CURRICULUM VITAE

Torsten Falk, Ph.D.

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EDUCATION

09/84-08/85 **Study of Biology and Chemistry** at the University of Kaiserslautern, Kaiserslautern, Germany

09/85-04/92 **Study of Biology** at the University of Kaiserslautern, Kaiserslautern, Germany

05/92-06/95 **Study of Neurobiology** at the Institute for Cellular Biochemistry and Clinical Neurobiology, UKE, University of Hamburg, Hamburg, Germany

DEGREES

04/1992 **Diplomarbeit (Masters thesis)** "Generation of a temperature sensitive plasmid replication mutant of the Streptomyces plasmid SCP 2*" at the Department of Genetics, University of Kaiserslautern, Kaiserslautern, Germany; Supervisor: Prof. J.A. Cullum

05/1996 **Ph.D. thesis** "Cloning, mRNA distribution and functional characterization of an inwardly rectifying potassium channel" at the Institute for Cellular Biochemistry and Clinical Neurobiology, UKE, University of Hamburg, Hamburg, Germany; Supervisor: Prof. D. Richter

POSTGRADUATE EDUCATION

07/95-01/96 **Postgraduate research** in the laboratory of Prof. J.R. Schwarz, Department of Applied Physiology, UKE, University of Hamburg, Hamburg, Germany

11/96-01/01 **Postdoctoral research** in the laboratory of Prof. A.J. Yool, Department of Physiology, University of Arizona, College of Medicine, Tucson, AZ

06/2001 The NEURON Simulation Environment-Summer Course in San Diego, CA

04/2010 Neurostereology Workshop Special Topics Course at the Marine Biological Laboratory Woods Hole, MA

ACADEMIC APPOINTMENTS

02/01-10/03 **Research Assistant Professor** in the Department of Physiology, University of Arizona, College of Medicine, Tucson, AZ

11/03-01/09 **Assistant Professor** in the Department of Neurology, University of Arizona, College of Medicine, Tucson, AZ

01/09-09/10 **Research Assistant Professor** in the Department of Neurology, University of Arizona, College of Medicine, Tucson, AZ

09/06-09/10 **Research Assistant Professor**, Physiological Sciences GIDP, University of Arizona, Tucson, AZ

10/10-06/17 **Assistant Professor, Neurology -** Research Scholar Track, University of Arizona, College of Medicine, Tucson, AZ

10/10-06/17 **Assistant Professor, Physiological Sciences Graduate Interdisciplinary Program (GIDP)** – (Non-Tenure Eligible), University of Arizona, Tucson, AZ

02/16-04/18 **Assistant Professor, Pharmacology** – (Non-Tenure Eligible), University of Arizona, College of Medicine, Tucson, AZ

08/16-06/17 **Assistant Professor, Neuroscience Graduate Interdisciplinary Program (GIDP**) – (Non-Tenure Eligible), University of Arizona, Tucson, AZ

07/17-06/24 **Associate Research Professor, Neurology -** Career Track, University of Arizona, College of Medicine, Tucson, AZ

07/17-07/24 **Associate Professor, Physiological Sciences Graduate Interdisciplinary Program (GIDP)** – (Non-Tenure Eligible), University of Arizona, Tucson, AZ

07/17-07/24 **Associate Professor**, **Neuroscience Graduate Interdisciplinary Program (GIDP**) – (Non-Tenure Eligible), University of Arizona, Tucson, AZ

04/18-07/24 **Associate Research Professor, Pharmacology** – (Non-Tenure Eligible), University of Arizona, College of Medicine, Tucson, AZ

07/24-present **Research Professor, Neurology -** Career Track, University of Arizona, College of Medicine, Tucson, AZ

08/24-present **Professor, Physiological Sciences Graduate Interdisciplinary Program (GIDP)** – (Non-Tenure Eligible), University of Arizona, Tucson, AZ

08/24-present **Professor, Neuroscience Graduate Interdisciplinary Program (GIDP**) – (Non-Tenure Eligible), University of Arizona, Tucson, AZ

08/24-present **Research Professor, Pharmacology** – (Non-Tenure Eligible**)**, University of Arizona, College of Medicine, Tucson, AZ

HONORS AND AWARDS

01/09/1998 Chair of the Ion Channel Session at the 1998 Meeting of the Arizona Chapter-Society for Neuroscience in Phoenix, AZ.

11/06/1999 Chair of the Receptor and Ion Channel Session at the 1999 Meeting of the Arizona Chapter-Society for Neuroscience in Flagstaff, AZ.

11/06/2007 Chair of the 'Parkinson's disease: Therapeutics' Session at the Society for Neuroscience Meeting 2007 in San Diego.

2015 Travel Stipend for the 35th Blankenese Conference: *Brain Repair: From Regeneration to Cellular Reprogramming*, Hamburg, Germany

2019 Travel Stipend for the 39th Blankenese Conference: *Signaling in Health and Disease*, Hamburg, Germany

2023 Received the *University of Arizona College of Medicine, Tucson, Faculty Excellence Award – Basic and Translational Investigator Award*

SERVICE AND OUTREACH

MEMBERSHIPS

1997-present Member, Society for Neuroscience (SfN)
2000-2010 Member, American Physiological Society (APS)
2011-2012 Member, Council on Undergraduate Research (CUR)
2016-present Member, International Parkinson and Movement Disorder Society (MDS)
2018-2019 Institutional Membership, Council on Undergraduate Research (CUR)

National and International Service

2005-present *Ad hoc* reviewer for:
"Molecular Genetics and Metabolism",
"Life Sciences",
"Neuroscience",
"Experimental Neurology",
"Neuroscience Letters",
"Neuropharmacology",
"Journal of Pharmacy and Pharmacology",
"Neurosignals",
"Journal of Biomedicine and Biotechnology",

"Medical Science Monitor",
"BMC Neuroscience",
"ACS Chemical Neuroscience",
"International Journal of Nanomedicine",
"Neurobiology of Disease",
"Cell Biology and Toxicology",
"Brain Research Bulletin",
"Brain Research",
"FEBS Letters",
"Brain",
"Scientific Reports –Nature"
"Journal of the Neurological Sciences"
"Neurotoxicity Research"
"Journal of Neurochemistry"
"Frontiers in Neuroscience"
"Frontiers in Neuropharmacology"
"Psychopharmacology"
"Molecular Psychiatry"
"Frontiers in Neural Circuits"

2007	*Ad hoc* reviewer for the National Science Foundation
2007	*Ad hoc* reviewer for the Muscular Dystrophy Association
2011	Invited reviewer for the Estonian Science Foundation
2013/2014	Invited reviewer for the Parkinson's Disease Foundation (PDF) main grant cycle for International Research Grants and Postdoctoral Fellowships
2014	*Ad hoc* reviewer for the Parkinson's UK Foundation
2014-present	*Ad hoc* reviewer for the Michael J. Fox Foundation for Parkinson's Research
2014/2015	Invited Reviewer for the Parkinson's Disease Foundation (PDF) and American Parkinson's Disease Association (APDA) Summer Student Fellowship Applications
2015	Invited reviewer for Fonds National de la Recherche Luxembourg
2016-2022	Member, Fellowships and Postdoctoral Grant Review Committee for the Parkinson's Foundation (PF)
2017	Invited reviewer for the Research Foundation of the City University of New York (RFCUNY)
2021	Invited reviewer for Fonds National de la Recherche Luxembourg
2021-present	Associate Editor, "Neurological Drugs", a section of "Frontiers in Drug Discovery"
2022	Invited to review for the Del Monte Neuroscience Pilot Grant Program University of Rochester Medical Center
2022	*Ad hoc* reviewer, NIH study section: Clinical Neurotransmitters and Neuroplasticity (CNNT) panel
2023	Invited reviewer for Arizona Alzheimer's Disease Research Center Grants
2023-2027	Standing Member, NIH Clinical Neuroplasticity and Neurotransmitters Study Section (CNNT), Brain Disorders and Clinical Neuroscience Integrated Review Group (BDCN)
2024	Invited to review for the Del Monte Neuroscience Pilot Grant Program University of Rochester Medical Center
2025	*Ad hoc* reviewer for the Parkinson's UK Foundation

College - University of Arizona Service

2005-2010	Experimental radiation shared services team
2006-2008	*Ad hoc* reviewer for the Faculty Small Grants Program
2006-present	Member, Physiological Sciences Graduate Interdisciplinary Program
2011-2016	*Ad hoc* interviewer for admission to the Neuroscience Graduate Interdisciplinary Doctoral Program
2014-present	*Ad hoc* interviewer for admission to the Arizona Biological and Biomedical Sciences Graduate Program
2016-present	Member, Medical Pharmacology Graduate Program
2016-present	Member, Neuroscience Graduate Interdisciplinary Program
2018-2021	Member, Graduate Student Admissions and Recruitment Committee (GSARC) for the Neuroscience Graduate Interdisciplinary Doctoral Program
2022	Reviewer for the 'Innovations in Healthy Aging: Grand Challenges in Healthy Aging' seed grant competition
2022-2023	*Ad hoc* interviewer for admission to the Neuroscience Graduate Interdisciplinary Doctoral Program
2023-2024	Member, PD Focus group
2023-2026	Chair, UA COM-T Medical Student Research Committee
2024	Reviewer, Faculty Awards Committee, COM-T
2024-2027	Member, Graduate Student Admissions and Recruitment Committee (GSARC) for the Neuroscience Graduate Interdisciplinary Doctoral Program
2025-2028	Member, Executive Committee (EC) for the Neuroscience Graduate Interdisciplinary Doctoral Program

Department of Neurology Service

2011-2013	Member, Neurology Website Committee
2014-2015	Member, Space Committee of the Department of Neurology
2016	Member, Neurology Research Strategic Plan - Committee B
2020-2023	HIPPA Liaison for the Department of Neurology
2023-2024	Member, Grand Rounds Planning Committee
2023-2024	Member, Seven-Year Review Self-Evaluation Committee

Outreach

2007-2012	Outreach Speaker at the bimonthly University of Arizona Parkinson's Research Lab tour series
02/22/2013	Lecture for the "Parkinson Disease Interest Group" Voyager RV Resort, Tucson, AZ
04/15/2014	Lecture on Strategies for the Treatment of Parkinson's disease at "Tucson Medical Center's Brain Week" Speaker Series at Tucson Medical Center, Tucson, AZ
08/21/2014	Lecture on Parkinson's disease Research at the "Arizona Senior Academy", Tucson, AZ
09/13/2014	Talk at the National Parkinson Foundation event "PD Taking Center Stage" in Phoenix, AZ
10/03/2014	Lecture on Parkinson's disease at the East Center in Green Valley, AZ

04/21/2015	Parkinson's Research Lab tour
05/13/2015	Lecture on Parkinson's research at the Tucson Jewish Community Center, Tucson, AZ
12/14/2015	Brown bag lunch talk on Parkinson's disease at UAHS Development Department, UA, Tucson, AZ
01/22/2016	Speaker at the American Parkinson's Disease Association "*Power Over Parkinson's*" Symposium, Tucson, AZ
10/19/2016	Speaker at the Oro Valley Parkinson's Disease Group, Oro Valley, AZ
11/12/2016	Presentation: Schmitt MB, Dollish HK*, **Falk T**, Cowen SL; *BRAIN AWARENESS CAMPAIGN EVENT* at Society for Neuroscience Meeting in San Diego; "BRIAN: The Brains of Neuroscience Outreach"; *Graduate Student Trainee
06/05/2023	Lecture at the Parkinson Wellness Recovery! (PWR!) Gym Annual PWR! Retreat, Tucson, AZ
05/21/2025	Lecture for Parkinson's disease Support group, Tucson, AZ

PUBLICATIONS

PEER-REVIEWED PUBLICATIONS

1. #**Falk T**, Meyerhof W, Corrette BJ, Schaefer J, Bauer CK, Schwarz JR, Richter D; Cloning, functional expression and mRNA distribution of an inwardly rectifying potassium channel protein. *FEBS Letters* 1995; 367:127-131. [PubMed]
2. Bauer CK, **Falk T,** Schwarz JR; An endogenous inactivating inwardly rectifying potassium current in oocytes of *Xenopus laevis*. *Pflügers Archive, European Journal of Physiology* 1996; 432:812-820. [PubMed]
3. **Falk T**, Muller YL, Yool AJ; Differential expression of three classes of voltage-gated Ca^{2+} channels during maturation of the rat cerebellum *in vitro*. *Developmental Brain Research* 1999; 115(2):161-170. [PubMed]
4. **Falk T**, Garver WS, Erickson RP, Wilson JM, Yool AJ; Expression of Niemann-Pick type C transcript in rodent cerebellum *in vivo* and *in vitro*. *Brain Research* 1999; 839(1):49-57. (Communicating Author) [PubMed]
5. **Falk T**, Strazdas LA, Borders RS, Kilani RK, Yool AJ, Sherman SJ; A herpes simplex viral vector expressing green fluorescent protein can be used to visualize morphological changes in high-density neuronal culture. *Electronic Journal of Biotechnology* 2001; 15 April 2001, 4(1) 20-21. Available from: http://ejb.ucv.cl/content/vol4/issue1/full/5/index.html. [PubMed]
6. **Falk T**, Kilani RK, Yool AJ, Sherman SJ; Viral-vector mediated expression of K^+ channels regulates excitability in skeletal muscle. *Gene Therapy* 2001; 8(18):1372-1379. (Communicating Author) [PubMed]
7. **Falk T**, Kilani RK, Borders RS, Strazdas LA, Steidl JV, Yool AJ, Sherman SJ; Developmental regulation of the A-current in hippocampal neurons: Role of the Kvβ1.1 potassium channel subunit. *Neuroscience* 2003; 120(2):387-404. [PubMed]
8. **Falk T**, Zhang S, Erbe EL, Sherman SJ; Neurochemical and electrophysiological characteristics of rat striatal neurons in primary culture. *Journal of Comparative Neurology* 2006; 494:275-289. [PubMed]

9. McKay BS, Goodman B, **Falk T**, Sherman SJ; Retinal pigment epithelial cell transplantation could provide trophic support in Parkinson's disease: results from an *in vitro* model system. *Experimental Neurology* 2006; 201:234-243. [PubMed]
10. **Falk T**, Xie JY*, Zhang S, Kennedy J, Bennett J, Yool AY, Sherman SJ; Over-expression of the potassium channel Kir2.3 using the dopamine-1 receptor promoter selectively inhibits striatal neurons. *Neuroscience* 2008; 155:114-127. (Communicating Author) [PubMed]
11. **Falk T**, Zhang S, Sherman SJ; PEDF is neurotrophic and neuroprotective in two *in vitro* models of Parkinson's disease. *Neuroscience Letters* 2009; 458:49-52. (Communicating Author) [PubMed]
12. **Falk T**, Zhang S, Sherman SJ; Vascular endothelial growth factor B is up-regulated and exogenous VEGF-B is neuroprotective in a culture model of Parkinson's disease. *Molecular Neurodegeneration* 2009; 4:49. (Communicating Author) [PubMed]
13. **Falk T**, Gonzalez RT*, Sherman SJ; The Yin and Yang of VEGF and PEDF: Multifaceted Neurotrophic Factors and their Potential in the Treatment of Parkinson's disease. *International Journal of Molecular Sciences* 2010; 11:2857-2900. (Communicating Author; peer-reviewed, invited review) [PubMed]
14. **Falk T**, Yue X*, Zhang S, McCourt AD*, Yee BJ, Gonzalez RT*, Sherman SJ; Vascular endothelial growth factor B is neuroprotective in an *in vivo* model of Parkinson's disease. *Neuroscience Letters* 2011; 496:43-47. (Communicating Author) [PubMed]
15. Yue X*, **Falk T**, Zuniga LA*, Szabò L, Porreca F, Polt R, Sherman SJ; Effects of the opioid agonist MMP-2200 in preclinical models of Parkinson's disease. *Brain Research* 2011; 1413:72-83. (Communicating Author) [PubMed]
16. **Falk T**, Congrove NR, Zhang S, McCourt AD*, Sherman SJ, McKay BS; PEDF and VEGF-A output from human retinal pigment epithelium cells grown on novel microcarriers. *Journal of Biomedicine and Biotechnology* 2012; Article ID 278932, 8 pages; doi.org/10.1155/2012/278932. (Communicating Author) [PubMed]
17. Mabrouk OS, **Falk T**, Sherman SJ, Kennedy RT, Polt R; Brain uptake of the opioid glycopeptide MMP-2200 – a microdialysis study. *Neuroscience Letters* 2012; 531(2):99-103. (Communicating Author) [PubMed]
18. Yue X*, Hariri DJ*, Caballero B*, Zhang S, Bartlett MJ*, Kaut O, Mount DW, Wüllner U, Sherman SJ, **Falk T**; Comparative study of neurotrophic effects by VEGF-B and GDNF in preclinical *in vivo* models of Parkinson's disease. *Neuroscience* 2014; 258:385-400. (Communicating Author) [PubMed]
19. Flores AJ*, Bartlett MJ*, So LY*, Laude ND, Parent KL, Heien ML, Sherman SJ, **Falk T**; Differential effects of the NMDA receptor antagonist MK-801 on dopamine 1 and 2 receptor-induced abnormal involuntary movements in a preclinical model. *Neuroscience Letters* 2014; 564:48-52. (Communicating Author) [PubMed]
20. Bartlett MJ*, Joseph RM*, LePoidevin LM*, Parent KL, Laude ND, Lazarus LB, Heien ML, Estevez M, Sherman SJ, **Falk T**; Long-term effect of sub-anesthetic ketamine-infusion in reducing L-DOPA-induced dyskinesia. *Neuroscience Letters* 2016; 612:121-125. (Communicating Author) [PubMed]
21. Sherman SJ, Estevez M, Magill AR, **Falk T**; Case reports showing a long-term effect of subanesthetic ketamine infusion in reducing L-DOPA-induced dyskinesias. *Case Reports in Neurology* 2016; 8:53-58. [PubMed]
22. Caballero B*, Sherman SJ, **Falk T**; Insights into mechanism of the protective effects of VEGF-B in dopaminergic neurons. *Parkinson's Disease* 2017; vol. 2017, Article ID

4263795, 13 pages, 2017. doi:10.1155/2017/4263795. (Communicating Author; peer-reviewed review) [PubMed]

23. Ye T*, Bartlett MJ*, Schmitt MB, Sherman SJ, **Falk T**, Cowen SL; Ten-Hour Exposure to Ketamine Enhances Corticostriatal Cross-Frequency Coupling and Broad-Band Gamma Oscillations in the Hippocampus. *Frontiers in Neural Circuits* 2018; 12:61. doi: 10.3389/fncir.2018.00061. [PubMed]
24. Flores AJ*, Bartlett MJ*, Root BK*, Parent KL, Heien ML, Porreca F, Polt R, Sherman SJ, **Falk T**; The combination of the opioid glycopeptide MMP-2200 and a NMDA receptor antagonist reduced L-DOPA-induced dyskinesia and MMP-2200 by itself reduced dopamine receptor 2-like agonist-induced dyskinesia. *Neuropharmacology* 2018; 141:260-271. (Communicating Author) [PubMed]
25. Hay M, Polt R, Heien ML, Vanderah TW, Largent-Milnes TM, Rodgers K, **Falk T**, Bartlett MJ*, Doyle KP, Konhilas JP; A Novel Angiotensin-(1-7)-glycosylated Mas Receptor Agonist for Treating Vascular Cognitive Impairment and Inflammation Related Memory Dysfunction. *Journal of Pharmacology and Experimental Therapeutics* 2019; 369:9-25. [PubMed]
26. Bartlett MJ*, So LY*, Szabò L, Skinner DP, Parent KL, Heien ML, Vanderah TW, Polt R, Sherman SJ, **Falk T**; Highly-selective μ-opioid receptor antagonism does not block L-DOPA-induced dyskinesia in a rodent model. *BMC Research Notes* 2020; 13:149. https://doi.org/10.1186/s13104-020-04994-7. (Communicating Author) [PubMed]
27. Crown LM, Bartlett MJ*, Eby AJ, Monroe EJ, Gies K, Wiegand JP, Wohlford L, Fell MJ, **Falk T**, Cowen SL; Sleep spindles and fragmented sleep as prodromal markers in LRRK2 G2019S Parkinson's disease. *Frontiers in Neurology* 2020; 11:324; doi: 10.3389/fneur.2020.00324 [PubMed]
28. Bartlett MJ*, Flores AJ*, Ye T*, Smidt SI*, Dollish HK*, Stancati JA, Farrell DC, Parent KL, Doyle KP, Besselsen DG, Heien ML, Cowen SL, Steece-Collier K, Sherman SJ, **Falk T**; Preclinical evidence in support of repurposing sub-anesthetic ketamine as a treatment for L-DOPA-induced dyskinesia. *Experimental Neurology* 2020; 333C:113413. (Communicating Author) [PubMed]
29. Bartlett MJ*, Mabrouk OS, Szabò L, Flores AJ*, Parent KL, Bidlack JM, Heien ML, Kennedy RT, Polt R, Sherman SJ, **Falk T**; The delta-specific opioid glycopeptide BBI-11008: CNS penetration and behavioral analysis in a preclinical model of L-DOPA-induced dyskinesia. *International Journal of Molecular Sciences* 2020, 22(1), 20; https://doi.org/10.3390/ijms22010020. Special Issue: *"Peptides for Health Benefits 2020"* (Communicating Author) [PubMed]
30. Young KF, Gardner R, Sariana V, Bartlett MJ*, **Falk T**, Morrison HW; Can quantifying morphology and TMEM119 expression distinguish between microglia and infiltrating macrophages after ischemic stroke and reperfusion in male and female mice? *Journal of Neuroinflammation* 2021; 18(1):58. [PubMed]
31. Ye T*, Bartlett MJ*, Sherman SJ, **Falk T**, Cowen SL; Spectral Signatures of L-DOPA-Induced Dyskinesia Depend on L-DOPA Dose and are Suppressed by Ketamine. *Experimental Neurology* 2021; 340:113670. [PubMed]
32. Pottenger AE*, Bartlett MJ*, Sherman SJ, **Falk T**, Morrison HW; Evaluation of Microglia in a rodent model of Parkinson's disease primed with L-DOPA after sub-anesthetic ketamine treatment. *Neuroscience Letters* 2021, 765:136251. [PubMed]
33. Apostol CR[§], Bernard K[§,]*, Tanguturi P, Molnar G, Bartlett MJ*, Szabò LZ, Liu C, Ortiz JB, Saber M, Giordano KR, Green TFR, Melvin J, Morrison HW, Madhavan L, Rowe RK, Streicher JM, Heien ML, **Falk T**, Polt R; Design and Synthesis of Novel Brain

Penetrant Glycopeptide Analogues of PACAP with Neuroprotective Potential for Traumatic Brain Injury and Parkinsonism. *Frontiers in Drug Discovery* 2022, Vol. 1: 818003 ([§]contributed equally). [PubMed]

34. Szabò LZ, Tanguturi P, Goodman HJ, Spröber S, Liu C, Al-Obeidi F, Bartlett MJ*, **Falk T**, Kumirov VK, Heien ML, Streicher JM, Polt R; Structure-based design of glycosylated oxytocin analogues with improved selectivity and antinociceptive activity. *ACS Medicinal Chemistry Letters* 2023, 14, 2, 163–170. [PubMed]
35. Flores AJ*[,§], Bartlett MJ*[,§], Seaton BT, Samtani G*, Sexauer MR*, Weintraub NC, Siegenthaler JR, Lu D, Heien ML, Porreca F, Sherman SJ, **Falk T**; Antagonism of kappa opioid receptors accelerates the development of L-DOPA-induced dyskinesia in a preclinical model of moderate dopamine depletion. *Brain Research* 2023, 1821, 148613. ([§]contributed equally); (Communicating Author) [PubMed]
36. Jordan G, Vishwanath A, Holguin GR, Bartlett MJ*, Tapia AK, Winter GM, Sexauer MR*, Stopera CJ*, **Falk T**, Cowen SL; Automated system for training and assessing reaching and grasping behaviors in rodents. *Journal of Neuroscience Methods* 2024, 401, 109990. [PubMed]
37. Bernard K*, Dickson D, Anglin BL, Heien ML, Polt R, Morrison HW[§], **Falk T**[§]; PACAP glycosides promote cell outgrowth *in vitro* and reduce infarct size after stroke in a preclinical model. *Neuroscience Letters* 2024, 836, 137883. ([§]Co-senior authors); (Communicating Author). [PubMed]
38. Stopera CJ*[,§], Bartlett MJ*[,§], Liu C, Esqueda A*, Parmar R*, Heien ML, Sherman SJ, **Falk T**; Differential effects of opioid receptor antagonism on the anti-dyskinetic and anti-parkinsonian effects of sub-anesthetic ketamine treatment in a preclinical model. *Neuropharmacology* 2024, 257, 110047. ([§]contributed equally); (Communicating Author). [PubMed]
39. Bernard K*, Mota J*, Wene P, Corenblum MJ, Saez J*, Bartlett MJ*, Heien ML, Doyle KP, Polt R, Hay M, Madhavan L[§], **Falk T**[§]; The Angiotensin (1-7) glycopeptide PNA5 improves cognition in a chronic progressive mouse model of Parkinson's disease by modulation of neuroinflammation. *Experimental Neurology* 2024, 381, 114926 ([§]Co-senior authors); (Communicating Author). [PubMed]
40. Zadina JE, Szabo LZ, Al-Obeidi F, Zhang X, Ogbu C, Heien ML, **Falk T**, Bartlett MJ, Polt R; Cyclic Glycopeptide Analogs of Endomorphin-1 Provide Highly Effective Antinociception in Male and Female Mice. *ACS Medicinal Chemistry Letters* 2024, 15(10), 1731-1740. [PubMed]
41. Vishwanath A, Bartlett MJ*, **Falk T**, Cowen SL; Decoupling of motor cortex to movement in Parkinson's dyskinesia rescued by sub-anesthetic ketamine. *Brain* 2024; awae386, https://doi.org/10.1093/brain/awae386. [PubMed]
42. Bartlett MJ*[,§], Stopera CJ*[,§], Cowen SL, Sherman SJ, **Falk T**; Differential effects of statins on the anti-dyskinetic activity of sub-anesthetic ketamine. *Neuroscience Letters* 2025, 848, 138114. ([§]contributed equally); (Communicating Author). [PubMed]
43. **Falk T**, Cowen SL; Motor cortex in levodopa-induced dyskinesia, systems and molecular changes after sub-anesthetic ketamine treatment. *Neural Regeneration Research* 2025, invited Perspective; in press.

***h*-index: 22** (measured 04/19/2025)
***i10*-index: 30** (measured 04/19/2025)

[#] Work done as a graduate student.

* Postgraduate, Graduate and Undergraduate Student Trainees

PEER-REVIEWED PUBLICATIONS UNDER REVIEW AND IN PREPARATION

1. Hill DF, Olson Z, Bartlett MJ*, **Falk T**, Heien ML, Cowen SL; Heterogeneous neuronal activity in the ventral tegmental area coordinates dopamine release in the *nucleus accumbens*. *Neuropsychopharmacology* 2025, in revision. [Preprint]
2. Sherman SJ, Richards SS, Bartlett MJ*, Lind A, Moine N, Doyle KP, Hsu CP, **Falk T**; In an open label Phase I clinical trial sub-anesthetic infusion of ketamine produced long-term reduction in levodopa-induced dyskinesia and depression. *Movement Disorders* 2025, in preparation. (Communicating Author).
3. Stopera CJ*,§, Bartlett MJ*,§, Bernard K*, Stancati JA, Singh S*, Frye JB, Doyle KR, Morrison HW, Sherman SJ, Madhavan L, Steece-Collier K, **Falk T**; Protective activity of sub-anesthetic ketamine in a preclinical model of Parkinson's disease is not blocked by antagonizing brain-derived neurotrophic factor signaling. *Experimental Neurology* 2025, in preparation. (§contributed equally); (Communicating Author).
4. Parmar R*, Singh S*, Bartlett MJ, Ragsdale S*, Sherman SJ, **Falk T**; The anti-dyskinetic and anti-parkinsonian effects of ketamine are not sex specific. *Neuropharmacology*, in preparation.
5. Vishwanath A, Bartlett MJ*, **Falk T**, Cowen SL; Ketamine induced motor gamma differences during dyskinesia and dopamine depletion. *Neurobiology of Disease* 2025, in preparation.
6. Ogbu C, Liu L, Bartlett MJ*, Sherman SJ, **Falk T**, Heien ML; The Pharmacokinetic Profile of Ketamine and its Metabolites as a Therapy for L-DOPA-induced Dyskinesia. *ACS Chemical Neuroscience Letters* 2025, in preparation.
7. **Falk T**, Smidt SI*, Cristiani S*, Bernard K*, Silashki BD*, Siegenthaler JR, Farrell DC, Muller DCY*, Morrison HW, Doyle KP, Madhavan L, Heien ML, Sherman SJ, Bartlett MJ; Neurorestorative effects of viral VEGF-B overexpression in the striatum of the PINK1 gene knock out rat model of Parkinson's disease. In preparation.

PEER-REVIEWED ABSTRACTS AND CONFERENCE PRESENTATIONS

1. Bauer CK, **Falk T**, Schwarz JR; An endogenous inactivating inwardly rectifying potassium current in oocytes of *Xenopus laevis*. *Neuroforum, Suppl.: 1. Kongress der Neurowissenschaftlichen Gesellschaft*, 1996.
2. **Falk T**, Bauer CK, Meyerhof W, Richter D, Schwarz JR; An inward rectifying K current cloned from rat anterior pituitary tumour cells. *Pflügers Archive, European Journal of Physiology, Suppl. to* 431, 1996; R 91.
3. **Falk T**, Peterson B, Sherman SJ, Yool AJ; A herpes virus vector for imaging dendritic growth in primary cultured neurons. *Pflügers Archive, European Journal of Physiology, Suppl. to* 435, 1998; P 20-11.
4. **Falk T**, Garver WS, Erickson RP, Wilson JM, Yool AJ; Developmental Expression of Niemann-Pick type C mRNA in Rat Cerebellum *in vivo*. *Society for Neuroscience Abstracts*, 1998; 798.2.
5. Kilani RK, **Falk T**, Yool AJ, Sherman SJ; Expression of a potassium channel-reporter gene fusion protein in cultured hippocampal neurons. *FASEB Journal* 1999; 13 (4): A472-A472 Part 1 Suppl.

6. Strazdas L, Borders RS, **Falk T**, Yool AJ, Sherman SJ; Time-lapse imaging and current clamp recordings from primary cultured rat hippocampal and cerebellar neurons infected with a herpes virus vector containing enhanced green fluorescent protein. *2. Symposion on GFP*, 1999; San Diego.
7. **Falk T**, Kilani RK, Borders RS, Yool AJ, Sherman SJ; Overexpression by herpes virus gene transfer of a voltage-gated potassium channel in primary cultured hippocampal neurons. *Society for Neuroscience Abstracts,* 1999; 179.14.
8. Sherman SJ, **Falk T**, Borders RS, Strazdas L, Yool AJ; Transgene expression of a green-fluorescent protein marker and antisense sequence targeting the β-1 subunit of the voltage-gated potassium channel in cultured hippocampal neurons. *Epilepsia,* 1999; 40:11, Suppl. 7.
9. **Falk T**, Kilani RK, Strazdas LA, Yool AJ, Sherman SJ; Overexpression by herpes virus gene transfer of a voltage-gated K channel in skeletal muscle cells. *Pflügers Archive, European Journal of Physiology, Suppl. to* 439, 2000; P17-11.
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10/19/2018 *KFDX 3.Texomas, Wichita Falls, TX:* "Healthcast: Ketamine stills Parkinson's disease"
https://www.texomashomepage.com/video/healthcast-ketamine-stills-parkinson's-disease_20181020000611/1536635928

10/22/2018 *WQAD8 (ABC)* "YOUR HEALTH: An old drug to help Parkinson's patients facing side effects"
https://www.wqad.com/article/news/health/your-health/your-health-an-old-drug-to-help-parkinsons-patients-facing-side-effects/526-87e4efb7-5e57-45b4-8d67-35d1d2ea2b62

12/02/2018 "Health Watch: Ketamine Stills Parkinson's"; *abc30.com*
https://abc30.com/health-watch-parkinsons-levodopa-university-of-arizona/4810509/

01/06/2025 Ignacio Ventura: "UA study may open the door for ketamine to ease side effects of Parkinson's drug"; *KJZZ*
https://www.kjzz.org/kjzz-news/2025-01-06/ua-study-may-open-the-door-for-ketamine-to-ease-side-effects-of-parkinsons-drug

INVITED LECTURES

10/03/1995 Seminar, Department of Anesthesiology, UCLA, Los Angeles, CA
10/06/1995 Seminar, Department of Molecular, Cellular and Developmental Biology, UCSB, Santa Barbara, CA

10/08/1995 Seminar, Section of Cell and Developmental Biology, UCSD, San Diego, CA
10/09/1995 Seminar Series, Committee on Neuroscience, University of Arizona, Tucson, AZ
10/14/1995 Seminar, Division of Biology, California Institute of Technology, Pasadena, CA
10/17/1995 Seminar, Departments of Cell and Developmental Biology and Molecular and Medical Genetics, Vollum Institute, Oregon Health Sciences University, Portland, OR
01/25/1996 Seminar, Department of Molecular Genetics, German Institute for Nutritional Research, Potsdam-Rehbruecke, Germany
03/18/1996 Seminar, Department of Membrane Biophysics, Max Planck Institute for Biophysical Chemistry, Goettingen, Germany
11/07/1997 Physiology Seminar Series, Department of Physiology, College of Medicine, University of Arizona, Tucson, AZ
01/09/1998 Oral presentation, Meeting of the Arizona Chapter-Society for Neuroscience in Phoenix, AZ
11/06/1999 Oral presentation, Meeting of the Arizona Chapter-Society for Neuroscience in Flagstaff, AZ
09/28/2001 Physiology Seminar Series, Department of Physiology, College of Medicine, University of Arizona, Tucson, AZ
08/19/2002 Seminar, Department of Physiology, UKE, University of Hamburg, Germany
02/17/2005 Grand Rounds, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
11/06/2007 Oral Presentation, 'Parkinson's disease: Therapeutics' Session, Society for Neuroscience Meeting in San Diego, CA
03/25/2008 Invited Neuroscience Community "Data-Blitz", Tucson, AZ
05/09/2008 Grand Rounds, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
10/09/2009 Grand Rounds, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
11/03/2009 Seminar, Committee on Neuroscience, University of Arizona, Tucson, AZ
09/28/2010 Physiology Seminar Series, Department of Physiology, College of Medicine, University of Arizona, Tucson, AZ
10/29/2010 Grand Rounds, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
07/26/2011 Seminar, Michael J. Fox Foundation for Parkinson's Research, New York, NY
10/28/2011 Grand Rounds, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
11/29/2011 Neuroscience Community "Data-Blitz", Tucson, AZ
03/15/2012 Invited Oral Presentation, 23rd Annual 'Spring Brain Conference', March 14-17, 2012, Tucson, AZ
03/29/2012 Genetics Grand Rounds, University of Arizona, Tucson, AZ
10/13/2012 Oral Presentation, 'Dopamine: Functional Translational Studies' Nanosymposium, Society for Neuroscience Meeting in New Orleans, LA
10/24/2012 Pharmacology Seminar Series, University of Arizona, Tucson, AZ
12/14/2012 Grand Rounds, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
12/06/2013 Grand Rounds, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ

12/19/2013	Seminar, Klinik und Poliklinik für Neurologie, Universitätsklinikum Bonn, Bonn, Germany
10/24/2014	Seminar on rodent Parkinson's disease models, University Animal Care Seminar Series, University of Arizona, Tucson, AZ
10/28/2014	Invited Neuroscience Community "Data-Blitz", Tucson, AZ
11/25/2014	Seminar on opioid glycopeptides, College of Pharmacy Drug Discovery & Development Seminar Series, University of Arizona, Tucson, AZ
12/12/2014	Grand Rounds on Neuroprotection, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
02/17/2015	Seminar, Banner Sun Health Research Institute, Sun City, AZ
06/01/2015	Selected oral presentation at 35th Blankenese Conference; Brain Repair: From Regeneration to Cellular Reprogramming, Hamburg, Germany
10/08/2015	Invited presentation at the Arizona PD summit, Mayo Clinic, Scottsdale, AZ
11/06/2015	Grand Rounds on L-DOPA-induced dyskinesia, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
11/10/2015	Seminar on Neuroprotection, College of Pharmacy Drug Discovery & Development Seminar Series, University of Arizona, Tucson, AZ
04/19/2016	Invited Neuroscience Community "Data-Blitz", Tucson, AZ
06/10/2016	Invited Data Blitz Talk at the Pain Mechanisms and Therapeutics Conference in Taormina, Sicily
12/09/2016	Grand Rounds on ketamine treatment for Parkinson's disease, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
01/11/2017	Seminar on low-dose ketamine as a chemical DBS to treat multiple disorders, Department of Pharmacology, University of Arizona, Tucson, AZ
01/22/2018	Invited Neuroscience Research "Data-Blitz", Tucson, AZ
03/02/2018	Grand Rounds on neuroplastic effects of ketamine treatment, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
11/20/2018	Invited Speaker at the Parkinson's Disease "Data Blitz", MOCA, Tucson, AZ
04/12/2019	Grand Rounds on development of neuroprotective mechanisms of VEGF-B for the treatment of Parkinson's disease, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
02/26/2020	Selected Oral Presentation at the 5th Annual ABRC-Flinn Research Conference, Phoenix, AZ
08/21/2020	Grand Rounds on preclinical evidence in support of repurposing sub-anesthetic ketamine as a treatment for L-DOPA-induced dyskinesia, Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
03/19/2021	Invited Seminar on preclinical evidence in support of repurposing sub-anesthetic ketamine as a treatment for L-DOPA-induced dyskinesia, Department of Natural Sciences, Baruch College, CUNY, New York, NY
05/02/2021	Data Blitz Presentation on the anti-dyskinetic activity of ketamine, UA COM Research Day 2021, Tucson, AZ
10/22/2021	Grand Rounds Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ
04/05/2022	Invited Neuroscience Community "Data-Blitz", MOCA, Tucson, AZ
10/14/2022	Invited Seminar; Friday Frontiers in Biomedical Science Series, College of Medicine, Tucson, AZ
03/24/2023	Grand Rounds Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ

08/30/2023 Invited Seminar on Repurposing Ketamine for L-DOPA-induced Dyskinesia, Lundbeck Pharmaceuticals, Copenhagen, Denmark
01/23/2024 Invited Seminar on Repurposing Ketamine for L-DOPA-induced Dyskinesia, Department of Translational Neuroscience, Michigan State University, Grand Rapids, MI
11/08/2024 Grand Rounds Department of Neurology, College of Medicine, University of Arizona, Tucson, AZ

GRANTS AND CONTRACTS

Active:

R01 NS122805 PI: Falk
NIH/NINDS
Mechanisms of low-dose ketamine treatment for Parkinson's disease
Purpose: The major goals of this project are to evaluate the molecular, cellular and systems mechanisms underlying its therapeutic activity in a preclinical model of L-DOPA-induced dyskinesia.
Dates: 07/01/2021 to 06/30/2025

Supplement to R01 NS122805 PI: Falk
NIH/NINDS
Mechanisms of Low-Dose Ketamine Treatment for Parkinson's Disease: Diversity Admin Supplement.
Purpose: Diversity Supplement for Predoctoral Training for Raveena Parmar, graduate student in the Falk laboratory
Dates: 04/01/2023 to 06/30/2025

MJFF-024922 MPI: Falk and Madhavan
Michael J. Fox Foundation for Parkinson's Research
PNA5, an Angiotensin-(1-7) glycopeptide, to treat dementia in Parkinson's Disease
Purpose: To test the effect of neuroprotective and anti-inflammatory effects of PNA5 as a treatment for cognitive decline in Parkinson's disease in a preclinical mouse model (Thy1 α-syn line 61 mice).
Dates: 08/01/2024 to 07/31/2026

Past:

Muscular Dystrophy Association (MDA) Research Grant PI: Falk
Overexpression of Kv2.1 channels to counteract Periodic Paralysis
Purpose: To drive targeted expression of ion-channels as a means of gene therapy for Hyperkalemic Periodic paralysis.
Dates: 07/01/2001 to 06/30/2002

Faculty Small Grants Program of the University of Arizona PI: Falk
Selective modulation of basal ganglia circuits
Purpose: To drive targeted expression of ion-channels as a means of gene therapy for Parkinson's disease.

Dates: 12/15/2005 to 12/14/2006

ASU-UA Biomedical Collaborative Award PI: Falk
Selective modulation of basal ganglia circuits as a new gene therapy approach to Parkinson's disease
Purpose: To drive targeted expression of ion-channels as a means of gene therapy for Parkinson's disease in rat (UA) and primate (ASU, Stephen Helms Tillery) models of Parkinson's disease.
Dates: 02/01/2007 to 01/31/2009

Arizona Biomedical Research Commission (ABRC) PI: Falk
Transplantation of adult RPE cells as treatment for Parkinson's disease
Purpose: To optimize human adult RPE cells as cell base treatment for Parkinson's disease
Dates: 07/01/2008 to 12/31/2011

American Parkinson's Disease Association (APDA) PI: Falk
Novel Opioid Glycopeptide MMP-2200 as an Anti-Dyskinetic Treatment for Parkinson's disease Patients
Purpose: To investigate a novel glycosylated opioid peptide
Dates: 07/15/2009 to 10/31/2011

Michael J. Fox Foundation for Parkinson's Research PI: Falk
VEGF-B as treatment for Parkinson's disease
Purpose: To test the effect of neuroprotective delivery of VEGF-B as a treatment for Parkinson's disease.
Dates: 06/01/2010 to 04/30/2012

Michael J. Fox Foundation for Parkinson's Research PI: Cowen; Co-I: Falk
Identification of network and oscillatory signatures of the LRRK2 mutation
Purpose: To evaluate and compared LRRK2 knock-out mice to toxin-lesioned Parkinson's disease animals and controls.
Dates: 08/01/2015 to 08/31/2016

R24 MH 109060-01 PI: Witte; Collaborator: Falk
NIH/NIMH
High resolution electrical brain mapping by real-time and portable 4D Acoustoelectric Imaging
Purpose: The major goal of this project is to test a novel imaging modality.
Dates: 09/30/2015 to 09/29/2018

R01 NS091238 PI: Polt; Co-I: Falk
NIH/NINDS
PACAP/VIP Glycopeptide Agonists as Neuroprotective Therapies for Parkinson's Disease
Purpose: The major goals of this project are to evaluate specific activity, stability, blood-brain barrier penetrance and effective neuroprotection of PACAP/VIP glycopeptides in preclinical Parkinson's disease models.
Dates: 09/30/2015 to 09/30/2021

Michael J. Fox Foundation for Parkinson's Research PI: Cowen; Co-I: Falk

Identification of network, oscillatory, and behavioral signatures of LRRK2 expression
Purpose: To evaluate and compare LRRK2 knock-out and LRRK2 G2019S knock-in mice and controls.
Dates: 08/01/2017 to 09/01/2019

F31 NS105455 PI: Zbesko; Consultant: Falk
NIH/NINDS
The role of T-lymphocytes and antibodies in B-lymphocyte mediated post-stroke cognitive decline
Purpose: The goal of this project is to investigate the mechanisms by which B-lymphocytes cause delayed memory deficits following stroke.
Dates: 09/01/2017 to 05/31/2020

Eleanor Bauwens Research Award PI: Morrison; Co-I: Falk
Mechanisms of VEGF-B to decrease brain injury after ischemic stroke in male and female mice
Purpose: The goal of this project is to investigate the mechanisms and possible sex differences in in VEGF-B's protective activity.
Dates: 08/01/2019 to 07/31/2020

R56 NS109608 PI: Falk
NIH/NINDS
Mechanisms of low-dose ketamine treatment for Parkinson's disease
Purpose: The major goals of this project are to evaluate the molecular, cellular and systems mechanisms underlying its therapeutic activity in a preclinical model of L-DOPA-induced dyskinesia.
Dates: 09/15/2019 to 06/30/2021

ADHS18-198846 MPIs: Sherman; Falk
Arizona Biomedical Research Commission (ABRC)
Ketamine, a New Symptomatic Treatment for Parkinson's Disease
Purpose: Aim 1 - Preclinical evaluation of mechanisms of action; and Aim 2 - Clinical testing of ketamine in Phase I and II trials
Dates: 04/01/2018 to 09/30/2022

PATENTS / LICENCES

06/05/2009 Provisional Patent Application "The novel opioid peptide MMP-2200 as an anti-dyskinetic agent for Parkinson's disease patients with levodopa-induced dyskinesias" filed (Royalty: 45%).
04/05/2011 Provisional Patent Application "VEGF-B" filed (Royalty: 50%).
08/17/2013 Provisional Patent Application "Glycosylated PACAP/VIP Analogues for Treatment of Neurodegenerative Diseases" filed (Royalty: 50%).
08/14/2014 International Application No: PCT/US14/51143 "Glycosylated PACAP/VIP Analogues for Treatment of Neurodegenerative Diseases" filed (equal inventors: **T. Falk** and R. Polt).
05/15/2015 Provisional Patent Application "UA14-139 Novel Treatment for Levodopa Induced Dyskinesia Associated with Parkinson's Disease" filed (Royalty: 33.33%).

02/16/2016	PCT Application No: PCT/US14/51143, "Glycosylated PACAP/VIP Analogues with Enhanced CNS Penetration for Treatment of Neurodegenerative Diseases" filed (equal inventors: **T. Falk** and R. Polt).
05/12/2016	PCT Application No: UAZ-34446/US16/PRO "Novel Treatment for Levodopa Induced Dyskinesia Associated with Parkinson's Disease" filed (equal inventors: **T. Falk**, S.J. Sherman and M. Estevez).
11/05/2018	PCT Application No: UA16-144 (16/181,129) filed, "GLYCOPEPTIDES AND USES THEREOF" (inventors: **T. Falk**, M.L. Heien, J. Streicher and R. Polt).
11/06/2018	**Patent US 10,117,907 B2 issued** "Glycosylated PACAP/VIP Analogues with Enhanced CNS Penetration for Treatment of Neurodegenerative Diseases" (equal inventors: **T. Falk** and R. Polt).
10/15/2020	**PharmaTher Inc. licensed** UAZ-34446/US16/PRO "Novel Treatment for Levodopa Induced Dyskinesia Associated with Parkinson's Disease" (inventors: **T. Falk** (47.5%), S.J. Sherman (47.5%) and M. Estevez (5%)).
02/07/2020	PCT Application UA18-020 16/637,702) filed "Glycopeptide and Classical Drug Design" (inventors: **T. Falk**, M.L. Heien, J.M. Streicher, C. Liu, C.R. Apostol, L. Szabo and R. Polt).
05/17/2021	**PharmaTher Inc. received FDA Approval for IND 154075** for a Multi-Center, Phase IIA, Randomized, Double-Blind, Prospective, Active Placebo-Controlled Trial to evaluate the safety, efficacy and pharmacokinetics of ketamine in the treatment of levodopa-induced dyskinesia in patients with Parkinson's disease ("**KET-LID**"; **NCT04912115**)
05/27/2021	Co-Founder, Equity partner, and Head of Biology, **Teleport Pharmaceuticals, LLC** (together with R. Polt, and M.L. Heien).
06/11/2021	"Study may proceed" letter from FDA for IND 154075.
08/29/2022	Application 17/898,082 "Composition and methods for treating motor disorders" filed as Continuation to Patent US 11,426,366 B2 (equal inventors: **T. Falk** and Sherman)
08/30/2022	**Patent US 11,426,366 B2 issued** "Composition and methods for treating motor disorders" (based on UAZ-34446/US16/PRO; equal inventors: **T. Falk**, S.J. Sherman and M. Estevez).
05/02/2023	PharmaTher Inc. submits **Fast Track Application** to FDA for KETARX™ (Ketamine) for the Treatment of Parkinson's disease.

TEACHING

General Teaching Contributions:

1995	Giving seminars and supervising a practical course in muscle physiology for medical students at the UKE, University of Hamburg, Hamburg, Germany
1996-present	Supervision of high school, medical, undergraduate and graduate students during their projects at the University of Arizona
2004-2005	Organizing Neuroscience Seminar Series
2006-present	Organizer of Lab meetings/Journal Club for joined Falk-Sherman laboratory
2007	Teaching Seminar 'Neurodegenerative disease' as part of PSIO 603A
2007	Backup as Case-Based Instruction Facilitator for Dr. B.S. McKay
2012-2017	Participant in the "Neurology Journal Club," organized by Dr. L. Madhavan

2013	Backup as Case-Based Instruction Facilitator for Dr. B.S. McKay
03/06/2013	Panel Discussion with Honors Students in Physiology
2014	Backup as Case-Based Instruction Facilitator for Dr. B.S. McKay
2016	Western Alliance to Expand Student Opportunities (WAESO) Project funded for Fall Semester: "Exosomes: localization of a control point for protein uptake"
2017	Western Alliance to Expand Student Opportunities (WAESO) Project funded for Spring Semester: "Exosomes: localization of a control point for protein uptake"
03/15/2017	Figueroa AG*, Sadideen DT*, **Falk T**, McKay BS; Exosomes: Localization of a control point for cargo uptake. *Poster presentation at 12th Annual Western Alliance to Expand Student Opportunities (WAESO) Conference*; Arizona State University, Tempe, AZ.
2017-2018	Participant in the "Current Research in Vision and Neurodegeneration Colloquium" organized by Drs. K.P. Doyle and B.S. McKay (OPH 696)
03/08/2017	Panel Discussion with Honors Students in Physiology
09/13/2017	Neuroscience and Cognitive Science (NSCS) Research Blitz
11/08/2017	Panel Discussion with Honors Students in NSCS
02/15/2018	Lecture on Parkinson's disease in *Current Topics in Physiology* Class (Psio 489)
03/28/2018	Neuroscience and Cognitive Science (NSCS), Nu Rho Psi Career Panel Discussion Event
08/14/2018	Arizona Biological and Biomedical Sciences (ABBS) Orientation Poster Session
01/28/2019	Neuroscience Recruitment Research Data blitz
04/18/2019	Neuroscience GIDP Journal Club
01/27/2020	Neuroscience Recruitment Research Data blitz
2021-2022	Monthly Joined Systems/Behavioral '*Virtual Mountain Labs Meeting'*; UA, Univ. of Montana, and Univ. of Lethbridge, Alberta, Canada
03/01/2022	Presentation at the "UBRP Conversations with Faculty"
04/13/2022	Seminar on Repurposing of sub-anesthetic ketamine for Parkinson's disease in the "Current Research in Vision and Neurodegeneration Colloquium" organized by Drs. K.P. Doyle and B.S. McKay (OPH 696)
01/23/2023	Neuroscience Recruitment Research Data blitz
02/17/2023	Faculty Feedback for Student Seminar in Physiological Sciences GIDP
03/15/2023	Lecture on: "Dopaminergic System, Movement, Parkinson's disease"; part of Neuropharmacology Course PHCL 553
03/18/2024	Lecture on: "Dopaminergic System, Movement, Parkinson's disease"; part of Neuropharmacology Course PHCL 553
11/04/2024	Networking dinner, Neuroscience and Cognitive Science Association of Students (NSCSAS)
12/09/2024	Lecture on: "Parkinson's disease"; part of Neuroscience Course NRSC 588
01/13/2025	Neuroscience Recruitment Research Data blitz
02/15/2025	Bernard K*, Mota J*, Wene P, Corenblum MJ, **Saez J***, Bartlett MJ*, Heien ML, Doyle KP, Polt R, Hay M, Madhavan L, **Falk T**; The angiotensin (1-7) glycopeptide PNA5 reduces cognitive decline in a mouse model with chronic progressive Parkinson's disease through modulation of neuroinflammation. (J. Saez presenter) *Poster Presentation at the Council of Young Filipinx Americans in Medicine 5th Annual Conference*, 2025.
03/17/2025	Lecture on: "Dopaminergic System, Movement, Parkinson's disease"; part of Neuropharmacology Course PHCL 553

Advising (number of faculty mentees) – 1
(number of postdoctoral advisees) – 6
(number of graduate advisees) – 14
(number of graduate rotation students) – 10
(number graduate student committees) – 30
(number of undergraduate advisees) – 41
(number of honors theses supervised) – 15
(number of high school advisees) – 17

Office hours – I keep an open-door policy; any student can have my attention as needed.

Mentoring – as outlined below.

Career Counseling – when needed.

Individual Student and Mentee Contact - Independent studies directed (Chronological in Sections):

Faculty mentor:

2017-2020 Helena W. Morrison, PhD, RN, Assistant Professor – Tenure Track, Biobehavioral Health Science Division, College of Nursing, UAHS; received tenure and promotion to Associate Professor in 07/2020

Postdoctoral mentor:

2005-2007 Jennifer Y. Xie, PhD; "Retinal pigment cell transplantation for Parkinson's disease: methods to enhance neurotrophic potential"; currently Associate Professor, Department of Biomedical Sciences, NYITCOM at Arkansas State University, Jonesboro, AR; co-mentor

2007-2011 Xu Yue, MD, "Effects of the opioid agonist MMP-2200 in preclinical models of Parkinson's disease"; currently Research Scientist, Department of Pharmacology, University of Arizona; co-mentor

2018-2019 Tony Ye, PhD; "Preclinical studies evaluating molecular and systems level mechanisms of ketamine's action to reduce L-DOPA-induced dyskinesia"; until 2022 postdoctoral *NIH T32 scholar* at the UCLA Medical School in Los Angeles, CA; currently Research Scientist at Lundbeck Pharmaceutical, Copenhagen, Denmark; mentor

2019-2022 Mitchell J. Bartlett, PhD; "Preclinical mechanistic evaluation of anti-dyskinetic and protective effects of low-dose ketamine-treatment"; currently Associate Scientific Investigator, Director of the Lymphology-Surgical Biology Laboratory, Assistant Director of the NIH-funded Summer Institute on Medical Ignorance, Department of Surgery, University of Arizona; mentor

2024-present Kelsey Bernard, PhD; "Evaluation of the glycopeptide PNA5 as a novel treatment for cognitive decline in Parkinson's disease"; co-mentor (mentor Dr. L. Madhavan)

2024-present Asier Aristieta, PhD; "Optogenetic Investigation of the anti-dyskinetic effects of ketamine"; co-mentor (mentor Dr. S.L. Cowen)

Medical Student Research Program (MSRP) and MD mentoring/supervising:

1998-2002	Ramsey K. Kilani, MD; currently Adjunct Associate in Radiology, Duke University; Chief Medical Officer at Global Security and Innovative Strategies (GSIS); supervisor (SJ Sherman, mentor)
2005	Rebecca Milholland, MD, PhD; currently at the Center for Neurosciences and Medical Director for the Oro Valley Hospital stroke program, Tucson AZ; co-mentor
2008	Swapna Putta, MD; currently Instructor in Neurology at Brigham and Women's Hospital, Neurology, Boston MA; supervisor (SJ Sherman, mentor)
2009	Miriam I. Harris, MD; currently Family Practice in Fresno CA; co-mentor (MSRP)
2009+2011	Brandon K. Root, MD (received the "Walton van Winkle award for excellence in surgical research" for his work); Residency, Section of Neurosurgery, Dartmouth Medical School; currently Neurosurgeon in Saint Louis, MO; co-mentor (MSRP)
2012	Mitchell J. Bartlett; mentor (MSRP)
2013	Mitchell J. Bartlett; received an American Parkinson's Disease Association (APDA) Summer Medical Fellowship for this work; mentor
2013	Christopher Chen Wu; currently Resident/Fellow, Department of Emergency Medicine at UA; mentor (MSRP)
2014-2015	Mitchell J. Bartlett; Research Year; "Effects of opioid glycopeptides in a preclinical L-DOPA-induced dyskinesia model"; graduated with a PhD in Medical Pharmacology at UA; mentor
2015	Hong Fang, MS; Visiting Student from Shanghai University of Traditional Chinese Medicine; co-mentor (H Lei, mentor)

Undergraduate Student mentoring/supervising:

1997-1998	Ramsey K. Kilani; graduated University of Arizona with MD; Adjunct Associate in Radiology, Duke University; Chief Medical Officer at Global Security and Innovative Strategies (GSIS); supervisor (SJ Sherman, mentor)
1998-1999	Rebecca S. Borders; graduated University of Arizona with MD; currently at Penn State Health Department of Radiology, Pittsburgh, PA; supervisor (SJ Sherman, mentor)
1998-1999	Lori A. Strazdas; graduated University of Arizona, School of Public Health, Masters of Public Health; currently Public Health Liaison with CloroxPro's Clinical & Scientific Affairs; supervisor (SJ Sherman, mentor)
2001-2002	Kevin Cushing; graduate studies in Chemistry, Northern Arizona University; currently Researcher at the Army Research Laboratory; supervisor (SJ Sherman, mentor)
2002-2005	Amit Kumar, Applied Mathematics; "Modeling K channels in hippocampal neurons and myotubes using the NEURON software"; supervisor (SJ Sherman, mentor)
2003-2004	Jason W. Worrell, Physiology, "Sub-cloning of promoters into viral shuttle plasmids"; currently a research scientist, Department of Neurobiology, David Geffen School of Medicine, UCLA; mentor

2005-2006 Emilie L. Erbe; graduated University of Utah, Physician's Assistant; supervisor (SJ Sherman, mentor)

2006-2007 Janelle Kennedy; graduated Rosalind Franklin University of Medicine and Science, Chicago, Physician's Assistant; supervisor (SJ Sherman, mentor)

2005-2008 Gabriel B. Sherman; Summer Student; graduated with a Masters in Urban Planning at Rutgers University, Project Manager for Minnehaha Creek Watershed District; mentor

2007-2010 Brandon J. Yee, Physiology, Undergraduate Biology and Research Program (UBRP); graduated from University of Arizona Eller School of Business; Investment Advisor Representative working at Versant Capital Management; supervisor (SJ Sherman, mentor)

2008-2010 Robert T. Gonzalez, Chemistry and Biochemistry (CBC), Undergraduate Biology and Research Program (UBRP); *CBC Outstanding Senior* Fall 2010; "The Yin and Yang of VEGF and PEDF: Multifaceted Neurotrophic Factors and their Potential in the Treatment of Parkinson's disease"; currently Senior Associate Editor at WIRED; co-mentor

2011-2013 Shiana J. Ferng, Biochemistry, Undergraduate Biology and Research Program (UBRP), "Evaluation of a Parkinson's disease model in medaka fish"; received "American Society for Biochemistry and Molecular Biology (ASBMB) Undergraduate Affiliate Network Research Award"; graduated with a dual MBA/Masters of Public Health degree, Mel and Enid Zuckerman College of Public Health and Eller College of Management, University of Arizona; currently Sr. Customer Success Account Manager, US Manufacturing at Microsoft, Portland, ME; co-mentor

2012-2013 Allison R. Morley, Biochemistry, "The Effect of VEGF Receptor Knock-outs on the Development of Parkinson's disease in *C. elegans*"; Masters in Biochemistry at Georgetown University; currently Clinical Project Coordinator at PCM TRIALS, Arvada, CO; mentor

2012-2013 Tom Do Hoon Kwon, Molecular & Cellular Biology, "The role of *Caenorhabditis elegans* glutamate transporters in a model of selenium-induced neurodegeneration"; co-mentor

2012-2013 David E. Gonzalez; supervisor (HL Rilo, mentor)

2014 Dianna Padilla, UCLA; NIH-funded Summer Institute on Medical Ignorance program for undergraduate students, University of Arizona; graduated from UCLA, currently at Semel Institute for Neuroscience and Human Behavior, UCLA, CA; mentor

2015-2016 Connie T. Tran, Molecular & Cellular Biology; currently Registered Nurse at Memorial Hermann Health System, TX, and enrolled in the UA College of Nursing's DNP program's Family Nurse Practitioner specialty; mentor

2015-2016 Dyana C.Y. Muller, Neuroscience and Cognitive Science (NSCS); 2018 Amgen Scholar at Berkeley; currently PhD Student in Neuroscience at UC Berkeley, CA; mentor

2015-2017 Benjamin D. Silashki, Physiology; currently in medical school class of 2024 at Midwestern University in Glendale, AZ; mentor

2016 Asim H. Zehri; graduated medical school class of 2021 at UA; currently resident at Wake Forest University Medical Center in Winston-Salem, NC; mentor

2017-2018 Raul Nava, Physiology, Undergraduate Research Opportunities Consortium (UROC) Minority Health Disparities (MHD) summer research program 2017;

	graduated with a Master degree in the UA Physiological Sciences Interdisciplinary Graduate Program 2021; currently Research Technician at the University of Arizona College of Medicine; mentor
2018-2019	Mary R. Schnellman, Neuroscience and Cognitive Science (NSCS); graduated with a JD at Saint Louis University Law School, St Louis, MO; mentor
2021-2022	Juben L. Saez, Physiology; NIH-funded Summer Institute on Medical Ignorance (SIMI) program for undergraduate students 2021; currently pursuing a DO at Arizona College of Osteopathic Medicine (AZCOM); mentor
2022	Kathaleen López-Smith, Associate of Art: Life Science Student – Public Health Tohono O'odham Community College: Sells, Arizona; co-mentor
2022	Lilian German, NIH-funded Summer Institute on Medical Ignorance (SIMI) program for Undergraduate students, University of Arizona; currently undergraduate student in Neuroscience and Cognitive Science (NSCS) and Criminology at University of Arizona; mentor
2022-2024	Jesus A. Mota, Biomedical Engineering; Undergraduate Biology Research Program (UBRP); currently Research And Development Engineer at SynCardia Systems, LLC; mentor
2023	Dillan A. Rhodes, Honors Thesis, Chemistry & Biochemistry; mentor
2025	Emma G.E. Smith, Neuroscience and Cognitive Science (NSCS), Undergraduate Research Opportunities Consortium (UROC) Minority Health Disparities (MHD) summer research program 2025; mentor

High School Student mentoring:

2012	Mary N. Nguyen; NIH-funded Summer Institute on Medical Ignorance (SIMI) program, University of Arizona; graduated from Brown University; graduated with Masters in Evidence-Based Social Intervention and Policy Evaluation from Oxford University, England; graduated from UA medical school in 2024; mentor
2013	Thomas White; NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; graduated with BA from University of Arizona; co-mentor
2013	Nicole Robles; NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; currently undergraduate student at University of Arizona; mentor
2014	Genesis Zazueta; NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; co-mentor
2014-2015	Genesis Zazueta; Independent research project, part of 'Biotechnology and Honors Research Methods', Tucson High Magnet School; graduated with BS in Public Heath from University of Arizona in 2019, Dean's List with Distinction in 2016; currently graduate student in Nursing, University of Arizona; mentor
2015	Niera L.R. Nez; NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; selected as a Dell Finalist/Scholar for the class of 2016; mentor
2016	Alexander Esqueda; NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; currently graduate student In Neuroscience at Yale University; mentor

2017	Catherine Fuentes, NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; currently undergraduate student at University of Arizona; mentor
2018	Gaige Tucker, Keep Engaging Youth in Science (KEYS) Research Internship Program; currently undergraduate student at University of Arizona; mentor
2018	Jaqueline Yepiz, NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; currently undergraduate student at University of Arizona; mentor
2018	Jimena Lamadrid, NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; mentor
2019	Isabella Fox, NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; mentor
2019	Fernanda Montes, NIH-funded Summer Institute on Medical Ignorance program for high school students, University of Arizona; mentor
2020	Isabella Fox, Senior Project for BASIS Chapter High School Tucson North; mentor
2020	Isabella Fox, NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; currently undergraduate student at Dartmouth College; mentor
2021	Lilian German, NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students; currently undergraduate student at UA; mentor
2021	Isaac Rojas, NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; mentor
2022	Sarah Buchanan, NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; mentor
2023	Ana Lucia Garcia, NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; mentor
2023	Max Irey, NIH-funded Summer Institute on Medical Ignorance (SIMI) program for high school students, University of Arizona; mentor

Participation in honors program:

2006-2007	Leslie A. Zuniga, Honors Thesis, Physiology, "Modulation of the inwardly rectifying potassium channels in the striatum as a potential Gene Therapy for Parkinson's disease"; graduated medical school, University of Arizona; Residency at Mayo Clinic Arizona; currently at Mayo Foundation for Medical Education and Research, Neurology Department, Rochester, MN; mentor
2007-2010	Alexander D. McCourt, Honors Thesis, Physiology, "Vascular Endothelial Growth Factor A production in retinal pigment epithelium grown on microcarriers: Implications for Parkinson's disease therapy"; graduated University of Arizona, School of Public Health with a Masters of Public Health, James E. Rogers College of Law with a JD, and Johns Hopkins Bloomberg School of Public Health with a PhD; currently Assistant Scientist at Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; co-mentor
2013-2015	Lindsey M. LePoidevin, Honors Thesis, Physiology; "Evaluation of an anti-dyskinetic treatment for L-DOPA-induced motor complications in a rodent Parkinson's disease model"; graduated medical school class of 2020 at UA; currently Resident at Baylor College of Medicine, Houston, TX; mentor

2013-2015 Ria M. Joseph, Honors Thesis, Physiology; "Evaluation of an anti-dyskinetic therapy in a preclinical model of L-DOPA-induced dyskinesia"; graduated medical school class of 2020 at University of Colorado; currently Resident at University of Michigan Medical School, Grand Rapids, MI; mentor

2016-2017 Grace Samtani, Honors Thesis, Neuroscience and Cognitive Science (NSCS); "Evaluation of drug "X" in preclinical models of Parkinson's disease"; graduated with a PhD form Texas A&M University in 2023; currently Postdoctoral Research Fellow in Neuroscience at Mayo Clinic, Jacksonville, FL; mentor

2016-2018 Anna G. Figueroa, Honors Thesis, Neuroscience and Cognitive Science (NSCS); "Exosomes: localization of a control point for cargo uptake"; Research Opportunities Consortium (UROC) Minority Health Disparities (MHD) summer research program 2016; recipient of Western Alliance to Expand Student Opportunities (WAESO) stipend 2016 and 2017 and *Spirit of Inquiry* Award in 2017/18; won the *Outstanding Transfer Graduate Award* from the Honors College in 2018; winner of the *Honors College Video Competition* in 2018; currently pursuing a PharmD at University of Colorado, Denver, CO; co-mentor (BS McKay, mentor)

2017-2019 Sofia Cristiani, Honors Thesis, Neuroscience and Cognitive Science (NSCS); "Behavioral improvement after overexpression of VEGF-B in a rat genetic Parkinson's disease model"; graduated with a Master of Arts in Psychology at Pepperdine University Graduate School of Education and Psychology; currently Graduate student at Saint Mary's College of California, San Francisco, California; mentor

2017-2019 Ayumi E. Pottenger, Honors Thesis, Molecular & Cellular Biology; "Evaluation the effects of sub-anesthetic ketamine on microglia and inflammation in a pre-clinical model of L-DOPA-induced dyskinesia"; graduated with a PhD at University of Washington, Seattle in 2024; co-mentor (HW Morrison, mentor)

2017-2019 Saskia I. Smitd, Honors Thesis, Neuroscience and Cognitive Science (NSCS); Undergraduate Biology Research Program (UBRP) in 2019; "Restorative effects of overexpression of VEGF-B in a PINK1 knockout Parkinson's disease model"; 02/2020-06/2020 Research Technician in the Falk laboratory; currently Clinical Research Coordinator II at University of Arizona; mentor

2017-2021 Morgan R. Sexauer, Honors Thesis, Neuroscience and Cognitive Science (NSCS); Undergraduate Biology Research Program (UBRP) in 2020/21; "What are the neurological mechanisms that underlie the therapeutic potential of psychoactive dissociative compounds: Ketamine, Psilocybin, LSD, and DMT?"; received a M.S. in Psychoactive Pharmaceutical Investigations at University of Wisconsin-Madison in 2023; currently Crisis Intervention Specialist (Crisis and Justice Systems) at Centene Corporation, Tucson AZ; mentor

2018-2022 Alexander Esqueda, Honors Thesis, Neuroscience and Cognitive Science (NSCS); "Comparison of Methods for Analyzing Abnormal Involuntary Movements and Contribution of Opioid Receptors to the Attenuation of Levodopa-induced Dyskinesia (LID) by Ketamine in a Preclinical Rat Model of LID"; selected for NIH-funded Summer Institute on Medical Ignorance for Undergraduate students in 2019, 2020 and 2021; Ronald E. McNair Achievement program in 2021/22; currently in the Neuroscience PhD Program at Yale University; mentor

2019-2020	Danielle A. Kalil, Honors Thesis, Neuroscience and Cognitive Science (NSCS); "Friedreich's ataxia – a rare neurodegenerative condition"; currently Division Office Manager at Vector Marketing; mentor
2023-present	Sansita Singh, Honors Thesis, Neuroscience and Cognitive Science (NSCS); mentor
2025-present	Jillian N. Zollar, Honors Thesis, Physiology; mentor
2025-present	Aryan Malik, Honors Thesis, Neuroscience and Cognitive Science (NSCS); co-mentor

Masters Student dissertation advisor for:

2007-2009	Leslie A. Zuniga, Masters Dissertation, Physiological Sciences, "Effects of the novel opioid peptide MMP-2200 in rat models of Parkinson's disease"; graduated from medical school, University of Arizona in 2013; Residency at Mayo Clinic Arizona; currently at Mayo Foundation for Medical Education and Research, Neurology Department, Rochester, MN
2010-2012	Dana J. Hariri, Masters Dissertation, Physiological Sciences; "Investigating the neurorestorative potential of VEGF-B in a Parkinson's disease model"; graduated from medical school, University of Arizona in 2019; currently Resident in Syracuse, NY
2011-2013	Andrew J. Flores, Masters Dissertation, Physiological Sciences, "The opioid glycopeptide MMP-2200: Analysis in a levodopa-induced dyskinesia model"; received PhD in Physiological Sciences at UA in 2020; currently postdoctoral fellow in the lab of Dr. Tom Hnasko, Department of Neurosciences, USCD, San Diego, CA
2011-2013	Beatrice Caballero, Masters Dissertation, Physiological Sciences, "Mechanisms of VEGF-B's action in dopaminergic cells", graduated medical school class of 2020, University of Arizona; currently Resident in Family Medicine at University of Washington, WA
2014-2016	Doraid T. Sadideen, Masters Dissertation, Physiological Sciences, "Exploring G-Protein-Coupled Receptors Regulation, Specificity and Controllability of Exosome Release in the Neuronal Cell Line SH-SY5Y"; graduated with a PhD at the UA Cancer Center, Tucson, AZ in 2022, currently postdoctoral researcher at UT Health San Antonio, TX
2015-2016	Beatrice Caballero, MS, Masters Dissertation, Department of Cellular & Molecular Medicine, Thesis: "Insights into the Mechanisms Involved in Protective Effects of VEGF-B in Neurons: A Literature Review"; graduated medical school class of 2020, University of Arizona; currently Resident in Family Medicine at University of Washington, WA
2025-present	Jasmine R. Meredith, Accelerated Masters Program; Molecular & Cellular Biology, co-mentor

Doctor of Pharmacy Student dissertation advisor for:

2010-2014	Lisa Y. So; "Differential effects of an opioid glycopeptide and a NMDA receptor antagonist in rodent models of dopamine-receptor 1 and 2 agonist–induced dyskinesia"; graduated 2020 with a PhD in Neuroscience at the University of

Arizona; followed by a postdoctoral fellow position at UA Department of Neuroscience, Tucson, AZ

PhD Student dissertation advisor for:

2016-2019 Mitchell J. Bartlett; PhD Dissertation in Medical Pharmacology; "Evaluation of drugs targeting NMDA and opioid receptors in preclinical models of Parkinson's disease and L-DOPA-induced dyskinesia"; received the *World Parkinson's Congress Conference Travel Award* 2016, and the *Hank Yamamura Travel Awards* in 2016, 2017 and 2018; selected as *Society for Neuroscience, Neuroscience Scholars Program Fellow* 2019 & 2020; won the *Outstanding Graduate Research Assistant Award* in 2018 bestowed by the UA Graduate & Professional Student Council; continued as a postdoctoral research associate in the Falk laboratory; currently Associate Scientific Investigator, Director of the Surgical Biology/Lymphology Laboratory, Department of Surgery, University of Arizona

2016-2020 Andrew J. Flores; PhD Dissertation in Physiological Sciences; "Modulation of opioid receptors in preclinical models of Parkinson's disease and levodopa-induced dyskinesia"; received the *Herbert E. Carter Travel Award*, University of Arizona Graduate College in 2015; selected to be one of the *UA Achievement Rewards for College Scientists (ARCS) Scholars* for 2015-2016, 2016-2017 and 2017-2018; currently postdoctoral fellow in the laboratory of Dr. Tom Hnasko, Department of Neurosciences, USCD, San Diego, CA

2019-2024 Kelsey Bernard, PhD Dissertation in Physiological Sciences; "Evaluation of systemically delivered glycopeptides for the treatment of acute brain injury and Parkinson's disease"; received a *NIA AZ-TRADD (Translational Research in Alzheimer's Disease and Related Dementias) T32 predoctoral fellowship* 2020-22; Herbert E. Carter Travel Award, University of Arizona Graduate College in 2022; *UA Achievement Rewards for College Scientists (ARCS) Scholars* for 2022-2023, 2023-2024 (co-mentoring with Dr. L. Madhavan); currently a postdoctoral fellow in the Department of Neurology at University of Arizona

2020-2024 Carolyn J. Stopera, PhD Dissertation in Neuroscience; "Preclinical evaluation of mechanisms underlying ketamine activity as a treatment for Parkinson's disease and L-DOPA-induced dyskinesia"

2022-present Raveena Parmar, PhD Dissertation in Medical Pharmacology; "Evaluation of ketamine activity as a treatment for Parkinson's disease and L-DOPA-induced dyskinesia: Sex-specificity and the context of the BDNF Val/Met polymorphism"; received the Hank Yamamura Travel Award in 2022; recipient of a NINDS Diversity Supplement Stipend for 2023-2025

Masters and PhD Student rotation advisor for:

2013-2014 Taylor A. Eaves, Masters Student, Physiological Sciences
2014 Lisa Y. So, PhD Student, Neuroscience
2016 Hannah K. Dollish, PhD Student, Neuroscience
2017 Hannah K. Wittchen, Masters Student, Physiological Sciences
2018-2019 Raul Nava, Masters Student, Physiological Sciences
2019 Kelsey Bernard, PhD Student, Arizona Biological and Biomedical Sciences

2019	Rickeem Butler, PhD Student, Medical Pharmacology
2019	Carolyn Stopera, PhD Student, Neuroscience
2022	Raveena Parmar, PhD Student, Medical Pharmacology
2024	Sydney Ragsdale, PhD Student, Neuroscience

Graduate Student Dissertation Thesis and Comprehensive Examination Committees (other than as advisor):

2006	Erin McKiernan, PhD Student, Physiological Sciences, Comprehensive Examination Committee; currently Professor, Department of Physics, Biomedical Physics Program at the National Autonomous University of Mexico
2007	Mary Adde, Physiological Sciences, Masters Dissertation Committee
2012	Justin M. Smith, Physiological Sciences Masters Dissertation Committee
2013-2014	Courtney Hemphill, Cellular and Molecular Medicine, Masters Dissertation Committee
2014	Alice S. Ferng, MD, PhD Student, Physiological Sciences, Comprehensive Examination Committee; graduated 2020 with a PhD from UA; currently Research Assistant Professor, Surgery, University of Arizona
2015	Andrew J. Flores, PhD Student, Physiological Sciences, Comprehensive Examination Committee; graduated 2020 with a PhD; currently postdoctoral scholar at UCSD, San Diego, CA
2016-2020	Lisa Y. So, PhD Student, Neuroscience, Comprehensive Examination and Dissertation Committees; graduated 2020 with a PhD; followed by a postdoctoral research associate position at UA, Tucson
2016-2018	Jean-Paul Wiegand, PhD Student, Neuroscience, Dissertation Committee; currently Project Manager at The Center for Innovation in Brain Science (CIBS) at UA, Tucson
12/2017	*External Reviewer* for the PhD thesis of Mohamad Kourghi, Health and Medical Sciences, Adelaide University, Australia; currently postdoctoral scholar at UC Irvine, CA
2016-2018	Tony Ye, PhD Student, Psychology, Dissertation Committee and co-mentor; followed by a postdoctoral *NIH T32* scholarship at the UCLA Medical School, Los Angeles, CA; currently Research Scientist at Lundbeck Pharmaceutical, Copenhagen, Denmark
2017-2018	Zach Olson, Masters Student, Physiological Sciences, Masters Dissertation Committee
2017-2020	Justin E. LaVigne, PhD Student, Medical Pharmacology, Comprehensive Examination and Dissertation Committees; followed by a postdoctoral scholar position at Purdue University, West Lafayette, IN and currently postdoctoral scholar at UA Dept. of Pharmacology
2018-2020	Lindsey M. Crown, PhD Student, Psychology, Dissertation Committee; followed by postdoctoral scholar at the USC Medical School, Los Angeles, CA, and currently Scientist at Neurocrine Biosciences, San Diego, CA
2018-2022	Alexander Marciniak, PhD Student, Chemistry & Biochemistry, Comprehensive Examination and Dissertation Committees; currently Research scientist at Amyris, Inc., Emeryville, CA

2019-2023	Rickeem Butler, PhD Student, Medical Pharmacology, Chair of Comprehensive Examination and Dissertation Committees; currently Grant and Contract Analyst, Sponsored Projects Services at University of Arizona, Tucson, AZ
04/2020	*External Review Committee member* for PhD thesis and doctoral defense of Kathryn E. Lanza, MS, Behavioral Neuroscience, State University of New York at Binghamton; currently postdoctoral fellow at Department of Psychiatry, Northwestern University, Chicago, IL
2020-2021	Raul Nava, Masters Student, Physiological Sciences, Masters Dissertation Committee; currently Research Associate, UA Department of Pharmacology, Tucson, AZ; currently Research Technician, University of Arizona
2020-2021	Gianna A. Jordan, Masters Student, Biomedical Engineering; "Automated Behavior Quantification of Rats in the String Pulling Task"; Masters Dissertation Committee; currently Associate Bioinformatics Engineer, Sage Bionetworks, Arizona, United States
2020-2021	Abhilasha Vishwanath, Masters Student, Psychology, “Effects of ketamine on neural signatures of Parkinson’s Disease and a novel string pulling behavior quantification system”; Masters Dissertation Committee
2020-2021	Harrison Stratton, MS, PhD student, Medical Pharmacology, Comprehensive Examination and Dissertation Committees; currently postdoctoral scholar at UA Department of Pharmacology, Tucson, AZ
2021-2024	Abhilasha Vishwanath, PhD Student, Psychology, “Effects of ketamine on neural signatures of Parkinson’s Disease”; PhD Comprehensive Examination and Dissertation Committees; currently postdoctoral researcher with Dr. A Ekstrom in the UA Department of Psychology, Tucson, AZ
2021-present	Gabriel R. Holguin, PhD Student, Psychology, PhD Comprehensive Examination and Dissertation Committees
2022-present	Chidiebere Ogbu, PhD Student, Chemistry & Biochemistry, Comprehensive Examination and Dissertation Committees
2022-2023	Lizzie Church, MS Student, Physiological Sciences, Dissertation Committee.
2023-present	Gabriel Moreau Winter, PhD Student, Psychology, Comprehensive Examination and Dissertation Committee
2023-2024	Brittany D. K. Gratreak, MD, PhD Student, Neuroscience, Comprehensive Examination and Dissertation Committees; graduated with PhD 2024, currently back in medical school
2023-2025	Adrian Pena, PhD Student, Neuroscience, Comprehensive Examination and Dissertation Committees
2023-present	Nicholas Christie, PhD Student, Chemistry & Biochemistry, Comprehensive Examination and Dissertation Committees
2024-present	Troy E. Smith, PhD Student, Chemistry & Biochemistry, Dissertation Committee
2024-present	Rana Mekha, PhD student, Clinical Translational Sciences, Comprehensive Examination and Dissertation Committees