In: *Evoked Potentials in Clinical Medicine*, 3rd Edition, edited by K.H. Chiappa, pp. 675-689. Lippincott-Raven: Philadelphia.

42. Burke, D., Kiernan, M.C., Mogyoros, I. & Bostock, H. (1997). Susceptibility to conduction block: differences in the biophysical properties of cutaneous afferents and motor axons. In: *Physiology of ALS and Related Diseases*, edited by J. Kimura & R. Kaji, pp. 43-53. Elsevier: Amsterdam.

43. Burke, D., Mogyoros, I., Kiernan, M.C. & Bostock, H. (1997). Excitability of cutaneous sensory axons in amyotrophic lateralis sclerosis. In: *Physiology of ALS and Related Diseases*, edited by J. Kimura & R. Kaji, pp. 145-154. Elsevier: Amsterdam.

44. Burke, D. (1997). Fusimotor system. In: *Encyclopedia of Human Biology*, 2nd edition, edited by R. Dulbecco,Volume 4, pp. 115-120. Academic Press: San Diego.

45. Gandevia, S.C. & Burke, D. (1997). Proprioceptive reflexes. In: *Encyclopedia of Human Biology*, 2nd edition, edited by R. Dulbecco, Volume 7, pp. 127-134. Academic Press: San Diego.

46. Burke, D. & Hicks, R.G. (1998). Corticospinal volleys evoked by transcranial electrical and magnetic stimulation. In: *Spinal Cord Monitoring: Basic Principles, Regeneration, Pathophysiology, & Clinical Aspects*, edited by Stålberg, E., Sharma, H.S. & Olsson, Y., pp. 445-461. Springer Verlag: Vienna, New York.

47. Cordo, P.J., Burke, D., Gandevia, S.C. & Hales, J.P. (1998). Mechanical, neural, and perceptual effects of tendon vibration. In: *Progress in Motor Control,* edited by Latash, M.L., Volume 1, pp. 151-171. Human Kinetics: Champaign

48. Burke, D. & Hicks, R.G. (1999). Corticospinal volleys underlying the EMG responses to transcranial stimulation of the human motor cortex. In: *Functional Neuroscience: Evoked Potentials and Magnetic Fields (EEG Suppl. 49),* edited by Barber, C., Celesia, G.C., Hashimoto, I. & Kakigi, R., pp. 226-232. Elsevier Science: Amsterdam.

49. Burke, D., Nuwer, M.R., Daube, J., Fischer, C., Schramm, J., Yingling, C.D. & Jones, S.J. (1999). Intraoperative monitoring. In: *Recommendations for the Practice of Clinical Neurophysiology*, edited by G. Deuschl & A. Eisen, pp. 133-148. Elsevier: Amsterdam.

50. Burke, D., Hallett, M., Fuhr, P. & Pierrot-Deseilligny, E. (1999). H reflexes from the tibial and median nerves. In: *Recommendations for the Practice of Clinical Neurophysiology*, edited by G. Deuschl & A. Eisen, pp. 259-262. Elsevier: Amsterdam.

51. Burke, D. & Gandevia, S.C. (1999). Properties of human peripheral nerves: implications for studies of human motor control. In: *Peripheral and Spinal Mechanisms in the Neural Control of Movement*, edited by M.D. Binder. *Progress in Brain Research* 123: 427-435.

52. Burke, D. (2002). Effects of activity on axonal excitability: implications for motor control studies. In: *Sensorimotor Control of Movement and Posture*, edited by S.C. Gandevia , U. Proske & D.G. Stuart, pp. 33-37. Plenum: New York.

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