



<b>Selected Publications:</b> *equal †corresponding	<b>Race N</b> , Uchida K, Burcham PB, Shi R <sup>†</sup> . Multimodal Toxicity of Acrolein and Associated Therapeutic Strategies in Central Nervous System Trauma and Disease. <i>Annual Review of Biomedical Engineering</i> . Vol 28.	2026
	Stingel R, <b>Race N</b> <sup>†</sup> , Shi R <sup>†</sup> . Reactive aldehyde species-mediated neuropathic pain in spinal cord injury mechanisms and therapeutic opportunities. <i>Neural Regeneration Research</i> .	2025
	<b>Race N</b> , Moschonas E, Kline AE, Bondi CO <sup>†</sup> . Cognition and behavior in the aging brain following TBI: surveying the preclinical evidence. <i>Traumatic Brain Injuries - Navigating the Unique Terrains of the Injured Young and Aged Brains</i> . Springer.	2024
	<b>Race N</b> , Moschonas E, Cheng J, Bondi CO, Kline AE <sup>†</sup> . Antipsychotic drugs: the antithesis to neurorehabilitation in models of preclinical TBI. <i>Neurotrauma Reports</i> .	2023
	Kutash L, Moschonas E, . . . , Cheng P, <b>Race N</b> , Kline AE, Bondi CO. Sustained attention performance deficits in three-choice serial reaction time task in male and female rats after experimental brain trauma. <i>Brain Research</i> .	2023
	Enam N*, <b>Race N</b> *. Post-traumatic pituitary dysfunction: pearls and pitfalls for physiatry. <i>Rehabilitation Grand Rounds</i> . (National CME Course)	2023
	Enam N, Deng H, <b>Race N</b> , Majid D, Okonkwo D <sup>†</sup> , Franzese K <sup>†</sup> . Continuum of care and longitudinal recovery in an athlete with second impact syndrome. <i>Brain Injury</i> .	2022
	Craine T, <b>Race N</b> *, Kutash L, Patel A, Moschonas E, Iouchmanov A, Sunleaf C, O’Neil D, Grobengieser K, Cheng J, Kline AE, Bondi CO <sup>†</sup> . Milnacipran ameliorates executive function impairments following frontal lobe TBI in male rats. <i>J Neurotrauma</i> .	2022
	<b>Race N</b> *, Andrews K*, Lungwitz E*, Alvarez S*, Acosta G, Warner T, Cao J, Lu K, Liu Z, Shekhar A, Truitt B <sup>†</sup> , and Shi R <sup>†</sup> . Psychosocial impairment following mild blast-induced traumatic brain injury in rats. <i>Behavioral Brain Research</i> .	2021
	Herr S, Shi L, Gianaris T, Jiao Y, Sun S, <b>Race N</b> , Shapiro S, Shi R <sup>†</sup> . Critical role of mitochondrial aldehyde dehydrogenase 2 in acrolein sequestering in rat spinal cord injury. <i>Neural Regeneration Research</i> .	2021
	Acosta G, <b>Race N</b> , Herr S, Fernandez J, Tang J, Shi R <sup>†</sup> . Acrolein-mediated alpha-synuclein pathology involvement in the early post-injury pathogenesis of mild blast-induced Parkinsonian neurodegeneration. <i>Molecular and Cellular Neuroscience</i> .	2019
	Shi R <sup>†</sup> and <b>Race N</b> . Mild blast-induced traumatic brain injury model. <i>Animal Models of Acute Neurological Injuries, 2<sup>nd</sup> Edition</i> . Springer Publishing.	2019
	Garcia-Gonzalez D*, <b>Race N</b> *, Voets N, Jenkins D, Sotiropoulos S, Acosta G, Cruz-Haces M, Tang J, Shi R <sup>†</sup> , Jérusalem A <sup>†</sup> . Cognition-based bTBI mechanistic criteria; a tool for preventive and therapeutic innovations. <i>Scientific Reports</i> .	2018
	Tully M, Tang J, Zheng L, Acosta G, Tian R, Hayward L, <b>Race N</b> , Mattson D <sup>†</sup> , and Shi R <sup>†</sup> . Systemic acrolein elevations in mice with experimental autoimmune encephalomyelitis and patients with multiple sclerosis. <i>Frontiers in Neurology</i> .	2018
	<b>Race N</b> . Causes and Consequences of Mild Blast-Induced Traumatic Brain Injury: From Biomechanics to Behavior. Purdue University, <i>ProQuest Publishing</i> .	2017
<b>Race N</b> *, Lai J*, Shi R <sup>†</sup> , Bartlett E <sup>†</sup> . Differences in post-injury auditory system pathophysiology after blast and non-blast acute acoustic trauma. <i>J Neurophysiology</i> .	2017	
Walls M*, <b>Race N</b> *, Zheng L, Acosta G, Alvarez S, and Shi R <sup>†</sup> . Structural and biochemical abnormalities in the absence of acute deficits in mild primary blast-induced head trauma. <i>J Neurosurgery</i> .	2016	
Song S*, <b>Race N</b> *, Kim A*, Zhang T, Shi R <sup>†</sup> , and Ziaie B <sup>†</sup> . A wireless intracranial brain deformation sensing system for blast-induced TBI. <i>Scientific Reports</i> .	2015	

<b>Publications in Progress:</b> *equal †corresponding	Busse L, Vo L, Aviles A, Estrada S, Sriram P, Kaufman Z, Savalia K, <b>Race N</b> . Substance Use Disorders Heighten Agitation and Clinical Complexity in Acute TBI Hospitalizations. <i>Archives of PM&amp;R</i> .	<b>Submitted</b>
	<b>Race N</b> , Moschonas E, Rennerfeldt P, Reddy R, Ranellone T, Wehrymeyer B, Sunleaf C, Cheng J, Carlson S, Dixon CE, Kline AE, Bondi CO†. Subacute $\alpha 7$ nicotinic acetylcholine receptor type I positive allosteric modulation partially restores mPFC cholinergic marker expression but does not improve attention after moderate right parietal contusion TBI in rats. <i>Brain Research</i> .	<b>Submitted</b>
	Kurzava Kendall L, Pingenot E, Ferber G, <b>Race N</b> †. Vascular Spinal Cord Injuries: a Rehabilitation- and Function-focused Review. <i>Am. J. Phys. Med. Rehab.</i>	<b>Submitted</b>
	Busse L, Vo L, Aviles A, Estrada S, Sriram P, Kaufman Z, Savalia K, <b>Race N</b> . Clinical Impact of Early Substance Withdrawal Identification and Treatment on Hospitalized TBI Agitation Management and Outcomes. <i>J Neurotrauma</i> .	In preparation
	Ong T, Garavito M, Kaufman Z, Stoianovici R, Savalia K, <b>Race N</b> . Pharmacogenetics-guided treatment approaches in traumatic brain injury. <i>Brain Injury</i> .	In preparation
	Harris A, Kalistratova V, Burgess N, Stoianovici R, Nella E, <b>Race N</b> , Savalia K. Paroxysmal Sympathetic Hyperactivity After Severe Traumatic Brain Injury: Diagnostic Challenges and Management Across the Recovery Spectrum. <i>J Clinical Medicine</i> .	In preparation
	<b>Race N</b> †, Moschonas E, Bertocchi M, Toader M, Rennerfeldt P, Reddy R, Ranellone T, Annas E, Cheng J, Kline AE, Bondi CO. Experimental frontal or parietal TBI yield distinct stress processing and safety learning dysfunction in rats. <i>J Neurotrauma</i> .	In preparation
	Moschonas E, <b>Race N</b> , Rennerfeldt P, Reddy R, Ranellone T, Wehrymeyer B, Sunleaf C, Patel A, Benbourenane A, Balaji S, Magdelinic T, Sha S, Cheng J, Kline AE, Bondi CO†. Chronic positive allosteric modulation of $\alpha 7$ nAChRs and environmental enrichment improve sustained attention, cholinergic tone, and systemic inflammation in rats after traumatic brain injury. <i>J Neurotrauma</i> .	In preparation
	Acosta G*, <b>Race N</b> *, Herr S, Abdeljaber M, Lu S, Shi R†. Acrolein-scavenging drugs reduce Parkinsonian motor deficits following blast-induced traumatic brain injury in rats.	In preparation
	Tang J, Fernandez J, Kim S, Abdeljaber M, Lu S, <b>Race N</b> †, Shi R†. Novel model for unconstrained free-motion closed head impact-acceleration mild TBI in rats.	In preparation
<b>Select Research Presentations and Conference Abstracts:</b> (full list <a href="#">here</a> )  Not shown: dozens of institutional seminars and local research symposia	Substance Use Disorders Heighten Agitation and Clinical Complexity in TBI Hospitalizations. American Psychiatric Association Annual Meeting 2026. San Francisco, CA.	2026
	Evaluation of the Burden Paroxysmal Sympathetic Hyperactivity in Severe Traumatic Brain Injury: Characterizing the Impact on Clinical Outcomes, Resource Utilization, and Length of Stay. American Academy of Neurology Annual Meeting. Chicago, IL.	2026
	The Perfect Storm: Effects of Paroxysmal Sympathetic Hyperactivity on Outcomes Following Traumatic Brain Injury. Association of Academic Physiatrists Annual Meeting 2026. San Juan, Puerto Rico.	2026
	Impaired socioemotional and coping skills after TBI: an experimental investigation in rats. Association of Academic Physiatrists Annual Meeting 2026. San Juan, Puerto Rico.	2026
	PRECISION Approaches in Traumatic Brain Injury: Practical Reanalysis of Existing Clinical Information to Steer Individualized Outcomes in Neurotrauma. Building Bridges in Traumatic Brain Injury Research IMPACT Symposium. Sacramento, CA.	2025
	The Agitation Burden: Exploring Substance Use Disorder’s Role in TBI Hospitalizations. Association of Medicine and Psychiatry Annual Meeting. Newport Beach, CA.	2025

<b>Select Research Presentations and Conference Abstracts, cont'd:</b>	Agitation in Traumatic Brain Injury: Implications of Substance Use Disorder and Its Treatment. National Medical Association Annual Convention. Chicago, IL.	2025
	Experimental parietal or frontal TBI impairs social safety learning, social preferences, and stress coping. National Neurotrauma Society Annual Symposium. PHL, PA.	2025
	Spasticity Injection Workshops with Ultrasound Improve Resident Education and Confidence. Association of Academic Psychiatrists Annual Meeting 2025. Phoenix, AZ.	2025
	Hands-on Ultrasound Guided Spasticity Injection Workshops Improve Resident Education and Confidence. AAPM&R Annual Meeting. San Diego, CA.	2024
	Aberrant social behavior, impaired stress coping, and altered social preferences following parietal or frontal experimental TBI in rats. Society for Neuroscience. Chicago, IL.	2024
	Development of reactive aldehyde scavengers for treatment of neuroinflammatory pain states. Therapeutics Development at NINDS: Innovation from Academics and Small Business Investigators. Society for Neuroscience Annual Meeting. Chicago, IL.	2024
	Toward precision medicine for chronic post-TBI neurocognitive dysfunction: a translational engineering, neuroscience, and clinical perspective. <u>Given twice</u> : Univ. of Pittsburgh Center for Neuroscience Seminar Series & UC Davis PM&R Grand Rounds	2023
	Anxiety-spectrum psychosocial dysfunction, safety learning impairments, and altered social preferences following experimental TBI in rats. Association of Academic Psychiatrists Annual Meeting. Anaheim, CA. Oral, RMSTP Plenary Talk.	2023
	Post-TBI cognitive, affective, and psychosocial dysfunction: a translational perspective. Purdue University Seminar Series for Neurotrauma and Diseases. Invited Oral.	2022
	Psychosocial safety learning impairments and altered social preferences after parietal or frontal experimental TBI in rats. Society for Neuroscience. San Diego, CA.	2022
	Positive effects of $\alpha 7$ nicotinic acetylcholinergic receptor modulation and environmental enrichment on sustained attention, cholinergic neurotransmission, and systemic inflammation after controlled cortical impact injury. National Neurotrauma Society Annual Symposium.	2022
	Discovery and development of small molecule reactive aldehyde scavengers: novel compounds with platform potential. University of Louisville Research Day. Invited Oral.	2022
	Psychosocial safety learning impairments following controlled cortical impact in male rats: a pilot. Presented at both: 11th Annual Children's Hospital Research Symposium 2022. ( <i>Top Abstract Selection, Oral Presentation</i> ) and 18 <sup>th</sup> Annual Rehabilitation Institute Research Day ( <i>Best Poster</i> ). Pittsburgh, PA.	2022
	Reducing toxic reactive aldehyde species for neuroinflammatory pain in neurotrauma and disease. Merck Pain Neurobiology Discovery Research Group. Invited Oral.	2022
	Delayed serotonin syndrome after intracranial hemorrhage in the setting of chronic premonitory dual serotonergic agents. Association of Academic Psychiatrists Annual Meeting 2022. Poster. New Orleans, LA.	2022
	Profound cerebellar ataxia secondary to phenytoin toxicity. Association of Academic Psychiatrists Annual Meeting 2022. Poster. New Orleans, LA.	2022
	Psychosocial and executive (dys)function after TBI: a translational view. UPMC PM&R Grand Rounds. Oral. Pittsburgh, PA.	2022
	Reactive aldehyde species reduction as a novel therapeutic approach for neurotrauma and related neuropathic pain. Praxis Incubate. Invited Oral.	2021

<b>Select Research Presentations and Conference Abstracts, cont'd:</b>	Positive $\alpha$ -7 nicotinic acetylcholine receptor allosteric modulator effects on sustained attention and cholinergic neurotransmission. National Neurotrauma Society Annual Symposium 2021. Virtual poster due to COVID-19.	2021
	Milnacipran ameliorates sustained attention and cognitive flexibility impairments following experimental frontal lobe traumatic brain injury in rats. International Society of Behavioral Neuroscience Symposium 2021. Poster and Oral. Puerto Vallarta, Mexico.	2021
	Management of second impact syndrome in the acute care and inpatient rehabilitation settings. Association of Academic Physiatrists Annual Meeting 2021. Virtual poster.	2021
	Reactive aldehyde species and TRPA1 axis modulation as novel non-opioid targets for neuropathic and neuroinflammatory pain in neurotrauma. NIH HEAL Initiative Preclinical Screening Platform for Pain. Invited Oral.	2021
<b>Funding:</b>	<b>NIH SBIR 1R44NS143670-01</b>   \$2,986,893   <i>Awarded</i> <i>Complete Mental Counts for Patients Recovering from Brain Injury.</i> PI - Ran Carmi, PhD. <u>Role:</u> Co-investigator; Academic Sub-award Site P.I.	9/2025-9/2028
	<b>UC Davis SyNAPSE Pilot Grant</b>   \$15,000   <i>Awarded</i> <i>ApoB100: A Novel CSF Biomarker for Longitudinal Quantification of Blood-Brain Barrier Permeability after TBI.</i> <u>Role:</u> Co-investigator	11/25-9/2026
	<b>UC Davis Academic Senate Large Grants to Support Research</b>   \$25,000   <i>Awarded</i> <i>Improving Treatment Approaches and Methods for Evaluation of Paroxysmal Sympathetic Hyperactivity in TBI.</i> <u>Role:</u> Co-PI.	7/2025-9/2026
	<b>UC Davis IMPACT Symposium Grant</b>   \$15,000   <i>Completed</i> <i>UC Davis SOM Connection Symposium. "Building Bridges in Traumatic Brain Injury Research – Collaborating to Solve a Complex Clinical Disease".</i> <u>Role:</u> Co-chair.	12/2024-2025
	<b>Foundation for PM&amp;R Materson New Investigator Grant</b>   \$10,000   <i>Completed</i> <i>Social relationship status and serotonergic dysregulation contributions to unhealthy social behavior and impaired stress management after TBI.</i> <u>Role:</u> PI.	9/2023-6/2025
	<b>Indiana CTSI Spinal Cord and Brain Injury Research Fund (ISCBIRF) Early Commercialization Award</b>   \$100,000   <i>Completed</i> Funds matched by Univ. Western Australia for additional \$55,000 <i>Development of small molecule scavengers of reactive aldehydes as novel therapeutics for neuropathic pain and neuroprotection in neurotrauma and neuroinflammatory diseases.</i> PI - Palaniappan Kulanthaivel, PhD. <u>Role:</u> Co-Investigator. Proposal Lead Author.	7/2021-6/2024
	<b>Praxis Incubate Program</b>   \$25,000   <i>Completed</i> <i>Neuro Vigor Therapeutics - development funds for small molecule treatments of neuropathic pain in spinal cord injury.</i> <u>Role:</u> Pitch/proposal Author. Co-Investigator/Science Team Lead.	9/2021-2/2022
	<b>Purdue Bilsland Dissertation Fellowship</b>   \$27,500   <i>Completed</i> <i>Blast-induced traumatic brain injury: from biomechanics to behavior.</i> <u>Role:</u> PI.	6/2016-5/2017
	<b>Indiana CTSI Innovation Pilot Grant</b>   \$10,000   <i>Completed</i> <i>Functional neuroimaging characterization of blast TBI-induced anxiety in rats.</i> PI - Riya Shi, MD, PhD. <u>Role:</u> Co-Investigator. Primary performing predoctoral researcher. Proposal Lead Author.	9/2014-8/2016
	<b>NIH R21 1 R21 NS090244-01</b>   \$275,000   <i>Completed</i> <i>Biomechanics of blast injury.</i> PI - Riya Shi, MD, PhD. <u>Role:</u> Primary performing predoctoral researcher. Proposal Lead Author.	9/2014-8/2016

**Teaching  
Experience:**

**Presentations and Lectures**

TBI Epidemiology, Pathophysiology, and Prognostication. UC Davis PM&R Resident Didactics.	2026 (spring)
Paroxysmal Sympathetic Hyperactivity Case Review. UC Davis PM&R Resident Didactics.	2025 (fall)
The Coma Recovery Scale-Revised: A Workshop. UC Davis PM&R Resident Didactics.	2025 (fall)
Traumatic Brain Injury Management: Acute Care PM&R Perspectives. UC Davis Annual Trauma Care Conference Symposium. <i>Invited Lecture.</i>	2025 (summer)
Concussion and Traumatic Brain Injury - Pain Sequelae. UC Davis Pain Medicine Fellowship Didactics. <i>Invited Lecture.</i>	2025 (summer)
Brain Injury Medicine Across the Continuum of Care: Systems- & Evidence-based Practice. Grand Rounds, UC Davis Dept. of Internal Medicine. <i>Invited Lecture.</i>	2025 (spring)
Cortical and Subcortical Neuroanatomy, Neuroradiology, and Stroke Syndromes. UC Davis PM&R Resident Didactics.	2025 (spring)
TBI Epidemiology and Post-traumatic Headache. UPMC PM&R Resident Didactics.	2025 (spring)
Acute Care TBI Management: Disorders of Consciousness, Agitation, Sleep/Wake, PSH. UC Davis Surgical Critical Care Fellowship Didactics. <i>Invited Lecture.</i>	2025 (spring)
Disorders of Consciousness, PSH, and Anoxic Brain Injuries. UC Davis PM&R Resident Didactics.	2025 (spring)
Gait rounds (weekly). UC Davis Dept. of PM&R.	2025 – pres.
Neuroradiology rounds (weekly). UC Davis Dept. of PM&R.	2025 – pres.
Acute Care Psychiatric Brain Injury Management. UC Davis Neurosurgery APP Meeting.	2024
Disorders of Consciousness. UPMC Comprehensive Rehabilitation Services CE Series.	2024
Disorders of Consciousness. UPMC Children’s Dept. of PM&R CE Series.	2024
TBI Neuropharmacology. UPMC Neuropsychology CE Series.	2024
Ultrasound-guided upper and lower limb cadaver chemodeneration workshop series. (3 distinct sessions). UPMC PM&R Resident Didactics.	2024
Clinical presentations and functional sequelae of post-TBI neuroendocrine dysregulation. 14 <sup>th</sup> Annual UPMC Brain Injury Rehabilitation Conference.	2023
TBI Epidemiology. UPMC PM&R Resident Didactics.	2023
Brain injury and stroke mini-didactics (6 lectures/month). UPMC Dept. PM&R.	2023 – 2024
Neuroradiology rounds (2 talks/month). UPMC Dept. PM&R.	2023 – 2024
Ultrasound-guided chemodeneration workshop. UPMC PM&R Resident Didactics.	2023
Clinician-scientist careers in brain injury. Future Leaders in Brain Injury Conference.	2023
PM&R Board Review: Neuromuscular and Electrodiagnostic Medicine. UPMC PM&R Resident Didactics.	2023
CSF1R-dependent microglial depletion and repopulation effects in preclinical TBI: effects of timing, dose, duration, and sex. Safar Center for Resuscitation Research Journal Club.	2022
Neurochemical imaging for patient selection in treatment of TBI-related cognitive impairments. Safar Center for Resuscitation Research Journal Club.	2022
Assessment of nociception and pain in disorders of consciousness patients. UPMC PM&R Departmental Journal Club.	2022

<b>Teaching Experience, cont'd:</b>	Efficacy of early beta blockades on survival and functional outcomes after TBI. UPMC PM&R Brain Injury Medicine Journal Club.	2021
	Potential future roles for biomarkers in brain injury physiatry. UPMC PM&R Brain Injury Medicine Journal Club.	2021
	Interpretation of a complex case of chronic multi-system neuromuscular failure. Neurology Morning Report. Henry Ford Hospital.	2020
	Evaluation and management of SCI and stroke patient shoulder pathologies in the acute inpatient rehabilitation setting. Spinal Injury Rehabilitation Center, Nepal.	2020
	Critical illness myopathy and polyneuropathy: from epidemiology to management. Dept. Physical Medicine and Rehabilitation, IU School of Medicine.	2019
	Decompressive craniectomy and functional outcomes in severe TBI. Dept. Neurosurgery, IU School of Medicine.	2018
	Seizures following TBI: a review of evidence and practice for physiatry. Dept. Physical Medicine and Rehabilitation, IU School of Medicine.	2018
	The ins and outs of medical school: how to get in, survive, and thrive. Career Development Guest Lecturer Series. Rose-Hulman Institute of Technology. Invited Annual Lecture.	2012 – 2015
	<b><u>Small Group and Individualized Teaching</u></b>	
	<b>Academic Clinical Medicine</b>    <i>Student/Resident/Fellow, IUSM/Henry Ford/UPMC/UCD</i>	2017 – pres.
<ul style="list-style-type: none"> <li>▪ Informal, daily unstructured teaching of junior and senior colleagues related to problem-centered questions on clinical wards at major academic centers.</li> </ul>		
<b>Bondi-Kline Joint Laboratory Journal Club</b>    <i>Journal Club Leader, UPMC</i>	2020 – 2024	
<ul style="list-style-type: none"> <li>▪ Facilitate bimonthly structured student-led journal club of relevant recent primary literature relevant to the lab's work. Perform direct mentorship, coaching, and guided presentation / critical interpretation of each manuscript.</li> </ul>		
<b>Career Development Office</b>    <i>Peer Advisor, Rose-Hulman Institute of Technology</i>	2007 – 2010	
<ul style="list-style-type: none"> <li>▪ Coached fellow students in resume writing, interviewing, networking, and job-seeking</li> </ul>		
<b>Homework Hotline</b>    <i>Tutor, Rose-Hulman Institute of Technology</i>	2007 – 2010	
<ul style="list-style-type: none"> <li>▪ Taught STEM fields over the phone to students ranging from elementary to undergrad</li> </ul>		
<b><u>Curriculum Development</u></b>		
<b>Brain Injury Medicine Resident Training</b>    <i>UC Davis PM&amp;R Residency</i>	2024 – pres.	
<ul style="list-style-type: none"> <li>▪ Re-defining and re-structuring outpatient, inpatient, consultative, procedural, and didactic objectives and development milestones for PM&amp;R residency program trainees.</li> </ul>		
<b>Interventional Spasticity and Dystonia Resident Training</b>    <i>Curriculum Founder, UPMC</i>	2023 – 2024	
<ul style="list-style-type: none"> <li>▪ Developed a longitudinal curriculum with pre/post competency testing, guidebooks and manuals, hands on live and cadaver workshops, and training videos to improve resident competency in interventional techniques for ultrasound- and landmark-guided interventional management techniques for increased muscle tone. Effectiveness data collected and presented at national conferences.</li> </ul>		
<b>Cultural Sensitivity in International Medicine</b>    <i>Course Developer, IUSM</i>	2013 – 2017	
<ul style="list-style-type: none"> <li>▪ Developed and implemented a pre-exchange cultural sensitivity and awareness training program complete with didactics, small group sessions, project assignments, role-playing, and pre-trip skill development. Course approved for formal elective credit.</li> </ul>		
<b>Mentorship:</b>	<b><u>Faculty level:</u></b>	
	<b>Research:</b> Mentoring 2 residents and 15 med students (4 via funded summer fellowships). Mentees have won numerous research awards, presented nationally, and published.	2024 – pres.
	<b>Clinical:</b> Mentoring 1 resident, 2 medical students. Hosted 16 resident clinical rotators.	2024 – pres.

	<b><u>Postdoctoral level:</u></b>	
	<b>Research:</b> Mentored 12 undergrad, 3 medical, and 1 predoctoral student. Facilitated bimonthly journal club. Mentees won research and travel awards.	2020 – 2024
	<b>Clinical:</b> Mentored several residents, medical students, and pre-meds.	2019 – 2024
	<b><u>Predoctoral level:</u></b> Mentored 9 undergrads; all named authors on predoctoral presentations and manuscripts. 7/9 went on to graduate studies and 2/9 accepted industry positions.	2013 – 2017
<b>Industry Experience:</b>	<b>Merz Pharmaceuticals</b>    <i>Expert educational instructor</i>	2024 – pres.
	<b>Flock Life, LLC</b>    <i>Co-Founder, gamified community approach to goal-setting, self-care</i>	2015 – 2019
	<b>FlowCo, Inc.</b>    <i>R&amp;D Engineer, Catheter-directed Minimally Invasive Devices</i>	2010 – 2011
	<b>Cook Medical</b>    <i>R&amp;D Engineer, Urologic Minimally Invasive Devices</i>	2009
<b>Academic Service &amp; Leadership:</b>	<b><u>Faculty at UC Davis Dept. of PM&amp;R</u></b>	<b>2024 – pres.</b>
	<b>Brain Injury Medicine</b>    <i>PM&amp;R Director</i>	2024 – pres.
	<ul style="list-style-type: none"> <li>▪ Developing an integrated system of care across the continuum for brain injury patients</li> <li>▪ Pioneering acute care brain injury consult co-mgmt service and working groups ('TBI Task Force' &amp; 'DoC Task Force' with allied disciplines) in UCD main hospital</li> <li>▪ Collaborating with allied disciplines including neurosurgery, trauma surgery, neurocritical care, neuropsychology, PT/OT/SLP, case mgmt</li> <li>▪ Advocating and engaging across the system to improve quality of and access to care including presenting grand rounds in multiple departments</li> <li>▪ Training and mentoring residents, medical students, and allied disciplines in key concepts and skills to improve quality of brain injury care and research</li> <li>▪ Restructuring PM&amp;R resident brain injury and stroke didactic curriculum</li> <li>▪ Developing and administering BIM-relevant Mock Orals cases</li> <li>▪ Conducting retrospective and prospective research and QI projects focused on BIM</li> <li>▪ Founded and leading weekly multidisciplinary 'Neuroradiology Rounds', 'Gait Rounds', and Neurocritical Care Rounds to enhance BIM education and collaboration</li> </ul>	
	<b>UC Davis SyNAPSE Neurotrauma Research Symposium</b>    <i>Co-chair</i>	2025
	<ul style="list-style-type: none"> <li>▪ Planned, executed, and orchestrated session calendar and speaker lineup</li> <li>▪ Founded dept-funded Pilot Grant series to encourage interdisciplinary collaboration</li> <li>▪ Collaborated with partners in NSGY, NCC, Trauma, EM, BME</li> </ul>	
	<b>UC Davis Traumatic Brain Injury IMPACT Symposium</b>    <i>Co-chair</i>	2025
	<ul style="list-style-type: none"> <li>▪ Developed symposium proposal, submitted for and awarded university grant to support external speakers and programming initiatives</li> <li>▪ Planned, executed, and orchestrated session calendar and speaker lineup</li> <li>▪ Collaborated with partners in NSGY, NCC, Trauma, EM, BME</li> </ul>	
	<b>UC Davis Brain Injury Physiatrist Search Committee</b>    <i>Chair</i>	2025 – 2026
	<ul style="list-style-type: none"> <li>▪ Lead search, identification/review/recruitment of qualified candidates for position</li> <li>▪ Secured and signed a highly qualified candidate from an under-represented background</li> </ul>	
	<b>PM&amp;R Residency Research Committee</b>    <i>Member</i>	2024 – pres.
<b>Peer Reviewer</b>		
<ul style="list-style-type: none"> <li>▪ Brain Injury (invited to pool, no reviews yet)</li> <li>▪ Journal of Visual Experiments (1)</li> <li>▪ Computers in Biology and Medicine (1)</li> <li>▪ Neuroscience and Biobehavioral Reviews (2)</li> <li>▪ Experimental Neurology (1)</li> <li>▪ Brain and Cognition (1)</li> </ul>	2025 – pres. 2024 – pres. 2024 – pres. 2023 – pres. 2023 – pres. 2023 – pres.	

<b>Academic Service &amp; Leadership, cont'd:</b>	<ul style="list-style-type: none"> <li>▪ Neurotrauma Reports (2) 2023 – pres.</li> <li>▪ Journal of Neurotrauma (7) 2022 – pres.</li> <li>▪ Frontiers in Neuroscience (2) 2020 – pres.</li> </ul>	
	<b>AAP Rehabilitation Medical Scientist Training Program (RMSTP)    Fellow</b> 2020 – pres.	
	<ul style="list-style-type: none"> <li>▪ Competitive national mentorship program for structured scientific development</li> </ul>	
	<b><u>UPMC Physical Medicine and Rehabilitation Residency and Fellowship Programs</u></b> 2020 – 2024	
	<b>Interventional Spasticity &amp; Dystonia Club    Co-Founder and Inaugural Instructor</b> 2023 – 2024	
	<ul style="list-style-type: none"> <li>▪ Developed curricula, led/organized workshops + industry partnerships, mentoring</li> </ul>	
	<b>Brain Injury Inpatient Rehabilitation Program Development Committee</b> 2023 – 2024	
	<ul style="list-style-type: none"> <li>▪ Engaged in QI initiatives and quality review for BI inpatient rehab units</li> </ul>	
	<b>Brain Injury Day Rehabilitation Program Development Committee</b> 2023 – 2024	
	<ul style="list-style-type: none"> <li>▪ Developed and expanded resources and programming available to our BI population</li> </ul>	
	<b>Resident/Fellow Research Track</b> 2020 – 2024	
	<ul style="list-style-type: none"> <li>▪ Competitive internal program to facilitate and protect time for resident researchers</li> </ul>	
	<b>Wellness Committee    Co-Chair 2022</b> 2020 – 2023	
	<ul style="list-style-type: none"> <li>▪ Develop, implement, and advocate wellness-promoting activities/practices</li> </ul>	
	<b>Recruitment Committee    Co-Chair 2022</b> 2022 – 2023	
	<ul style="list-style-type: none"> <li>▪ Performing holistic application review and interviewing residency candidates</li> </ul>	
	<b><u>MSTP, IU School of Medicine and Purdue Weldon School of Biomedical Engineering</u></b> 2011 – 2019	
	<b>Spinal Injury Rehabilitation Centre Nepal    Medical Officer</b> 2019	
	<ul style="list-style-type: none"> <li>▪ Worked full time as a resident medical officer in SCI and stroke/brain injury rehab units</li> </ul>	
	<b>PM&amp;R Student Interest Group    Co-President 2018   Treasurer 2017</b> 2017 – 2019	
<ul style="list-style-type: none"> <li>▪ Advocated for, promoted, and sought opportunities for student pursuits in PM&amp;R</li> </ul>		
<b>FIRM, Inc.    Community Engagement and Research Chair 2018   Promotions Chair 2017</b> 2013 – 2019		
<ul style="list-style-type: none"> <li>▪ Combatted burnout in healthcare via digital + personal outreach and annual symposia</li> </ul>		
<b>Combined Degree Student Council    Co-President 2015   Class Representative 2013-19</b> 2013 – 2019		
<ul style="list-style-type: none"> <li>▪ Advocated for student body with admin; orchestrated speaker series + retreats</li> </ul>		
<b>Biomedical Engineering Grad Student Assoc.    Professional Development Chair 2015-16</b> 2013 – 2017		
<ul style="list-style-type: none"> <li>▪ Coordinated conferences, seminars, networking events, and job-seeking prep sessions</li> </ul>		
<b>Medical Missions, Inc.    President 2014-16   Dev Chair 2013   Supplies Chair 2011-12</b> 2011 – 2016		
<ul style="list-style-type: none"> <li>▪ Executed annual service learning exchange, built supply chain + training curricula</li> </ul>		
<b>Professional Memberships:</b>	International Behavioral Neuroscience Society (IBNS)	
	National Neurotrauma Society (NNS)	
	International Society of Physical and Rehabilitation Medicine (ISPRM)	
	American Academy of Physical Medicine and Rehabilitation (AAPMR)	
	American Congress of Rehabilitation Medicine (ACRM)	
	Association of Academic Physiatrists (AAP)	
	AAP Rehabilitation Medicine Scientist Training Program (RMSTP)	
	Biomedical Engineering Society (BMES)	
	Society for Neuroscience (SfN)	
<b>Professional Service:</b>	Abstract Review Committee Member, National Neurotrauma Symposium	2026
	Co-guest Editor, Journal of Clinical Medicine Special Issue on Severe TBI	2025 – pres.
	Awards Committee Member, National Neurotrauma Society	2025 – pres.
	Community Advisory Board Member, 3 DoD TBI grants: microBLAST, GAMBIT, NEXUS	2024 – pres.
	Scientific Grant Review Panelist, MINDSOURCE Brain Injury Network, State of Colorado	2024
	Project Advisor, UPMC Administrative Track	2024

Pittsburgh Brain Injury Support Group, UPMC Rehabilitation Institute	2023 – 2024
Preclinical TBI Common Data Elements Development and Review Committee, NIH	2023 – pres.
Scientific Reviewer/Mentor, Neuroscience Practicum Course, Univ. of Pittsburgh	2023 – 2024
Scientific Reviewer & Competition Judge, UPMC Rehabilitation Institute	2022 – 2024
Scholarship Review Board, Community Foundation of Morgan County	2016 – 2025

**QI Initiatives:**

▪ Improving PSH diagnosis and mgmt in ICU TBI patients	2025 – pres.
▪ Improving agitation diagnosis and mgmt in hospitalized TBI patients	2025 – pres.
▪ Functional trajectory evaluations in hospitalized DoC patients	2025 – pres.
▪ Ultrasound-guided chemodenervation curriculum development & implementation	2024
▪ Pharmacy Formulary Review for Addition of Relevant Brain Injury Medications	2024
▪ Brain Injury Call Algorithms for Residents and RNs	2023
▪ Brain Injury Mini-didactics	2023
▪ Clinical Experiences in Disability Medical Student Clerkship Development	2022

**Honors and Awards:**

UC Davis Medical Center

Top Doctor, Sactown Magazine (awarded by peer vote of Sacramento physicians)	2026
Honoree, AAPM&R Innovators and Influencers (National award)	2025
Co-guest Editor, Journal of Clinical Medicine Special Issue on Severe TBI	2025
Invited Speaker, UC Davis Neurosurgery Residency Didactics	2025
Invited Speaker, UC Davis TBI IMPACT Symposium	2025
Invited Speaker, UC Davis SyNAPSE Neurotrauma Research Symposium	2025
Invited Speaker, UC Davis Internal Medicine Grand Rounds	2025
Invited Speaker, UC Davis Annual Trauma Care Conference	2025
Invited Speaker, UC Davis Chronic Pain Fellowship Didactics	2025
Invited Speaker, UC Davis Neurosurgery APP Quarterly Review	2024

University of Pittsburgh Medical Center

Nominee, McLean Outstanding Resident/Fellow Award, AAP	2024
Invited Speaker, 14 <sup>th</sup> Annual UPMC Brain Injury Rehab Conference	2023
Invited Speaker, UC Davis PM&R Grand Rounds	2023
Invited Speaker, Center for Neuroscience Seminar Series, Univ. of Pittsburgh	2023
Nominee and Invited Speaker, AAPM&R PHiT Fire Innovators Session	2023
Overall Excellence in Residency Award (Clinical/Research/Teaching), Dept. of PM&R	2023
Invited Speaker, Future Leaders in Brain Injury Conference, Synapse National	2023
Best Poster, Resident Category, UPMC Rehabilitation Institute Research Day	2023
Nominee, Nancy Caroline Research Fellow Award (excellence in brain injury research)	2023
Invited Speaker, RMSTP Plenary Research Talk Selection, AAP	2023
Invited Speaker, Purdue Neurotrauma and Disease Seminar Series	2022
Invited Speaker, University of Louisville Research Day	2022
Invited Speaker, Merck Neurobiology Discovery Research Group	2022
Best Poster, Resident Category, UPMC Rehabilitation Institute Research Day	2022
‘Top Abstract’, Selected for Oral Presentation, Rangos Research Day	2022
Nominee, Nancy Caroline Research Fellow Award (excellence in brain injury research)	2022
Invited Speaker, NIH HEAL Initiative Preclinical Screening Platform for Pain	2021
Invited Speaker, Praxis SCI Startup Incubator	2021
Resident of the Quarter, Dept. of PM&R	2021
Best Poster, Resident Category, UPMC Rehabilitation Institute Research Day	2021
Nominee, Nancy Caroline Research Fellow Award (excellence in brain injury research)	2021
National Neurotrauma Society Annual Symposium Postdoctoral Trainee Award	2021
International Behavioral Neuroscience Society Annual Meeting Postdoctoral Travel Award	2021
Association of Academic Psychiatrists RMSTP Fellow Selection and Participant	2020 – pres.
UPMC Residency Research Track Selection and Participant	2020 – 2024

<b>Honors and Awards, cont'd:</b>	<u>Henry Ford Hospital</u>	
	Intern of the month, October	2019
	<u>Indiana University School of Medicine</u>	
	Dr. Ralph M. Buschbacher Outstanding Graduate in PM&R	2019
	Alpha Omega Alpha (ΑΩΑ) Honor Medical Society	2018
	<u>Purdue University Weldon School of Biomedical Engineering</u>	
	Bilsland Fellowship (funded tuition and living expenses)	2016 – 2017
	Invited Speaker and Best Oral Presentation, Chinese Neurotrauma Scholars Association	2016
	Invited Speaker, Big 10 BME Graduate Student Speaker Exchange	2015
	Purdue GSG and Bourland Research Travel Awards	2015
	Purdue Dollens Scholarship (funded tuition + fees)	2013
	<u>Rose-Hulman Institute of Technology</u>	
	Summa Cum Laude	2011
	Samuel F. Hulbert Outstanding Graduate in Biomedical Engineering	2011
	Tau Beta Pi Engineering Honor Society (top 15% GPA)	2010
	ESPN The Magazine Division III Soccer Academic All-American	2010
Hemingway Scholar Award (highest GPA)	2008	
Dean's List 12/12 Terms	2007 – 2011	
Eli Lilly Foundation Scholarship (competitive scholarship, 4 year full tuition+room/board)	2007 – 2011	
<b>Exams &amp; Board Certification:</b>	<a href="#">Brain Injury Medicine Subspecialty Boards – Pass, 100th percentile (top national score)</a>	2024
	ABPMR Part II Oral Boards – Pass	2024
	ABPMR Part I Written Boards – Pass, 99th percentile	2023
	PM&R Residency National SAE – Pass, 98th percentile	2023
	PM&R Residency National SAE – Pass, 99th percentile	2022
	PM&R Residency National SAE – Pass, 100th percentile (top national score)	2021
<b>Intellectual Property:</b>	Machine learning pipeline for brain tissue damage prediction in TBI. Oxford University Innovation Limited. United Kingdom. Co-developer. Licensable digital resource.	2021
	Finite element rat head models with diffusion tensor imaging. Oxford University Innovation Limited. United Kingdom. Co-developer. Licensable digital resource.	2018
	Blast panel for traumatic brain injury protection. Oxford University Innovation Limited. United Kingdom. Co-inventor. Patent.	2017
	Portable diagnostic tool for blast injury and other traumatic brain injuries. Purdue Research Foundation. USA. Co-inventor. Patent.	2017
<b>Other Work:</b>	<a href="#">"Listening in": natural language processing in the clinical encounter.</a> <i>Physiatry in Motion.</i> Association of Academic Physiatrists, Resident and Fellow Council Quarterly.	2020