**Kristen Ann Keefe**

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| **Address**  Dept. Pharmacology & Toxicology  University of Utah  30 South 2000 East  Salt Lake City, UT 84112  (801) 585-7989 (phone)  (801) 585-5111 (fax)  k.keefe@utah.edu  **Citizenship** U.S.A. | **Home** 1354 E. Old Maple Ct.  **Address** Salt Lake City, Utah 84117  (801) 755-3219 |

**Education**

* Ph.D., M.S. Behavioral Neuroscience, University of Pittsburgh, Pittsburgh, Pennsylvania, 1987-1992
* M.A. Speech-Language Pathology, University of Pittsburgh, Pittsburgh, Pennsylvania, 1984-1986
* B.A. Communication Sciences and Psychology, *summa cum laude*, Case Western Reserve University, Cleveland, Ohio, 1982-1984
* Undergraduate, Communication Disorders, University of Vermont, Burlington, Vermont, 1980–1982

**Additional Professional Development**

* Fundamentals of Professional Coaching U-Can Workshop, University of Utah, November 1 & 8, 2022.
* Facilitating Entering Mentoring, Facilitator Training for CIMER “Entering Mentoring” Curriculum, University of Wisconsin, WI, July 21-22, 2022.
* Health Sciences Senior Leadership Seminar, University of Utah, February 5-6, 2015.
* Health Sciences Leadership Seminar I "Leadership in Action", University of Utah, March 31-April 2, 2014.
* HERS (Higher Education Resource Services) Leadership Institute, Denver, Colorado 2013.
* Cold Spring Harbor Course, "Molecular and Cellular Biology of Addiction"; 2001.

**Roles**

* Assitant Vice President for Faculty, Office for Faculty UofU Health, July 2023-present
* Associate Dean for Faculty, College of Pharmacy, University of Utah, July 2019-present
* Interim Dean, College of Pharmacy, University of Utah, July 2014-Dec. 2016
* Professor (2008-present); Associate Professor (2002-2008), Assistant Professor (1995-2002); Department of Pharmacology and Toxicology, College of Pharmacy and Interdepartmental Graduate Program in Neuroscience, University of Utah
* Director, Interdepartmental Graduate Program in Neuroscience, University of Utah, 2011-2014.
* Intramural Postdoctoral Training Award Postdoctoral Fellow, Laboratory of Neurophysiology, NIMH, Section of Neuroanatomy; Chief, Dr. Charles R. Gerfen, 1992-1995
* NIMH Individual NRSA Predoctoral Fellow, University of Pittsburgh, Dept. of Behavioral Neuroscience, laboratories of Drs. Michael J. Zigmond and Elizabeth D. Abercrombie, 1990 - 1992
* NIMH Institutional Training Grant Fellow, Center for Neuroscience, University of Pittsburgh, 1988 - 1990
* Research Speech Pathologist, Dept. of Neurology, University of Pittsburgh, 1986 - 1987
* Research Consultant, Child Development Unit, Children's Hospital of Pittsburgh, 1985 - 1987
* Andrew Mellon Predoctoral Fellow, Dept. of Communication Disorders, University of Pittsburgh, 1984-1986

**Awards**

* Nominated, P3 Teacher of the Year Award, College of Pharmacy, University of Utah, 2018, 2022
* Nominated, P2 Teacher of the Year Award, College of Pharmacy, University of Utah, 2009, 2012, 2013, 2014, 2015, 2018, 2022, 2023
* Nominated, The Linda K. Amos Award for Distinguished Service to Women, University of Utah, 2019.
* The Lawrence C. and Delores M Weaver College of Pharmacy Recognition Award, 2017
* Distinguished Teaching Award, University of Utah, 2017.
* Elected Fellow, Academy of Health Science Educators, University of Utah, 2014
* Graduate Student and Postdoctoral Scholar Distinguished Mentor Award, University of Utah, 2012.
* Nominated, Teacher of the Year Award, College of Pharmacy, University of Utah, 2007.
* Intramural Postdoctoral Training Award Postdoctoral Fellow, Laboratory of Neurophysiology, NIMH, Section of Neuroanatomy; Chief, Dr. Charles R. Gerfen, 1992-1995
* NIMH NRSA Predoctoral Fellowship, University of Pittsburgh, Dept. of Behavioral Neuroscience, laboratories of Drs. Michael J. Zigmond and Elizabeth D. Abercrombie, 1990 - 1992
* Recipient, Chiodo Award for Excellence in Behavioral Neuroscience, Dept. of Behavioral Neuroscience, University of Pittsburgh, 1992
* NIMH training grant awardee, Center for Neuroscience, University of Pittsburgh, 1988 - 1990
* Lisa Levey Award for Outstanding Graduate Student, Dept. of Communication Disorders, University of Pittsburgh, 1986.
* Andrew Mellon Predoctoral Fellowship, Dept. of Communication Disorders, University of Pittsburgh, 1984-1986
* Graduated *Summa Cum Laude* with Honors in Communication Sciences, Case Western Reserve University, 1984.
* American Speech-Language and Hearing Association Honor Student Award, Dept. of Communication Sciences, Case Western Reserve University, 1984.

**Professional Societies**

American Association of Colleges of Pharmacy

American Society for Pharmacology and Experimental Therapeutics

International Basal Ganglia Society

Society for Neuroscience

**Teaching**

Professional Skills Development (PHTX 7690), Pre and postdoctoral trainees on training grants and in biomedical science labs.

Coursemaster and lecturer, 2020-present

Principles of Project Development (PHARM 7352), PharmD Professional Curriculum, College of Pharmacy, University of Utah

Coursemaster and Lecturer, 2017-2022

Co-coursemaster and lecturer, 2023

Integrated Pharmacotherapeutics II (PHARM 6253), PharmD Professional Curriculum, College of Pharmacy, University of Utah

Lecturer, Central Nervous System Pharmacology, 2016-present

Integrated Pharmacotherapeutics I (PHARM 6252), PharmD Professional Curriculum, College of Pharmacy, University of Utah

Co-Coursemaster, 2023-

Module Leader, "Autonomic Nervous System" 2016-present

Lecturer, Autonomic Nervous System Pharmacology 2016-present

Recitation (PHARM 6251), PharmD Professional Curriculum, College of Pharmacy, University of Utah

Small Group Facilitator, 2016-2018

P2 Recitation (PHARM 6250), PharmD Professional Curriculum, College of Pharmacy, University of Utah

Coursemaster, 2016-2018

Pharmacology I (PHTX 5211), Pharm.D. Professional Curriculum, College of Pharmacy, University of Utah

Co-Coursemaster, 2009-2014

Lecturer, 1995-2015

Introduction to the Autonomic Nervous System (2 hr)'

Sympathomimetics and Catecholamines (2 hr)

Anti-adrenergic agents (2 hr)

Pharmacotherapy of Parkinson’s Disease (1 hr)

Skeletal Muscle Relaxants" (1 hr)

Headache Medications (2 hr; no longer as of 2007).

Biological Basis of Disease (PHTX 5121), Professional Curriculum, College of Pharmacy, University of Utah

Lecturer, 2004-2016

Organization of the Autonomic Nervous System (2 hr)

Neurotransmission (2 hr, 2015)

Movement Disorders (3 hr, 2015)

Psychiatric Disorders (2 hr, 2015)

Pharmacologic Basis of Therapeutics II (1995-2009) / Brain and Behavior (2010-present) (PHTX 6030), M.D. Professional Curriculum, School of Medicine, University of Utah

Lecturer, 1995-2014

Introduction to the Autonomic Nervous System (2 hr)

Sympathomimetics and Catecholamines (2 hr)

Anti-adrenergic agents (1 hr)

Physiology of the Basal Ganglia (1 hr; 2007-2008)

Pharmacotherapy of Parkinson’s Disease (1 hr)

Skeletal Muscle Relaxants (1 hr/directed study)

Headache Medications (1 hr; no longer as of 2006)

Multiple medication counseling small groups recitations (facilitator)

Medication Counseling exam grading sessions.

Fundamentals of Pharmaceutical Sciences (PHARM 7113), College of Pharmacy Graduate Programs Curriculum, College of Pharmacy, Univ. of Utah

Lecturer, 2004-2011

Receptor Theory / Receptors (2 hr)

Receptor Regulation (1 hr)

Pharmacology Essentials (PHTX 7113), Dept. of Pharmacology and Toxicology, College of Pharmacy, Univ. of Utah

Lecturer, 2012-2014

Receptor Theory / Receptors (2 hr)

Receptor Regulation (2 hr)

Cellular and Molecular Neuroscience (NEUSC 6040), Interdepartmental Neuroscience Program Curriculum, University of Utah

Couresmaster, 2002-2004

Lecturer, 2005-2013

Neurotransmitter Synthesis and Metabolism (3 hr)

Introduction to Receptors (1.5 hr; through 2007)

Ionotropic glutamate receptors (1.5 hr; through 2007)

Systems Neuroscience: Functioning of the Nervous System (NEUSC 6050), Interdepartmental Neuroscience Program Curriculum, University of Utah

Lecturer, 1997-2011

Basal Ganglia (2 hr).

Biochemical Basis of Neuropharmacology (PHTX 7270), Dept. of Pharmacology and Toxicology and other Graduate Programs, College of Pharmacy, University of Utah

Coursemaster (1999-2011)

Lecturer (1997-2011)

Functional Neuroanatomy (2 hr)

Excitatory Amino Acids (2 hr)

Inhibitory Amino Acids (2 hr)

Serotonin, Histamine, Melatonin (2 hr)

Catecholamines (2 hr)

Acetylcholine (2 hr)

Non-traditional Neurotransmitters (2 hr)

Neuropharmacology of Movement Disorders (2 hr)

Neuropharmacology of Drug Addiction (2 hr)

Neuropharmacology of Schizophrenia/psychosis (2 hr)

Neuropharmacology of Affective Disorders (2 hr)

Professional Skills Development (PHTX 7690), Dept. of Pharmacology and Toxicology and other Graduate Programs, College of Pharmacy, University of Utah

Coursemaster, 2006-2013

Lecturer 1998-2015

Your Role as a Graduate Student / Career Planning (2 hr)

Technical writing (3 hr)

Oral presentations (1 hr)

Job-Seeking Skills (1 hr)

Small group facilitation of grant reviews

Methods in Pharmacology (PHTX 6600), Dept. of Pharmacology and Toxicology Graduate Program, College of Pharmacy, University of Utah

Lecturer, 1997-2011

*In situ* Hybridization Histochemistry and Immunohistochemistry (3 hr).

Developments in Neuropharmacology (PHTX 6720) Journal Club, Dept. of Pharmacology and Toxicology Graduate Program, College of Pharmacy, University of Utah

Couresemaster, 1998-1999.

Principles of Pharmacology and Toxicology (PHTX 6610), Dept. of Pharmacology and Toxicology Graduate Program, College of Pharmacy, University of Utah

Lecturer, 1998-2004

Pharmacodynamics (2 hr)

Antagonism (1 hr)

Spare Receptors (1 hr)

Advances in Neuropharmacology (PHTX 7280), Dept. of Pharmacology and Toxicology Graduate Program, College of Pharmacy, University of Utah

Lecturer, 1996

Molecular Biology of NMDA receptors (3 hr)

Dopamine Receptors and Psychiatric Disorders (3 hr).

Drugs and Behavior, University of Pittsburgh, Teaching Assistant, 1990

Experimental Methods in Psychology, University of Pittsburgh, Teaching Assistant,1987 - 1988.

**Professional Service**

***Department***

* Graduate Training Committee, Dept. of Pharmacology and Toxicology, College of Pharmacy, Univ. of Utah. Member, 1996-2011; 2018-present; Chair 2002-2011
* Faculty Search Committee Chair, 2017-2018; 2022-2023
* Teaching and Curriculum Committee, Dept. of Pharmacology and Toxicology, College of Pharmacy, Univ. of Utah. Member, 1996-2000; Chair, 1998-2000.

***College***

* Executive Committee, 2019-present
* Associate Dean for Faculty, 2019-present
* Member, PharmD Project Committee, 2017-present
* Dept. of Pharmaceutics and Pharmaceutical Chemistry Faculty Search Committee, 2020-2021
* PhD Curriculum Task Force member, 2020
* Accreditation Self-Study Committee member; Head, Standard 19, College of Pharmacy 2021 accreditation process 2020-2021.
* Stimson Endowed Chair Selection Committee, Chair, 2019
* Utah Poison Control Center Executive Director Search, Chair, 2018-2019
* Member, Assessment Committee, 2018-2019.
* Interim Dean, College of Pharmacy, University of Utah, July 2014-December 2016
* Head, PharmD Curricular Revision Task Force, 2012-2013.
* Member, Task Force for Curriculum Revision for Professional PharmD program, 2010-2011.
* Strategic planning committee for College of Pharmacy 2007 accreditation process, Curriculum Task Force member, 2006-2007
* Curriculum Committee, College of Pharmacy, Univ. of Utah, Member, 2005-2012.
* Learning and Teaching Committee, College of Pharmacy, Univ. of Utah. Member, 1997-2005.
* Women’s Focus Group, College of Pharmacy, Univ. of Utah. Member, 1997-1998.
* Recruitment and Affirmative Action Committee, College of Pharmacy, Univ. of Utah. Member, 1995-1997.

***University***

* Ad Hoc Committee on Career-Line Faculty Matters, 2023-
* Institutional Policy Committee, 2023-
* University Promotion and Tenure Advisory Committee (UPTAC), Co-Chair, 2023-
* Co-Chair, Research Training and Career Development Committee (RTRAC) 2020-present
* Mentoring Committee, Academy of Health Sciences Educators, 2014-present.
* Faculty Data Steering Committee, 2020-present
* Neuro-Immunology Training Grant steering committee, 2020-present
* Executive Planning Committee, Masters of Education in Health Sciences, 2018-2021.
* Internal Graduate Program Review Committee, Master of Science in Clinical Investigation, 2020, Graduate Council Review.
* Planning Committee, *2020 Addictions Update: Science, Policy & Treatment*, Dept. of Psychiatry, Univ. of Utah
* Planning Committee, *2019 Addictions Update: Science, Policy & Treatment*, Dept. of Psychiatry, Univ. of Utah
* Steering Committee, Biological Chemistry Program, 2018-2020.
* Health Sciences Library Task Force, 2017
* Search Committee for VP for Research, University of Utah, 2015-2016
* Executive Board, Neuroscience Initiative, University of Utah, 2014-2016
* Board of Directors, Center on Aging, University of Utah, 2014-2016
* Advisory Board, Utah Poison Control Center, 2014-2016
* Internal Advisory Board, Diabetes and Metabolism Initiative, University of Utah, 2015-2016
* Vice President’s Clinical and Translational (VPCAT) Research Scholars Program, 2015-2019.
* Internal Graduate Program Review Committee, Department of Neurobiology and Anatomy, 2013, Graduate Council Review.
* Director, Interdepartmental Program in Neuroscience, 2011-2014; Directorate, member, 2006-2011.
* Local Organizing Committee, The Brain Institute 2nd Annual Spring Symposium Series, *Drug Discovery for Mental Illness*, March 18, 2011.
* University Promotion and Tenure Advisory Committee (UPTAC), Univ. of Utah, 2003-2006.
* Scientific Advisory Group, Genetics of Addiction Project, Genetic Science Learning Center, Univ. of Utah, 2001-2004.
* Admissions Committee, Interdepartmental Neuroscience Program, Univ. of Utah. Member, 1995-2006.
* Library Policy Advisory Committee, Univ. of Utah. Member, 2001-2004.
* Academic Senate, Univ. of Utah. Member, 1999-2002.
* Personnel and Elections Committee, Univ. of Utah. Member, 1999-2002.
* Institutional Animal Care and Use Committee, Univ. of Utah. Member, 1996-1999.
* Women in Medicine Planning Committee, Health Sciences Center, Univ. of Utah. Member, 1996.

***National / International***

* Chair, ZRG1 F02A-A 20 (Fellowships: Behavioral Neuroscience), Center for Scientific Review, NIH, 2021-2023
* External Advisory Committee, University of Alabama at Birmingham Training Program in Neurodegeneration (T32NS095775), 2021-present.
* External Advisory Committee, University of South Dakota’s Center for Brain and Behavior Research, 2020-present
* Manuscript reviewer for numerous journals including: *Addiction Biology, Brain Research, European Journal of Neuroscience, Journal of Neuroscience, Journal of Neuroscience Research, Journal of Pharmacology and Experimental Therapeutics, Neuropsychopharmacology, Neuroscience, Neuroscience Letters, Neurotoxicity Research, Psychopharmacology, The International Journal of Neuropsychopharmacology.*
* Editorial Board, *Neurotoxicity Research*, 1998-present.
* *Ad hoc* grant reviewer, Center for Scientific Review, NIH, ZRG1 F02A-A 20 (Fellowships: Behavioral Neuroscience),

2012-2022; 2-3 panels/year.

Co-chair: 2020-2021

* *Ad hoc* grant reviewer, Center for Scientific Review, NIH 2022/01 ZDA1 SKM-D (01) S (NIDA AND NIAAA Institutional Research Training Grant (T32) Review Panel), November 10-12, 2021.
* *Ad hoc* grant reviewer, Center for Scientific Review, NIH, 2021/01 ZDA1 IXR-Q (06)S (Special Emphasis Panel for Exploiting Genome or Epigenome Editing to Functionally Validate Genes or Variants Involved in Substance Use Disorders (R21/R33 Clinical Trial Not Allowed)*)*.
* *Ad hoc* grant reviewer, Center for Scientific Review, NIH 2020/05 ZRG1 IFCN-C (02) M (Special Emphasis Panel: Motivated Behavior, Alcohol and Heavy Metals).
* Planning Committee, “Engaging the Next-Gen Research Workforce: 2019 Research Symposium,” AACP INvolve 2019 meeting
* Officer, Board of Trustees, The Skaggs Institute for Research, 2014-2016
* Invited Member, Society for Neuroscience Online Member Programs Steering Committee, 2015, declined due to Interim Dean responsibilities.
* *Ad Hoc* grant reviewer, Special Emphasis Panel/Scientific Review Group NRSA Institutional Research Training Program (T32) Programs, 2016
* *Ad Hoc* grant reviewer, Special Emphasis Panel/Scientific Review Group 2016/10 BRLE, 2016
* External Advisory Committee, PhD Training Program in Neuroscience, Michigan State University, 2014-2016.
* *Ad Hoc* grant reviewer, CSR IAM meeting 2012/01 ZRG1 IFCN-H (02) M and NIDA CEBRA Review, 2011-2016.
* Member, Society for Neuroscience Committee on Neuroscience Departments and Programs (CNDP), 2011-2014.
* Regular member, Neurobiology of Motivated Behavior Study Section (NMB), Center for Scientific Review, NIH, 2007-2011.
* Local Organizing Committee, 10th Triennial Meeting of the International Basal Ganglia Society, June 20-24, 2010.
* Local Organizing Committee, National Meeting of Directors of Graduate Training in Pharmacology, Salt Lake City, UT, July 25-28, 2007.
* Facilities Chair, Winter Conference on Brain Research, 2006-2008.
* Executive Committee, Winter Conference on Brain Research, 2006-2008.
* *Ad hoc* grant reviewer, Center for Scientific Review, NIH, Neurobiology of Motivated Behavior (NMB), 2006.
* *Ad hoc* grant reviewer, Center for Scientific Review, NIH, ZRG1 IFCN-A(02) (Member Conflict: Psychopharmacology), 2006.
* *Ad Hoc* grant reviewer, CSR/NIH, ZRG1 MDCN-K (90) Special Emphasis Panel, (Neurogenetics and Neurogenomics), 2006.
* *Ad hoc* grant reviewer, Center for Scientific Review, NIH, ZRG1 F02A-A 20 (Fellowships: Behavioral Neuroscience), 2006.
* *Ad Hoc* grant reviewer, CSR/NIH, ZRG1 MDCN-K (90) Special Emphasis Panel, (Neurogenetics and Neurogenomics), 2005.
* *Ad Hoc* grant reviewer, NSF, RIG-CAA (Research Initiation Grants /Career Advancement Awards), 2005.
* Facilities Chair-Elect, Winter Conference on Brain Research, 2004-2005
* *Ad hoc* grant reviewer, CSR/NINDS, ZNS1 SRB-M(10) Udall Centers of Excellence in Parkinson’s Disease grant reviews, 2004
* *Ad hoc* grant reviewer, CSR, NIH, ZRG1 FO2A(20) IFCN Fellowship Review Panel, 2003-2006.
* *Ad hoc* grant reviewer, NINDS Special Emphasis Panel ZNS1 SRB-H, 2002.
* Program Committee, Winter Conference on Brain Research, 2001-2004.
* *Ad hoc* grant reviewer, Center for Scientific Review, NIH, IFCN-1, 2000-2001.
* Society for Neuroscience, Social Issues Committee, 2000-2002.
* Organizer, Town Meeting on the Neurobiology of Learning Disabilities, sponsored by the Winter Conference on Brain Research, Breckenridge, CO, January, 2000.
* *Ad hoc* grant reviewer, NIMH Special Emphasis Panel ZMH1-S(01), 1999.
* Member, Board of Directors, Winter Conference on Brain Research, 1999-2002.
* Organizer, Town Meeting on the Neurobiology of Mental Illness, sponsored by the Winter Conference on Brain Research, Aspen, CO, January, 1999.
* Organizer, Town Meeting on Drug Abuse, sponsored by the Winter Conference on Brain Research, Salt Lake City, UT, January, 1998.
* *Ad hoc* grant reviewer, Dept. of Defense (Army) Neurotoxin Exposure Treatment Research Program, 1997, 2002, 2004.
* *Ad hoc* grant reviewer, Veterans’ Affairs Medical Service, 1996

***Community Service***

* Board of Directors, The Gifted Music School, Salt Lake City, UT 2016-2019
* Judge, Utah Brain Bee, various years
* Volunteer for school science outreach and other Brain Awareness Week and Red Ribbon Week activities at Salt Lake City area schools, the Salt Lake Public Library, and The Leonardo, various years.
* Interfaith Hospitality Network / Family Promise volunteer helping to house and provide for homeless families in area churches in Salt Lake City. Provide food and serve as overnight and breakfast host for families.

**Student Committees**

***Postdoctoral advisor:***

Dr. Shashank Tandon, 2014-2021; Medical Writer 2 at MediTech Media (part of Nucleus Global).

Dr. Teri Furlong, 2014-2016, Lecturer, University of New South Wales, Australia.

Dr. Ashley Fricks-Gleason, 2010-2013, Associate Professor (Tenured), Dept. of Psychology and Neuroscience, Director of Undergraduate Research, Regis University, Denver CO

Dr. Jong-Hyun Son, 2009-2013, Assistant Professor (Tenure line), Dept. of Biology, University of Scranton, Scranton PA.

Dr. Ping Chen, 2008-2009, Attorney, Ping Chen Professional Corporation, Ottowa, Ontario, CAN

Dr. Roy Smeal, 2003-2007, Research Scientist, Sustainability Analyst, Climate Change Analyst, Energy Analyst.

Dr. K. Ashley Horner, 2002-2006, Professor (Tenured), Vice-Chair, Dept. of Biomedical Sciences, Mercer University School of Medicine, Columbus, GA.

***Doctoral Dissertation Advisor:***

Kaliana Veros (co-mentor), 2020-present, Program in Neuroscience, Univ. of Utah.

Danielle Giangrasso, 2015-2021, Program in Neuroscience, Univ. of Utah. Behavioral Research Scientist, APOPO, Morogoro, Tanzania.

Anne Gibson, 2015-2021, Program in Neuroscience, Univ. of Utah. Assistant Professor of Neuroscience, Westminster College, Salt Lake City, UT.

Elissa Pastuzyn, 2009-8/2013, Program in Neuroscience, Univ. of Utah. Director of Biology, Recursion Pharmaceuticals, Salt Lake City, UT.

Danielle Friend, 2009-5/2013, Director, Regulatory Policy and Intelligence at The Janssen Pharmaceutical Companies of Johnson & Johnson.

Melissa Barker, 2009-3/2013, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Research Associate Professor, Dept. of Pharmacy, University of Washington

Matt Riedy, 2004-2009, Program in Neuroscience, Univ. of Utah.

Principal Investigator at U.S. Space and Naval Warfare (SPAWAR) Systems Center Atlantic, Charleston, SC.

Renee (Gaspar) Gentzel, 2004-2006, Program in Neuroscience, Univ. of Utah.

Graduated with MPhil in 2006. Histology Lead at Spark Therapeutics, Inc.

David Daberkow, 2001-2006, Program in Neuroscience, Univ. of Utah.

Associate Professor (Tenured), Dept. of Biology, Eastern Washington University.

David E. Chapman, 1998-2003, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Field Medical Director, Pfizer.

David H. Adams, 1998-2002, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Senior Director, Product Development Immunology at Eli Lilly and Company

Amy C. Adams, 1996-2000, Program in Neuroscience, Univ. of Utah. Education Coordinator Social Justice Committee, St. Mark's United Methodist Church, Carmel, IN

Anindita Ganguly, 1995-2000, Dept. of Pharmacology and Toxicology, Univ. of Utah. Associate Director, Global Medical Communications, Neuroscience, Takeda

***Postdoctoral Mentoring Committees***

Iris Titos, 2022-present, Molecular Medicine Program

Michael Conoscenti, 2021-present, Dept. of Neurobiology

***Qualifying Examination / Doctoral Dissertation Committees***

Pearl Cummins, 2023-present, qualifying exam committee member and dissertation committee member, Program in Neuroscience, Univ. of Utah

Donzelle Taylor, 2022-present, qualifying exam committee member and dissertation committee member, Program in Neuroscience, Univ. of Utah

Jordan Grammer, 2021-present, qualifying exam committee member and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Daniel Hansen, 2020-present, qualifying exam and dissertation committee member, Dept. of Medicinal Chemistry, Univ. of Utah.

Rachel Gatlin, 2020-present, qualifying exam committee member and dissertation committee member, NRSA Co-Sponsor, Program in Neuroscience, Univ. of Utah.

Charlotte Magee, 2016-2021, qualifying exam committee member and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Nancy Williams, 2015-2020, qualifying exam committee member and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Heidi Febinger, 2015-2019, qualifying exam committee member and dissertation committee co-mentor, MPhil, Program in Neuroscience, Univ. of Utah.

Shasha Luks-Morgan, 2015-2020, qualifying exam committee member and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Joshua Barrios, 2015-2016, qualifying exam committee member, Program in Neuroscience, Univ. of Utah.

Anindita Roy, 2015-2020, qualifying exam and dissertation committee member, Dept. of Medicinal Chemistry, Univ. of Utah.

Tiffanie Dahl, 2013-2015, qualifying exam committee member, Program in Neuroscience, Univ. of Utah.

Daniel Epstein, 2013-2016, qualifying exam committee member and co-mentor, Program in Neuroscience, Univ. of Utah.

Erica Larsen, 2014, qualifying exam committee member, Higher Education Teaching Specialist Certification Program Mentor, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Chandni Sheth, 2011-2016, qualifying exam committee member and co-mentor, Program in Neuroscience, Univ. of Utah.

Trevor P.L. Fidler, 2011-2016, qualifying exam and dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Krystal Minear, 2011-2012, qualifying exam committee member, Dept. of Biology, Univ. of Utah.

Andrew Kraft Haack, 2011-2015, qualifying exam and co-mentor, Program in Neuroscience, Univ. of Utah.

Lingyan Xing, 2010-2015, qualifying exam and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Andrea Leigh Schwager, 2010-2013, qualifying exam and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Christopher Howard, 2009-2013, qualifying exam and dissertation committee member, Dept. of Biological Sciences, *Illinois State University*.

Patrick Gordon, 2009-2010, qualifying exam committee member, Program in Neuroscience, Univ. of Utah.

Adam McPherson, 2009-2010, qualifying exam committee member, Program in Neuroscience, Univ. of Utah.

Christina Rossi, 2009-2014, qualifying exam and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Matthew Hearing, 2008-2010, Dissertation committee member, Dept. of Neurosciences, *Medical University of South Carolina*

Vernon Twede, 2008-2013, qualifying exam and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Sean Patrick Flynn, 2008-2012, qualifying exam and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Andrea Brushfield Morris, 2008-2011, qualifying exam and dissertation committee member, Dept. of Psychology, Univ. of Utah.

John Arik Hone, 2007-2012, qualifying exam and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Karla Mark, 2007, Dept. of Pharmacology, *Boston University School of Medicine*, External examiner on PhD dissertation defense, February 16, 2007.

Katherine Zukor, 2006-2010, qualifying exam and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Purba Marik, 2004, thesis committee, Dept. of Pharmacology and Toxicology, Univ. of Utah.

David Vago, 2003-2005, qualifying exam and dissertation committee member, Dept. of Psychology, Univ. of Utah.

Jason Rogers, 2003-2005, qualifying exam and dissertation committee member, Dept. of Psychology, Univ. of Utah.

Jim Otto, 2002-2006, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Heidi Bartholomeusz, 2001, qualifying exam and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Mary Logan, 2000-2005, qualifying exam and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Peter West, 2000-2004, qualifying exam / dissertation committee member, Program in Neuroscience, Univ. of Utah.

Inah Lee, 2000-2002, qualifying exam and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Bryan Klein, 1999-2002, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Matt Barton, 1999-2002, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Tim Simeone, 1999-2002, dissertation committee member, Program in Neuroscience, Univ. of Utah.

Paul Gilbert, 1999-2002, dissertation committee member, Dept. of Psychology, Univ. of Utah.

Joseph Yeh, 1997-2002, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Wayne Pratt, 1997-2002, qualifying exam / dissertation committee member, Dept. of Psychology, Univ. of Utah.

Deanna Hubbard, 1997-2001, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Stefan Leutgeb, 1997-2000, qualifying exam and dissertation committee member, Program in Neuroscience, Univ. of Utah.

Ryan Metzger, 1997-2000, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Heather Haughey, 1997-2000, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Jeff Brown, 1997-1998, laboratory rotation mentor. 1999-present, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Scot C. Westwood, 1997-1999, laboratory rotation mentor. 1999-2001, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Jennifer Kulak, 1996-2000, qualifying exam and dissertation committee member, Dept. of Biology, Univ. of Utah.

Shana Skradski, 1996-2000, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Gricelly Vargas, 1996-1999, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Jerry Kokoshka, 1996-1998, dissertation committee member, Dept. of Pharmacology and Toxicology, Univ. of Utah.

***Research Rotation Mentor***

Alina Guo, 2020, Biological Chemistry Program, Univ. of Utah

Rachel Gatlin, 2020, Program in Neuroscience, Univ. of Utah

Jessica Szczesny Grey, 2016, MD/PhD student, School of Medicine, Univ. of Utah

Kevin Lawrence, 2016, PSURF student, College of Pharmacy, Univ. of Utah

Jennifer Cheng, 2016, Program in Neuroscience, Univ. of Utah

Erica Vander Mause, 2015, Biological Chemistry Program, Univ. of Utah

Maria Mercedes Disotuar, 2014, Biological Chemistry Program, Univ. of Utah

Anne Gibson, 2014, Program in Neuroscience, Univ. of Utah

Danielle Giangrasso, 2014, Program in Neuroscience, Univ. of Utah

Jaycie Loewen, 2012, Program in Neuroscience, University of Utah

Sarah Redmon, 2012, Program in Neuroscience, University of Utah

Chandni Sheth, 2011, Dept. of Pharmacology and Pharmacology, University of Utah

Elissa Pastuzyn, 2008, Program in Neuroscience, Univ. of Utah

Danielle Friend, 2008, Program in Neuroscience, Univ. of Utah

Melissa Barker, 2008, Dept. of Pharmacology and Toxicology, Univ. of Utah

Killian Zimmerman, 2008, Dept. of Pharmacology and Toxicology, Univ. of Utah

Jonathan Constance, 2007, Dept. of Pharmacology and Toxicology, Univ. of Utah

Eli Iacob, 2007, Program in Neuroscience, Univ. of Utah

Andrea Schwager, 2007, Program in Neuroscience, Univ. of Utah

Michael Rog, 2007, Dept. of Pharmacology and Toxicology, Univ. of Utah

Sean Flynn, 2007, Program in Neuroscience, Univ. of Utah

Gretchen Carr, 2006, Program in Neuroscience, Univ. of Utah

Andrew Zayachkivsky, 2006, Program in Neuroscience, Univ. of Utah

Cameron Metcalf, 2005, Dept. of Pharmacology and Toxicology, Univ. of Utah

Matthew Reidy, 2003, Program in Neuroscience, Univ. of Utah

Kathleen Davis, 2003, Program in Neuroscience, Univ. of Utah

Renee Esser, 2003, Program in Neuroscience, Univ. of Utah

Ashwini Sabnis, 2003, Dept. of Pharmacology and Toxicology, Univ. of Utah

Prachee Avasthi, 2001, Program in Neuroscience, Univ. of Utah.

David Daberkow, 2001, Program in Neuroscience, Univ. of Utah.

Kamisha Johnson-Davis, 2001-2002, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Jannine Truong, 2000-2001, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Aaron Rowland, 1999-2000, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Jeff Brown, 1997-1998, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Scot Westwood, 1997-1999, Dept. of Pharmacology and Toxicology, Univ. of Utah.

Peter West, 1997, Program in Neuroscience, Univ. of Utah .

Michael Brekke, 1996, Program in Neuroscience, Univ. of Utah.

Robert Renden, 1996, Program in Neuroscience, Univ. of Utah.

***Visiting Scholars***

Benjamin Przybylo, Visiting Pharmacy Student, Philipps-Universität Marburg, Germany, GPEN Program, April-September, 2015.

Katharina Oldenburger, Visiting Pharmacy Student/Master's Thesis candidate, Philipps-Universität Marburg, Germany, GPEN Program, May-November, 2011.

Morten Thomsen, 2008, Department of Pharmacology and Neuroscience, University of Copenhagen, Denmark (visiting student)

***Clinical Fellow Committees***

Michelle Schober, M.D., Dept. of Pediatrics (Children’s Health Research Center Fellow) Member, Scholarly Oversight Committee, 2004-2010.

***PharmD Students***

Benjamin Elggren, University of Utah College of Pharmacy, PSURF and PharmD Capstone Project Mentor, 2021-present

Jacob Earl, University of Utah College of Pharmacy, PharmD Capstone Project Mentor, 2021-2023

Zachary Merrill, University of Utah College of Pharmacy, PharmD Capstone Project Mentor, 2020-2022, Pharmacist, Lehi UT

Kuang-Yie Vo, University of Utah College of Pharmacy, PharmD Capstone Project Mentor, 2018-2020, Pharmacist, Omnicare (A CVS Health Company)

McKenna Oney, University of Utah College of Pharmacy, PharmD Capstone Project Mentor, 2018-2020

Colton Rice, University of Utah College of Pharmacy, PharmD Capstone Project Mentor, 2018-2020, Staff Pharmacist, Associated Food Stores.

Gregory Haws, University of Utah College of Pharmacy, PharmD Capstone Project Mentor, 2018-2020, Pharmacist, St. Luke's Health System, Twin Falls, ID.

Kaitlyn Brown, PharmD (Wlkes University School of Pharmacy), ASPET Summer Undergraduate Research Fellow, 2013. Currently, Clinical Managing Director, American Association of Poison Control Centers (AAPCC).

***Undergraduate Students***

Caroline Maude Durham (Columbia/Juilliard), summer research, 2021

Joshua Wooley (Emory University), summer research project, 2021. Research Analyst, Anticonvulsant Drug Development Program, University of Utah.

Benjamin Ciener (Oberlin College), summer research project, 2020-2021. Technician B, New York Brain Bank, Columbia University Irving Medical Center

Monica Murray (Regis University), ASPET Summer Undergraduate Research Fellow, 2015. Currently, Regulatory Affairs Coordinator, University of Colorado Anschutz Medical Campus

Megan Schnedar (University of Utah), ACCESS Program Fellow, 2014-2015. BS in Physics, Univ. of Utah 2018. Software Engineer, Bolt.

Karlee Stokes (University of Utah), ASPET Summer Undergraduate Research Fellow, 2014. BS in Chemistry, University of Utah 2018. Graduate student, International Security, University of Bristol.

Kamela Ganesh (University of Virginia), Summer Undergraduate Research Fellow, BA in Biology from UVA in 2015; MS in Social Work University of Utah, 2020. Staff Clinical Social Worker, University of Utah Counseling Center.

Ashtyn Smith (Westminster College), Senior Honors Thesis, 2014-2015.Currently, doctoral student in Neuroscience, University of Virginia.

Brandon Grant (Texas A&M University), NIDA Summer Undergraduate Fellow, 2013. Assistant Community Director, Silver Tree Residential LLC.

Xue Lei (Peking University), Bioscience Summer Undergraduate Fellow, 2013. Doctoral Student, Industrial and Organizational Behavior, George Mason University.

Lee Leavitt (University of Utah), Dept of Biology, Neuroscience Undergraduate Research Program Fellow, 2012-2013. Software Engineer II, Myriad Genetics

Aaron Carver (University of Utah), Dept. of Biology, 2012. VP of Operations, Lightstream - Cloud & Technology Solutions, Clearfield, UT

Crystal Chau (University of Utah), ACCESS Program Fellow, Summer, 2012. Medical Laboratory Scientist, ARUP Laboratories, Salt Lake City, UT

James Kuhn (Westminster College), ASPET Summer Undergraduate Research Fellow, 2011.

Christine Garcia (Westminster College), ASPET Summer Undergraduate Research Fellow, 2009. Advisor for senior honors thesis, 2009-2010; Was Study Director, Nelson Laboratories. Currently, home raising tomorrow’s scientists!

Ariel Burns (Kansas State University), ASPET Summer Undergraduate Research Fellow, 2008. Ph D Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center (2015), Associate Lab Director, The Great Plains Laboratory, KS

Mikaela Martineau (Larson) (Smith College), ASPET Summer Undergraduate Research Fellow, Summer, 2006; Univ. of Utah Undergraduate Research Opportunity Program (UROP) Fellow, Fall, 2006; Associate Director of Research, Huntsman Cancer Institute, University of Utah.

John Ryan Rigby (Westminster College), ASPET Summer Undergraduate Research Fellow, 2005; Currently, Electronics Engineer, Hill Air Force Base.

Trever Rushton (Univ. of Utah) ASPET Summer Undergraduate Research Fellow, 2005; Sales, Industrial Supply Company, Salt Lake City, UT

Jonathan Newman (Westminster College), Research Internship and ASPET Summer Undergraduate Research Fellow, 2003; PharmD, University of Montana, 2007. Supervisor, Specialty Pharmacy, Phoenix Children’s Hospital, AZ.

Nathan Poulsen (Westminster College), Research Internship and ASPET Summer Undergraduate Research Fellow, 2002; MA in Pharmacology Columbia University 2005; MBA Cornell University School of Management, 2006; JD Fordham University School of Law, 2011; Chief Legal Officer (Interim) COMPASS Pathways, New York

Kelly Reihl (Univ. of Utah), ASPET Summer Undergraduate Research Fellow, 2001. Senior Research Associate, Recursion, UT.

***High School Students***

Tynli Moore, Juan Diego Catholic High School Summer Science Internship in College of Pharmacy, Univ. of Utah, 2020. Student, Utah State University

Jasmine Aguilar Lopez, Juan Diego Catholic High School Summer Science Internship in College of Pharmacy, Univ. of Utah, 2020. Honors Student, UofU

Elainna Ng, Juan Diego Catholic High School Summer Science Internship in College of Pharmacy, Univ. of Utah, 2016. Graduate, UC-Berkeley 2022. Full-time Research Associate, CA.

Patrick Dowd, The Waterford School Summer Science Internship in College of Pharmacy, Univ. of Utah, 2015. United States Naval Academy graduate (2020). Lieutenant (junior Grade), US Navy.

Olivia (Cella) Edwards, Juan Diego Catholic High School Summer Science Internship in College of Pharmacy, Univ. of Utah, 2012. Embedded software engineer, SmartRent, CO

Crystal Chau, Juan Diego Catholic High School Summer Science Internship in College of Pharmacy, Univ. of Utah, 2011. BS, Medical Laboratory Science, University of Utah (2016). Medical Laboratory Scientist, ARUP Laboratories, Salt Lake City, UT

Spencer Durfey, Juan Diego Catholic High School Summer Science Internship in College of Pharmacy, Univ. of Utah, 2009.

**Research Support**

***Active***

07/15/20-07/14/25 T32 NS115723 (Keefe, KA, PI) “Training in the Development of Novel Interventions for the Treatment of Neurological and Neurobehavioral Disorders,” NINDS/NIH, $1,044,304 total direct costs.

***Pending***

R01 DA056587 (Barrios, Keefe, Dudley MPI) “Illudalic acid analogs as chemical probes for PTPRD activity in substance use disorders” NIDA/NIH, 1,999,354.00 total direct costs. 07/01/22-06/30/26. Scored 35th percentile. To be resubmitted.

***Previous***

04/15/20-03/31/22 R21 DA049530 (Bortolato/Peterson MPI; Keefe KA Collaborator) “Exploring steroid-based therapies to reduce opioid abuse,” NIDA/NIH, $275,000 total direct costs.

02/01/19-01/31/22 R21 DA046600 (Keefe, KA & Wilcox, KS, MPI) “Astrocyte-mediated glutamate transport in dorsal striatum associated with habitual cocaine seeking,” NIDA/NIH $377,438.

10/01/2018-09/30/2019 HHSN271201600048C (Wilcox, KW, PI: Keefe, KA, Co-I) “Screening of Investigational Compounds to Treat, Modify or Prevent Epilepsy for the NINDS Epilepsy Therapy Screening Program (ETSP): Addendum (Track three): Evaluating investigational compounds as non-addictive analgesics. NIH/NINDS $77,129 (Keefe, KA Project direct costs).

04/01/2015 - 03/31/2018 R21DA037736 (Keefe, K.A. PI) "Exploring nucleocytoplasmic IEG mRNA export in striatal neuron subpopulations," NIDA/NIH $372,500.

03/01/2014 - 02/28/2018 R01MH094870 (Keefe, K.A., PI) "Opioid modulation of neural encoding of motivation and reward," NIMH/NIH $1,117,500.

2013, Univ. of Utah Research Instrumentation Fund Grant (Keefe, K.A., PI) "HPLC System with Electrochemical Detector for Analysis of Central Neurotransmitters," $38,000.

2012-2015 R21DA031408 (Kesner, RP & Keefe, KA, MPI) "Hippocampus and relapse associated with drug addiction," NIDA/NIH $410,670.

07/01/12-06/30/2016 T32NS076067 (Keefe, K.A. PI) "Predoctoral Interdepartmental Training Program in Neuroscience" NINDS/NIH $859,204.

2011-2014, F32DA032502 (Pastuzyn, PI; Keefe, Sponsor) "Arc, Phasic Dopamine, and Methamphetamine-Induced Striatal Learning Deficits" pre-doctoral NRSA Training Fellowship, NIDA/NIH, $70,359.

2011-2013 F32DA031523 (Fricks-Gleason, PI; Keefe, KA Sponsor) "nNOS-containing striatal interneurons and methamphetamine-induced neurotoxicity"post-doctoral NRSA Training Fellowship, NIDA/NIH $117,161.

2008-2014 R01DA024036 (Keefe, K.A. PI) "Long-term consequences of methamphetamine toxicity," NIDA/NIH $1,657,282.

2007-2010 R21DA022447 (Keefe, K.A., PI) “Neural Substrates of Stimulus-Induced Drug Seeking”, NIDA/NIH $408,613.

2002-2007 R01NS041673 (Keefe, K.A., PI) “Regulation of striatal neurons by NMDA receptor subtypes”, NINDS/NIH $1,406,428.

2001-2012 PO1DA13367 (Keefe, K.A., PI, Project 3). “Differential Effects of Methamphetamine and Cocaine”; NIDA/NIH, $1,654,599.

2004-2005 (Keefe, K.A., PI) “Cued Drug-seeking Behavior and Synaptic Plasticity in Striatal Efferent Neurons”, Univ. of Utah Research Foundation. $29,000.

2000-2003 R01DA09407 (Keefe, K.A., PI) “Role of Neurotensin in Methamphetamine Effects”, NIH/NIDA, $633,117.

1999-2000 (Wilcox, K.S., PI; Keefe, K.A., Co-I) “Functional differences in NMDA receptors of spiny efferent neurons in the medial vs. lateral striatum”, Univ. of Utah, College of Pharmacy, $3,950.

1998-2000 R43NS37995 (Layer, R.T., PI; Keefe, K.A. Co-I) Conantokins for the Treatment of Parkinson’s Disease $99,700.

1998-1999, “Anti-Parkinsonian potential of NPS compounds”, $3,402.

1997-1998, “Anti-Parkinsonian potential of conantokins”, Cognetix, Inc., $11,021.

1996-2002 R29NS35579 (Keefe, K.A., PI) “Regulation of striatal neurons by NMDA receptor subtypes”, NIH/NINDS, $518,486.

1996-1997, “Effects of dopamine-depleting brain lesions on NMDA receptor subunit expression”, Univ. of Utah College of Pharmacy Research Support Grant, $4,750.

1996-1997, “Effects of NMDA receptor antagonists on the function of striatal efferent neurons”, Univ. of Utah Research Grant, $5,800.

**Invited Presentations**

1. Scranton Brain and Behavior Conference, Invited Keynote Speaker, “"Consequences of methamphetamine-induced neurotoxicity on basal ganglia-mediated learning and memory processes, Scranton, PA March 5, 2022.”
2. 2019 Addictions Update: Science, Policy & Treatment, Invited speaker, “’Choosing’ To Use: Insights Into The Neurobiology Of Behavioral Choice,” Salt Lake City, UT June 13-14, 2019.
3. International Behavioral Neuroscience Society meeting, Invited speaker in symposium, "Basic and Translational Aspects of Drug Addiction," British Columbia, Canada, June, 2015.
4. Dept. of Biology, Eastern Washington University, "Consequences of methamphetamine-induced neurotoxicity on molecular and behavioral functions of the basal ganglia," January 16, 2015.
5. American Association of Colleges of Pharmacy, participant in session entitled, "Succession Planning in Academic Pharmacy," AACP Annual Meeting, July 29, 2014.
6. Dept. of Molecular Pharmacology, Rosalind Franklin University of Medicine and Science. Invited seminar speaker, "What a METH:  Long-term consequences of METH-induced partial DA loss on phasic DA neurotransmission and basal ganglia-mediated learning and memory processes", Sept. 27, 2012.
7. Dept. of Neurosciences, College of Medicine, The University of Toledo. Invited seminar speaker, "What a METH:  Long-term consequences of METH-induced partial DA loss on phasic DA neurotransmission and basal ganglia-mediated learning and memory processes", August 15, 2012.
8. Dept. of Physiology and Developmental Biology, Brigham Young University. Invited seminar speaker, "Consequences of Methamphetamine-Induced Neurotoxicity on Molecular and Behavioral Functions of the Basal Ganglia". Sept. 15, 2011.
9. 2011 Gordon Research Conference on Catecholamines, Invited speaker in session on Catecholamines in Neuropsychiatric/Neurological Disorders. August 7-12, 2011.
10. 44th Winter Conference on Brain Research, invited presenter in session entitled "Becoming addicted: The transition to dorsal striatum mediated drug-seeking behavior ", Keystone, CO, January 22-27, 2011.
11. Translational Research in Methamphetamine Addiction meeting. Session Chair (Pharmacology and Toxicology of Methamphetamine) and invited presentation entitled "Methamphetamine and basal ganglia dysregulation". July 19-21, 2010, Chico Hot Springs and Day Spa, Pray, Montana.
12. Dept. of Pharmacology and Toxicology Seminar Series, University of Utah, "Long-term consequences of methamphetamine-induced neurotoxicity on cellular, systems, and behavioral function of the basal ganglia", March 15, 2010.
13. 2010 Society of Toxicology Meeting, "How to Identify your skills and passions". Invited presentation in panel entitled "Where do I go now? Rational career development planning for early-career scientists". March 9, Salt Lake City, UT.
14. 2009 National Meeting of Directors of Graduate Study in Pharmacology, “Selecting for Success in Graduate School and Beyond”, April 22-24, New Orleans, LA.
15. 42nd Winter Conference on Brain Research. Organizer and presenter in workshop entitled "One Model Doesn’t Fit All—Partial DA Loss and Striatal Function", Copper Mtn, CO, January 24-30, 2009.
16. Neurology Residents Lecture Series, University of Utah, “Introduction to the Autonomic Nervous System I and II”, December 11 and 18, 2008.
17. 2008 Bioscience Symposium, University of Utah, “Long-term consequences of methamphetamine-induced neurotoxicity on cellular, systems, and behavioral function of the dorsal striatum", September 23, 2008.
18. Dept. of Neuroscience, Medical University of South Carolina, “Long-term consequences of methamphetamine-induced neurotoxicity on cellular, systems, and behavioral function of the dorsal striatum", May 1, 2008.
19. 23rd Annual Spring Meeting, Center for Neurobiology of Learning and Memory, University of California, Irvine. "Long-term consequences of methamphetamine-induced neurotoxicity on cellular, systems, and behavioral function of the dorsal striatum", April 17-18, 2008
20. 41st Winter Conference on Brain Research, invited presenter in scientific panel entitled "Learning and Plasticity: What’s Arc Got To Do with It?", Snowbird, UT, January 26-February 1, 2008.
21. 40th Winter Conference on Brain Research, invited presenter in scientific panel entitled “Skating on Thin “Ice”: Neurobiological and Behavioral Consequences of High Dose Methamphetamine.” Snowmass, CO, January, 2007.
22. 40th Winter Conference on Brain Research, organizer and presenter in scientific panel entitled “The glass ski boot: Fitting thalamic afferents into striatal anatomy and function.” Snowmass, CO, January, 2007.
23. Dept. of Molecular Pharmacology, Finch College of Health Sciences, The Chicago Medical School, “Long-term consequences of methamphetamine toxicity on basal ganglia function”, April, 2004.
24. US-Spain Binational Workshop on Drug Abuse and Addiction, National Institute on Drug Abuse (USA) and National Institute of Drug Research and Training (Spain). “Psychostimulant effects on basal ganglia function”. October 22-24, 2003, Washington, D.C..
25. Program in Neuroscience, University of Utah, “NMDA receptor diversity in the striatum: Subtypes and interactions”. October 7, 2003.
26. Dept. of Psychology, University of Utah, NMDA receptor diversity in the striatum: Subtypes and interactions. April 4, 2003.
27. 36th Winter Conference on Brain Research, Organizer and presenter in workshop entitled “Just because you believe it, doesn’t make it so: Indices of neuronal function”. Snowbird, UT January, 2003.
28. Professional Skills Workshop, Society for Neuroscience Annual Meeting. "Getting Into Graduate School", San Diego, CA, Nov. 9, 2001; Orlando Florida, 2002.
29. College on Problems of Drug Dependence, Neuropeptidergic responses to psychostimulant drugs of abuse: Strategies for drug development: Neuropeptide mRNA Responses to Psychostimulants, Quebec City, Canada, June, 2002.
30. 35th Winter Conference on Brain Research, Organizer and presenter on panel entitled "2002 Census Report on NMDA Receptor Subtypes in Striatum: More Than One", Snowmass, CO Jan 26-Feb. 2, 2002.
31. 9th International Conference on *In Vivo* Methods: Monitoring Molecules in Neuroscience. Invited speaker: "The theology of amino acid microdialysis: The mystery of origin and meaning", Dublin, Ireland, June 16-19, 2001.
32. Professional Skills Workshop, Society for Neuroscience Annual Meeting. Invited presenter and ethics discussant, New Orleans, LA, November 4, 2000.
33. University of Pittsburgh Survival Skills and Ethics Program course on Teaching Survival Skills and Ethics to Emerging Researchers. Invited ethics discussant and focus group leader, Vail, CO., June 10-14, 2000.
34. Motivational Neuronal Network Meeting; 'The Role of the Ventral Striatum in Plasticity and Learning', Gene Expression Focus Group invited participant, Seabrook Island Resort, April 15-17, 2000.
35. 8th International Conference on *In Vivo* Methods: Monitoring Molecules in Neuroscience, “Analyzing dopamine regulation of basal ganglia circuitry with in vivo microdialysis", Stony Brook, NY, June 19-23, 1999.
36. Endocrine Society Meeting Career Development Workshop, “Moving On...” (keynote address), San Diego, CA, June 11, 1999.
37. Dept. of Psychology, Univ. of Utah, Cognitive Neuroscience Symposium Series, “Conditional dependence of dopamine-mediated effects in striatal neurons on NMDA receptor activation”, Salt Lake City, UT, Nov. 20, 1998.
38. NPS Pharmaceuticals, Inc., “Conditional Dependence of Dopamine-Mediated Effects in Striatal Neurons on NMDA Receptor Activation”, Salt Lake City, UT, Sept. 27, 1998
39. Intermountain Chapter of the Society for Neuroscience, “Dopamine-Glutamate Interactions in the Regulation of Striatal Efferent Neurons”, Salt Lake City, UT, Oct. 20, 1997.
40. University of Pittsburgh Survival Skills and Ethics Program course on Teaching Survival Skills and Ethics to Emerging Researchers. “Helping Trainees Make the Transition”, Charleston, W.Va., June 7-11, 1997.
41. American Thoracic Society / American Lung Association 1997 International Conference, Post-graduate Course in Basic Science Techniques and Methods in Neurobiology. “Analysis of Neurotransmitters (HPLC, RIA, Radioenzymatic Assays)”, San Francisco, CA, May 17, 1997.
42. Dept. of Neuroscience, University of Pittsburgh, “Regulation of Striatal Neuron Function by Excitatory Afferents”, June 1, 1996.

**PUBLICATIONS (#=undergraduate; \*=graduate student; @=postdoctoral fellow)**

**Book Chapters**

1. Gibson, A.\* and **Keefe, K.A.** Consequences of Neurotoxin-induced Dopamine Loss on Striatal Synaptic Plasticity. In Handbook of Neurotoxicity (R. Kostrzewa, Ed.), Springer, 2021
2. **Keefe, K.A.** and Gibson, A.\* Models of Methamphetamine-induced Neurotoxicity. In Handbook of Neurotoxicity (R. Kostrzewa, Ed.), Springer, 2021
3. **Keefe, K.A.** and Horner, K.A.@ Neurotransmitter Regulation of Striatal Gene Expression (Chapter 30). In Handbook of Basal Ganglia Structure and Function 2e (H. Steiner and K.Y. Tseng, Eds.), Elsevier, Inc., 2017.
4. Garris, P.A. and **Keefe, K.A.** Voltammetric Analysis of Loss and Gain of Dopamine Function (Chapter 13). In Compendium of In Vivo Monitoring in Real-Time Molecular Neuroscience Volume 1: Fundamentals and Applications (G.S. Wilson and A.C. Michael, Eds.), World Scientific Publishing Co., 2015.
5. **Keefe, K.A.** and Horner, K.A.**@** Neurotransmitter Regulation of Basal Ganglia Gene Expression (Chapter 27). In Handbook of Basal Ganglia Structure and Function, a Decade of Progress (H. Steiner and K.Y. Tseng, Eds.), Elsevier, Inc., 2010.
6. **Keefe, K.A.** Sympathomimetic drugs (Chapter 70). In: Remington: The Science and Practice of Pharmacy (A.R. Gennaro, et al., Eds.), Mack Publishing Co., 2000/2003.
7. Zigmond, M.J. and **Keefe, K.A.** 6-Hydroxydopamine as a tool for studying catecholamines in adult animals: Lessons from the neostriatum. In: Highly Selective Neurotoxins: Basic and Clinical Applications (R. Kostrzewa, Ed.), Humana Press, 1997, pp. 75-107.
8. Gerfen, C.R., **Keefe, K.A.**, and Steiner H. D1 and D2 dopamine receptor-mediated gene regulation in the striatum. In: Pharmacological Regulation of Gene Expression in the CNS (K. Merchant, Ed.), CRC Press, Boca Rotan, FL, pp. 3-24, 1996.

**Reviews**

1. Friend, D.M.**\***, Fricks-Gleason, A.N.**@**, and **Keefe, K.A.** Is There A Role for Nitric Oxide in Methamphetamine-Induced Dopamine Terminal Degeneration? Neurotoxicity Research, 25(2):153-156, 2014.

**Research Articles**

1. Giangrasso DM\*+, Veros, K\*+, West PJ, Wilcox KS, **Keefe, KA**. Glutamate dynamics in the dorsolateral striatum of rats with goal-directed and habitual cocaine-seeking behavior. Front. Mol. Neurosci., 11 May 2023 Sec. Neuroplasticity and Development Volume 16 - 2023 | <https://doi.org/10.3389/fnmol.2023.1160157> +Authors contributed equally to this paper.
2. Gibson AS\*, West PJ, **Keefe KA**. Effects of methamphetamine-induced neurotoxicity on striatal long-term potentiation. Psychopharmacology (Berl). 2022 Jan;239(1):93-104. doi: 10.1007/s00213-021-06055-8. Epub 2022 Jan 5. PMID: 34985532; PMCID: PMC8728478.
3. Bosse, GD, Cadeddu, R, Floris, G, Farero, RD, Vigato, E, Lee, SJ, Zhang, T, Gaikwad, NW, **Keefe, KA**, Philips, PEM, Bortolato, M, Peterson, RT. The 5α-reductase inhibitor finasteride reduces opioid self-administration in animal models of opioid use disorder. Journal of Clinical Investigation 2021 May 17;131(10):e143990. doi: 10.1172/JCI143990 PMCID: PMC8121512
4. Gibson, AS\*, **Keefe, KA,** Furlong, TM@ Accelerated habitual learning resulting from L-dopa exposure in rats is prevented by N-acetylcysteine, Pharmacology, Biochemistry, and Behavior 2020 Nov;198:173033. doi: 10.1016/j.pbb.2020.173033.Epub 2020 Sep 2. PMID: 32888972
5. Henchey, C, **Keefe, KA**, Munger, MA, Witt, DM Fostering PharmD Student Research and Quality Improvement with Mentored Projects. American Journal of Pharmaceutical Education, Apr 2020, ajpe7940; DOI: 10.5688/ajpe7940
6. Giangrasso, DM\*, Furlong, TM@, **Keefe, KA** Characterization of striatum-mediated behavior and neurochemistry in the DJ-1 knock-out rat model of Parkinson’s disease. Neurobiology of Disease, 2020, Feb; 134: 104673. PMID: 31734455 DOI:[10.1016/j.nbd.2019.104673](https://doi.org/10.1016/j.nbd.2019.104673)
7. Tandon S**@**, **Keefe KA**, Taha SA. Mu opioid receptor signaling in the nucleus accumbens shell increases responsiveness of satiety-modulated lateral hypothalamus neurons. European Journal of Neuroscience, 2017, Apr 10. doi: 10.1111/ejn.13579. [Epub ahead of print]
8. Sheth, C**\***, Furlong, TM**@**, **Keefe, KA**, Taha, SA. The lateral hypothalamus to lateral habenual projection, but not the ventral pallidum to lateral habenula projection, regulates voluntary ethanol consumption. Behavioral Brain Research, 2017, Apr 18. pii: S0166-4328(16)31308-0. doi: 10.1016/j.bbr.2017.04.029. [Epub ahead of print]
9. Tandon S**@**, **Keefe KA**, Taha SA Excitation of lateral habenula neurons as a neural mechanism underlying ethanol-induced conditioned taste aversion. Journal of Physiology, J Physiol. 2017 Feb 15;595(4):1393-1412. doi: 10.1113/JP272994.
10. Sheth, C**\***, Furlong, TM**@**, **Keefe, KA**, Taha, SA Lesions of the rostromedial tegmental nucleus increase voluntary ethanol consumption and accelerate extinction of ethanol-induced conditioned-taste aversion. Psychopharmacology (Berl), 233(21-22):3737-3749, 2016
11. Kesner, RP, Kirk, RA**#**, Clark, JK, **Keefe, K** Naloxone injections into CA3 disrupt pattern completion associated with relapse from cocaine seeking. Hippocampus, 26(7), 892-898, 2016.
12. Furlong, TM**@**, Leavitt, LS**#**, **Keefe, KA**, Son, J-H**@** Methamphetamine-, d-amphetamine-, and p-chloroamphetamine-induced neurotoxicity differentially effect impulsive responding on the stop-signal task in rats. Neurotoxicity Research, 29(4): 569-582, 2016.
13. Fricks-Gleason, AN**@**, German, CL, Hoonakker, AJ, Friend, DM**\***, Ganesh, KK#, Carver, AS**#**, Hanson, GR, Fleckenstein, AE, **Keefe, KA** An acute, epitope-specific modification in the dopamine transporter associated with methamphetamine-induced neurotoxicity. Synapse, 70(4), 139-146, 2016. *\*Cover Article\**
14. Robinson JD**\***, Howard CD**\***, Pastuzyn ED**\***, Byers DL, **Keefe KA**, Garris PA Methamphetamine-induced neurotoxicity disrupts pharmacologically evoked dopamine transients in the dorsomedial and dorsolateral striatum. Neurotoxicity Research, 26(2):152-167, 2014.
15. Pastuzyn ED**\*** and **Keefe, KA** Changes in neural circuitry regulating response-reversal learning and Arc-mediated consolidation of learning in rats with methamphetamine-induced partial monoamine loss. Neuropsychopharmacology, 39(4):963-972, 2014.
16. Friend, DM**\*** and **Keefe, KA** A role for D1 DA receptors in striatal methamphetamine-induced neurotoxicity. Neuroscience Letters, 555:243-247, 2013.
17. Riedy MD**\*** and **Keefe KA** Lack of increased immediate early gene expression in rats reinstating cocaine-seeking behavior to discrete sensory cues. PLoS One, Sep 17;8(9):e72883, 2013.
18. Fricks-Gleason, AN**@**, **Keefe, KA** Evaluating the role of neuronal nitric oxide synthase-containing striatal interneurons in methamphetamine-induced dopamine neurotoxicity. Neurotoxicity Research, 24(2):288-297, 2013.
19. Howard, CD**\***, **Keefe, KA**, Daberkow, DP, Ramsson, E, Garris, PA Methamphetamine-induced neurotoxicity disrupts naturally occurring phasic dopamine signaling. European Journal of Neuroscience, 38(1):2078-2088, 2013.
20. Howard, CD**\***, Pastuzyn, EP**\***, Barker-Haliski, ML**\***, Garris, PA, **Keefe, KA** Phasic-like stimulation of the medial forebrain bundle augments striatal gene expression despite methamphetamine-induced partial dopamine denervation. The Journal of Neurochemistry, 125(4):555-565, 2013.
21. Friend, DM**\*** and **Keefe, KA** Glial reactivity in resistance to methamphetamine-induced neurotoxicity. The Journal of Neurochemistry, 125(4):566-574, 2013.
22. Friend, DM**\***, Son, JH**@**, **Keefe, KA**, Fricks-Gleason, AN**@** Expression and activity of nitric oxide synthase isoforms in methamphetamine-induced striatal dopamine toxicity. The Journal of Pharmacology and Experimental Therapeutics. 344(2):511-521, 2013.
23. Son, J-H**@**, Kuhn, J**#**, and **Keefe, KA** Perseverative behavior in rats with methamphetamine-induced neurotoxicity. Neuropharmacology, 67:95-103, 2013.
24. Barker-Haliski, ML**\***, Oldenberger, K**#**, **Keefe, KA** Impaired Arc/Arg 3.1 mRNA expression in striatal efferent neurons following partial monoamine loss induced by methamphetamine. The Journal of Neurochemistry, 123(5):845-855, 2012.
25. Barker-Haliski, ML**\***, Pastuzyn, ED**\***, **Keefe, KA** Expression of the core exon-junction complex factor eIF4A3 is increased during behavioral activation and striatally mediated learning. Neuroscience, 226:51-61, 2012.
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**Abstracts and Presentations**

Veros, KM\*, West, P, Wilcox, K, and **Keefe** Glutamate dynamics of the tripartite synapse in the dorsolateral striatum of cocaine-seeking rats. Program No. PSTR167.12. 2023 Neuroscience Meeting Planner. Washington, D.C.: Society for Neuroscience, 2023. Online.

Earl, J\*, Gibson, AS\*, and **Keefe, KA** The effects of bupropion on Arc mRNA expression in mice with methamphetamine-induced neurotoxicity. Program No. PSTR430.04. 2023 Neuroscience Meeting Planner. Washington, D.C.: Society for Neuroscience, 2023. Online.

Veros, KM\*, Giangrasso, D\*, West, PJ, Wilcox, KS, and **Keefe, KA** Extended cocaine self-administration may be associated with slower glutamate synaptic transporter currents in astrocytes in the dorsolateral striatum, Neurobiology of Drug Addiction Gordon Research Conference, Aug. 14-19, 2022, Newry, ME.

Gibson, AS\*, West, PJ, **Keefe, KA** Impaired striatal LTP and restoration by bupropion in rats with methamphetamine-induced neurotoxicity, Neurobiology of Drug Addiction Gordon Research Conference, Aug. 14-19, 2022, Newry, ME.

Veros, KM\*, Giangrasso, D\*, West, PJ, Wilcox, KS, and **Keefe, KA** Extended cocaine self-administration may be associated with slower glutamate synaptic transporter currents in astrocytes of the dorsolateral striatum, Basal Ganglia Gordon Research Conference, March 20-25, 2022, Ventura, CA.

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Giangrasso, D\*, Wagner, JN, Timm, MM, Wilcox, KS, and **Keefe, KA** Functional Remodeling of the Triparite Synapse in Cocaine Abuse and Addiction (P081.08), SfN Global Connectome: A Virtual Event, January 11-13, 2021.

Gibson, AS\*, West PJ, and **Keefe, KA.** Effects of methamphetamine-induced dopamine toxicity on striatal plasticity (P286.06)**,** SfN Global Connectome: A Virtual Event, January 11-13, 2021.

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Gibson, AS\* and **Keefe, KA**. L-DOPA treatment for methamphetamine-induced basal ganglia dysfunction. 12th Triennial International Basal Ganglia Society Meeting, Merida Mexico, March 26-30, 2017

Giangrasso, D\*, Furlong, T@, **Keefe, KA.** Characterization of striatally-mediated motor and cognitive function in the DJ-1 KO rat model of Parkinson’s disease (Tu-47C). Dopamine 2016, Vienna, Austria, September 5-8, 2016

Gibson, AS\* and **Keefe, KA**. L-DOPA treatment for methamphetamine-induced basal ganglia dysfunction (We-61C). Dopamine 2016, Vienna, Austria, September 5-8, 2016

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