

## **CURRICULUM VITAE**

**Edwin G. (Ted) Abel, III**

<b><u>Date of Birth</u></b>	10 November 1963
<b><u>Place of Birth</u></b>	Winston-Salem, North Carolina, USA
<b><u>Office Address</u></b>	Iowa Neuroscience Institute University of Iowa Carver College of Medicine 2312 Pappajohn Biomedical Discovery Building 169 Newton Road Iowa City, IA 52242-1903
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<b><u>Personal Information</u></b>	Noreen M. O'Connor-Abel, wife, married 24 July 1993 Seamus Christopher Abel, son, born 4 December 1999
<b><u>Research Interests</u></b>	Dr. Abel is recognized as a pioneer in defining the molecular mechanisms of long-term memory storage and identifying how these processes go awry in neurodevelopmental and psychiatric disorders.
<b><u>Current Positions</u></b>	
2019-present	Chair and Departmental Executive Officer, Department of Neuroscience and Pharmacology, Carver College of Medicine, University of Iowa
2019-present	Professor, Department of Neuroscience and Pharmacology, Carver College of Medicine, University of Iowa
2017-present	Founding Director, Iowa Neuroscience Institute, University of Iowa
2017-present	Roy J. Carver Chair in Neuroscience, University of Iowa

- 2017-present Professor, Department of Molecular Physiology and Biophysics, Carver College of Medicine, University of Iowa (Secondary Appointment, 2019-present)
- 2017-present Professor, Department of Psychiatry, Carver College of Medicine, University of Iowa (Secondary Appointment)
- 2017-present Professor, Department of Biochemistry, Carver College of Medicine, University of Iowa (Secondary Appointment)
- 2017-present Professor, Department of Psychological and Brain Sciences, University of Iowa (Secondary Appointment)

**Previous Positions**

- 2010-2016 Brush Family Professor of Biology, University of Pennsylvania
- 2010-2016 Professor, Department of Neuroscience, Perelman School of Medicine, University of Pennsylvania (Secondary Appointment)
- 2012-2016 Founding Director, Neurobehavior Testing Core, University of Pennsylvania
- 2006-2016 Director, Biological Basis of Behavior Program, University of Pennsylvania
- 2008-2016 Professor, Department of Biology, University of Pennsylvania
- 2006-2016 Program Director, NIMH Training Program in Behavioral and Cognitive Neuroscience, University of Pennsylvania
- 2011 Gastwissenschaftler, Molekulare Organisation des Gehirns, Institut für Neurowissenschaften und Medizin (IMN-2), Forschungszentrum Jülich, Germany
- 2009-2010 Edmund J. and Louise W. Kahn Term Professor of Biology, University of Pennsylvania
- 2004-2008 Associate Professor with Tenure, Department of Biology, University of Pennsylvania
- 1998-2004 Assistant Professor, Department of Biology, University of Pennsylvania

**Education**

- 1993-1997 Postdoctoral Fellow, Center for Neurobiology and Behavior, College of Physicians and Surgeons, Columbia University, Dr. Eric R. Kandel, advisor, “Molecular mechanisms of long-term memory storage”

1987-1993	Ph.D., Biochemistry and Molecular Biology, Harvard University, Dr. Tom Maniatis, advisor, "Characterization of factors that bind to <i>Drosophila Adh</i> regulatory elements"
1986-1987	M. Phil., Biochemistry, University of Cambridge, Dr. R. Tim Hunt, advisor, "The cloning of cyclin from starfish oocytes"
1985-1986	Part II (First Class Honors), Biochemistry, University of Cambridge
1981-1985	B.A. (Honors), Chemistry, Swarthmore College, Honors Thesis, Dr. Peter T. Thompson, advisor, "Solute-solute interactions in dilute aqueous solutions of nonelectrolytes"

### **Honors, Awards and Fellowships**

2021	Presidential Lecturer, University of Iowa
2021	Scholar of the Year, University of Iowa
2020	Elected Fellow, American Psychological Association
2019	Elected Member, National Academy of Medicine
2018	Elected Fellow, Association for Psychological Science
2018	Springfield High School Achievers Hall of Fame
2017	Roy J. Carver Chair in Neuroscience, University of Iowa
2017	Plenary Speaker, Indian Society for Sleep Research, 25 <sup>th</sup> Annual Meeting, Goa, India
2015	Elected Fellow, American Association for the Advancement of Science
2015	Donald O. Hebb Lecturer, Dalhousie University, Halifax, Nova Scotia, Canada
2015	Keynote Lecture, Asian Chromatin Meeting, Bangalore, India
2013	Presidential Symposium Lecturer, Association for Psychological Science
2012	Elected Fellow, American College of Neuropsychopharmacology
2010-2016	Brush Family Professor of Biology, University of Pennsylvania
2009-2010	Edmund J. and Louise W. Kahn Term Professor of Biology, University of Pennsylvania

- 2006 Dean's Award for Mentorship of Undergraduate Research, School of Arts and Sciences, University of Pennsylvania
- 2006 Elected Member, American College of Neuropsychopharmacology
- 2005 Biological Basis of Behavior Society Professor of the Year, University of Pennsylvania
- 2001 Biological Basis of Behavior Society Professor of the Year, University of Pennsylvania
- 2001 Elected Associate Member, American College of Neuropsychopharmacology
- 2000-2006 David and Lucile Packard Foundation Fellowship for Science and Engineering
- 2000 Daniel X. Freedman Award, National Alliance for Research on Schizophrenia and Depression
- 1999-2001 Young Investigator Award, Mental Retardation and Developmental Disabilities Research Center, Children's Hospital of Philadelphia
- 1998-2002 John Merck Scholars Award in the Biology of Developmental Disabilities in Children
- 1998 McKnight Scholars Award, McKnight Endowment Fund for Neuroscience (Declined to accept Merck Scholars Award)
- 1998 Klingenstein Fellowship Award in the Neurosciences, The Esther A. and Joseph Klingenstein Fund (Declined to accept Merck Scholars Award)
- 1996-1998 Young Investigator Award, National Alliance for Research on Schizophrenia and Depression
- 1993-1996 Damon Runyon-Walter Winchell Cancer Research Fund Postdoctoral Fellowship
- 1990, 1991, 1992 Certificate for Distinction in Teaching, Harvard University
- 1987-1990 National Science Foundation Graduate Fellowship
- 1986 Bachelor Scholar, Christ's College, University of Cambridge
- 1986 Darwin Prize, Christ's College, University of Cambridge
- 1985-1987 Marshall Scholarship
- 1985 Ivy Award, Swarthmore College

1985 Phi Beta Kappa, Swarthmore College  
1985 Sigma Xi, Swarthmore College

**Teaching Experience**

2018-present Professor, Department of Neuroscience and Pharmacology, University of Iowa  
2017-present Professor, Department of Molecular Physiology and Biophysics, University of Iowa  
2008-2016 Professor, Department of Biology, University of Pennsylvania  
2004-2008 Associate Professor, Department of Biology, University of Pennsylvania  
1998-2004 Assistant Professor, Department of Biology, University of Pennsylvania  
1996-1997 Laboratory Instructor, Neuroanatomy, College of Physicians and Surgeons, Columbia University  
1994-1997 Supervisor, Summer Undergraduate Research Students, Columbia University  
1991-1992 Head Teaching Fellow, Introductory Molecular Biology, Harvard University  
1990 Teaching Fellow, Mechanisms of Gene Control (Graduate Seminar), Harvard University  
1990-1993 Teaching Consultant to Teaching Fellows in the Sciences, Harvard University  
1990-1993 Supervisor, Undergraduate Research Theses, Harvard University  
1989 Teaching Fellow, Physical Biochemistry, Harvard University  
1988-1993 Freshman Proctor and Advisor for Freshmen, Harvard University  
1986-1987 Tutor, Part 1B, Biochemistry, Christ's College and Jesus College, University of Cambridge

**Courses Taught (University of Iowa)**

2020-present Lecturer in Biology 5653, Fundamental Neurobiology  
2021-present Lecturer in Psychology 3275, The Science of Sleep

**Courses Taught (University of Pennsylvania)**

2001-2016	Biology 442/NGG 575, Neurobiology of Learning and Memory
2001-2016	Biology/Biological Basis of Behavior 251, Molecular and Cellular Neurobiology Laboratory (with Marc Schmidt)
1998- 2001	Biology/Biological Basis of Behavior 251, Molecular and Cellular Neurobiology (with Marc Schmidt and Lee Peachey)
1999-2016	Biology 488/ NGG 578, Advanced Topics in Behavioral Genetics (with Maja Bucan)
2008	Biology 425, Biochemistry and Molecular Genetics Superlab (with John Wagner)
2006	INSC 595/Psychology 603, Behavioral Neuroscience (with Harvey Grill)
1999	Biology 521/Psychology 600/NGG 575, Advanced Topics in Learning and Memory (with Robert Rescorla)
1998-2016	Lecturer in a variety of courses including Systems Neuroscience (INSC 573), Behavioral Neuroscience (INSC 595), Cellular and Molecular Neuroscience (INSC 571), Neurochemistry and Neuropharmacology (PHRM 510), Neuropsychopharmacology (PHRM 550), Neuroscience Journal Club/Seminar Course (INSC 999), Introductory Biology (BIOL 101, 102, 121, 122), Epigenetics of Human Health and Disease (BIOL 593), Brain and Behavior (Perelman School of Medicine)

**Current Grant Support**

RO1 MH 087463 (Abel, T.) 07/16/10 to 4/30/26  
NIH/NIMH \$409,648 (current year total direct costs)

**Epigenetic Mechanisms of Memory Storage**

This grant examines epigenetic changes during memory storage, focusing on histone acylation and cutting edge transcriptomic approaches. The competitive renewal application for this grant was scored in the 5<sup>th</sup> percentile.

P50 HD 103556 (Strathearn L.- Contact and Abel, T.) 06/1/2021 to 05/31/2026  
NIH/NICHD \$1,230,243 (current year total costs)

**University of Iowa Hawkeye Intellectual and Developmental Disabilities Research Center (HAWK-IDDRC)**

The mission of the Hawk-IDDRC is to provide an organizational structure that fully integrates basic and clinical research across the lifespan—from conception to adulthood—that is tailored to an

underserved rural population and focused on the prevention, diagnosis, treatment and amelioration of IDD.

R01 MH117964 (Abel, T – Contact and Diba, K) 09/10/18 to 06/30/23  
NIH/NIMH \$434,299 (current year total direct costs)

**Molecular, Cellular and Circuit Effects of Sleep Deprivation on Hippocampal Function**

The main objective of this proposal is to identify the molecular, neuronal and circuit processes by which sleep loss impairs synaptic plasticity and memory by focusing on mechanisms of resilience to sleep deprivation.

R01 MH117964-02S1 (Abel, T) 07/10/19 to 06/30/23  
NIH/NIMH \$209,000

**Molecular, Cellular and Circuit Effects of Sleep Deprivation on Hippocampal Function**

The main objective of this supplement is to determine if reversing the effects of sleep deprivation on the hippocampus will improve memory in mouse models of neurodegenerative disease.

1R01 AG 062398 (Abel, T - Contact and Lyons, L.) 08/01/19 to 04/30/24  
NIH/NIA \$497,257 (current year total direct costs)

**Mechanistic Studies on the Impact of Sleep Deprivation on Gene Regulation**

The objectives of this proposal are to identify the molecular signaling pathways through which sleep deprivation affects hippocampal protein synthesis, determine the mRNA molecules available for translation after sleep deprivation and identify cellular signatures of sleep deprivation within the hippocampus.

1R01 NS 114780 (Frank, M.) 07/01/20 to 06/30/25  
NIH/NINDS \$195,430 (current year total costs, Iowa)

**Astroglial Mechanisms in Sleep Homeostasis**

The major goal of the project is to define the role that astrocytes play in sleep homeostasis. The Abel lab at the University of Iowa is using next generation sequencing technology (single-cell RNA sequencing) to isolate signaling pathways that are involved in astrocyte-mediated sleep homeostasis.

SFARI 573508 (Abel, T. and Hoffman, E. - Contact) 09/01/18 - 08/31/22  
Simons Foundation (SFARI) \$130,687 (current year total costs, Iowa)

**Translating Drug Discovery in Zebrafish and Mouse Models of ASD Risk Genes**

The major goal of this project is to translate findings from high-throughput zebrafish behavior-based screens to mouse behavioral assays, elucidating the cellular and circuit-level effects of drug candidates in both systems. This grant is currently in a no-cost extension.

**Completed Grant Support**

2018-2020 Principal Investigator, SFARI 572595, Simons Foundation, “Neural mechanisms underlying sleep disturbances in autism spectrum disorder,” Shinjae Chung (Penn), lead PI, \$40,934 (last year total costs, Iowa)

The major goal of this project was to investigate changes in the activity and molecular signature of preoptic sleep neurons that underlie sleep disturbances of ASD mouse model.

- 2007-2019 Project Leader, P50 AG 017628, NIH/NIA, “The mechanisms of alterations in sleep with age,” Allan Pack (Penn), PI, \$209,911, last year direct costs (Project 1). Dr. Abel was the leader of Project 1 that examined the role of CREB in age-related changes in sleep/wake states, using genetically modified mice to define where CREB acts to regulate sleep and to identify target genes regulated by CREB.
- 2015-2019 Principal Investigator, NSF 1515458, National Science Foundation. “US-French Collaboration: Spatial and Temporal Aspects of Molecular Signaling in Synaptic Plasticity,” \$75,000, last year total costs. This collaborative grant with Avrama Blackwell (George Mason University) and Jean-Antoine Girault (Institut du Fer à Moulin, Paris) uses electrophysiological, imaging and computational approaches to define the mechanisms by which compartmentalized signaling mediates synaptic plasticity in the hippocampus. The Girault lab is funded by the Agence Nationale de la Recherche (France).
- 2015-2019 Principal Investigator, SFARI 345034, Simons Foundation (SFARI). “Uncovering the impact of 16p11.2del on neurons mediating motivated behavior,” \$249,914, last year total costs. This collaborative grant with Alea Mills (Cold Spring Harbor Laboratory) and Nicola Grissom (University of Minnesota) examines the impact of 16p11.2 del on reward learning.
- 2013-2018 Principal Investigator, RO1 MH 099544, NIH/NIMH, “Non-neuronal regulators of sleep,” \$327,972 last year total direct costs. This grant focused the role of astrocytes in regulated sleep/wake states and in mediating the impact of sleep deprivation on memory storage and synaptic plasticity. This was a multi-PI grant with Marcos Frank (Washington State University) as contact PI.
- 2017-2018 Principal Investigator, SFARI 497698, Simons Foundation, “Assessment of Arbaclofen treatment on habituation, cognition and repetitive motor behaviors in a mouse model of 16p 11.2 microdeletion,” \$22,849 last year direct costs. This collaborative grant with William O’Brien (University of Pennsylvania) examines the impact of Arbaclofen on 16p11.2 microdeletion behavioral phenotypes.
- 2014-2017 Principal Investigator, R21 MH102679, NIH/NIMH, “Cell-Type Specific Epigenomics in the Brain,” \$150,000 last year total direct costs. This grant focused on the development of novel approaches to isolate chromatin from specific populations of neurons. This was a collaborative grant with Ben Garcia at the University of Pennsylvania.
- 2014-2017 Principal Investigator, R21 MH102703, NIH/NIMH, “The Impact of Sleep Deprivation on Translation,” \$150,000 last year total direct costs. This grant



explored the role of protein synthesis to reverse the negative impact of sleep deprivation on cognition. This is a collaborative grant with Leon Reijmers at Tufts University.

- 2012-2017 Animal Core Director, P50 MH 096891, NIH/NIMH, Raquel Gur, PI, “Developmental Trajectories of Negative Symptoms in Schizophrenia.” This project sought to uncover the molecular mechanisms that underlie the developmental trajectory of schizophrenia. It sought to unify clinical and basic science findings with the goal of finding predictive markers of schizophrenia and understanding the basis for cognitive deficits that are debilitating aspects of this disorder. \$183,453 last year direct costs to Dr. Abel.
- 2006- 2016 Program Director, NIH/NIMH T32 MH017168, “Predoctoral Training Program in Behavioral/Cognitive Neuroscience.” The program, funded continuously since 1984, is designed to prepare exceptional students for a productive research career in the neuroscience of behavior, from CNS-controlled mechanisms of homeostasis to perception and cognition. Dr. Abel renewed this grant competitively twice. \$212,998 last year direct costs.
- 2010-2016 Project Leader, DARPA 58077-LS-DRP, Seema Bhatnagar, PI, “Identifying the Neural Substrates of Emotional Arousal: Towards a Path to Stress Resistance.” This grant examined the impact of chronic stressors on activity of orexin and norepinephrine systems in the brain and identified targets that produced resistance to the effects of stress.
- 2012-2016 Co-Principal Investigator, DOD CDMRP AR110189, Thomas A. Jongens, PI, “Examination of the mGluR-mTOR Pathway for the Identification of Potential Therapeutic Targets to Treat Fragile X.” This grant genetically and pharmacologically examined the misregulation in the mGluR-mTOR pathway identified in the *Drosophila* and mouse fragile X models to identify new potential targets for treatment of this syndrome.
- 2004-2015 Co-Principal Investigator, NIH/NIDA RO1 DA017949, Thomas J. Gould (Temple University), PI, “Nicotine Addition: Learning, Neural and Genetic Processes,” \$34,732, last year total costs to Dr. Abel. This was a collaborative grant between Dr. Gould and Dr. Abel to examine the effects of nicotine on learning from the level of receptor activation to changes in cell signaling and gene expression.
- 2015 SFARI Undergraduate Summer Research Program, \$12,331.
- 2014 SFARI Undergraduate Summer Research Program, \$12,331.
- 2012-2015 Principal Investigator, SFARI 248429, Simons Foundation, “Comprehensive Phenotyping of Mouse Autism Models,” \$475,208 total costs.
- 2009-2015 Principal Investigator, RO1 MH086415, NIH/NIMH, “Tools to Conditionally Regulate Intracellular Signaling Pathways in Vivo,” \$335,580 last year total direct costs. This was a collaborative grant with Martin

Schwärzel, Freie Universität Berlin.

- 2008-2014 Principal Investigator, RO1 AA 018060, NIH/NIAAA, “CRCNS: Spatial & Temporal Aspects of cAMP/PKA Signaling Underlying Information Processing,” \$112,693 last year total direct costs. This was a collaborative grant with Avrama Blackwell, George Mason University and Manuela Zaccolo, Oxford University.
- 2009-2013 CHOP/Penn Center for Excellence for Autism Research, SAP#4100047863 (PI: Schultz, R.), Investigator, \$898,989 last year total direct costs.
- 2011-2012 Principal Investigator, S10-RR027374, “Fluidigm BioMark High-Throughput Genetic Analysis System,” \$268,479 last year direct costs.
- 2001-2012 Conte Center, The Neurobiology of Stimulus Encoding in Schizophrenia (Project IV, cAMP/PKA signaling and endophenotypes of schizophrenia). NIH/NIMH P50 MH64045, Raquel Gur, PI. Dr. Abel was the PL for Project IV. \$157,259 last year direct costs.
- 2000-2011 Principal Investigator, NIH/NIMH RO1 MH 060244, “The Molecular Basis of Long-Term Memory Storage,” \$212,500 last year direct costs. Dr. Abel was PI of this grant which focused on the molecular mechanisms of long term hippocampus-dependent memories.
- 2009-2010 University Research Foundation Award, University of Pennsylvania. “Novel Pharmacogenetic and Optogenetic Tools for Neurobiology.” The objective of this one-year grant is to develop new pharmacogenetic and optogenetic tools to study the role of cAMP signaling in hippocampal synaptic plasticity and memory. \$45,000 total costs.
- 2005-2009 Human Frontiers Science Program Research Grant. “PKA anchoring and cAMP signaling: Genetic, proteomic, computational and cell biological approaches.” Dr. Abel was the Principal Investigator of this collaborative program grant between Seth Grant (United Kingdom), Manuela Zaccolo (United Kingdom) and Avrama Blackwell (USA). \$450,000 last year total costs.
- 2003-2008 SCOR in Neurobiology of Sleep and Sleep Apnea (Project IV, The Molecular Mechanisms of Sleep/Wake Regulation). NIH/NHLBI P50 HL 060287, Allan Pack, PI. Dr. Abel was the PL for Project IV. This Project represented a competing renewal of Dr. Abel’s RO1 grant NIH RO1 AG 018199. \$219,304 last year direct costs.
- 2003-2008 Investigator, NIH/NICHD U01 HD 044575, Richard Schultz, PI, “Impact of Egg Quality on Gene Expression and Behavior.” \$228,957 last year direct costs.
- 2006-2007 University of Pennsylvania Distinguished International Scholars Program Grant to host Peter V. Nguyen, University of Alberta, Edmonton, Canada.

- 2006-2009 University of Pennsylvania Provost Interdisciplinary Seminar Fund Grant to support a seminar series in the Biological Basis of Behavior.
- 2000-2006 David and Lucile Packard Foundation Fellowship for Science and Engineering, "In Vivo Imaging and Molecular Studies of Gene Expression Following Learning," \$112,500 first year direct costs, \$562,500 total direct costs.
- 2003-2004 Co-Principal Investigator, NIH R43 AG 022779, "Sleep Research with Digital Video Technologies," Yiqing Liang, Clever Systems Inc., Principal Investigator, \$11,170, total costs
- 2002-2003 Transdisciplinary Tobacco Use Research Center (P50 CA 84718), University of Pennsylvania, "Microarray Analysis of Learning-Related Changes in Hippocampal Gene Expression after Nicotine Treatment," \$25,000 direct costs.
- 2002-2003 University Research Foundation, University of Pennsylvania, "The Roles of RGS Proteins in Learning and Memory," \$15,000 direct costs.
- 2000-2006 Co-Principal Investigator with Bruce T. Lamb, P50 AG 008012, "Project 1: Behavioral Analysis of Transgenic Models of Alzheimer's Disease," UHC/CWRU Alzheimer's Disease Research Center, Karl Herrup, Principal Investigator, \$58,351 first year direct costs, \$291,755 total direct costs to the University of Pennsylvania.
- 1999-2004 Principal Investigator, NIH RO1 AG 018199, "Sleep and Memory: A Genetic and Molecular Analysis," \$150,000 first year direct costs, \$600,000 total direct costs; administrative supplement, \$73,000, direct costs.
- 1999-2004 Co-Principal Investigator, NIH RO1 HD 037032, "Molecular Mechanisms and Developmental Consequences of ICSI," Richard Schultz, Principal Investigator, \$158,345 first year direct costs, \$842,582 total direct costs.
- 1999-2001 Young Investigator Award, Mental Retardation and Developmental Disabilities Research Center, NIH P30 HD 026979, Children's Hospital of Philadelphia, \$37,000 total direct costs.
- 1998-2002 John Merck Scholars Award in the Biology of Developmental Disabilities in Children, John Merck Fund, \$60,000 first year direct costs, \$240,000 total direct costs.
- 1998-2001 Whitehall Foundation Research Grant, "Protein Kinase A, Long Term Memory and LTP: A Genetic Analysis," \$75,000 first year direct costs, \$225,000 total direct costs.
- 1998-1999 American Cancer Society Institutional Research Grant, University of Pennsylvania Cancer Center, "Transgenic Approaches to Determine the

Oncogenic Potential of Galphas in the Pituitary Gland,” \$10,000 direct costs.

1998-1999 University Research Foundation, University of Pennsylvania, “The Use of Temporally Regulated Transgenes to Study the Role of Protein Kinase A in Long-Term Memory Storage,” \$20,000 direct costs.

1998 University of Pennsylvania Cancer Center Pilot Project Grant, “Transgenic Approaches to Determine the Oncogenic Potential of G $\alpha$ s in the Pituitary Gland,” \$20,000 direct costs.

### **Collaborators**

Sharba Bandyopadhyay, Indian Institute of Technology, Kharagpur, India: Neural circuits regulating vocalizations in mouse models of autism

Sourav Banerjee, National Brain Research Centre, Manesar, India: microRNA regulation of synaptic plasticity

Jay Baraban, Johns Hopkins University: microRNA regulation of synaptic plasticity

Kim (Avrama) Blackwell, George Mason University: Computational modeling of localized signaling pathways

Edward (Ted) Brodtkin, University of Pennsylvania: Mouse models of endophenotypes of autism

Kamran Diba, University of Michigan: Impact of sleep deprivation on hippocampal function

Dirk Feldmeyer, Forschungszentrum Jülich and RWTH Aachen University, Germany: Electrophysiological and morphological analysis of neocortical microcircuits

Marcos Frank, Washington State University, The role of non-neuronal cells in the function of sleep

Ben Garcia, University of Pennsylvania: Proteomic analysis of combinatorial histone modifications

Karl Peter Giese, King’s College, London: Epigenetic mechanisms of memory storage

Jean-Antoine Girault, Institut du Fer à Moulin, Pierre and Marie Curie University, Paris: Live two-photon imaging and electrophysiology in acute brain slices

Nicola Grissom, University of Minnesota: Reward learning in mouse models of autism

Robbert Havekes, University of Groningen, Netherlands: Impact of sleep deprivation on memory

Lisa Lyons, Florida State University: Impact of sleep deprivation on gene expression

Jacob Michaelson, University of Iowa: Computational analysis of high throughput sequencing data

Thomas Nickl-Jockschat, University of Iowa: Structural imaging of mouse models of autism and schizophrenia

Allan Pack, University of Pennsylvania: Genetic regulation of sleep/wake

Harish Poptani, University of Liverpool: Magnetic resonance imaging and spectroscopy in mice

Teresa Reyes, University of Cincinnati: Reward learning in mouse models of autism

Stephen Safe, Texas A&M University: The role of nuclear receptors in memory consolidation

Jennifer Tudor, Saint Joseph's University: Impact of sleep deprivation on protein synthesis

### **Advisory Boards**

2021-present                      National Advisory Mental Health Council, National Institute of Mental Health (pending approval)

2020-present                      Internal Advisory Board, Wellstone Muscular Dystrophy Specialized Research Center, University of Iowa

2019-present                      Advisory Committee to the Deputy Director for Intramural Research, National Institutes of Health

2019-present                      Scientific Advisory Board, Conte Center, McLean Hospital and Harvard University

2019-present                      External Advisory Board, Intellectual and Developmental Disabilities Research Center, Children's Hospital of Philadelphia/Penn

2018-present                      Steering Committee, Sleep Gordon Research Conference

2017-present                      Scientific Advisory Board, McLean Hospital

2015-present                      Brain and Behavior Research Foundation, Scientific Council

2014-2018                          Chair, NIMH Board of Scientific Counselors (member since 2013)

2014-2016                          McMorris Autism Training Program, Executive Committee, Center for Autism Research, CHOP/Penn

2012-2016                          Training Grant in Neurodevelopmental Disabilities, CHOP/Penn, Michael Robinson, PI, Steering Committee

2012-present                      New Jersey Governor's Council for Medical Research and Treatment of Autism, Scientific Advisory Committee

2010-2015	Executive Committee, International Research Training Group (DFG: IRTG 1328), RWTH Aachen University, Germany and Penn (F. Schneider and R. Gur, PIs)
2008-2014	Autism Speaks Foundation, Scientific Advisory Board
2008-2012	“Mu Opioid Receptors in Addiction” NIDA Program Project Grant (Wade Berrettini, PI), University of Pennsylvania, Board of Scientific Councilors
2008-2012	“Molecular and Cellular Basis of Cognitive Aging in Prefrontal Cortical Networks” NIA Program Project Grant (Amy Arnsten, PI), Yale University, External Advisory Board
2008-2012	Penn Autism Network Advisory Committee
2007-2008	Autism Speaks, Scientific Advisory Committee
2006-2008	Cure Autism Now and Autism Speaks Foundation, Clinical Trials Network Steering Committee
2005-2007	Cure Autism Now Foundation, Board of Directors
2004-2007	Cure Autism Now Foundation, Scientific Review Council

**Review Committees**

2019-2021	Co-chair, External Review Committee, Scientific Director, National Institute of Mental Health
2019	Chair, External Review Committee, Medical Neuroscience Graduate Program, Indiana University School of Medicine
2019	Eagles Autism Challenge Review Committee
2019	Simons Foundation Autism Research Initiative, Bridge to Independence Grant Review Panel
2016	External Review Committee, Department of Health Sciences and Technology, Eidgenössische Technische Hochschule Zürich
2016	External Review Committee, Neuroscience Graduate Program, University of Texas Southwestern Medical Center
2013-2020	Brain Research Foundation: Scientific Review Committee
2013, 2014, 2016	Simons Foundation Autism Research Initiative, Review Panel
2013	NIH Director's Early Independence Awards Review, ZRG1 BBBP-E

2013	Deutsche Forschungsgemeinschaft, Review Panel for TR-SfB 654, Plasticity and Sleep
2013	Autism Speaks: Weatherstone Fellowship Review Panel
2006-2010	NIH: Neurobiology of Learning and Memory Study Section, standing member
2006	NIH Special Emphasis Panel, ZRG1 IFCN-L (Learning and Memory)
2005, 2006	NIH: Neurobiology of Learning and Memory Study Section, ad hoc member
2005	NIH: IFCN-E Special Emphasis Panel member
2005, 2006	New Jersey Governor's Council on Autism, Scientific Review Panel
1999	NIH Special Emphasis Panel, IFCN-1
1998-2003	NSF Behavioral and Computational Neuroscience Advisory Panel
1998, 1999, 2002	NIH: Integrative, Functional and Cognitive Neuroscience 7 (IFCN-7), ad hoc member

### **Editorial Appointments**

2015-present	Editorial Board Member, <i>Neurobiology of Sleep and Circadian Rhythms</i>
2015-present	Editorial Board Member, <i>Cellular Signaling</i>
2012-present	Editor in Chief, <i>Neurobiology of Learning and Memory</i>
2008-2018	Review Editor, <i>Frontiers in Neuroscience</i>
2006-2014	Associate Editor, <i>Behavioral Neuroscience</i>
2001-2005; 2014-present	Consulting Editor, <i>Behavioral Neuroscience</i>
2003-present	Contributor, Faculty of 1000, <a href="http://www.facultyof1000.com">http://www.facultyof1000.com</a>
2002-present	Reviewing Editor, <i>Hippocampus</i>
1997-2004	Editorial Board, Mouse Mutant Database

### **Journal and Grant Reviews**

Review about 30 papers a year for *Behavioral Brain Research*; *Behavioral Neuroscience*; *Biological Psychiatry*; *Cell*; *Current Biology*; *eLife*; *Frontiers in Neuroscience*; *Genes, Brain and Behavior*; *Hippocampus*; *Human Molecular Genetics*; *Journal of Biological Chemistry*; *Journal of Clinical Investigation*; *Journal of Neurophysiology*; *Journal of Neuroscience*; *Journal of Neuroscience Research*; *Learning & Memory*; *Molecular Psychiatry*; *Nature*; *Nature Neuroscience*; *Neurobiology of Learning and Memory*; *Neuron*; *Neuropsychopharmacology*; *Neuroscience Letters*; *Philosophical Transactions B*, *PNAS*; *Psychopharmacology*; *Science*; and grants for the Science Foundation Ireland, The Wellcome Trust, National Science Foundation, Human Frontier Science Program, US-Israel Binational Science Foundation, Medical Research Council, Telethon (Italy), Autism Speaks, Deutsche Forschungsgemeinschaft (DFG), Simons Foundation Autism Research Initiative (SFARI), INSERM, CNRS, Agence Nationale de la Recherche (France), Wellcome Trust/ DBT India Alliance.

### **Community Outreach**

2020	STEAD Talk, University of Iowa
2020	Chat from the Old Cap, University of Iowa
2018	Talk at Iowa City Rotary, Sleep and Memory
2015, 2016	Talk at Kinney Center for Autism Education and Support, Saint Joseph's University, Reward Learning and Autism
2004-2016	Kids Judge Neuroscience Fair, Faculty Organizer
2011-2016	Neuroscience Advisory Board, The Franklin Institute and Penn, Neuroscience in Your World: A Partnership for Neuroscience Education Across the K-12 Spectrum
2012	Talk at White Horse Village, Mechanisms of Memory Storage
2010	Talk at The Quadrangle, Sleep and Memory
2008	Talk at Young Women's Leadership School at Rhodes, Philadelphia
2005-2009	CBS 3-TV Autism Phone Bank

### **Special Courses and Summer Programs**

2015	Speaker, Summer Undergraduate Internship Program, University of Pennsylvania
2014	Speaker, Summer School, talk entitled "Memory and consciousness: Plasticity, brain rhythms and sleep," Tübingen, Germany
2007-2009, 2012	Instructor, Summer Course in Computational Neuroscience, University of Pennsylvania



2001, 2009	Instructor, Undergraduate Summer Workshop in Cognitive Science and Cognitive Neuroscience, University of Pennsylvania
1995	Linkage Analysis Course, College of Physicians and Surgeons, Columbia University
1994	Short Course in Medical and Experimental Mammalian Genetics, Jackson Laboratory, Bar Harbor, Maine
1993	Molecular Embryology of the Mouse, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York
1985	Resident research student, laboratory of Dr. S. Brenner, Dupont Experimental Station, Wilmington, Delaware

### **Professional Society Memberships**

2013-present	Association for Psychological Science (Member, 2013-1017; Fellow, 2018-present)
2007-present	American Psychological Association
2001-present	American College of Neuropsychopharmacology (Associate Member, 2001-2005; Member, 2006-2011; Fellow, 2012-present)
2000-present	Pavlovian Society
1999-present	Sleep Research Society
1995-present	Society for Neuroscience
1988-present	American Association for the Advancement of Science (Fellow, 2015-present)
1985-present	Sigma Xi
1985-present	Phi Beta Kappa

### **Professional Society Service**

2018	American College of Neuropsychopharmacology, Nominating Committee
2017-2020	Molecular and Cellular Cognition Society, President

2016-2018	Chair Elect, Chair and Past Chair, Section on Neuroscience, American Association for the Advancement of Science
2016-present	Steering Committee, Gordon Research Conference on Sleep
2015-2016	Molecular and Cellular Cognition Society, Treasurer
2015-2018	American College of Neuropsychopharmacology, Membership Committee
2014-2016	Chair, Sleep Research Society Scientific Offerings Committee
2014-2015	Sleep Research Society Research Committee
2014	Sleep Research Society Strategic Planning Retreat
2012-present	Molecular and Cellular Cognition Society, Council
2011-2013	American College of Neuropsychopharmacology, Program Committee
2008-2012	American College of Neuropsychopharmacology, Public Information Committee
2009	President, Phi Beta Kappa Delta Chapter, University of Pennsylvania, (Selection Committee 2006-2009)

**Musical Experience**

2020-present	Saxophone Student of Ryan Smith
2017-present	Clarinet Student of Jorge Montilla
2017-present	University of Iowa Hospitals and Clinics, Faculty and Staff Orchestra
2016	Diocesan Consecration Choir, Episcopal Diocese of Pennsylvania
2014-2016	Penn Wind Ensemble
2012-2016	Clarinet Student of Allison Herz
1998-2016	Trinity Episcopal Church Choir, Swarthmore, Pennsylvania
2011	Aachener Bachverein, Aachen, Germany
1993-1997	New York Choral Society
1993-1997	First Presbyterian Church Choir, New York City
1987-1993	Harvard University Choir and Appleton Chapel Choir

1985-1987 Christ's College Chapel Choir, Christ's College, Cambridge, United Kingdom

### **Recordings**

1992 *Alleluia! Sacred Choral Music in New England.* Harvard University Choir

1993 *O Great Joy: Baroque Music for Christmas.* Harvard University Choir

1995 "The Testament of Freedom" and "Frostiana." Randall Thompson. Manhattan Chamber Orchestra and New York Choral Society

1997 *Ain't Got Time to Die: Songs of the American Spirit.* Choir and Soloists of the First Presbyterian Church in the City of New York

### **Publications (\* indicates peer-reviewed publication)**

#### **As an undergraduate**

- 1.\* Suri, S. K., Spitzer, J. J., Wood, R. H., **Abel, E. G.** and Thompson, P. T. (1985). Interactions in aqueous nonelectrolyte systems: Gibbs Energy of interaction of the ether group with the hydroxyl group and the amine group. *Journal of Solution Chemistry* **14**: 781-794.
- 2.\* Florant, G., Green, R., **Abel, T.**, Hartzell, S., Tamarkin, L. and Brainard, G. (1989). Melatonin profile in marmots: The influence of catecholamine, hibernation, and light. *Journal of Pineal Research* **7**: 105-113.

#### **As a graduate student**

3. **Abel, T.** and Maniatis, T. (1989). The action of leucine zippers. *Nature* **341**: 24-25.
- 4.\* **Abel, T.**, Bhatt, R. and Maniatis, T. (1992). A *Drosophila* CREB/ATF transcriptional activator binds to both fat body- and liver-specific regulatory elements. *Genes & Development* **6**: 466-480.
- 5.\* **Abel, T.**, Michelson, A. M. and Maniatis, T. (1993). A *Drosophila* GATA family member that binds to *Adh* regulatory sequences is expressed in the developing fat body. *Development* **119**: 623-633.
- 6.\* Winick, J., **Abel, T.**, Leonard, M. W., Michelson, A. M., Chardon-Loriaux, I., Holmgren, R. A., Maniatis, T. and Engel, J. D. (1993). A GATA family transcription factor is expressed along the embryonic dorsoventral axis in *Drosophila melanogaster*. *Development* **119**: 1055-1065.

7. **Abel, T.** and Maniatis, T. (1994). Mechanisms of eukaryotic gene regulation. In Stamatoyannopoulos, G., Nienhuis, A. W., Majerus, P. W. and Varmus, H. (eds.), *The Molecular Basis of Blood Diseases*. W. B. Saunders, Philadelphia, pp. 33-70.

#### As a postdoctoral fellow

- 8.\* Nguyen, P. V., **Abel, T.** and Kandel, E. R. (1994). Requirement for a critical period of transcription for induction of a late phase of LTP. *Science* **265**: 1104-1107.
- 9.\* Mayford, M., **Abel, T.** and Kandel, E. R. (1995). Transgenic approaches to cognition. *Current Opinion in Neurobiology* **5**: 141-148.
10. **Abel, T.**, Alberini, C., Ghirardi, M., Huang, Y.-Y., Nguyen, P. and Kandel, E. R. (1995). Steps toward a molecular definition of memory consolidation. In Schachter, D. (ed.), *Memory Distortion*. Harvard University Press, Cambridge, Mass., pp. 298-325.
11. Nguyen, P. V., Alberini, C. M., Huang, Y.-Y., Ghirardi, M., **Abel, T.** and Kandel, E. R. (1995). Genes, synapses and long-term memory. In Ottoson, D. (ed.), *Challenges and Perspectives in Neuroscience*. Elsevier, Oxford, U.K., pp. 213-237.
12. Kandel, E. R. and **Abel, T.** (1995). Neuropeptides, adenylyl cyclase and memory storage. *Science* **268**: 825-826.
- 13.\* Patterson, S. L., **Abel, T.**, Deuel, T. A. S., Martin, K. C., Rose, J. C. and Kandel, E. R. (1996). Recombinant BDNF rescues deficits in basal synaptic transmission and hippocampal LTP in BDNF knockout mice. *Neuron* **16**: 1137-1145.
14. Huang, Y.-Y., Nguyen, P. V., **Abel, T.** and Kandel, E. R. (1996). Long-lasting forms of synaptic potentiation in the mammalian hippocampus. *Learning & Memory* **3**: 74-85.
- 15.\* **Abel, T.**, Nguyen, P. V., Barad, M., Deuel, T. A. S., Kandel, E. R., and Bourtchouladze, R. (1997). Genetic demonstration of a role for PKA in the late phase of LTP and in hippocampus-based long-term memory. *Cell* **88**: 615-626.
16. Silva, A. J., Simpson, E. M., Takahashi, J. S., Lipp, H. P., Nakanishi, N., Wehner, J. M., Giese, K. P., Tully, T., **Abel, T.**, Chapman, P. F., Fox, K., Grant, S., Itohara, S., Lathe, R., Mayford, M., McNamara, J. O., Morris, R. J., Picciotto, M., Roder, J., Shin, H. S., Slesinger, P. A., Storm, D. R., Stryker, M. P., Wang, Y. and Wolfer, D. P. (1997). Mutant mice and neuroscience: recommendations concerning genetic background. *Neuron* **19**: 755-759.

#### As a principal investigator at the University of Pennsylvania

- 17.\* **Abel, T.**, Martin, K. C., Bartsch, D. and Kandel, E. R. (1998). Memory suppressor genes: Inhibitory constraints on the storage of long-term memory. *Science* **279**: 338-341.
18. **Abel, T.** and Kandel, E. R. (1998). Positive and negative regulatory mechanisms that mediate long-term memory storage. *Brain Research Reviews* **26**: 360-378.

- 19.\* Bourtchouladze, R., **Abel, T.**, Berman, N., Gordon, R., Lapidus, K. and Kandel, E. R. (1998). Different training procedures for contextual memory in mice can recruit either one or two critical periods for memory consolidation that require protein synthesis and PKA. *Learning & Memory* **5**: 365-374. PMID: PMC311273.
20. Cardin, J. and **Abel, T.** (1999). Memory suppressor genes: Enhancing the relationship between synaptic plasticity and memory storage. *Journal of Neuroscience Research* **58**: 10-23.
21. Bailey, C. H., **Abel, T.** and Kandel, E. R. (1999). Meccanismi molecolari dei processi di apprendimento e di memorizzazione. In *Frontiere della Vita, Enciclopedia Italiana*.
22. Lattal, K. M. and **Abel, T.** (2000). Cellular and molecular mechanisms of learning and memory. In Reith, M.E.A. (ed.), *Cerebral Signal Transduction: From First to Fourth Messengers*. Humana Press, Totowa, New Jersey, pp. 27-71.
- 23.\* Nguyen, P. V., **Abel, T.**, Kandel, E. R. and Bourtchouladze, R. (2000). Strain-dependent differences in LTP and hippocampus-dependent memory in inbred mice. *Learning & Memory* **7**: 170-179. PMID: PMC311331.
- 24.\* Rotenberg, A., **Abel, T.**, Hawkins, R. D., Kandel, E. R. and Muller, R. U. (2000). Parallel instabilities of LTP, place cells and learning caused by decreased protein kinase A activity. *Journal of Neuroscience* **20**: 8096-8102.
- 25.\* Woo, N. H., Duffy, S. N., **Abel, T.** and Nguyen, P. V. (2000). Genetic and pharmacological demonstration of differential recruitment of cAMP-dependent protein kinases by synaptic activity. *Journal of Neurophysiology* **84**: 2739-2745.
- 26.\* Duffy, S. N., Craddock, K. J., **Abel, T.** and Nguyen, P. V. (2001). Environmental enrichment modifies the PKA-dependence of hippocampal LTP and improves hippocampus-dependent memory. *Learning & Memory* **8**: 26-34. PMID: PMC311356.
27. **Abel, T.** (2001). Advances in Synaptic Plasticity (Book Review). *Quarterly Review of Biology* **76**: 114-115.
- 28.\* Graves, L., Pack, A. and **Abel, T.** (2001). Sleep and memory: A molecular perspective. *Trends in Neurosciences* **24**: 237-243.
- 29.\* **Abel, T.** and Lattal, K. M. (2001). Molecular mechanisms of memory acquisition, consolidation and retrieval. *Current Opinion in Neurobiology* **11**: 180-187.
- 30.\* Wand, G., Levine, M., Zweifel, L., Schwindinger, W. and **Abel, T.** (2001). The cAMP-protein kinase A signal transduction pathway modulates ethanol consumption and sedative effects of ethanol. *Journal of Neuroscience* **21**: 5297-5303.
- 31.\* Lattal, K. M. and **Abel, T.** (2001). Different requirements for protein synthesis in acquisition and extinction of spatial preferences and context-evoked fear. *Journal of Neuroscience* **21**: 5773-5780.

- 32.\* Nie, T. and **Abel, T.** (2001). Fear conditioning in inbred mouse strains: An analysis of the time course of memory. *Behavioral Neuroscience* **115**: 951-956.
- 33.\* Lattal, K. M. and **Abel, T.** (2001). An immediate shock freezing deficit with discrete cues: A possible role for US processing mechanisms. *Journal of Experimental Psychology: Animal Behavior Processes* **27**: 394-406.
- 34.\* Bucan, M. and **Abel, T.** (2002). The mouse: Genetics meets behavior. *Nature Reviews Genetics* **3**:114-123.
- 35.\* Graves, L., Dalvi, A., Lucki, I., Blendy, J. A. and **Abel, T.** (2002). Behavioral analysis of the CREB alpha Delta mutation on a B6/129 F1 hybrid background. *Hippocampus* **12**: 18-26.
- 36.\* Scharf, M. T., Woo, N. H., Lattal, K. M., Young, J. Z., Nguyen, P. V. and **Abel, T.** (2002). Protein synthesis is required for the enhancement of long-term potentiation and long-term memory by spaced training. *Journal of Neurophysiology* **87**: 2770-2777.
37. **Abel, T.** and Keeley, M. (2002). Gateway to Memory (Book Review). *Quarterly Review of Biology* **77**: 229-230.
- 38.\* Woo, N. H., **Abel, T.** and Nguyen, P. V. (2002). Genetic and pharmacological demonstration of a role for cyclic AMP-dependent protein kinase-mediated suppression of protein phosphatases in gating the expression of late LTP. *European Journal of Neuroscience* **16**: 1871-1876.
39. **Abel, T.** and Selzer, M. E. (2002). Promoting recovery of neurological function. In Asbury, A. K., et al. (eds.), *Diseases of the Nervous System (Third Edition)*. Cambridge University Press, Cambridge, UK, pp. 79-104.
- 40.\* Woo, N. H., Duffy, S. N., **Abel, T.** and Nguyen, P. V. (2003). Temporal spacing of synaptic stimulation critically modulates the dependence of LTP on cAMP-dependent protein kinase. *Hippocampus* **13**: 293-300.
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42. Hellman, K. M. and **Abel, T.** (2003). Molecular mechanisms of memory consolidation. In Maquet, P., Smith, C. and Stickgold, R. (eds.), *Sleep and Plasticity*. Oxford University Press, Oxford, UK, pp. 295-325.
- 43.\* Graves, L., Hellman, K., Veasey, S., Blendy, J. A., Pack, A. and **Abel, T.** (2003). Genetic evidence for a role of CREB in sustained cortical arousal. *Journal of Neurophysiology* **90**: 1152-1159.
- 44.\* Kaplan, M. and **Abel, T.** (2003). Genetic approaches to the study of synaptic plasticity and memory storage. *CNS Spectrums* **8**: 597-620.
- 45.\* Chennathukuzhi, V., Stein, J. M., **Abel, T.**, Donlon, S., Yang, S., Miller, J. P., Allman, D. M., Simmons, R. A. and Hecht, N. B. (2003). Mice deficient for Testis-Brain RNA-Binding Protein

exhibit a coordinate loss of TRAX, reduced fertility, altered gene expression in the brain and behavioral changes. *Molecular and Cellular Biology* **23**: 6419-6434. PMID: PMC193699.

- 46.\* Lattal, K. M., Mullen, M. T. and **Abel, T.** (2003). Extinction, renewal and spontaneous recovery of a spatial preference in the water maze. *Behavioral Neuroscience* **117**: 1017-1028.
- 47.\* Connolly, P. M., Maxwell, C., Kanes, S. J., **Abel, T.**, Liang, Y., Tokarczyk, J., Bilker, W. B., Turetsky, B. I., Gur, R. E., and Siegel, S. J. (2003). Inhibition of auditory evoked potentials and pre-pulse inhibition of startle in DBA/2J and DBA/2Hsd inbred mouse substrains. *Brain Research* **992**: 85-95.
- 48.\* Ecker, D., Stein, P., Xu, Z., Williams, C. J., Kopf, G. S., Bilker, W. B., **Abel, T.** and Schultz, R. M. (2004). Long-term effects of culture of preimplantation mouse embryos on behavior. *Proceedings of the National Academy of Sciences* **101**: 1595-1600. PMID: PMC341785.
- 49.\* Gould, T. J.<sup>#</sup>, Bizily, S. P.<sup>#</sup>, Tokarczyk, J., Kelly, M. P., Siegel, S. J., Kanes, S. J. and **Abel, T.** (2004). Sensorimotor gating deficits in transgenic mice expressing a constitutively active form of G<sub>s</sub>alpha. *Neuropsychopharmacology* **29**: 494-501. <sup>#</sup>Co-first authors PMID: PMC3348581.
- 50.\* Maxwell, C. R., Liang, Y., Weightman, B. D., Kanes, S. J., **Abel, T.**, Gur, R. E., Turetsky, B. I., Bilker, W. B., Lenox, R. H. and Siegel, S. J. (2004). Effects of chronic olanzapine and haloperidol differ on the mouse N1 auditory evoked potential. *Neuropsychopharmacology* **29**: 739-746.
- 51.\* Lattal, K. M. and **Abel, T.** (2004). Behavioral impairments caused by injections of the protein synthesis inhibitor anisomycin after contextual retrieval reverse with time. *Proceedings of the National Academy of Sciences* **101**: 4667-4672. PMID: PMC384804.
- 52.\* Lattal, K. M., Honavar, S. and **Abel, T.** (2004). Effects of post-session injections of anisomycin on the extinction of a spatial preference and on acquisition of a spatial reversal preference. *Behavioral Brain Research* **153**: 327-339.
- 53.\* Connolly, P. M., Maxwell, C., Liang, Y., Kahn, J. B., Kanes, S. J., **Abel, T.**, Gur, R. E., Turetsky, B. I. and Siegel, S. J. (2004). The effects of ketamine vary among inbred mouse strains and mimic schizophrenia for the P80, but not P20 or N40 auditory ERP components. *Neurochemical Research* **29**: 1179-1188.
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- 56.\* Wood, M. A., Kaplan, M. P., Park, A., Blanchard, E. J., Oliveira, A. M. M., Lombardi, T. L. and **Abel, T.** (2005). Transgenic mice expressing a truncated form of CREB-binding protein (CBP) exhibit deficits in hippocampal synaptic plasticity and memory storage. *Learning & Memory* **12**: 111-119. PMID: PMC1074328.

- 57.\* Wood, M. A., Kaplan, M. P., Brensinger, C. M., Guo, W. and **Abel, T.** (2005). Ubiquitin C-terminal esterase 3 (*Uchl3*) is involved in working memory. *Hippocampus* **15**: 610-621.
- 58.\* McNamara, R. K., Hussain, R. J., Simon, E. J., Stumpo, D. J., Blackshear, P. J., **Abel, T.** and Lenox, R. H. (2005). Effect of myristoylated alanine-rich C kinase substrate (MARCKS) overexpression on hippocampus-dependent learning and hippocampal synaptic plasticity in MARCKS transgenic mice. *Hippocampus* **15**: 675-683.
- 59.\* Zhang, B., Veasey, S. C., Wood, M. A., Leng, L. Z., Kaminski, C., Leight, S., **Abel, T.**, Lee, V. M. Y., Trojanowski, J. Q. (2005). Impaired REM sleep in the Tg2576 APP murine model of Alzheimer's Disease with injury to pedunculopontine cholinergic neurons. *American Journal of Pathology* **167**: 1361-1369. PMID: PMC1603771.
- 60.\* Keeley, M. B., Busch, J., Singh, R. and **Abel, T.** (2005). Novel tTA hybrid transcription factors report kinase activity and are inhibited by doxycycline. *Biotechniques* **39**: 529-536.
- 61.\* Sommovilla, J., Bilker, W. B., **Abel, T.** and Schultz, R. M. (2005). Embryo culture does not affect longevity of offspring in mice. *Reproduction* **130**: 599-601.
- 62.\* Lee, E. B., Leng, L. Z., Zhang, B., Kwong, L., Doms, R. W., Trojanowski, J. Q., **Abel, T.** and Lee, V. M.-Y. (2006). Targeting A beta oligomers by passive immunization with a conformation selective monoclonal antibody improves learning and memory in APP transgenic mice. *Journal of Biological Chemistry* **281**: 4292-4299.
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- 64.\* Keeley, M. B., Wood, M., Isiegas, C., Stein, J., Hellman, K., Hannenhalli, S. and **Abel, T.** (2006). Differential transcriptional response to non-associative and associative components of classical fear conditioning in the amygdala and hippocampus. *Learning & Memory* **13**: 135-142. PMID: PMC1409829.
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85. **Abel, T.** and Nguyen, P. V. (2008). Regulation of hippocampus-dependent memory by cyclic AMP-dependent protein kinase. *Progress in Brain Research*. **169**: 97-115. PMID: PMC2914307.
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88. Brennan, F. X. and **Abel, T.** (2008). The cAMP/PKA signaling pathway and the modeling of human memory disorders in mice. *Advances in Psychology* **139**: 301-316.
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### **Books**

1. Meerlo, P., Benca, R. and **Abel, T.** (Eds.) (2015). *Sleep, Neuronal Plasticity and Brain Function*. Berlin: Springer.
2. **Abel, T.** and Nickl-Jockschat, T. (Eds). (2016). *The Neurobiology of Schizophrenia*, Elsevier.

### **Citation Statistics (Google Scholar, October 2021)**

Total citations: 24,108

h-index: 77

i10-index: 178

<https://scholar.google.com/citations?user=2XITxRcAAAAJ&hl=en>

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### **Press Coverage of Research**

ABCNEWS.com, 14 August 2003: “Sleep Affects Some Memories But Not All”:

<http://abcnews.go.com/Technology/story?id=97553&page=1>

ScienceNOW, 21 October 2009: “Why Sleepyheads Forget”:

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Penn 60 Second Lecture, 22 September 2012: It’s Not a Dream, It’s a Memory: The Role of Sleep in Memory Storage: [www.youtube.com/watch?v=XiY3mRh5dU4](http://www.youtube.com/watch?v=XiY3mRh5dU4)

NPR's Science Friday, 5 October 2012: "What your genes can tell you about your memory":  
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Penn-led Team Prevents Memory Problems Caused by Sleep Deprivation, 18 November 2014:  
<http://www.upenn.edu/pennnews/news/penn-led-team-prevents-memory-problems-caused-sleep-deprivation>

Learning difficulties mark male mice with autism mutation, SFARI, 19 November 2014:  
<http://sfari.org/news-and-opinion/conference-news/2014/society-for-neuroscience-2014/learning-difficulties-mark-male-mice-with-autism-mutation>

60-Second Lecture: When Nurture Meets Nature: The New Field of Behavioral Epigenetics, 16 May 2015: <https://vimeo.com/129593486>

The effect of sleep on memory, Radio New Zealand 28 August 2015:  
<http://www.radionz.co.nz/national/programmes/ninetoon/audio/201768381/the-effect-of-sleep-on-memory>

Penn Team Restores Memory Formation Following Sleep Deprivation in Mice, 26 April 2016:  
<https://news.upenn.edu/news/penn-team-restores-memory-formation-following-sleep-deprivation-mice>

In mTORC and Theta Rhythms, New Clues to How Sleep Locks Down Memories, ALZFORUM, 20 May 2016-05-29: <http://www.alzforum.org/news/research-news/mtorc-and-theta-rhythms-new-clues-how-sleep-locks-down-memories#comment-20761>

Mutation tied to autism deprives male mice of their sleep, Spectrum 23 November 2016:  
<https://spectrumnews.org/news/mutation-tied-autism-deprives-male-mice-sleep/>

Metabolic enzyme drives memory formation, 20 June 2017:  
<https://medcom.uiowa.edu/theloop/news/metabolic-enzyme-drives-memory-formation>

Signaling pathway may be key to why autism is more common in boys, 17 October 2017:  
<https://medcom.uiowa.edu/theloop/news/signaling-pathway-may-be-key-to-why-autism-is-more-common-in-boys>; <http://www.dailymail.co.uk/health/article-4988208/May-explain-boys-likely-autism.html>; <https://spectrumnews.org/news/learning-difficulties-mark-male-mice-with-autism-mutation/>

Sci on the Fly: <https://www.aaaspolicyfellowships.org/blog/podcast-aaas-2018-live-science-memory-and-exceptional-abilities>

How Iowa is advancing our understanding of autism: <https://btn.com/2020/04/02/iowa-autism-research/>



New UI center for Intellectual and Developmental Disabilities:  
<https://www.kcrg.com/2021/07/27/new-ui-autism-research-center-launches-response-growing-diagnosis-concerns/>

### **Invited Talks**

2021

Cardiff University, School of Biological Sciences  
Case Western Reserve University, Department of Neurosciences  
Cincinnati Children's Hospital  
Society for Neuroscience, Annual Meeting

2020

University of Massachusetts Medical Center, Joel Richter Lab Presentation  
Vanderbilt University, Vanderbilt Brain Institute

2019

Asian Molecular and Cellular Cognition Society, Seoul, South Korea  
Federation of Asian and Oceanian Physiological Societies Congress, Kobe, Japan  
International Brain Research Organization, Session Chair, Daegu, South Korea  
SFARI Annual Investigators Meeting, New York

2018

American Association for the Advancement of Science Annual Meeting, Session Chair,  
Austin, Texas  
Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde, Berlin,  
Germany  
European Molecular and Cellular Cognition Society Annual Meeting, Berlin, Germany  
EMBO/Wellcome-Trust DBT India Alliance Symposium "From synapses to memory: RNA  
based regulatory mechanisms," National Brain Research Center, Manesar, India, Co-  
Organizer  
Gordon Research Conference on Sleep, Galveston, TX, Steering Committee  
Molecular and Cellular Cognition Society Europe, Berlin, Germany  
Nencki Institute for Experimental Biology, Warsaw, Poland  
Pennsylvania State University, Department of Biobehavioral Health  
Rutgers University, Brain Health Institute  
Stowers Institute, Kansas City  
University of California San Diego, Temporal Dynamics of Learning Center  
University of Texas Southwestern Medical Center, Department of Neuroscience

2017

Associated Professional Sleep Societies, Boston, MA, Lunchtime Debate  
Associated Professional Sleep Societies, Boston, MA, Session Chair  
Brain Research Foundation, Neuroscience Day, Chicago, IL  
Florida Atlantic University, Brain Institute  
Indian Society for Sleep Research, Goa, India  
Molecular and Cellular Cognition Society Asia, Singapore  
Northwestern University, Neurobiology of Information Storage Training Program

Simons Foundation Autism Research Initiative, Spring Investigators Meeting  
Tokyo University of Agriculture, Japan  
University of California, Irvine, Conte Center  
University of Iowa, Department of Biology  
University of Iowa, Department of Neurology, Grand Rounds  
University of Massachusetts Medical School, Department of Neurobiology  
World Congress of Psychiatry, Berlin, Germany

2016

American Society for Neurochemistry, Annual Meeting, Denver, CO, Plenary Session  
Speaker  
Associated Professional Sleep Societies, Denver, CO, Session Chair  
Florida State University, Rushton Symposium Speaker  
Gordon Research Conference on Sleep, Galveston, TX, Session Chair  
Indian Academy of Neuroscience Annual Meeting, Plenary Lecture, Manesar, India  
Indian Institute of Technology, Kharagpur, India  
International Meeting on Anchored cAMP Signaling Pathways, Zermatt, Switzerland  
Jawaharlal Nehru University, Delhi, India  
McLean Hospital, Harvard University  
National Center for Brain Research, Manesar, India  
MIND Institute, University of California, Davis, Distinguished Lecture Series  
Oregon Health & Science University, Department of Behavioral Neuroscience  
Simons Center for the Social Brain, MIT  
University of Texas Southwestern Medical Center, Department of Psychiatry

2015

Asian Chromatin Meeting, Bangalore, India; Keynote Lecture  
Bryn Mawr College, Department of Biology Seminar Series  
Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde, Berlin,  
Germany, Session Chair  
Donald O. Hebb Memorial Lecture, Dalhousie University, Halifax, Nova Scotia, Canada  
Gordon Research Conference on Amygdala in Health & Disease, Stonehill College, Easton,  
MA, Speaker  
International Society for Neurochemistry Meeting, Cairns, Australia  
Janelia Conference on Behavioral Epigenetics, Ashburn, VA  
King's College London, Department of Basic and Clinical Neuroscience  
National University of Singapore, Department of Physiology  
Providence Sleep Research Interest Group (PSRIG) seminar series, Brown University,  
Providence, RI  
Shriners Hospitals Pediatric Research Center, Temple University, Philadelphia, PA  
Society for Neuroscience Annual Meeting, Publishing Panel, Chicago, IL  
University of Iowa, Department of Psychology  
University of Otago, Dunedin, New Zealand  
University of Wisconsin, Milwaukee, Neuroscience Series  
Winter Conference on Neural Plasticity, Barbados  
Winterschool, RWTH, Aachen, Germany; Keynote Lecture

2014

Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde, Berlin,  
Germany, Session Chair  
European MCCS meeting, Milan, Italy  
FENS Workshop, Milan, Italy  
Institut du Fer à Moulin, Paris, France  
Gordon Research Conference on Sleep, Galveston, TX, Session Chair  
Simons Foundation, 16p11.2 meeting, New York, NY  
Uniformed Services University of the Health Sciences, Bethesda, MD, Neuroscience Seminar  
Series  
University of Toronto, Canada, Neuroscience Seminar Series  
West Virginia University, Morgantown, West Virginia, Neuroscience Seminar Series

2013

American College of Neuropsychopharmacology Annual Meeting, Hollywood, Florida, Session  
Chair  
Association for Psychological Science (APS), Presidential Symposium, Washington, DC  
Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde, Berlin,  
Germany, Session Chair  
Drexel University School of Medicine, Department of Pharmacology  
Forschungszentrum Jülich, Germany  
Zentrum für Molekulare Neurobiologie, Hamburg, Germany  
International Society for Neurochemistry Meeting, Cancun, Mexico  
International Meeting on Anchored cAMP Signaling Pathways (Denver)  
RWTH Seminar and Workshop, Aachen, Germany  
Society for Neuroscience Annual Meeting, San Diego, Nanosymposium Chair  
Universitätsklinikum Aachen, Klinik für Psychiatrie, Psychotherapie und Psychosomatik,  
Aachen, Germany  
Johns Hopkins University, Department of Psychiatry  
University of Southern California, Zilkha Neurogenetic Institute

2012

American College of Neuropsychopharmacology Annual Meeting, Hollywood, Florida  
Associated Professional Sleep Societies, Boston  
Colorado State University, Molecular, Cellular and Integrative Neurosciences Program  
Defense Science Research Council, What is Information in the Brain Workshop  
Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde, Berlin,  
Germany, Session Chair  
Epigenetics: Opportunities for Sleep Research, University of Pennsylvania, Co-Organizer  
Molecular and Cellular Cognition Society, New Orleans  
Max Planck Institute for Neurobiology, Martinsried, Germany  
University of Pennsylvania, Department of Psychiatry, Grand Rounds  
New York University, Neuroscience Institute  
University of Arizona, Neuroscience Program

2011

American College of Neuropsychopharmacology Annual Meeting, Waikaloa, Hawaii, Session  
Chair  
Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde, Berlin,  
Germany (Three talks, Co-Chair of two Symposia)

Foundation IPSEN, Epigenetics, Brain and Behavior Meeting, Paris, France  
Gladstone Institute of Neurological Disease and UCSF Neuroscience Program  
IBRO World Congress of Neuroscience, Symposium Speaker, Florence, Italy  
Institut du Fer à Moulin, Paris, France  
Interdisziplinäres Zentrum für Neurowissenschaften, Heidelberg University, Heidelberg,  
Germany  
Molecular and Cellular Cognition Society, Session Chair  
University of Alabama, Birmingham, Bevill Conference on Cognition and Cognitive  
Disorders  
Universitätsklinikum Aachen, Klinik für Psychiatrie, Psychotherapie und Psychosomatik,  
Aachen, Germany  
Université de Strasbourg, CNRS, IFR 37 des Neurosciences, Strasbourg, France  
Winter Conference on Neural Plasticity, Moreea, French Polynesia  
Young Researchers Transatlantic Academy, Philadelphia  
Zoologisches Institute, Technische Universität Braunschweig, Germany

2010

European Sleep Meeting, Lisbon, Portugal  
Forschungszentrum Jülich, Germany  
Universiteit Maastricht, Netherlands  
New York Academy of Sciences Symposium “Phosphodiesterase Targets for Cognitive  
Dysfunction and Schizophrenia”  
New York Academy of Sciences Behavioral Epigenetics Meeting  
RWTH Seminar and Workshop, Aachen, Germany  
Swarthmore College, Department of Biology  
University of Delaware, Department of Psychology

2009

American College of Neuropsychopharmacology Annual Meeting, Hollywood, Florida  
Center for Molecular Medicine and Therapeutics, University of British Columbia, Vancouver  
Canada  
Center for the Neurobiology of Learning and Memory, University of California, Irvine  
Early Life Programming and Neurodevelopmental Disorders, Philadelphia, Pennsylvania  
International Congress on Sleep Medicine, Sao Paulo, Brazil  
Krasnow Institute for Advanced Study, George Mason University, Fairfax, Virginia  
Leibniz Institute for Neurobiology, Magdeburg, Germany  
Mosbach Colloquium, German Society for Biochemistry and Molecular Biology  
Neuroscience Seminar Series, Tufts University, Boston, Massachusetts  
Stanley Center Seminar Series, Broad Institute, Cambridge, Massachusetts

2008

American College of Neuropsychopharmacology Annual Meeting, Phoenix, Arizona, Chair and  
Speaker, Two Panels  
Center for Behaviour and Neurosciences, University of Groningen, Netherlands  
Department of Neuroendocrinology, University of Lübeck, Germany  
FENS Panel Organizer, Geneva, Switzerland  
HFSP Annual Meeting, Berlin, Germany  
Indiana University, Department of Psychological and Brain Sciences  
Institute of Psychiatry, King’s College, London

Keystone Symposium on Genetics and Biochemistry of Sleep, Tahoe City, California  
Memorial University, Grass Lectureship, St. John's Newfoundland, Canada  
Temple University, Neuroscience Program

2007

Associated Professional Sleep Societies, Trainee Day, Annual Meeting, Minneapolis  
Canadian College of Neuropsychopharmacology, Banff, Canada  
Johns Hopkins University, Department of Psychological and Brain Sciences  
Mount Sinai School of Medicine, Seaver and New York Autism Seminar Series  
Penn Autism Network Conference, University of Pennsylvania, Conference Co-organizer  
University of Texas Southwestern Medical Basic Neuroscience Seminar Series

2006

American College of Neuropsychopharmacology Annual Meeting, Hollywood, Florida, Panel  
Chair and Speaker  
Case Western Reserve University School of Medicine, Department of Neuroscience  
Cleveland Clinic Foundation, Department of Neuroscience  
Cure Autism Now Philadelphia Chapter  
DFG International Research Training Group, Winter School, Aachen, Germany  
Leibniz Institute for Neurobiology, Magdeburg, Germany  
Mount Sinai School of Medicine, Translational Neuroscience Seminar Series  
NIA Workshop on the Molecular and Cellular Basis of Cognitive Aging  
Penn Autism Network Conference, University of Pennsylvania, Conference Co-organizer  
Sanger Centre, Hinxton, England  
Research Perspectives in Autism, University of Pennsylvania, Conference Co-organizer  
Rutgers University, Department of Genetics  
University College, London, Department of Anatomy, England  
University of Maryland, Department of Physiology  
University of Pennsylvania School of Medicine, Department of Anesthesiology, Grand Rounds  
University of Pennsylvania School of Medicine, Department of Pharmacology  
University of Tennessee Health Science Center, Neuroscience Institute  
University of Vienna School of Medicine, Austria

2005

American College of Neuropsychopharmacology Annual Meeting, Hawaii, Hot Topics Session  
Free University of Berlin, Germany, Department of Neurobiology  
International Meeting on Anchored cAMP Signaling Pathways, Berlin, Germany  
Merck/Penn Sleep Research Retreat  
David and Lucile Packard Foundation, Annual Meeting, Monterey, California  
Pavlovian Society, Annual Meeting, Anaheim, California  
Temple University School of Medicine, Department of Pharmacology  
University of Alberta School of Medicine, Department of Physiology  
University of Toronto, Program in Neuroscience

2004

Duke University, Department of Psychology and Brain Science  
Molecular and Cellular Cognition Society Annual Meeting  
Monell Chemical Senses Center, Philadelphia, PA  
Ponce School of Medicine, Department of Physiology, Ponce, Puerto Rico

Ninth International Sleep & Breathing Meeting, Newport, Rhode Island  
University of Tennessee Health Science Center, Neuroscience Institute

2003

American College of Neuropsychopharmacology Annual Meeting, Puerto Rico  
Associated Professional Sleep Societies, Annual Meeting, Chicago, Discussion Organizer  
Drexel University College of Medicine, Department of Pharmacology and Physiology  
Experimental Biology 2003, San Diego, CA  
University of Pennsylvania, "How to phenotype my mouse at Penn"  
University of Pennsylvania, SIB/Vision Training Grant Annual Retreat  
University of Pennsylvania, Summer Undergraduate Internship Program

2002

Associated Professional Sleep Societies, Annual Meeting, Seattle  
Associated Professional Sleep Societies, Trainee Day, Annual Meeting, Seattle  
Case Western University School of Medicine, Postdoctoral Research Day  
University of Pennsylvania, Institute of Neurological Sciences

2001

Associated Professional Sleep Societies, Annual Meeting, Chicago  
Associated Professional Sleep Societies, Annual Meeting, Chicago, Discussion Organizer  
David and Lucile Packard Foundation, Annual Meeting, Monterey, California  
Pavlovian Society, Annual Meeting, Symposium Organizer, New Brunswick, New Jersey  
University of Alberta School of Medicine, Edmonton, Alberta  
University of Pennsylvania, Institute of Neurological Sciences Annual Retreat  
Wyeth-Ayerst Pharmaceuticals, Monmouth Junction, NJ

2000

Carnegie Institute of Washington  
Children's Hospital of Philadelphia, Mental Retardation and Developmental Disabilities  
Research Center  
Eastern Virginia Medical School, Department of Neuroscience  
National Institutes of Health, National Institute of Child Health and Human Development  
Tufts University School of Medicine, Department of Neuroscience  
University of Pennsylvania, Center for Cognitive Neuroscience  
University of Pennsylvania, Center for Neurodegenerative Disease Research  
University of Pennsylvania, Department of Biology Annual Retreat

1999

University of Delaware, Department of Psychology  
University of Pennsylvania, Behavioral Neuroscience Annual Retreat

1998

American College of Neuropsychopharmacology Annual Meeting, Puerto Rico  
University of Pennsylvania, Center for Neurobiology and Behavior  
University of Pennsylvania, Center for Reproductive Studies  
University of Pennsylvania, Department of Psychology  
University of Pennsylvania, Institute for Neurological Sciences

1997

Case Western Reserve University School of Medicine, Department of Neuroscience  
Georgetown University, Department of Biology  
Harvard University Medical School, Department of Genetics  
National Institutes of Health, National Cancer Institute  
Northwestern University, Department of Neurobiology and Physiology  
University of Rochester, Department of Brain and Cognitive Sciences  
University of California, Irvine, Department of Psychobiology  
University of Pennsylvania, Department of Biology

1996

Cold Spring Harbor Laboratory Banbury Meeting on Learning & Memory  
Columbia University, Graduate Program in Neuroscience  
New York State Psychiatric Institute

1995

American College of Neuropsychopharmacology Annual Meeting, Puerto Rico

1994

American EEG Society Annual Meeting, Chicago

### **Lab Personnel**

### **Postdoctoral Fellows and Research Scientists (Ph.D. level)**

#### **University of Pennsylvania**

K. Matthew Lattal, 1998-2004, individual NRSA award, currently a Professor, Department of Behavioral Neuroscience, Oregon Health and Sciences University  
Rifat Hussain, 1999-2000, currently a research associate at Albany Medical College  
Carolina Isiegas, 2000-2005; 2007, currently employed in Biotech research, Spain  
Marcelo Wood, 2001-2006, Society for Neuroscience Minority Fellowship, Alavi-Dabiri Postdoctoral Fellowship Award in Intellectual and Developmental Disabilities Research (CHOP), currently Professor and Chair, Department of Neurobiology and Behavior, University of California, Irvine  
Scott Bizily, 2001-2002, currently a lawyer  
Michael Kaplan, 2001-2006, currently Lab Instructor, Biological Basis of Behavior Program, Penn  
Michele Kelly, 2002-2006, Tourette Syndrome Association Research Grant Award, currently an Associate Professor, University of South Carolina School of Medicine  
Ming Ouyang, 2005-2008, currently a Research Specialist with Steven Thomas, Penn  
Cedrick Florian, 2005-2010, currently a Lecturer-Researcher, University of Toulouse 3, France  
Pepe Hernandez, 2006-2012, NSF Minority Postdoctoral Research Fellowship, currently a Research Scientist, Psychogenics  
Robbert Havekes, 2007-2015, Rubicon Grant, Netherlands Organization for Scientific Research, currently an Assistant Professor, University of Groningen, Netherlands  
Marcel Estévez Montero, 2008-2012, Penn-PORT Program, individual NRSA award  
Lucia Peixoto, 2010-2015, Neurodevelopmental Disorders Postdoctoral Fellowship, currently an Assistant Professor, Washington State University, Spokane, Washington

Jennifer Choi Tudor, 2010-2016, Penn-PORT Program, individual NRSA award, currently an Assistant Professor, Saint Joseph's University  
Danielle Cusmano, 2014-2016, currently employed by Rutgers University  
Rolf Hansen, 2014-2016, currently employed by Teva Pharmaceuticals

### **University of Iowa**

Sarah Ferri, 2013-present, Neurodevelopmental Disorders Postdoctoral Fellowship, K01 Award NIMH  
Snehajyoti Chatterjee, 2016-present, K99 Award NIA  
Joseph Lynch, 2016-2017, currently a visiting Assistant Professor, Department of Psychology, Franklin and Marshall College  
Mahesh Shetty, 2017-present  
Marie Gaine, 2017-2020, currently an Assistant Professor, College of Pharmacy, University of Iowa  
Jae Kyoon Kim, 2018-present  
Queena Lin, 2018-2020, currently Director, Neurobank Core, Iowa Neuroscience Institute  
Satya Tadinada, 2019-present  
Junko Kasuya, 2020-present

### **Graduate Students (Ph.D.)**

#### **University of Pennsylvania**

Laurel Graves Weaver, M.D., Ph.D. (Neuroscience), 1998-2002, currently a child psychiatrist, Children's Hospital of Philadelphia  
Kevin Hellman, Ph.D. (Neuroscience), 2000-2004, individual NRSA award, currently a tenure track faculty member, University of Chicago  
Ting Nie, Ph.D. (Biology), 1999-2005, currently a postdoctoral fellow, Emory University  
Michael Keeley, Ph.D. (Cellular and Molecular Biology), 2000-2005, currently a marketing planning manager, Genentech  
Joel Stein, M.D., Ph.D. (Cellular and Molecular Biology), 2001-2005, currently an Assistant Professor of Radiology, Hospital of the University of Pennsylvania  
Conor McDonough, Ph.D. (Neuroscience), 2001-2006, individual NRSA award, currently a lawyer  
Ana Oliveira, Ph.D. (Instituto Gulbenkian de Ciencia, Oeiras, Portugal), 2003-2008, currently a postdoctoral fellow with Hilmar Bading, Heidelberg, Germany  
Ted Huang, Ph.D. (Neuroscience), 2004-2008, currently a Strategic Consultant, ETHOS Health Communications  
Chris Vecsey, Ph.D. (Neuroscience), 2004-2008, MINS/NGG Flexner Award for Outstanding Ph.D. Thesis, currently an Assistant Professor, Skidmore College  
Joshua Hawk, Ph.D. (Neuroscience), 2004-2010, Saul Winegrad Award for Outstanding Ph.D. Thesis, currently a postdoctoral fellow with Daniel Colon-Ramos, Yale University  
Nan Ma, Ph.D. (Biology), 2007-2011, currently a scientist at Cetazam  
Mathieu Wimmer, Ph.D. (Neuroscience), 2007-2012, currently an Assistant Professor of Psychology, Temple University  
Hannah Schoch, Ph.D. (Cell and Molecular Biology), 2008-2014, currently a postdoctoral fellow with Lucia Peixoto, Washington State University  
Toni-Moi Prince, Ph.D. (Neuroscience), 2009-2013, currently in management consulting  
Shane Poplawski, Ph.D. (Pharmacology), 2009-2014, currently a postdoctoral fellow at Abbott



Alan (Jung Whan) Park, Ph.D. (Biology), 2009-2014, currently a postdoctoral fellow with Joshua Gordon, Columbia University

Vince Luczak, Ph.D. (Biology), 2010-2016, currently a postdoctoral fellow with Gulcin Pekkurnaz, University of California, San Diego

Morgan Bridi, Ph.D. (Neuroscience), 2010-2015, individual NRSA award, currently a postdoctoral fellow with Shiyong Huang, Hussman Institute, Baltimore

Christopher Angelakos, Ph.D. (Neuroscience), 2013-2017, National Defense Science and Engineering Graduate fellowship, currently a postdoctoral fellow with Luis De Lecea, Stanford University

## **University of Iowa**

Emily Walsh (Neuroscience), 2018-present

Utsav Mukarjee (Neuroscience), 2019-present

Yann Vanrobaeys (Genetics), 2020-present

Benjamin Kelvington (Pharmacology), 2021-present

Yutong Wang (Pharmacology), 2021-present

## **Graduate Students (M.A.)**

Natalie Denney, M.A. (submatriculation), 1998-1999

Jennifer Yanow, M.A. (submatriculation), 1999-2000

Alan Young, M.A. (Neuroscience), 1999-2004, individual NRSA award

Anna McNally, M.A. (Pharmacology), 2014-2015

## **Rotation Students**

### **University of Pennsylvania**

Yang Song, Biology, 1998

Ting Nie, Biology, 1998-1999

Jessica Cardin, Neuroscience, 1998-1999

Alan Young, Neuroscience, 1998-1999

Arati Sadalge, Neuroscience, 1999

J. Clay Gaspard, Biology, 2000

Joel Stein, Cellular and Molecular Biology (MD/PhD), 2000

Michael Keeley, Cellular and Molecular Biology, 2000

Kevin Hellman, Neuroscience, 2000

Li Li, Biology, 2000

Shaya Honarvar, Biology, 2001

Noah Roy, Neuroscience, 2001

Conor McDonough, Neuroscience, 2001

Prin Amorapanth, Neuroscience (MD/PhD), 2001

Kimberly Noble, Neuroscience (MD/PhD), 2001

David Yang, Biology, 2001

Bing He, Biology, 2002

Mate Varga, Biology, 2002

Yanshan Fang, Neuroscience, 2002  
Andrew McClelland, Neuroscience (MD/PhD), 2003  
Tamar Gur, Neuroscience (MD/PhD), 2003  
Congzhou Liu, Biology, 2004  
Nick DeLong, Neuroscience, 2004  
Ted Huang, Neuroscience, 2004  
Chris Vecsey, Neuroscience, 2004  
Joshua Hawk, Neuroscience, 2005  
Amanda Crocker, Neuroscience, 2005  
Nan Ma, Biology, Biology, 2006  
Mathieu Wimmer, Neuroscience, 2006  
Greg Dunn, Neuroscience, 2007  
Robert Lin, Pharmacology, 2007  
Farzaneh Najafi, Biology, 2008  
Alan (Jung Whan) Park, Biology, 2008  
Hannah Schoch, Cell and Molecular Biology, 2008  
Toni-Moi Prince, Neuroscience, 2009  
Shane Poplawski, Pharmacology, 2009  
Vince Luczak, Biology, 2009  
Joseph Wasserman, Neuroscience, 2010  
Morgan Bridi, Neuroscience, 2010  
Kellie Woll, Pharmacology, 2012  
Julia Kahn, Neuroscience, 2013  
Christopher Angelakos, Neuroscience, 2013  
Anna McNally, Pharmacology, 2014  
Janani Saikumar, Biology, 2014  
Nicole Bowman, Neuroscience, 2014

### **University of Iowa**

Parker Abbott, Neuroscience, 2017  
Emily Walsh, Neuroscience, 2018  
Yann Vanrobaeys, Genetics, 2019  
Hassan Ahamed, MSTP, Neuroscience, 2019  
Gage Liddiard, MSTP, Neuroscience, 2019  
Rebekah Peplinski, Genetics, 2020  
Sara Mitchell, Neuroscience, 2021  
Lucas Casten, Genetics, 2021  
Benjamin Kelvington, Pharmacology, 2021  
Yutong Wang, Pharmacology, 2021  
Yuxi Li, Pharmacology, 2021

### **Medical Students and Residents**

Chris Chiang (Jefferson), 1999  
Edward Blanchard (Penn Med), 2004  
John Northrop, M.D., Ph.D. (Penn Psychiatry Resident), 2009-2012  
Justin Valdez, 2018, Summer Research Fellowship

## **Foreign Scholars**

Claudia Barz, Forschungszentrum Jülich, Germany, 2010-2011  
Burcin Acar, University of Groningen, Groningen, Netherlands, 2010  
Vibeke Bruinenberg, University of Groningen, Groningen, Netherlands, 2011  
Erik van Tilborg, Maastricht University, Netherlands, 2013  
Anne Guenther, Forschungszentrum Jülich, Germany, 2014  
Vishalini Sivarajan, Forschungszentrum Jülich, Germany, 2015  
Judith Kreuzmann, University of Groningen, 2015-2016

## **Undergraduates**

### **University of Pennsylvania**

Alexander Harris, 1998, work study  
Donald Monson, 1998-1999, work study  
David Ecker, 1998-2000, independent study, BIBB; Undergraduate Research Grant Recipient  
Edward Blanchard, 1998-2000, independent study, BIOL  
Rajeev Dhupar, 1998-1999, independent study, BIOL; Nassau Fund Award Recipient  
Bree Goldman, 1998-1999, independent study, BIBB  
Charles Levine, 1998-1999, independent study, BIOL  
Josh Gruber, 1999, independent study, CHEM  
Matthew Scharf (Yeshiva University), Summer 1999, Summer 2000  
Elizabeth Heller, 1999-2002, independent study, BIOL  
David Krieger (Yeshiva University), Summer 2000  
Michael Mullen, 2000-2001, independent study, BIBB; received BIBB undergraduate research award  
Michael Abraham, 2000-2001, work study  
Michael Krathen, 2000-2001, work study  
Alice Park, 2001-2003, independent study, BIOL  
Rebecca Spivack, 2001-2002, independent study, BIOL; Nassau Fund Award Recipient  
Byron Ko, 2001-2002, work study  
Johanna Busch, 2001-2004, work study and independent study  
Komal Soin, Summer 2002  
Ari Grinspan, 2002-2004  
Fatima Akrouh, 2002, work study  
Mingrui Zhou, 2002, work study  
Katherine Peer, 2002-2003, independent study, BIOL  
Rajesh Singh (St. Louis University), Summer 2003, SUIP  
Christina Liu, 2003-2004  
Zachary Kern, 2003-2004, work study  
Michelle Attner, 2003-2005, Nassau Fund Award Recipient  
Katherine Holzem, 2003-2005  
Michael Esposito, 2003-2005, work study  
Arter Biggs (Grambling State University), Summer 2004, SUIP  
Jessica Knight (Washington College), Summer 2005, SUIP  
Nora Khatib, 2005-2006, independent study

Quinn Grimes, 2005-2008, work study, independent study  
Stephen Han, 2005-2006  
Chris Favilla, 2005-2007, work study  
Allison Rao, 2006-2009, independent study, Eliot Stellar Award  
Shannon Grimes, 2006-2010, work study  
Devan Jaganath, 2006-2008, work study, independent study, Edward N. Pugh, Jr Award  
Aysha El Shamayleh, 2006, work study  
Brian Kroener, 2007-2010, independent study  
Rosa Cui, 2007-2010, work study and independent study, Edward N. Pugh, Jr Award  
Michael Sulewski, 2008-2011, Provost's Undergraduate Research Mentoring Program, Eliot Stellar Award  
Justin Besen, 2008-2010, independent study  
Karuna Meda, 2008-2010, independent study, Pincus-Magaziner Family Undergraduate Research Grant  
Jihaan Mutasim (Rutgers, Camden), 2009-2010  
Charles Kenworthy, 2009-2010, independent study  
Edward Linton, 2009-2011, independent study, University Scholar  
Lyl Tomlinson (Brooklyn College, CUNY), 2009, SUIP  
Armin Gollogly, 2009, Summer Program in Computational Neuroscience  
Jennifer Blackwell, 2009-2012, independent study, Pincus-Magaziner Family Undergraduate Research Grant  
Kimberly Lackenby, 2009, UPenn/King's College London Medical Student Exchange  
Susan Sheng, independent study 2010-2012  
Brittany Mayweather, 2010-2014, Ware College House Research Fellowship  
Kyle Krainock (Swarthmore College), 2011-2013  
Sean Massa, 2012  
Bridget Ellsworth, 2012-2013, independent study  
Emily Davis, 2012-2014, independent study, Penn Undergraduate Research Mentoring Program, Benjamin Franklin Scholars  
Angela Wanjin Zhu, 2013-2015, Penn Undergraduate Research Mentoring Program  
James Mellody, 2013  
Rebecca Teng (Swarthmore College), 2013-2014  
Caroline Chung, 2013-2016, Rose Award for Undergraduate Research  
Patrick Lawson (Johns Hopkins University), 2013  
Stelios Monos, 2013-2016  
Olivia Perez (Swarthmore College), 2013-2015, Conte Summer Program  
Mengxi Zhang (Swarthmore College), 2013-2014, Conte Summer Program  
Alyssa Nieves, 2013-2015, independent study  
Giulia Porcari, 2013-2014  
Chris Schlitt (Penn State University), 2013-2014  
Natalie Long (Penn State University), 2014  
Adewola Osunsade (University of the District of Columbia), 2014, SUIP, SFARI Summer Fellow  
Noelle Arroyo (Swarthmore College), 2014-2016, Conte Summer Program  
Jenni Walsh (Swarthmore College), 2014-2015  
Hope Merens, 2015-2016  
Matthew Bruce (Temple University), 2015-2016, MARC Scholar  
Abigail Dove (Swarthmore College), 2015, CTSA Summer Program  
Maria Navarro (University of Miami), 2015, The Leadership Alliance Summer Program, SFARI Summer Fellow

Vedant Thyagaraj, 2015-2016  
Kate Sohn, 2015-2016, Penn Undergraduate Research Mentoring Program  
Wendy Wei, 2015-2016  
Shaila Berlas, 2015-2016  
Jessica Schwarz, 2016, SUIP, SFARI Summer Fellow  
Laura Baratta (Temple), 2016, SUIP  
Anna Meaney (Vassar College), 2016  
Luigim Vargas (Brown University), 2016, SUIP, SFARI Summer Fellow  
Justine Albers (Swarthmore College), 2016, CTSA Summer Program  
Rachel Levinson, 2016, Penn Undergraduate Research Mentoring Program  
Nickole Kanyuch, 2016, Conte Summer Program

### **University of Iowa**

Sam Dahlke (Grinnell College), 2017  
Noah Ajram (Princeton University), 2017  
Manish Yadav (India Institute of Technology, Kharagpur), 2017  
Andrew Solsrud, 2017  
Jia Ern Ong, 2017-2019  
Michael Li, 2017-2018  
Ji Youn Lee, 2017-2019, independent study  
Amy Yan, 2018-2021  
Ariel Roghair (Macalester College), 2018, Interdisciplinary Summer Undergraduate Research Program  
Ashley Plumb (St. Ambrose University), 2018, Interdisciplinary Summer Undergraduate Research Program  
Saaman Ghodsi (Franklin & Marshall College), 2018  
Marie Wosny (Heinrich-Heine-Universität, Dusseldorf), 2018, DAAD Summer Fellowship  
Achala Thippeswamy, 2018-present  
Michela (Benney) Argue, 2019-2020  
Cindy Cosme, 2019, Interdisciplinary Summer Undergraduate Research Program  
Tasha Gilkison, 2021-present  
Quinn Truax (St. Olaf College), 2021, Summer Undergraduate Research Program  
Ingrid Streitz (St. Olaf College), 2021, Summer Undergraduate Research Program  
Deaven Denis, 2021-present

### **Research Specialists**

#### **University of Pennsylvania**

Scott Gellman, 1998-1999  
Haejin Kim, 1999-2000  
Elizabeth Cresiski, 2000-2001  
Matthew Scharf, 2000-2001  
Michael Waddington, 2000-2001  
Charles Levine, 2000-2002  
Thomas Lombardi, 2001-2003  
David Rapoport, 2002-2004  
Sara Fabian, 2004-2005  
LaKesha Davison, 2004-2005, Penn PREP

James Lederman, 2006-2007  
Dan Reilly, 2007-2008  
Angela Carter, 2007-2009, Penn PREP  
Leonardo Guercio, 2010-2011  
Karuna Meda, 2010-2011  
Charles Kenworthy, 2010-2012  
Michael Heenan, 2012-2014  
Marcus Neafsey, 2012-2013  
Mary McMullen, 2013-2015  
Kyle Krainock, 2013-2014  
Christopher Schlitt, 2014-2015  
Giulia Porcari, 2014-2105  
Emily Davis, 2015  
Kyle White, 2015-2016  
Natalie Long, 2015-2016  
Matthew Marini, 2015-2016  
Eric Sorensen, 2015-2017

### **University of Iowa**

Tania Chatterjee, 2017-2020  
Joseph Lederman, 2017-2018  
Kelsey Blocklinger, 2019-2020  
Pravda Quinones, 2020-present  
Saaman Ghodsi, 2020-2021

### **Training Grant Participation**

#### **University of Pennsylvania**

Training in Behavioral/Cognitive Neuroscience (MH17168), T. Abel, P.I., 1998-2016  
MD/PhD Program in Sleep and Chronobiology (AG00256), A. Pack, P.I., 1998-2004  
Training Program in Cell and Molecular Biology (GM07229), R. Schultz, P.I., 1998-2016  
Graduate Training in Systems and Integrative Biology (GM07517), J. Gold, P.I., 1998-2016;  
member, executive committee, 2005-2016  
Predoctoral Training Grant Program in Genetics (GM08216), D. Epstein, P.I., 1998-2016  
Training Program in Sleep and Respiratory Neurobiology (HL07713), A. Pack, P.I., 1998-2016  
Training in Sleep and Sleep Disorders (HL07953), A. Pack, P.I., 2000-present; director, MD/PhD  
program in sleep/circadian rhythm research, 2000-2016  
Training Program in Neuropsychopharmacology (MH14654), I. Lucki, P.I., 1998-2016  
Training in Age-Related Neurodegenerative Diseases (AG000255), V. Lee, P.I., 1998-2016  
Schizophrenia: A Neuropsychiatric Perspective (MH019112), R. Gur, P.I., 2001-2016  
UPenn Post-Baccalaureate Research and Education Program (GM71745), J. Boyer, P.I.,  
2005-2016  
Summer Undergraduate Internship Program in Biomedical Studies, 2003-2016  
Training Grant in Neurodevelopmental Disabilities (NS007413), M. Robinson, P.I., 2005-2016  
Research Training in Anesthesia/Perioperative Medicine, (GM007612), C. S. Deutschman, P.I.,  
2006-2016

Institutional Research and Academic Career Development Award (GM081259), Y. Paterson, P.I.,  
2007-2016

International Research Training Group (DFG: IRTG 1328), RWTH Aachen, Germany and Penn  
(F. Schneider and R. Gur, PIs), 2006-2015

### **University of Iowa**

Medical Scientist Training Program (T32-GM007337), S. Lentz and P. Geyer, Directors, 2017-  
present

Mechanisms of Health and Disease at the Behavioral-Biomedical Interface (T32-GM108540), S.  
Lutgendorf, Director, 2017-present

Neuroscience Training Program (T32-NS007421), D. Tranel, Director, 2017-present

### **Thesis Committees**

#### **University of Pennsylvania**

Paul Nealen, Biology, 1997-2000

David Kapfhamer, Cellular and Molecular Biology, 1997-2002

Gloster Aaron, Neuroscience, 1998-2001

Xiufang Guo, Neuroscience, 1999-2004

Diana Williams, Psychology, 1999-2003

Jessica Cardin, Neuroscience, 1999-2004

Henry Su, Neuroscience, 1999-2002, Chair

Mark Beenhakker, Neuroscience, 1999-2004

Daniel Gottlieb, Psychology, 2000-2004

Stacey Schaefer, Psychology, 2000-2006

Julide Bilen, Biology, 2001-2004

Han Cho, Biology, 2001-2002

Edward Lee, Neuroscience, 2001-2003

Youngshin Lim, Biology, 2001-2003

Kangning (Connie) Liu, Biology, 2001-2005

Carrie Walters, Neuroscience, 2001-2004, Chair

Melanie Watson, Neuroscience, 2002-2007

Qi Zhang, Neuroscience, 2002-2004, Chair

Laila Dadvand, Neuroscience, 2002-2006

Lingbo Li, Biology, 2002-2006

Francesca Grossman, Cellular and Molecular Biology, 2002-2004

Pavan Auluck, Neuroscience, 2003

Deepak Sampathu, Cellular and Molecular Biology, 2003-2006

Marc Meulener, Cellular and Molecular Biology, 2003-2005

John Wolf, Neuroscience, 2003-2006, Chair

Mate Varga, Biology, 2003-2006

Matthew Giampola, Neuroscience, 2003-2006

Jim Crowley, Pharmacology, 2003-2005

Rui Liu, Biology, 2004-2009

Cathryn Kubera, Neuroscience, 2005-2008

Matthew Scharf, Neuroscience, 2005-2008, Chair

Caroline Patten, Neuroscience 2006-2007  
Andrew McClelland, Neuroscience (MD, PhD), 2006-2008  
Jessica Cleck, Pharmacology, 2006-2008  
John Ross, Pharmacology, 2006-2010  
Keith Schutsky, Pharmacology, 2007-2011  
Xiaoyu Peng, Biology, 2007-2011  
Marybless Atienza, Neuroscience, 2008-2009  
Sarah Ferri, Psychology, 2009-2013  
Dustin Shilling, Neuroscience (MD, PhD), 2009-2013  
Aleksandra Nall, Cell and Molecular Biology, 2011-2014  
Rachel Monyak, Cell and Molecular Biology, 2011-2016  
A Reum Jang, Biology, 2011-2014  
Adam Watson, Neuroscience, 2011-2015  
Heather Ballance, Neuroscience, 2011-2015  
Leonardo Guercio, Neuroscience, 2011-2016  
Riley Graham, Biology, 2014-2016  
Hung Bui, Biology, 2014-2017  
Jennifer Blackwell, Neuroscience, 2015-2016  
Seth Madlon-Kay, Psychology, 2015-2016

### **University of Iowa**

Margaret Fuller, Neuroscience (MSTP), 2017-present  
Alexandra Petrucci, Neuroscience, 2018-present  
Katerina Sosa, Neuroscience, 2020-present

### **Mentorship Committees**

#### **University of Pennsylvania**

Steve Siegel, Department of Psychiatry, 2001-2007  
Stephen Kanos, Department of Psychiatry, 2001-2006  
Mirek Mackiewicz, Center for Sleep and Respiratory Neurobiology, 2002-2009  
Elena Nikonova, Center for Sleep and Respiratory Neurobiology, 2002-2005  
Aaron Pawlyk, Center for Sleep and Respiratory Neurobiology, 2003-2004  
Marcos Frank, Department of Neuroscience, 2004-2009  
Dejian Ren, Department of Biology, 2006-2009  
David Raizen, Department of Neurology, 2009-2014  
Jason Gerstner, Center for Sleep and Circadian Neurobiology, 2010-2014  
Miranda Lim, Center for Sleep and Circadian Neurobiology, 2012-2013  
Gangrui Yang, Department of Pharmacology, 2015-2016  
Nicholas Betley, Department of Biology, 2015-2016  
John Wolf, Department of Neurosurgery, 2016

#### **University of Iowa**

Joseph Glykys, Department of Pediatrics, 2019-present  
Merry Mani, Department of Radiology, 2020-present



Hildegard Janouschek, Department of Psychiatry, 2019-present

### **Preliminary and Qualifying Exam Committees**

#### **University of Pennsylvania**

Peter Bronk, Neuroscience, 1998  
Marc Eisen, Neuroscience, 1998  
Laurel Graves, Neuroscience, 1998  
Brook Brouha, Cellular and Molecular Biology, 1999  
Henry Su, Neuroscience, 1999  
Youngshin Lim, Biology, 1999  
Jessica Cardin, Neuroscience, 1999  
Julide Bilen, Biology, 2000  
Kevin Hellman, Neuroscience, 2000  
Matthew McManus, Neuroscience, 2000  
Gene Civillico, Neuroscience, 2001  
Kangning (Connie) Liu, Biology, 2001  
Carrie Walters, Neuroscience, 2001  
Matthew Giampoala, Neuroscience, 2002  
Michael Gyda, Biology, 2002  
Kimberly Noble, Neuroscience, 2002  
Ryan Wyatt, Neuroscience, 2002  
Jim Crowley, Pharmacology, 2002  
Mate Varga, Biology, 2003  
Tamar Gur, Neuroscience, 2004  
Matthew Scharf, Neuroscience, 2004  
Rui Liu, Biology, 2004  
Pat Williams, Neuroscience, 2005  
Melissa Wang, Neuroscience, 2009  
Sarah Ferri, Psychology, 2009  
Jia He, Biology, 2012  
Nicole Yohn, Neuroscience, 2012  
Jennifer Blackwell, Neuroscience, 2014  
Riley Graham, Biology, 2014  
Hung Bui, Biology, 2014  
Greg Artiushin, Neuroscience, 2014

#### **University of Iowa**

Margaret Fuller, Neuroscience (MSTP), 2017  
Kelsey Heslin, Neuroscience, 2018  
Alexandra Petrucci, Neuroscience, 2018  
Parker Abbott, Neuroscience, 2019  
Katerina Sosa, Neuroscience, 2020

### **External Examinations**

Seema Malkani, University of Delaware, Department of Psychology, Thesis Committee, 1998-2001  
Edwin Santini, Ponce School of Medicine, Department of Physiology, Ponce, Puerto Rico, Thesis Committee, 2002-2004  
Susan Carswell, Widener University, Institute for Graduate Clinical Psychology, Thesis Committee, 2002  
Cuie Qiu, Drexel University College of Medicine, Department of Pharmacology and Physiology, Thesis Committee, 2003-2007  
Robbert Havekes, Center for Behaviour and Neurosciences, University of Groningen, Netherlands, 2007  
Rebekah Evans, Neuroscience Ph.D. Program, George Mason University, 2009-2013  
Roelina Hagewoud, Center for Behaviour and Neurosciences, University of Groningen, Netherlands, 2010  
Han Wang, Otto von Guericke Universität, Magdeburg, Germany, 2013  
Nikos Tzavaras, Mount Sinai School of Medicine, 2013  
Xia Nan, Jefferson University School of Medicine, 2014  
Swarthmore College, Department of Biology, Honors Examiner, 1999, 2002, 2014  
Amrutha Swaminathan, Jawaharal Nehru Centre for Advanced Scientific Research, 2015

### **Committees and Administrative Assignments (University of Pennsylvania)**

#### **Biology Department**

Faculty Search Committee, Neuroscience, 1998, 1999, 2014  
Chair, Faculty Search Committee, Neuroscience, 2006-2008  
Ad hoc Tenure and Faculty Review Committees, Member and Chair, 2005-2016  
Space Committee, 2014-2016

Advising Committee, Undergraduate Neurobiology Concentration, 2000-2016  
Undergraduate Curriculum Committee, 2003-2016  
Undergraduate Major Advisor, 2003-2016

Graduate Student Admissions Committee, 1998-2000  
Graduate Student Academic Review Committee, 1999-2000  
Advising Committee, Neurobiology and Physiology Graduate Students, 2006-2011  
Advising and Assessment Committee, Biology Graduate Students, 2015-2016

Biology Advisory Board Presentation, 1998  
Biology Undergraduate Night Speaker, 1998

#### **School of Arts and Sciences**

Director and Co-Director, Biological Basis of Behavior Program, 2006-2016  
Biological Basis of Behavior Program Faculty Advisory Committee, 2001-2005

Member, Executive Committee, College of Liberal and Professional Studies, 2008-2011  
Co-Chair, SAS Penn Integrates Knowledge Neuroscience Committee, 2010-2011  
Member, Mapping the Mind Strategic Planning Committee, 2013-2014

Member, Faculty Planning Group on Mapping the Mind, 2015-2016

Search Committee, Dean of Freshmen, 2004

Psychology Department, Faculty Search Committee, Behavioral Neuroscience, 1998-1999, 2004-2005, 2005-2006, 2006-2007

Psychology Department, ad hoc Tenure Review Committee, 2014

Advisor to First-Year and Second-Year Students, 1998-2016

Welcome to the College, Speaker, 2007, 2016

Penn Previews, Faculty Panel, 2002, 2005, 2007, 2008, 2009, 2012, 2013

## **University**

Mahoney Institute for Neurosciences

Advisory Board, 1999-2002; 2006-2009

Executive Committee, 2010 to 2016

Neuroscience Advisory Committee, 2016

Chair, Seminar Committee, 2013 to 2015

Chair, Year of Neuroepigenetics Planning Committee, 2016

McMorris Fellows Executive Committee, 2014 to 2016

Search Committee, Chair in Autism Research (CHOP and Penn), 2005-2007

Department of Neurology, School of Medicine, Faculty Search Committee, 2006, 2007, 2012

Department of Psychiatry, School of Medicine, Faculty Search Committee, 2006-2007

Department of Neuroscience, School of Medicine, Faculty Search Committee, 2008, 2009, 2013, 2014

Department of Neuroscience, School of Medicine, Chair Search Committee, 2011-2012

Ad hoc Tenure Review Committees

Department of Otorhinolaryngology; Head and Neck Surgery, 2008-2009

Department of Neuroscience, School of Medicine, 2007, 2008, 2009

Department of Pediatrics, School of Medicine, 2007

Department of Anesthesiology, School of Medicine, 2011

Center for Cognitive Neuroscience Retreat Planning Committee, 2004, 2006

Center for Cognitive Neuroscience Review Committee, 2014

Neuroscience Graduate Group

Lab Rotation Talks Committee, 1998-1999

Admission Committee, 1998-2000

Curriculum Committee, 1999-2002

Preliminary Examination Course, Instructor, 2001-2005

Seminar Committee, 2002-2003

Member, Cell and Molecular Biology Graduate Group, 1998-2016

Member, Biology Graduate Group, 1998-2016

Member, Neuroscience Graduate Group, 1999-2016

Member, Mahoney Institute for Neurosciences, 1999-2016

Member, Pharmacology Graduate Group, 1999-2016  
Member, Psychology Graduate Group, 1999-2016  
Member, Center for Neurobiology and Behavior, 1999-2016  
Member, Center for Sleep and Circadian Neurobiology, 1999-2016  
Affiliated Faculty, Institute for Research in Cognitive Science, 2005-2016  
Member, Penn Genome Frontiers Institute, 2010-2013  
Member, Institute for Translational Medicine and Therapeutics, 2011-2016

Center for Undergraduate Research and Fellowships, Selection Committee for Rhodes, Marshall, Mitchell Scholarships, 2000-2016  
Member, Penn Prep Program to prepare minority students for medical and graduate school, 2003-2016  
Penn Reading Project, Discussion Group Leader, 1998-2008, 2011-2013  
Speaker, Career Services Panel on Grant Writing, 1999  
Speaker, Science Panel, Freshmen Week, 2000

Member, Faculty Working Group on Mechanisms of Abnormal Behavior, 2015-2016  
Member, Faculty Discussion Group on Foundations in Cognitive Science, 2015-2016

Long-Term Animal Needs Committee, 2001-2002  
Animal Resources Review Committee, 2006

### **Committees and Administrative Assignments (University of Iowa)**

#### **University**

Iowa Neuroscience Institute, Founding Director, 2017-present  
Member, Interdisciplinary Graduate Program in Neuroscience, 2017-present  
Member, Molecular Medicine Graduate Program, 2017-present  
Member, Interdisciplinary Graduate Program in Genetics, 2018-present  
Path Forward Research and Discovery Work Group, Co-Chair, 2017-2021  
Strategy Team, 2021-present

#### **Carver College of Medicine**

Chair and Departmental Executive Officer, Department of Neuroscience and Pharmacology, 2018-present  
Co-chair, Search Committee for the Chair of the Department of Psychiatry, 2018  
Member, Medical Scientist Training Program (MSTP), Executive Committee, 2019-present  
Member, UIHC Faculty Compensation Implementation Working Group, 2020-present  
Member, Master Campus Facility Planning Executive Steering Committee, 2021-present  
Member, Search Committee for the Chair of the Department of Pediatrics, 2021

### **References**

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