

CURRICULUM VITAE  
DIANE LIPSCOMBE, Ph.D.

February, 2023

Brown University  
Robert J. and Nancy D. Institute for Brain Science  
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EDUCATION

1982 B.Sc. (Hons) 1982: University College London, Department of Pharmacology  
1986 Ph.D. University College London, Department of Pharmacology

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APPOINTMENTS

1978-1982 Technician, Wellcome Research Laboratories, Beckenham, Kent, UK. In the lab of Sir James W. Black. Full-time:1978 -1979; summers: 1980-1982  
1982-1986 Graduate Student, University College London, Department of Pharmacology. Advisors Humphrey P. Rang (FRS) and David Colquhoun (FRS)  
1986-1988 Postdoctoral Associate, Yale University School of Medicine, Department of Cellular and Molecular Physiology in the laboratory of Richard W. Tsien  
1989-1990 Postdoctoral Fellow, Stanford Medical School, Department of Molecular and Cellular Physiology in the laboratory of Richard W. Tsien  
1990-1992 Visiting Assistant Professor and Consultant, Miles Pharmaceuticals, West Haven, CT  
1990-1993 Assistant Professor of Physiology (Research), Brown University, Division of Biology and Medicine  
1993-1999 Assistant Professor of Neuroscience (Tenure Track), Brown University, Division of Biology and Medicine  
1997 Visiting Assistant Professor, Centers for Genome Research and Neuroscience, Edinburgh University, UK  
1999 Associate Professor of Neuroscience (Tenured), Brown University  
2006 Professor of Neuroscience, Brown University  
2014-2015 Co-Director, Center for Neurobiology of Cells and Circuits, Brown Institute for Brain Science  
2015-2016 Interim Director, Brown Institute for Brain Science  
2016 Adjunct Professor of George and Anne Ryan Institute for Neuroscience, University of Rhode Island  
2016 Director, Robert J. and Nancy D. Carney Institute for Brain Science  
2017 Thomas J Watson Sr. Professor of Science, Brown University  
2019 Reliance Dhirubhai Ambani Director, Robert J. and Nancy D. Carney Institute for Brain Science

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HONORS AND AWARDS

1989-1990 Postdoctoral Fellow of the American Heart Association

1995	Steinbach Fellow, Marine Biological Laboratories, MA
1998-1999	Richard and Edna Salomon Assistant Professor, Brown University
2002	Catherine Filene Shouse Fellow, Marine Biological Laboratories, MA
2007	Daniel A. Nachshen Memorial Lecturer, University of Maryland Baltimore, MD
2009	Harriet W Sheridan Award for Distinguished Contribution to Teaching at Brown University
2010	Faculty Mentorship Award, Graduate School, Brown University
2011	Robert Newcomb Lecture, NINDS, Bethesda, MD
2011	Faculty Speaker at Mid-Year Completion Ceremony, Brown University
2012	Joan Mott Prize Lecture, Physiological Society, Edinburgh, UK
2012	Elected Fellow by the Neuroscience Chapter, American Association for the Advancement of Science (AAAS)
2013	President's Award for Excellence in Faculty Governance, Brown University
2013	Dean's Award for Excellence in Graduate and or Postdoctoral Teaching and Mentoring in the Biological Sciences
2013	Faculty Advising Fellow, Brown University
2015	AAAS Elected Member at Large, Neuroscience
2015-2017	Elected Councilor, Society for Neuroscience
2017	President-elect, Society for Neuroscience
2017	Thomas J Watson Sr. Professor of Science, Brown University
2018-2019	President, Society for Neuroscience
2019	Reliance Dhirubhai Ambani Director of the Robert J. and Nancy D. Carney Institute for Brain Science
2019	<a href="#">Fast Company Top 100</a> most creative people of 2019
2020	Member of the American Academy of Arts and Sciences, MA
2022	Honorary Fellow of the Physiological Society, London

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## NIH BOARDS

1993-present	Ad Hoc Member of several NIH study sections
1999-2003	Member NIH MDCN-3 study section
2004-present	Ad Hoc study section reviewer T32 Jointly Sponsored Institutional Predoctoral Training Programs in Neuroscience
2007-2008	Member, NIMH Advisory Council Workgroup on Research Training
2010-2016	Member NIH BPNS study section, Chair (2015-2016)
2014	Ad hoc member, Intramural Reviewer for NIAAA
2014-2019	External advisory board, NIH Director's Biomedical Research Workforce Innovation Award Broadening Experiences in Scientific Training
2017-2022	NINDS, Board of Scientific Councilors, (Chair 2020-2022)
2021-2023	Member, NINDS Scientific Director search committee

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## EXTERNAL BOARDS AND REVIEW COMMITTEES

1992-present	Ad Hoc Reviewer for J. Neuroscience, J. Biological Chemistry, Proceedings of the National Academy of Sciences, Journal of General Physiology, Journal of Physiology (London), American Journal of Physiology and European Journal of Physiology, Nature Neuroscience, eLife.
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2001-2004	Elected Council Member, Society of General Physiologist
2001-2004	Member Marine Biological Laboratories Fellowship selection committee.
2002-2015	Editorial Board, <i>Journal of Neurophysiology</i>
2003-2004	Member Marine Biological Laboratories Grass Fellowships selection and advisory committee
2003-2007	Editorial Board and Reviewing Editor, <i>Journal of Neuroscience</i>
2007-2010	Member Scientific Publications Committee, Society for Neuroscience
2009-2012	Member of the Board, Butler Hospital, Providence, RI
2010-present	Associate Editor <i>Wiley Interdisciplinary Reviews</i>
2011	External reviewer, OSHU and Vollum Neuroscience Graduate Program
2011	External reviewer, Stanford Medical School, Neuroscience Graduate Program
2011-2013	Senior Editor, <i>Brain Research</i>
2011-2014	Chair, Scientific Publications Committee, Society for Neuroscience
2012	Ad Hoc Committee Society for Neuroscience, developing new policy for pre-screening submitted manuscripts for scientific misconduct to the Journal of Neuroscience.
2012	Reviewer for The Wellcome Trust, London, UK
2013	Chair, Ad Hoc Committee Society for Neuroscience, Scientific Publications Working Group
2011-2013	Senior Editor, Brain Research
2012-present	Editorial Board, <i>Channels</i>
2012-2013	Member, Ethics Committee, Society for Neuroscience
2012-2018	Academic Council, Care New England Health Care System
2012-2018	Board of Directors, Care New England Health System, RI
2014	External Reviewer, Neuroscience Program University of Colorado, Anschutz Medical Campus
2014-2016	External Advisor, Neuroscience Graduate Program, University of Chicago
2015	Search Committee, Editor in Chief, <i>Journal of Neuroscience</i>
2015-2018	Member at Large Neuroscience Section, AAAS
2015-present	Steering committee, Center for Neurorestoration and Neurotechnology, Providence Veterans Administration Hospital, RI
2016-2018	Advisory Board, George and Anne Ryan Institute for Neuroscience, University of Rhode Island
2017	External reviewer Johns Hopkins Neuroscience Program (Medical School)
2017-2022	Editor, <i>Current Opinion in Physiology</i>
2018	External reviewer Johns Hopkins Neuroscience Program (College of Arts and Sciences)
2018-present	Scientific Advisory Board, Sean M. Healey & AMG Center for ALS at Mass General, Boston, MA
2019	External reviewer Brandeis Biology and Neuroscience Program
2020-2021	Executive Committee & Audit Committee, Society for Neuroscience
2020-2021	Steering Committee ALBA network, Federation of European Neuroscience
2020-2022	Editor, <i>Current Research in Physiology</i>
2021	External reviewer Feil Family Brain, Mind Research Institute, Cornell Weill Medical School
2021	External reviewer Advanced Research Science Center, CUNY
2023	Scientific Advisory Board, Zymedne Therapeutics, Canada

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## SERVICE TO BROWN UNIVERSITY

### University Committees

1994-1997 Medical Committee on Academic Standing (Office of the Dean of Biology and Medicine)

1997-2000 PLME summer research fellowship selection committee (Office of the Dean of Biology and Medicine)

1999-2003 University Disciplinary Council (Office of the President)

2001 Temporary Chair, University Disciplinary Council (Office of the President)

2001 Committee on Women's Health initiative (Office of the Dean of Biology and Medicine, Dean Marsh chaired by Donald Coustan).

2001 Committee for Strategic Planning: Working group (Office of the Dean of Biology and Medicine, Dean Marsh)

2001 Task Force to evaluate the non-academic discipline procedures at Brown (Office of the President, Interim President Blumstein)

2001 Panel Member, Corporation Committee on Biomedical Affairs (Office of the Dean of Biology and Medicine, Dean Marsh)

2001-2002 Chair, University Disciplinary Council (Office of the President, President Blumstein and President Simmons)

2002 Search Committee, Director of the transgenic facility (Office of the Dean of Biology and Medicine)

2003-2005 Advisory Committee for the Brown/MBL partnership and joint Graduate Program (Office of the President, President Simmons)

2004 Postdoctoral Advisory Committee (Office of the Vice President for Research, Briant)

2004 University Patent Advisory Committee (Office of the President and Vice President for Research, Briant)

2004-2007 Advisory Board for Sheridan Teaching Center (Office of the Dean of the College)

2005 Action Group to define new Deanship positions in BioMed (Office of the Dean of Biology and Medicine)

2006-2008 Research Advisory Board (Office of the Vice President for Research, Briant)

2006-2008 Academic Priorities Committee (Office of the Provost, Kertzer)

2007-2008 Vice Chair, Academic Priorities Committee (Office of the Provost, Kertzer)

2006 Sidney E Frank Hall for Life Sciences Building Dedication Committee (Office of the Dean of Biology and Medicine, Adashi)

2006 Medical School Strategic Planning Action Group (Office of the Dean of Biology and Medicine, Adashi)

2006-2008 Faculty Committee for the Capital Campaign (Office of the President, Simmons)

2009-2010 University Organizational Review Committee (Office of the President, Simmons)

2007-2010 IMSD advisory board (Office of the Dean Biology and Medicine, Wing)

2009-2010 Leduc Imaging Facility, Faculty Committee (Office of the Dean Biology and Medicine)

2009-2012 Member President's Scientific Advisory Council (Office of the President, Simmons and Paxson)

2011 Knowledge District Committee (Office of the Provost, Schlissel)

2011 Internal reviewer for Environmental Change Initiative and Center for Environmental Studies (Office of the Provost, Schlissel)

2011 Search Committee, Chair of Psychiatry and Human Behavior, Warren Alpert Medical School, Brown (Offices of the Dean Medicine & CEO Butler Hospital, Dean Wing and Dr. Recupero).

2011-2012 Norman Prince Institute for Neuroscience, Faculty Planning Committee

2011-2016 Executive Committee, Brown Institute for Brain Science (BIBS, Donoghue)

2012-2015 Tenure, Appointments and Promotions Committee, Vice Chair (2013-2014), Chair (2014-2015) (Office of the Dean of the Faculty)

2013-2014 Dean of the College Search Committee (Office of the President, Paxson)

2013-2015	Faculty Advising Fellow, (Office of the Dean of the College)
2014	Focus Group “Organizational Assessment” (Office of the President, Paxson)
2014-2017	R25 Advisory Committee, Butler Psychiatric Residency Program.
2014	Faculty Advisory Board for the Brown FITW Scholars Program
2017-2018	Faculty Advisor, Presidential Scholars Program
2017-2018	Steering Committee, School of Professional Studies Program
2017-2021	Health Affairs Coordinating Committee (Office of the Vice President for Health Affairs and Dean of Biology and Medicine)
2018-present	Advisory board Providence VA Center for Neurorestoration and Neurorehabilitation (CfNN)
2018-2021	Chair, School of Public Health Committee on Academic Programs and Faculty Appointments (CAPFA)
2018-2019	Faculty Search Committee, Brown Institute for Translational Science and Carney Institute for Brain Science
2019	Chair, Faculty search committee for Carney Institute for Brain Science
2020-2021	COVID-19 Graduate Appointment Extension Committee
2020-2021	Ad Hoc Committee on Promoting Long-term Financial Health
2021	Search Committee, Director of the Leadership Alliance
2021	Search Committee, Dean of Biology and Medicine
2021-2022	Advisory Board, Pembroke Center
2021-2023	Chair, Task Force on the Status of Women Faculty at Brown
2023	StemJAZZ Postdoctoral Scholars Advisory Committee

#### Neuroscience Department Committees

1993	Neuroscience colloquium (1 year term)
1993-6	Three Neuroscience Search Committees
1994-6	Neuroscience Graduate Program annual retreat organizer
1995	Neuroscience Undergraduate Curriculum Committee, Chair (1996-1997)
1997-8	Member, Neuroscience Undergraduate Curriculum Committee
1998-1999	Sheridan Teaching Center Faculty Liaison
2001	Search committee, Neuroscience
2001-2009	Postdoctoral training grant committee (Director T32)
2004	Search committee, Neuroscience
2004	Co-director, Neuroscience Graduate Program
2004-2011	Admission committee Neuroscience Graduate Program.
2005	Search committee, Neuroscience
2005-2011	Director, Neuroscience Graduate Program and Graduate Partnership Program with NIH
2008	Search Committee, Neuroscience
2009	Chair, Search Committee, Neuroscience
2009-2010	Search Committee Neuroscience
2011	Search Committee, Neuroscience
2012-2016	Chair, Steering Committee Neuroscience Graduate Program and Graduate Partnership Program with NIH
2014-2105	Co-Chair, BIBS/Department Search Committee
2016-present	Steering Committee Neuroscience Graduate Program and Graduate Partnership Program with NIH
2017	Faculty Search Committee, Neuroscience and Brown Institute for Brain Science

## PUBLICATIONS

- Lipscombe D and Rang HP (1988) A ganglionic nicotinic receptor similar in pharmacology to that of skeletal muscle. *Journal of Neuroscience*. 8, 3258-3265.
- Tsien RW, Fox AP, Hirning LD, Lipscombe D, Madison DV, McCleskey EW, Miller RJ, Poenie M, Reuter H, Thayer SA, Tsien RY (1988) Alfred Benzon Symposium 25: Molecular Mechanisms in Secretion, eds. N.A. Thorn, O.H. Peterson and J.H. Thaysen. Munksgaard, Copenhagen. p 66-84.
- Lipscombe D, Madison DV, Poenie M, Reuter H, Tsien RY, Tsien RW (1988) Spatial distribution of calcium channels and cytosolic calcium transients in growth cones and cell bodies of sympathetic neurons. *Proceedings of the National Academy of Science U.S.A.* 85, 2398-2402. PMID: [PMC280000](#) | [10.1073/pnas.85.7.2398](#)
- Lipscombe D, Madison DV, Poenie M, Reuter H, Tsien RW, Tsien RY (1988) Imaging of cytosolic Ca<sup>2+</sup> transients arising from Ca<sup>2+</sup> stores and Ca<sup>2+</sup> channels in sympathetic neurons. *Neuron* 1, 355-365. PMID: 2856095 | [10.1016/0896-6273\(88\)90185-7](#)
- Tsien RW, Lipscombe D, Madison DV, Bley K, Fox AP (1988) Multiple types of calcium channels and their selective modulation. *Trends in Neuroscience* 11, 431-438. PMID: 2469160 | [10.1016/0166-2236\(88\)90194-4](#)
- Lipscombe D, Kongsamut S, Tsien RW (1989).  $\alpha$ -Adrenergic Inhibition of Sympathetic Neurotransmitter Release Mediated by Selective Modulation of N-type Calcium Channel Gating. *Nature* 340, 639-642. PMID: 2570354 | [10.1038/340639a0](#)
- Kongsamut S, Lipscombe D, Tsien RW (1989) The N-type Ca channel in Frog Sympathetic Neurons and its Role in  $\alpha$ -Adrenergic Modulation of Transmitter Release. *Annals New York Acad. Sci.* 560, 312-333. PMID: 2568108 | [10.1111/j.1749-6632.1989.tb24112.x](#)
- Lipscombe D, Kongsamut S, Tsien RW (1990)  $\alpha$ -Adrenergic inhibition of N-type calcium channels and neurotransmitter release in sympathetic neurons. *Progress in Cell Research* 1, 33-48.
- Delcour AH, Lipscombe D, Tsien, RW (1992) Multiple modes of N-type Ca channel activity distinguished by differences in gating kinetics. *Journal of Neuroscience* 13, 181-194. PMID: [PMC6576304](#) | [10.1523/JNEUROSCI.13-01-00181.1993](#)
- Delcour AH, Yang J, Lipscombe D, Tsien RW (1993). G protein mediated Inhibition of N-type Ca channels at the single channel level. *Second NIMH Symposium on Molecular Neurobiology*, Eds. Zalcman, Scheller & Tsien.
- Tsien RW, Lipscombe D, Madison DV, Bley K, Fox AP (1995) Reflections on Ca<sup>2+</sup> channel diversity 1988-1994. *Trends in Neuroscience* 18, 52-53. PMID: 7537405
- Lin Z, Harris CA, Lipscombe D (1996) Molecular identity of Ca channel  $\alpha_1$ -subunits underlying Ca channel currents in rat sympathetic neurons. *J. Molecular Neuroscience* 7:257-267. PMID: 8968947 | [10.1007/BF02737063](#)
- Lin Z, Haus S, Edgerton J, Lipscombe D (1997) Identification of functionally distinct isoforms of the N-type Ca channel in rat sympathetic ganglia and brain. *Neuron* 18:1-14. PMID: 9010213 | [10.1016/s0896-6273\(01\)80054-4](#)
- Lin Z, Lin Y, Schorge S, Pan J, Beierlein M, Lipscombe D (1999) Alternative splicing of a short cassette exon in  $\alpha_{1B}$  generates functionally distinct N-type calcium channels in central and peripheral neurons. *J. Neuroscience* 19:5322-5331. PMID: [PMC6782300](#) | [10.1523/JNEUROSCI.19-13-05322.1999](#)
- Schorge S, Gupta S, Lin Z, McEnery M, Lipscombe D (1999) Voltage and calcium-dependent stabilization of a Ca channel mRNA. *Nature Neuroscience* 2:785-790. PMID: 10461216 | [10.1038/12153](#)

- Pan JQ and Lipscombe D (2000) Alternative splicing in the II-III loop of the N-type Ca channel  $\alpha_{1B}$  subunit: Functional differences are  $\beta$  subunit specific. *J. Neuroscience* 20:4769-4775. PMID: [PMC6772276](#) | [10.1523/JNEUROSCI.20-13-04769.2000](#)
- Xu W and Lipscombe D (2001) Neuronal Cav1.3 $\alpha_1$  L-type channels activate at relatively hyperpolarized membrane potentials and are incompletely inhibited by dihydropyridines. *J. Neuroscience* 21:5944-5951. PMID: [PMC6763157](#) | [10.1523/JNEUROSCI.21-16-05944.2001](#)
- Lipscombe D (2001) "Ion Channels". *Encyclopedia of Life Sciences*. Nature/Macmillan Press.
- Lipscombe D, Pan QJ, Gray AC (2002) Functional diversity in voltage-gated calcium channels generated by alternative splicing. *Molecular Neurobiology* 26:21-44.
- Lipscombe D (2002) L-type calcium channels: Highs and new lows. *Circulation Research*. 90:933-935. PMID: 12016257 | [10.1161/01.res.0000019740.52306.92](#)
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- Bell TJ, Thaler C, Castiglioni AJ, Helton, TD, Lipscombe D (2004) Cell-specific alternative splicing increases calcium channel current density in the pain pathway. *Neuron* 41: 127-138. PMID: 14715140 | [10.1016/s0896-6273\(03\)00801-8](#)
- Thaler C, Gray AC, Lipscombe D (2004). Cumulative inactivation of N-type Cav2.2 calcium channels modified by alternative splicing. *Proceedings of the National Academy of Science, USA* 101:5675-5679. PMID: [PMC397472](#) | [10.1073/pnas.0303402101](#)
- Lipscombe D, Xu W, Helton TD (2004) Neuronal L-type calcium channels: The low down. *J. Neurophysiology* 92:2633-2641. PMID: 15486420 | [10.1152/jn.00486.2004](#)
- Lin Y, McDonough SI, Lipscombe D (2004) Alternative splicing in the voltage-sensing region of N -type Cav2.2 channels modulates channel activation and deactivation speed. *J. Neurophysiology* 92:2820-2830. PMID: 15201306 | [10.1152/jn.00048.2004](#)
- Helton TD, Xu W, Lipscombe D (2005) Neuronal L-type calcium channels open quickly and are blocked slowly. *J. Neuroscience* 25: 10247-10251. [PMC6725800](#) | [10.1523/JNEUROSCI.1089-05.2005](#)
- Lipscombe D (2005) "Ion channels". *The Encyclopedia of Life Sciences*. Macmillan Press.
- Lipscombe D (2005) Neuronal proteins custom designed by alternative splicing. *Current Opinions in Neuroscience* 15:358-363. PMID: 15961039 | [10.1016/j.conb.2005.04.002](#)
- Lipscombe D and Raingo J (2006) Internalizing channels: a mechanism to control pain? *Nature Neuroscience* 9:8-10. PMID: 16378086 | [10.1038/nn0106-8](#)
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- Castiglioni AJ, Raingo J, Lipscombe D (2006) Alternative splicing in the C-terminus of Cav2.2 controls surface expression and gating of N-type calcium channels. *Journal of Physiology* 576:119-134. PMID: [PMC1995641](#) | [10.1113/jphysiol.2006.115030](#)
- Lipscombe D and Raingo J (2007) Alternative Splicing Matters: N-type Calcium Channels in Nociceptors. *Channels* 1:225-227. PMID: 18708749 | [10.4161/chan.4809](#)
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- Raingo J, Castiglioni AJ, Lipscombe D (2007) Alternative splicing controls G protein-dependent inhibition of N-type calcium channels in nociceptors. *Nature Neuroscience* 10, 285-92. PMID: [PMC3027493](#) | [10.1038/nn1848](#)
- Gray AC, Raingo J, Lipscombe D (2007) Neuronal calcium channels: Splicing for optimal performance. *Cell Calcium* 42:409-417. PMID: [PMC2001240](#) | [10.1016/j.ceca.2007.04.003](#)
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- Lipscombe D, Vergnolle N, Zamponi GW (2007) Differential role of N-type calcium channel splice isoforms in pain. *J Neurosci*, 27, 6363-73. PMCID: [PMC6672448](#) | [10.1523/JNEUROSCI.0307-07.2007](#)
- Lipscombe D, Allen S, Marangoudakis S, Raingo, J (2008) "Alternative splicing of neuronal Ca<sub>v</sub>2 calcium channels" For "Ion channels" Eds Lenard Kaczmarek and Valentin K. Gribkoff. Wiley Publishers.
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- Lipscombe D and Pan JQ (2009). Tripping the HCN breaker. *Neuron* 62:747-750. PMID: 19555642 | [10.1016/j.neuron.2009.06.003](#)
- Jakubek L, Marangoudakis S, Raingo J, Liu X, Lipscombe D and Hurt R (2009) Neuronal calcium ion channels are inhibited by trace yttrium released from carbon nanotubes. *Biomaterials* 30: 6351-6357. PMCID: [PMC2753181](#) | [10.1016/j.biomaterials.2009.08.009](#)
- Andrade A, Sandoval A, Lipscombe D, Campbell KP, Felix R (2009) The Cav $\alpha_2\delta$  subunit augments expression and modifies the pharmacology of Cav1.3 L-type channels. *Cell Calcium*, 46, 282-292. PMCID: [PMC7178495](#) | [10.1016/j.ceca.2009.08.006](#)
- Andrade A, Denome S, Jiang Y-Q, Marangoudakis S, Lipscombe D (2010) Opioid receptor inhibition of N-type calcium channels and spinal morphine analgesia couple to cell-specific alternative splicing. *Nature Neuroscience* 13: 1249 - 1256. PMCID: [PMC2956429](#) | [10.1038/nn.2643](#)
- Allen SE and Lipscombe D (2010) The neuronal splicing factor Nova controls alternative splicing in N-type and P-type Ca<sub>v</sub>2 calcium channels. *Channels* 4:483-489. PMCID: [PMC3047467](#) | [10.4161/chan.4.6.12868](#)
- Lipscombe D (2011) "Alternative splicing and calcium ion channel diversity", in Levitan, I. (ed.), *Ion Channels: The Biomedical & Life Sciences Collection*, Henry Stewart Talks Ltd, London (online at <http://hstalks.com/?t=BL1232814-Lipscombe>)
- Manarangoudakis S, Andrade A, Helton TD, Denome S, Lipscombe D (2012) Differential Ubiquitination and Proteasomal Regulation of Cav<sub>v</sub>2.2 Splice Isoforms. *Journal of Neuroscience* 32: 10365-10369. PMCID: [PMC3428229](#) | [10.1523/JNEUROSCI.0851-11.2012](#)
- Lipscombe D, Andrade A, Allen, SE (2013) Alternative splicing: functional diversity among voltage-gated calcium channels and behavioral consequences. *Biochem Biophys Acta* 1828, 1522-1529. PMCID: [PMC3625486](#) | [10.1016/j.bbamem.2012.09.018](#)
- Jiang Y-Q, Andrade A, Lipscombe D (2013) Spinal morphine but not ziconotide or gabapentin analgesia is affected by alternative splicing of voltage-gated calcium channel Cav<sub>v</sub>2.2 pre-mRNA. *Molecular Pain* 9: 67. PMCID: [PMC3916075](#) | [10.1186/1744-8069-9-67](#)
- Lipscombe D and Toro CP (nee Phillips, CG) (2013). "Ion Channels". *Encyclopedia of Life Sciences*. Nature/Macmillan Press.
- Lipscombe D, Allen SE, Toro CP (2013) Control of neuronal voltage-gated calcium ion channels from RNA to protein. *Trends in Neuroscience* 36: 598-609. PMCID: [PMC3795946](#) | [10.1016/j.tins.2013.06.008](#)
- Lipscombe D and CP Toro (2014) "Biophysical Properties of Voltage-Gated Ion Channels" in 3<sup>rd</sup> edition "From Molecules to Networks" Eds Jack Byrnes, Ruth Heidelberg, Neal Waxman. Elsevier/Academic Press.
- Groen JL, Andrade A, Ritz K, Jalalzadeh H, Haagmans M, Bradley TE, Jongejan A, Verbeek DS, Nurnberg P, Denome S, Hennekam RC, Lipscombe D, Baas F and Tijssen MA (2015) *CACNA1B* mutation is linked to unique myoclonus-dystonia syndrome. *Hum Mol Genet* 24, 987–993. PMCID: [PMC4817404](#) | [10.1093/hmg/ddu513](#)
- Lipscombe D and Andrade A (2015) Calcium Channel Cav $\alpha$ 1 Splice Isoforms - Tissue Specificity and Drug Action. *Curr Mol Pharmacol*. 26, 21-44. PMCID: [PMC5441838](#) | [0.2174/1874467208666150507103215](#)



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- Andrade A, Hope J, Allen A, Yorgan V, Lipscombe D, Pan JQ (2016) A rare schizophrenia risk variant of CACNA1I disrupts Cav3.3 channel activity. *Scientific Reports*. 19;6:34233. doi: 10.1038/srep34233. PMID: [PMC5069464](#) | [10.1038/srep34233](#)
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- Tong X-J, Lopez-Soto EJ, Li L, Liu H, Nedelcu D, Lipscombe D, Hu Z, Kaplan J (2017) Retrograde synaptic inhibition is mediated by  $\alpha$ -Neurexin binding to the  $\alpha 2\delta$  subunits of N-type calcium channels. *Neuron* 95:326-340. PMID: [PMC5548138](#) | [10.1016/j.neuron.2017.06.018](#)
- Allen SE, Toro CP, Andrade A, Denome S, Lipscombe D (2017) Cell-specific RNA binding protein Rbfox2 regulates Cav2.2 mRNA exon composition and overall Cav2.2 current size. *eNeuro*. PMID: [PMC5633781](#) | [10.1523/ENEURO.0332-16.2017](#)
- Mustafa ER, Lopez Soto EJ, Martinez Damonte V, Rodriguez SS, Lipscombe D, Raingo J (2017) Ghrelin receptor constitutive activity reduces surface expression of voltage-gated calcium channels in a Cav $\beta$  dependent manner. *Journal of Cell Science* 130:3907. PMID: [PMC6518300](#) | [10.1242/jcs.207886](#)
- Lipscombe D and Wyllie DJA (2018) Ion channels in health and disease. *Current Opinion in Physiology*. Eds Lipscombe & Wyllie. <https://doi.org/10.1016/j.cophys.2018.02.012>.
- Lipscombe D and Lopez Soto EJ (2018) Protected by a Fox. *Neuron* 98:3-5. PMID: 29621488 | [10.1016/j.neuron.2018.03.026](#)
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- López Soto E.J., DuBreuil D., Daste S., Li D., Fleischmann A., & Lipscombe D. (2020). Voltage-gated calcium channels in skin are essential for transient neurogenic thermal hyperalgesia in mice. The FENS Forum.
- Meir R.Y., López Soto E.J., DuBreuil D.M., Daste S., Fleischmann A., & Lipscombe D. (2021). Voltage-gated calcium channels in skin are critical for transient hyperalgesia in mice. Society for Neuroscience Global Connectome: A Virtual Event.
- Salib A.N., Crane M.J., DuBreuil D.M., López Soto E.J., Jamieson A.M., & Lipscombe D. (2021). A role for peripheral Cav2.2 channels in neurogenic inflammatory hyperalgesia. Society for Neuroscience Global Connectome: A Virtual Event. 2021.
- Salib A.N., Crane M.J., Jamieson A.M., Lipscombe D.L. (2022) Voltage-gated Cav2.2 calcium ion channels in Trpv1 nerve endings in skin contribute to the release of proinflammatory mediators. New York Academy of Sciences (NYAS): Advances in Pain abstract.
- Salib, A-M.N., Crane, M. J., Jamieson, A. M. & Lipscombe, D (2022). Voltage-gated Cav2.2 calcium ion channels in Trpv1 nerve endings in skin contribute to the release of proinflammatory mediators. FENS annual meeting Abstract (Paris) 2022.
- Meir, R. Y. & Lipscombe, D. (2022). Behavioral responses evoked by optogenetic activation of *Cacna1h*-expressing low threshold mechanoreceptors in mice. FENS annual meeting Abstract (Paris) 2022.
- Meir, R. Y. & Lipscombe, D. (2022) Optogenetic activation of *Cacna1b*-expressing low threshold mechanoreceptors mimics nocifensive behavior and hypersensitivity in mice. Society for Neuroscience Abstracts. 2022.
- Salib, A-M N., Crane, M J., Jamieson, A M. & Lipscombe, D (2022). Voltage-gated Ca<sub>v</sub>2.2 calcium ion channels in skin mediate capsaicin-induced heat hypersensitivity via interleukin -1 $\alpha$  signaling, Society for Neuroscience Abstracts. 2022.

## GRANT SUPPORT

- 2021-2026** Title: Voltage-Gated Calcium Channels in Nociceptors and Mechanoreceptors  
 Principal Investigator: Diane Lipscombe  
 Co-PIs: Christopher I. Moore and Alexander Fleischmann  
 Agency: NIH NINDS  
 Type: R01 NS055251  
 Period: 9/2021-9/2026,  
 Budget: Annual Direct \$335,000  
*Supports research focused on the role of calcium ion channels in adaptive and maladaptive pain. Our studies will inform strategies to mitigate certain forms of chronic pain experienced by millions of people*



- 2021-2026 Title: Advancing the Research Careers of Women and PEERs in Brain Science  
 Multi-PIs: Diane Lipscombe (contact), Carlos Aizenman  
 Agency: NIH NINDS  
 Type: R25 NS124530-01  
 Period 09/01/2021-08/30/2026  
 Budget: Annual Direct \$250,000  
*Structured programming, mentorship and skill development for senior postdocs and junior faculty as they advance their careers, with the goal of enhancing retention and success of a diverse cohort of academic scientists*
- 2017-2023 Title: Developing a National Research Infrastructure for Neuroscience  
 Principal Investigator: Christopher I Moore  
 Co PI: Diane Lipscombe, Ute Hochgeschwender, Nathan Shaner  
 Agency: NSF  
 Type: Next Generation Networks for Neuroscience (NeuroNex)  
 Total Annual Budget: \$1.85M  
*This NeuroNex Technology Hub advances science by innovating new bioluminescent technologies, and teaching others about it.*
- 2021-2026 Title: “Jointly Sponsored Predoctoral Training Program in Neuroscience”  
 Multi PIs: David Sheinberg, Diane Lipscombe  
 Agency NIH-NIMH  
 Type: T32MH020068 (Years 22-26)  
 Period 8/1/21-7/31/26  
*Supports 8 graduate students each year in the first two years of their training in the Neuroscience Graduate Program.*
- 2021 FBRI contract to develop fluid biomarker facility at Brown.  
 PI: Lipscombe  
 Amount: \$500,000.  
*This contract will be used to purchase equipment to establish a fluid biomarker facility at Brown in the Center for Alzheimer’s Disease Research*
- 2005-present Title: “NIH Graduate Partnership Program Grant”  
 Principal Investigator: Diane Lipscombe  
*This grant supports graduate students in the joint Brown-NIH program.*

Pending Council Review

Faculty Institute Recruitment for Sustainable Transformation (FIRST)  
 Title: “Brown Together: Cohort Recruitment of Outstanding Scientists to Forge Impactful Research in Brain Science and Public Health Care”  
 Multi PIs: Diane Lipscombe (contact PI), Carlos Aizenman, Ronald Aubert, Megan Raney  
 Agency NIH-OD  
 Type: P30 (Requested Years 1-5)  
 Period requested 03/01/2023-02/28/2028  
*Institutional award to support recruitment and mentorship of 10 assistant professors to Brown University in the areas of Brain Science. Behavior and Health to accelerate inclusive excellence.*

Completed

- 1990-1991 \$6,000 (direct) from RI Community and RI Community Foundation.  
"Regulation of neuronal Ca channels by neurotransmitters, hormones and second messengers"
- 1991-1992 \$15,000 (direct) from American Heart Association, RI affiliate.  
"Regulation of voltage-dependent Ca influx in the sympathetic nervous system"
- 1993 \$100,000 institutional support
- 1994 \$30,000 Center for Dementia Research, Miles Inc.
- 1992-1997 R29 FIRST AWARD NINDS  
PI, "Neuronal Ca channels: Regulation and function" \$350,000 (direct)
- 1996-2001 K02 Independent Research Award NIH. \$335,265 (direct)
- 1997-2001 R01 NS29967 "Neuronal Ca channels: Regulation and function" \$700,000 (direct)
- 1999-2000 Slater Research Foundation "Commercialization of N-type Ca channel cell lines" \$75,000
- 2004-2009 Title: "Postdoctoral Training program in Systems and Behavioral Neuroscience"  
Principal Investigator: Diane Lipscombe  
Agency NIH-NIMH  
Type: T32MH19118 (Years 15-19).  
Period 7/1/2004-6/30/2009 I transferred this grant to Professor Barry Connors in 2009.
- 1997-2010 Title: "Neuronal Ca channels: Regulation and Function".  
Principal Investigator: Diane Lipscombe  
Agency: NIH NINDS  
Type: R01 NS29967 (Years 14-17)  
Period 1/1/06 -12/31/11
- 2010-2011 Title: "Single nucleotide polymorphisms of neuronal CACNA1C L-type calcium channels associated with bipolar disorder"  
Principal Investigator: Diane Lipscombe  
Agency: NIH NIMH  
Type: R21 MH087969  
12/1/10-11/30/11
- 2009-2011 Title: "Neuronal Ca channels: Regulation and Function".  
Principal Investigator: Diane Lipscombe  
Agency: NIH NINDS  
Type: 3R01NS029967-17S1 (ARRA supplemental award)  
Budget period: 07/21/2009 – 08/31/2010

- 2009-2011 Title: “N-type calcium channels in nociceptive neurons”  
Principal Investigator: Diane Lipscombe  
Agency: NIH NINDS  
Type: 3R01NS055251-04S1 (ARRA supplemental award)  
Budget Period: 02/01/2009 – 02/14/2011
- 2011 Title: “Senior Women Leadership Award from ADVANCE”  
Principal Investigator: Tayhas Palmore  
Agency: NSF  
Type: Sub project  
Period 6/1/11-7/31/11
- 2011-2012 Title: “Synaptic Remodeling in the Spinal Cord in Chronic Pain”  
Principal Investigators: Diane Lipscombe/Julie Kauer  
Agency: Internal seed funding from Brown Institute for Brain Science  
Type: Internal award  
Period 7/1/11-12/31/11
- 2011-2013 Title: “CENTER FOR CANCER SIGNALING NETWORKS”  
Principal Investigator: Walter Atwood  
Sub Project Title: “Developing EGFP knock-in mice to study the transition from acute to chronic pain”  
Principal Investigators on subproject: Diane Lipscombe/Julie Kauer/Barry Connors  
Agency NIH-1P30RR031153  
Type: COBRE Pilot funds
- 2006-2010 Title: “Jointly Sponsored Predoctoral Training Program in Neuroscience”  
Principal Investigator: Diane Lipscombe  
Agency NIH-NIMH  
Type: T32MH020068 (Years 5-10)  
Period 7/1/06-6/30/10
- 2006-2014 Title: “N-type calcium channel in nociceptive neurons”  
Principal Investigator: Diane Lipscombe  
Agency: NIH NINDS  
Type: R01 NS055251-01  
Period: 08/02/2006 – 01/31/2014 (in NCE through 01/31/2015)
- 2012-2014 Title: “Molecular and Cellular Mechanisms Underlying the Transition from Acute to Chronic Pain”.  
Principal Investigator: Lipscombe and Kauer  
Brown University OVPR Seed Funds Award (\$85,000)  
Principal Investigators: Diane Lipscombe and Julie Kauer
- 2013-2014 Title: “Inhibitory Synaptic Transmission, Stress and Drugs of Abuse”  
3R01DA011289-15S1(Kauer/Lipscombe(Multi-PI) 0.6 calendar  
NIH \$75,000 direct costs

- 2015-2015 Title: “Functional analyses of rare de novo exonic mutations in CACNA1I identified in patients with schizophrenia”  
 Role: PI  
 Agency: Contract with the Broad Institute  
 Type: Collaborative project  
 Budget: For a postdoctoral associate for one year.
- 2014-2016 Title: “The Mechanism of Migraine: From Genes to Behavior”  
 PIs: Diane Lipscombe, Julie A Kauer,  
 Christopher I Moore, Carl Saab  
 Role: Co-PI  
 Agency: Gift from the Association of Migraine Disorders  
 Budget: \$125,000 per year direct
- 2015-2017 Title: “Genetically Encoded Light-Production and Light-Sensing for Neuronal Manipulation”  
 Role: Multi-PI (Hochgeschwender, Moore, Lipscombe)  
 PI: Hochgeschwender  
 Agency: NIH  
 Grant: 1R21 MH 101525-01  
 Budget: \$431,750 (total for the project)
- 2014-2018 Title: “Synaptic Plasticity in the Spinal Cord”  
 Principal Investigator: Julie Kauer  
 Role: Co-Investigator  
 Agency NINDS  
 Type: RO1
- 2015-2018 Title: “Bioluminescent Optogenetics to Autoregulate Excitable Cells.  
 Role: Co-Investigator  
 Principal Investigator: CI Moore  
 Agency: W.M. Keck Foundation  
 Period: 7/1/2015-6/30/2018  
 Budget: Annual direct: \$900,000
- 2015-2018 Title: “Accelerating identification of cross-species suppressor genes and elucidating early pathophysiology in ALS”  
 Role: PI of a multi-PI proposal  
 PIs: Robert Brown Jr (UMass), Anne Hart (Brown), Justin Fallon (Brown), Diane Lipscombe (Brown), Robert Reenan (Brown), Kristi Wharton (Brown), Brian Wainger (MGH)  
 Agency: ALS Finding a Cure Foundation  
 Budget: Annual year 1 direct to the group: \$1.48 million
- 2014-2019 Title: “Predoctoral Training Program in Neural Dynamics”  
 Principal Investigator: Diane Lipscombe  
 Co PI: Christopher I. Moore

Agency NIH-NINDS  
Type: 2T32NS062443-06A1  
Period 7/1/14-8/31/19

2015-2021 Title: "N-type calcium channel in nociceptive neurons"  
Principal Investigator: Diane Lipscombe  
Agency: NIH NINDS  
Type: R01 NS055251  
Period: 08/02/2015–08/2021 (NCE 2020-2021)

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#### ISSUED PATENTS AND MATERIAL TRANSFER AGREEMENTS

2006 Lipscombe & Schorge  
US 7,018,832 B2  
March 28, 2006  
"Human N-type Calcium Channel Isoform and Uses Thereof"

2022 Moore, Hochgeschwender, Lipscombe  
U.S. Patent No. 11,242,374  
February 8, 2022  
"Minimally-Invasive and Activity-Dependent Control of Excitable Cells"

1996-present In collaboration with Brown University Research Foundation, issued several MTAs to provide Ca channel splice isoforms clones to several commercial parties.

2010-present All our ion channel cDNA clones are available through AddGene for distribution to academic labs (>900). See [http://www.addgene.org/Diane\\_Lipscombe](http://www.addgene.org/Diane_Lipscombe).

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#### INVITED SEMINARS and SYMPOSIUM SPEAKER

1987 Sandoz Institute for Medical Research, London, England  
1988 Winter Conference on Brain Research, CO  
Department of Pharmacology, Cornell University, Ithaca, NY  
1989 American Society for Neurochemistry, Symposium, New Orleans, LA  
Department of Neuroscience, University of San Francisco, CA  
Department of Physiology, University of Pittsburgh, PA  
ICI Pharmaceuticals, Wilmington, DE  
1990 Miles Pharmaceuticals, West Haven, CT  
Section of Physiology, Brown University, RI  
1991 American Society for Neurochemistry, Symposium, SC  
Graduate program in Neuroscience, Brown University, RI  
1992 Department of Neuroscience, Brown University, RI  
1993 Marine Biological Laboratories, MA  
1994 "The Monday Night Fight", Marine Biological Laboratories, MA  
Miles Institute for Dementia Research, CT  
Department of Pharmacology, Yale University, CT

1995 Department of Physiology, Tufts University, MA  
Vollum Institute, OR

1996 Speaker, FASEB conference on Cell Calcium, VT  
Jefferson Medical College, Philadelphia, PA

1997 Astra/Arcus Pharmaceuticals, Rochester, NY  
Pfizer Pharmaceuticals, Groton, CT  
Park Davis Pharmaceuticals, Ann Arbor, MI  
University of Chicago, IL  
Marine Biology Laboratories, Plymouth, England  
Strathclyde University, Glasgow, Scotland  
University College London, England  
Edinburgh University, Scotland

1998 Winter Conference on Brain Research, Invited symposium speaker, CO  
Tufts University, Boston, MA  
University of Massachusetts, Worcester, MA  
Marine Biology Laboratories, MA  
Stanford University, CA  
Neurex Corporation, CA  
SIBIA Corporation, San Diego, CA

1999 SUNY Brooklyn, NY  
Merck Pharmaceuticals, PA  
Symposium Speaker, in honor of Harald Reuter, Stanford University, CA  
University of Minnesota Medical School, MN

2000 University of North Carolina, NC  
Department of Pharmacology, Yale University, CT  
Winter conference on Brain research, CO

2001 Marine Biological Laboratories, MA  
Rutgers University, NJ  
Invited Speaker, Stanford University Graduate Program Retreat, Monterey, CA  
Boston University, MA  
Scion Pharmaceuticals, MA

2002 University of Florida, FL

2003 Edinburgh University, Scotland

2004 Amgen Inc, CA  
National Institute of Aging, NIH, Baltimore, MD  
Invited speaker: "Splicing 2004" Conference, MD  
New York University, Neuroscience Program, NY

2005 Department of Pharmacology, University of Virginia, VA  
Neuroscience Program, Colorado State University, CO  
Neuroscience Program, University of Chicago, IL  
Society for Neuroscience 2005 meeting, Symposium speaker, Washington DC  
Neuroscience Program, University of Pennsylvania, PA

2006 Invited Speaker, Annual meeting of the Biophysical Society, Salt Lake City, UT  
Neuroscience and Pharmacology Program, Columbia University Medical School, NY  
Invited speaker, Cold Spring Harbor Laboratory Symposium, NY  
Invited speaker, International Pain meeting, Cayman Islands  
Vanderbilt University, TN  
University of Texas, Southwestern, TX

- 2007 Reed College, OR  
 Tufts University, MA  
 Invited speaker, International Calcium channel symposium, Tahiti  
 Harvard University, Neurobiology, MA  
 University of Buffalo NY, NY  
 Invited speaker, International Symposium “Calcium Channels and Transporters”, Manchester, England  
 Invited speaker, FASEB Summer Research Conference on “Ion Channel Regulation”, CO  
 Merck Pharmaceuticals, NJ  
 Abbott Pharmaceuticals, IL  
 University of Connecticut, CT
- 2008 Daniel Nachshen Distinguished Lecture, University of Maryland, MD  
 Columbia University, Department of Physiology and Biophysics, NY  
 Thomas Jefferson University, Neuroscience Program, PA  
 Northwestern University, Chicago, IL  
 University of Rochester, NY  
 Marine Biology Laboratories, “Monday Night Fight” Neurobiology Seminar, MA  
 Albert Einstein College of Medicine, NY  
 NIH, NINDS, Bethesda, MD
- 2009 Institute for Molecular and Nanoscale Innovation, Brown University  
 Speaker, Keystone Symposium, “The Neurobiology of Pain and Analgesia”, NM  
 Speaker, Howard Hughes International Symposium “Current Topics and Methods in Ca<sup>2+</sup> Signaling” Ouro Preto, Brazil  
 Broad Institute, MA
- 2010 Speaker, Calcium Channels Symposium, Belize  
 University of Washington, Seattle, WA  
 St. John’s University, NY  
 Cold Spring Harbor, NY  
 University of Indiana, IN  
 Speaker, New Horizons in Calcium Signaling, Biophysical Society, Beijing, China  
 Neuroscience Research Institute, Peking University, Beijing, China
- 2011 University of La Plata, Argentina, Ion Channel Workshop  
 IMBICE La Plata, Argentina  
 National Institute of Molecular Medicine, International Symposium of Molecular Medicine, Belo Horizonte, Brazil  
 Northwestern University, Chicago, IL  
 Robert Newcomb Memorial Lecture, National Institutes of Health, NINDS, Bethesda, MD  
 Mid-Year Completion Faculty Speaker, Brown University, RI
- 2012 Winter Conference on Brain Research, Symposium Speaker, Park City, UT  
 Invited Speaker, FASEB Meeting, Snowmass, CO  
 Joan Mott Prize Lecture, Physiological Society Meeting, Edinburgh, Scotland  
 University of Puerto Rico, PR
- 2013 Boğaziçi üniversitesi, Istanbul, Turkey  
 Albert Einstein Medical School, NY  
 City University of New York, NY  
 Stanford University School of Medicine, CA  
 University of Texas, San Antonio, SACNAS Symposium. TX  
 Tufts University School of Medicine, MA

- 2014 Brown Club of Portland, OR  
 Speaker at Pain Symposium, RIH, Providence, RI  
 Pfizer Inc, Boston, MA  
 University of Chicago, Keynote speaker retreat, IL  
 Society for Neuroscience, “Meet-the-Expert” talk, Washington, DC  
 Brandeis University, Boston, MA
- 2015 Rutgers University, NJ  
 Panelist, The Lamphere Case: The Sex Discrimination Case that Changed Brown, RI  
 Speaker, European Calcium Channel Conference, Austria  
 Speaker and Panelist Pembroke Center 250<sup>th</sup> Celebration of Brown, RI  
 Scripps Institute, La Jolla, CA  
 Invited Speaker, Argentinian Neuroscience Society, Argentina  
 New York University, NY  
 Keynote speaker, Gordon Research Seminars, Sunday River, ME  
 Speaker, David Yue Memorial Symposium, John Hopkins University, MD  
 Duke University Institute for Brain Science, Durham, NC
- 2016 Speaker, German Physiological Society, Germany  
 Co-Organizer and Speaker, Humphrey P Rang Symposium, University College London, England
- 2017 Speaker, The Harvard Brain Science Initiative and Glaxo Smith Kline symposium on  
 “Neuronal Excitability as a Determinant of Neurological and Psychiatric Diseases”, MA  
 Loyola University, Chicago, IL  
 NSF Panel, SfN annual meeting, Washington, DC  
 Channel Therapeutics, Broad Institute, Cambridge, MA  
 University of New Hampshire, NH
- 2018 Faculty for Faculty Provost Special Series, Brown University, RI  
 University of Chicago, Commencement speaker for Graduate School.  
 Speaker Conference “Neurons, synapses and circuits: from function to disease”, Sidney, Australia  
 National Institute of Environmental Health Sciences, NC  
 Speaker, Ion Channel Modulation. Clare College, Memorial Court, Cambridge, England  
 Speaker, Stanford University Medical School, Neuroscience Program, CA
- 2019 Annual Distinguished Lecturer, British Neuroscience Society, Edinburgh University, UK  
 Department of Pharmacology, Boston University Medical School, MA  
 Speaker, Instituto de Neurobiología, National Autonomous University of Mexico, Queretaro, Mexico  
 Speaker, CINVESTAV, Mexico City, Mexico  
 Speaker, Instituto de Fisiología Celular, National Autonomous University of Mexico, Mexico City, Mexico  
 Speaker, Department of Neuroscience, University of Copenhagen, Denmark  
 Keynote Lecture, Joint Meeting of the German, Austrian and Swiss Physiology Societies, Ulm Germany  
 Society for Neuroscience, Chicago, many presentations  
 Ion Channel Modulation Symposium event, Amgen & Sophion, Boston
- 2020 Seminar Speaker, Department of Neuroscience, University of Texas Austin (Virtual)
- 2021 Keynote speaker, Neuroscience, Behavior and Health Forum Vermont Chapter of the Society for Neuroscience; (Virtual)  
 Grand Rounds Speaker, Neuroscience Department, Massachusetts General Hospital (Virtual)



Richard J Traystman Keynote lecture, Department of Anesthesiology, Anschutz Medical Center, University of Colorado

2022 NINDS Grand Rounds, Bethesda (Virtual)  
Deutsches Zentrum für Neurodegenerative Erkrankungen (DZNE), Bonn Germany (to be reschedule)  
Keynote speaker, Ryan Neuroscience Institute, URI  
Ion Channel Modulation Symposium, NYU

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#### UNDERGRADUATE STUDENT ADVISING

1992-1996 Second year advisor  
1992-present Neuroscience concentrator advisor  
2013-2020 First year and Second year advisor

#### GRADUATE STUDENT ADVISING

2020-present Advisor to 1<sup>st</sup> year neuroscience graduate students

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#### GRADUATE THESIS COMMITTEES

1992/3 Sharona Gordon (Physiology)  
1993/4 Shang Jing (Neuro), Yili Hao (Physiology), Sonya Williams (Neuro)  
Misha Beierlein (Neuro), Seth Horowitz (Neuro)  
1994/5 Joshua Garren (Neuro), Seth Horowitz (Neuro), Nina Cardoza (Neuro), Stephanie Haus (Neuro), Misha Beierlein (Neuro)  
1995/6 Stephanie Haus (Neuro), Hey Kyoung Lee (Neuro)  
1996/1997 Stephanie Haus (Neuro), Hey Kyoung Lee (Neuro)  
1997/1998 Stephanie Haus Schorge (Neuro), Weifeng Xu (Neuro), Jennifer Pan (Pharmacology), Sunil Mehta (Pharmacology), Misha Beierlein (Neuro)  
1998/1999 Stephanie Haus Schorge (Neuro), Weifeng Xu (Neuro), Jennifer Pan (Pharmacology), Xin Dong (Neuro), Elizabeth Glater (Neuro), Misha Beierlein (Neuro)  
1999/2000 Weifeng Xu (Neuro), Jennifer Pan (Pharmacology), Xin Dong (Neuro), Elizabeth Glater (Neuro), Misha Beierlein (Neuro), Annette Gray (Neuro), Thomas Bell (MCB), Andrew Castiglioni (MCB), Nicole Strangeman (Neuro).  
2000/2001 Weifeng Xu (Neuro), Jennifer Pan (Pharmacology), Xin Dong (Neuro), Elizabeth Glater (Neuro), Misha Beierlein (Neuro), Annette Gray (Neuro), Thomas Bell (MCB), Andrew Castiglioni (MCB), Michael Long (Neuro).  
2001/2002 Annette Gray (Neuro), Thomas Bell (MCB), Andrew Castiglioni (MCB), Michael Long (Neuro).  
2002/2003 Annette Gray (Neuro), Thomas Bell (MCB), Andrew Castiglioni (MCB), Michael Long (Neuro).  
2003/2004 Annette Gray (Neuro), Thomas Bell (MCB), Andrew Castiglioni (MCB), Dustin Graham (Neuro), Bonnie Lau (MD/PhD)  
2004/2005 Annette Gray (Neuro), Andrew Castiglioni (MCB), Dustin Graham (Neuro)  
2005/2006 Sprio Marangoudakis (MCB), Summer Allen (Neuro), Seung-Chan Lee (Neuro)

2007	Sprio Marangoudakis (MCB), Summer Allen (Neuro), Cecilia Phillips (Neuro), Rachel Maloney (MCB), Paul Haines (MCB)
2008-9	Sprio Marangoudakis (MCB), Summer Allen (Neuro), Cecilia Phillips (Neuro), Julia Najera (NSGP), Kristen Perkins (NSGP), Omar Ahmed (NSGP)
2010	Sprio Marangoudakis (MCB), Summer Allen (Neuro), Cecilia Phillips (Neuro), Julia Najera (NSGP), Kristen Perkins (GPP), Kristen Webster (NSGP)
2011	Sprio Marangoudakis (MCB), Summer Allen (Neuro), Cecilia Phillips (Neuro), Julia Najera (NSGP), Kristen Perkins (GPP), Kristen Webster (NSGP), Valerie Yorgan (NSGP)
2012	Sprio Marangoudakis (MCB), Summer Allen (Neuro), Cecilia Phillips (Neuro), Julia Najera (NSGP), Kristen Webster (NSGP), Valerie Yorgan (NSGP), Hanna Sherrill (GPP), Rahilla Tarfa (GPP)
2013	Kristen Perkins (GPP), Kristen Webster (NSGP), Valerie Yorgan (NSGP), Hanna Sherrill (GPP), Rahilla Tarfa (GPP), Daniel DuBreuil (NSGP)
2014	Kristen Perkins (GPP), Kristen Webster (NSGP), Valerie Yorgan (NSGP), Hanna Sherrill (GPP), Rahilla Tarfa (GPP), Daniel DuBreuil (NSGP), Erin Hoops (NSGP), Aaron Held (MCB), Rachel Stevenson (NSGP).
2015	Valerie Yorgan (NSGP), Hanna Sherrill (GPP), Rahilla Tarfa (GPP), Daniel DuBreuil (NSGP), Aaron Held (MCB), Rachel Stevenson (NSGP).
2016	Rahilla Tarfa (GPP), Daniel DuBreuil (NSGP), Aaron Held (MCB), Rachel Stevenson (NSGP)
2017	Rahilla Tarfa (GPP), Daniel DuBreuil (NSGP), Aaron Held (MCB), Rachel Stevenson (NSGP), Saba Baskoylu (NSGP), Kathryn Russo (NSGP)
2018	Aaron Held (MCB), Rachel Stevenson (NSGP), Saba Baskoylu (NSGP), Kathryn Russo (NSGP), Rosa Martinez (MCB)
2019	Saba Baskoylu (NSGP), Kathryn Russo (NSGP), Rosa Martinez (MCB), Rachel Stevenson (NSGP), Alastair Tulloch (NSGP), Ryan Castro (NSGP)
2020	Kathryn Russo (NSGP), Rachel Stevenson (NSGP), Alastair Tulloch (NSGP), Ryan Castro (NSGP), Remy Meir (NSGP), Anne-Mary Salib (NSGP), Claire Gao (GPP)
2021	Kathryn Russo (NSGP), Tulloch (NSGP), Rachel McLaughlin (NSGP), Ryan Castro (NSGP), Remy Meir (NSGP), Anne-Mary Salib (NSGP), Claire Gao (GPP), Dmitriji Celinskis (Biomed Engineering)
2022	Alastair Tulloch (NSGP), Rachel McLaughlin (NSGP), Ryan Castro (NSGP), Remy Meir (NSGP), Anne-Mary Salib (NSGP), Claire Gao (GPP), Dmitriji Celinskis (Biomed Engineering)

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#### BROWN SPONSORED TALKS

1992-2003	Faculty sponsor, Women in Science and Engineering Neuroscience affinity group
1996	Speaker, Women in Science and Engineering event during Parent's weekend
1999	Speaker, Parent's forum
1999	Speaker, Johns Hopkins Program for Gifted Children, Biotechnology Day
2004	Speaker, Career Development "How to get the most out of a scientific conference"
2005	Speaker, Women in Science and Engineering event: "Life as a Neuroscientist"
2006	Symposium organizer and Speaker, Parent's weekend
2007	Speaker, Capital Campaign, Seattle, OR
2008	Speaker, Brown Alum Club, Charlotte, SC
2008	Speaker, "How to get into Graduate School", Division of Biology and Medicine
2009	Faculty Liaison, OIP Fellow in Brown University-UDSM program

2008-2010	Faculty Mentor, Advance program at Brown
2011	Recruitment talk for Brown Undergraduate Class of '15, New York City
2011	Parents of Brown Capital Campaign, Parent's weekend
2011-2016	Faculty Liaison, Brown Varsity Fencing Teams
2011	Brown Faculty Speaker at Mid-Year Completion Ceremony
2012	Faculty Speaker, Brown Club of New Caanan, CT
2012	Brown Club of New Orleans, LA
2012	Faculty Speaker, Parent's Weekend
2013	Panel Speaker, Balancing Parenthood and Career, Brown Medical School.
2013	Jr. Faculty Roundtable
2014	Grant writing workshop, Sheridan Teaching Center
2014	Speaker, Brown Club of Portland, OR
2014	Panelist, Office of Women in Medicine and Science (OWIMS) conference
2015	Organizer and Panelist, Young Scholars Conference at Brown University
2017	Co-Organizer "Inspiring Women in Science", Brown University
2017	Luncheon with Women in Science and Engineering at Brown
2018	Faculty for Faculty talk (Office of the Provost)
2019	Podcast Interview with the Provost, Brown University

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## SOCIETY MEMBERSHIPS

Society for Neuroscience, American Association for Advancement of Science, American Academy of Arts and Sciences, Federation of European Neuroscience Societies, Physiological Society UK.

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## TEACHING

1991	Lecturer and laboratory coordinator of Bio 6, "Human Physiology"
1992	Guest lecturer for BI 6 (CNS I & II). Guest lecturer, "Ion Channels", BI 110
1992-1998	Course director and lecturer NE/0092, "Principals of Neurobiology", ~100 students
1992	Guest lecturer "Patch clamp course" (Several information lectures and discussions)
1993	Guest lecturer "Neuroscience" NE/0001 (Two lectures)
1993	Guest lecturer "Neuropharmacology" BI/0162
1996-1998	Guest lecturer "Physiology" BI 80
1998-2002	Guest lecturer "Developmental Neurobiology" NE 104
1999-2000	Lecturer "Principals of Neurobiology" NE 102 (6 lectures)
2001-2002	Course director and lecturer NE 102, "Principals of Neurobiology" Co-director BN 215 "Ion channels, receptors and disease".
2002-2003	Course director and lecturer BN 1020, "Principals of Neurobiology"
2003-2010	Course director and lecturer BN 2030 "Molecular Neurobiology"
2004	Course organizer, BN294 "Faculty Seminar Series"
2004	Guest lecturer BN 102 "Principals of Neurobiology"
2006-2007	Course director BN2040 "Advanced Molecular and Developmental Neurobiology"
2006-2012	Director BN293 "Skills and Ethics workshop"
2008	Freshman orientation seminar "The places in between" by Rory Stewart
2009	Freshman orientation seminar "In the Beak of the Finch" by Johnathan Weiner

2010	Freshman orientation seminar “The Dew Breaker” by Edwidge Danticat
2011	Freshman orientation seminar “Factory Girls” by Leslie Chang
2012	Freshman orientation seminar “Sons Of Providence” by Charles Rappleye
2013	Freshman orientation seminar “Beautiful Souls” by Eyal Press
2011-2016	Director, NEUR2030 “Advanced Molecular and Cellular Neurobiology”
2008-2012	Co-director, “Bench to Bedside” seminar series
2013	Suna Kirac Workshop on Neurodegenerative Disease, Istanbul, Turkey.
2013-present	Neuroscience Graduate Program Neuropracticuum, Marine Biological Laboratories, MA

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## UNDERGRADUATE, GRADUATE and POSTDOCTORAL TRAINEES

### Undergraduates

1992-1993	Tanya Fagaly (BI/N 195/196), Heath Chung (BI 195/196), Richard Ha, (BI 196)
1993	UTRA WISE fellow, Deborah Ling (Summer research project)
1993-1994	Deborah Ling (BI/N 195/196), Charles Harris (BI 195/196)
1994-1995	Muffie Fulton (Summer research and BIN 195/196), Michael Rothenberg (BI 195/196)
1995-1996	Muffie Fulton (BI/N 195/196, hons), Seamus MacKin (Goldwater Fellow; BI/N195/196)
1996	Monika Strivastava (UTRA Summer fellowship)
1996-1997	Timothy Martens (N195/196), Seema Gupta (N195/196)
1998-2000	Julie Nam (NE195/196)
2000-2001	Abigail May (UTRA summer fellowship)
2001-2002	Raymond Ho (UTRA summer fellowship) Rebecca Lederer
2003-2005	Kara Lamattina, Kyle Schmitt
2005	Christine Cramer, Lamia Khan
2006	Lamia Khan, Dana Robertson, Stephen Alherhand, Hiba Hammad
2007	Jacob Kline, Andrew Huang
2008	Andrew Huang
2009-2010	Kiauntee Murray
2011	Jonathan Tran, Andrew Pintea,
2012	Sophia Lin, Adela Wu, Andrew Pintea, Jonathan Tran
2013	Sophia Lin, Adela Wu, Kishan Patel
2014	Beth Mottel, Kishan Patel
2016	Maite Van Hentenryck
2017	Olena Kuksenko

### Undergraduate Honors students

1993-1994	Charles Harris (Biology); MD, PhD Washington U.
1994-1995	Jeremy Edgerton (BI/N 195/196) Winner of the best undergraduate honors presentation in Neuroscience. PhD from Duke University Michael Rothenberg (BI 195/196) Biology prize for academic excellence; MD, PhD, UCSF.
1995-1996	Muffie Fulton, (BI/N 195/196). Winner of the best undergraduate honors presentation in Neuroscience.
2000	Abigail May
2002	Rebecca Lederer (worked for NGO, Graduate school for Landscape Architecture, currently working in NYC).
2006	Dana Roberston (PhD program UCSF)

2009	Andrew Hwang (Medical School, Tufts University)
2010	Kiauntee Murray (Medical School, NJ)
2012	Andrew Pintea (Medical School)
2012	Johnathan Tran (UCSD Medical School)
2014	Beth Mottel (Medical School)
2015	Kishan Patel (Medical School)
2016	Maite Van Hentenryck (Fulbright Scholar)
2017	Olena Kuksenko (Graduate School at Columbia)

#### Graduate students

1993-1997	Zhixin Lin (Secondary Advisor, Molecular Biology, Cell Biology and Biochemistry Graduate Program; Research Scientist at Icagen, NC).
1995-1999	Stephanie Haus Schorge (Neuroscience Graduate Program; Wellcome Fellow, Professor and Chair, Department of Neuroscience, Physiology and Pharmacology, UCL, UK; interim Dean of the Sciences, UCL, UK).
1997-2001	Jennifer Q. Pan (Pharmacology Graduate Program; Associate Director Stanley Center, Broad Institute, MA; Director Translational Research, Stanley Center, Broad Institute, MA)
1997-2002	Weifeng Xu (Neuroscience Graduate Program; Associate Professor (Research), University of Pittsburgh)
1999-2004	Thomas J. Bell (Molecular Biology, Cell Biology and Biochemistry Graduate Program; Director of Research Services National Disease Research Interchange)
1999-2005	Andrew J. Castiglioni (Molecular Biology, Cell Biology and Biochemistry Graduate Program; Principal Biologist, Argonne Labs, IL).
1999-2006	Annette C. Gray (Neuroscience Graduate Program; Howard Hughes pre-doctoral fellow 2000-2005; Associate Dean for the Sciences and Executive Director of the ASRC at The Graduate Center, City University of New York; Associate Provost for Research, NYU)
2006-2011	Spiro Marangoudakis (Molecular Biology, Cell Biology and Biochemistry Graduate Program; awarded predoctoral NRSA NINDS). Corporate Development Strategist, Cell Signaling Technologies (CST).
2006-2011	Summer E. Allen (Neuroscience Graduate Program, awarded predoctoral NRSA NINDS; freelance science writer)
2007-2011	Cecilia G. Phillips (Neuroscience Graduate Program, awarded predoctoral NRSA NINDS; Assistant Professor Sarah Lawrence College)
2010-2014	Kristin M. Webster (Neuroscience Graduate Program, awarded predoctoral NRSA NIMH; postdoctoral associate Laboratory of Molecular Biology, UK; Assistant Director Carney Institute for Brain Science, Brown University)
2012-2016	Valerie Yorgan (Neuroscience)
2013-2017	Daniel DuBreuil (Neuroscience, awarded predoctoral NRSA NINDS; postdoctoral associate Harvard/MGH; Research Scientist Sanofi)
2016	Emilio Román Mustafá (Visiting Scholar from Raingo lab, Argentina)
2020-present	Anne-Mary Salib (Neuroscience Graduate Program; IMSD)
2020-present	Remy Meir (Neuroscience Graduate Program; awarded NRSA NINDS)
2021-2022	Youna Choi (NIH-GPP program, rotation)
2022-2023	Benjamin Filo (NIH-GPP rotation)

#### Postdoctoral Associates (Current position)

1996-1997	Zhixin Lin (Scientist, Icagen Inc, NC)
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2000-2003	Chris Thaler (Postdoctoral Associate, Williams and Mary)
2001-2004	Kathryn Richards (Merck Postdoctoral Science Research Fellowship, 2002, Associate Scientist, Germany)
2004-2007	Jesica Raingo (Equivalent Associate Professor La Plata and Scientists at IMBICE, Argentina)
2008-2010	Yu-Qiu Jiang (Postdoctoral Associate, City College, NY)
2002-2004	Thomas D Helton (Research Associate/ Project Manager, University of North Carolina at Chapel Hill)
2008-2011	Thomas D Helton (Research Associate/ Project Manager, University of North Carolina at Chapel Hill)
2011-2014	Summer E Allen (Freelance Science writer)
2008-2015	Arturo Andrade (NIH K99/R00, R01, R21; Assistant Professor Research, Brown University (current); Assistant Professor at University of New Hampshire (prior))
2015-2016	Duk-Soo Kim (Visiting Scientist)
2015-2021	E. Javier Lopez Soto (Postdoctoral Associate; Warren Alpert Foundation fellowship; NIH K99/R00; Assistant Professor, NC State)
2016-2019	Joshua Whitt
2018	Kristin Webster (Assistant Director for Training and Development, Carney Institute for Brain Science, Brown University)
2022 - present	Martin Sebastian Sisti
2022- present	Dmitrijs Celinskis

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## TEACHING OUTSIDE BROWN

1987	Lecturer and organizer of the "Ion Channel Workshop", Shanghai, China.
1993-1994	Teaching faculty "Neurobiology", MBL, Woods Hole, MA
1995-1996	Electrophysiology Section Director, "Neurobiology", MBL, Woods Hole, MA
1997	Guest lecture "Neurobiology", MBL, Woods Hole, MA
1998	Electrophysiology Section Director, "Neurobiology", MBL, Woods Hole, MA
1999-2002	Guest lecture "Neurobiology", MBL, Woods Hole, MA

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