CURRICULUM VITAE

Mohammed Abdul MUNEER, PhD

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EDUCATION

Course	Year	Major	Institute
Ph. D.	2005	Molecular Biology	Cochin University of Science and Technology, Kochi, Kerala, INDIA
M. Sc.	1998	Biotechnology	Department of Biotechnology, Cochin University of Science and Technology, Kochi, Kerala, India
B. Sc	1995	Zoology (Main), Chemistry, and Botany.	University of Calicut, Kerala, India.

POSITIONS/PROFESSIONAL EXPERIENCE

Dates	Title, Institute, and address.
05/13/2025 to current	**Associate Professor,** Department of Biomedical Engineering, Florida International University, Miami, FL-33174.
12/01/2021 to 05/09/2025	**Associate Professor:** JFK Neuroscience Institute, Hackensack Meridian Health JFK University Medical Center, 65 James St, Edison, NJ-08820. Associate Professor of Neurology, Hackensack Meridian Health School of Medicine, Nutley.
03/28/2016 to 11/30/2021	**Assistant Professor:** JFK Neuroscience Institute, Hackensack Meridian Health JFK University Medical Center, 65 James St, Edison, NJ-08820. Assistant Professor of Neurology, Hackensack Meridian Health School of Medicine, Nutley.
07/14/2014 to 03/25/2016	**Assistant Research Professor:** Dept. of Biomedical Engineering, New Jersey Institute of Technology, Newark, NJ.
12/01/2007 to 12/28/2008	**Assistant Professor, Head (**Department of Biotechnology) and in charge of Molecular Biology and Genetic Engineering Research Unit: at Mar Athanasios College for Advanced Studies, Thiruvalla, Kerala, India.

POSTDOCTORAL TRAINING/EDUCATION

Dates	Title, Institute, and Mentor	Specialty
10/15/2013 to 07/11/2014	**Postdoctoral Research Associate:** JFK Neuroscience Institute, JFK Medical Center, Edison, NJ-08820. Mentor: Dr. Alfred Geller.	Neuroscience and Gene therapy

02/01/2013 to 10/14/2013	**Postdoctoral Research Associate and Lab Manager:** Center for Neural Repair and Rehabilitation, Temple University School of Medicine, Philadelphia, USA. Mentor: Dr. Shuxin Li	Spinal cord injury and peptide therapy
01/01/2009 to 01/31/2013	**Postdoctoral and Senior Research Associate:** Department of Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center, Omaha, USA. Research in Pharmacology and Neuroscience. Mentor: Dr. James Haorah.	Neuropharmacology, drug of abuse, and traumatic brain injury

SCIENTIFIC APPOINTMENTS AND HONORS

Scientific Grant Review Panels

2024 Ad-hoc grant reviewer: US-Israel Binational Science Foundation.
2023 Panel Member-CDMRP (Dept of Defense, US)-TBIPH grant peer review panel.
2021 Ad-hoc grant reviewer: National Science Center, Poland.
2020 Ad-hoc grant reviewer: Israel Science Foundation (ISF).
2019 Ad-hoc grant reviewer: Missouri Spinal Cord Injury/Disease Research Program.

Abstract Review Panels for Scientific Conferences/Associations

2025- Reviewed abstracts for Florida Undergraduate Research Conference (FURC).
2025- Reviewed abstracts for National Conference on Undergraduate Research (NCUR).
2022- Member Society for Neuroscience, India abstract review panel. Reviewed 8 abstracts.
2017- Member National Neurotrauma Society abstract review panel. Reviewed 22 abstracts.

Member in Scientific Societies/Associations

2009- Member, Society for Neuroscience, USA
2009- Member, Research Society on Alcohol, USA.
2012- Member, National Neurotrauma Society, USA
2016- Member, American Heart Association (AHA), USA
2007-2008 Member, Society for Biotechnologists of India.
1998-2000 Member, Association of Microbiologists of India.

Ph.D Examiner/Thesis Reviewer

2019 External Ph.D. examiner/thesis reviewer, Mangalore University
2018 External Ph.D. examiner/thesis reviewer, NJMS, Rutgers University.
2015 External Ph.D. examiner/thesis reviewer, Cochin University.
2007-2008 Examination board member, Mahatma Gandhi University, Kerala.

Editorial Board Member in Journals

2023- Guest Editor: *Journal of Integrative Neuroscience*. Topic: Traumatic brain injury: Mechanisms of pathogenesis and therapeutic interventions.
2022- Topical advisory panel member-Antioxidants (journal).
2021- Editor: Advances in life science research (journal)
2014- Review Editor, Frontiers in Genetics (journal)
2010- Editorial board member:
Journal of Spinal Cord Medicine
Journal of Biological Research
International Invention Journal of Medicine and Medical Sciences
Trauma cases and reviews
Journal of Biomedical Engineering Research
Jacobs Journal of Pharmacology and Pharmacovigilance
JSM Brain Science

Other academic appointments

2025- Faculty Search Committee Member-Department of Biomedical Engineering, FIU
2021-2024 Faculty Search Committee Member-JFK Neuroscience Institute.
2016-2025 IACUC review committee member: Seton Hall University.

Honors and awards

2025	Indo-American award for research and education from Indian Consulate NY, USA.
2024	NIH-NINDS R01 grant award.
2024	Best academician award for education and research from the 'World Malayalee Council'.
2024	'Featured Researcher' award from Hackensack Meridian JFK University Medical Center.
2023	NIH-NIAAA R21 grant award.
2019	NJ Department of Health NJCBIR grant award.
2018	NJ Department of Health NJCSCR grant award.
2016	NJ Department of Health NJCBIR grant award.
2000-2005	NATP fellowship (India) for graduate study.
2004	Award for best oral presentation on Biotechnology in the International Conference on Biotechnology and Neuroscience.
2001	Qualified CSIR-JRF, India (Research fellowship for graduate study in life sciences).
2002	Qualified GATE (graduate aptitude test in Engineering, India) in life sciences.
1997	MES scholarship for PG academic career.
1990	Best outgoing student award in the high school.

Invited talks

2025	Invited talk: at the Department of Zoology, Govt College Kasaragod, on Oct 3, 2025.
2025	Invited talk: at Greenwood school of Akkara foundation, Kasaragod, Kerala on Oct 4, 2025.
2025	Invited talk: Kerala Govt NORKA Scientific and professional meet, held on Sep 27, 2025 at Cochin, India.
2024	Invited talk, Department of Pharmacology, Toxicology and Addiction Science, University of Tennessee Health Science Center, Memphis on Sep, 2024.
2024	Invited talk, Department of Biomedical Engineering, Florida International University, FL.
2024	Invited talk, Department of Neurosurgery, University of South Florida, Tampa, FL.
2024	Invited talk, Department of Biological Science, Rowan University, NJ.
2024	Invited talk, Department of Molecular and Translational Medicine, Texas Tech university Health Science Center, El Paso, TX.
2024	Invited talk at the Department of Pharmacology and Toxicology, Michigan State University, East Lansing, MI.
2024	Invited talk, Society for Neuroscience, India held at Newman College, Kerala.
2022	Invited talk, Cochin University of Science and Technology, Kerala, India.
2021	Invited talk, St. Albert's College, Kerala, India.
2019	Invited talk, Department of Pharmacology, Physiology, and Neuroscience, Rutgers New Jersey Medical School, Newark, NJ.
2018	Delivered a Radio talk on a program, 'Science Scope' at Radiomacfast-FM 90.4, on 8/6/2018.
2016	Invited talk, Dept of Neurosurgery, University of Texas, Houston.
2016	Invited talk, JFK Neuroscience Institute, Edison, NJ.
2011	Invited talk, Indian Institute of Technology, Mumbai, India.

RESEARCH ACTIVITIES

A. Peer-reviewed Publications

1. Saikia BB, Alikunju S, Poovanthodi Y, Kassim Z, **Muneer PMA***(2025). Nrf2 activator peptide protects the brain from cerebral vascular dysfunction in alcohol ingestion. *Journal of Clinical Investigation Insight. (In revision).* ***Corresponding author.**
2. Saikia BB, Bhowmick S, Malat A, Preetha Rani MR, Thaha A, **Muneer PMA*** (2024). ICAM-1 deletion using CRISPR/Cas9 protects the brain from traumatic brain injury-induced inflammatory leukocyte adhesion and transmigration cascades by attenuating the paxillin/FAK-dependent Rho GTPase pathway. *Journal of Neuroscience,* e1742232024; DOI: https://doi.org/10.1523/JNEUROSCI.1742-23.2024. This article is selected for JNeurosci's highlight

"This Week in the Journal" and one of our Figure images was selected for the Journal's cover image. ***Corresponding author.**

3. Bhowmick S, Preetha Rani MR, Singh S, **Muneer PMA*** (2023). Discovery of novel microRNAs and their pathogenic responsive target genes in mild traumatic brain injury. *Experimental Brain Research*, 241(8): p. 2107-2123. ***Corresponding author.**
4. **Muneer PMA** (2023). Nrf2 as a Potential Therapeutic Target for Traumatic Brain Injury. *J Integr Neurosci,* 2023. 22(4): p. 81. ***Corresponding author.**
5. **Muneer PMA*,** Saikia BB, Bhowmick S (2022). Synergistic effect of mild traumatic brain injury and alcohol exacerbates neuroinflammation, amyloidogenesis, tau pathology, neurodegeneration, and blood-brain barrier alterations: impact on psychological stress. *Experimental Neurology;* 358:114222. doi: 10.1016/j.expneurol.2022.114222. ***Corresponding author.**
6. Bhowmick S, Alikunju S, **Muneer PMA*** (2022). NADPH oxidase-induced activation of transforming growth factor-beta-1 causes neuropathy by suppressing antioxidant signaling pathways in alcohol use disorder. *Neuropharmacology;* DOI: 10.1016/j.neuropharm.2022.109136. ***Corresponding author.**
7. Bhowmick S, Malat A, Caruso D, Ponery N, D'Mello V, Finn C, **Muneer PMA*** (2021). Intercellular adhesion molecule-1-induced post-traumatic brain injury neuropathology in the prefrontal cortex and hippocampus leads to sensorimotor function deficits and psychological stress. *eNeuro*, ENEURO.0242-21.2021. ***Corresponding author.**
8. Bhowmick S, **Muneer PMA*** (2021). PTEN blocking stimulates corticospinal and raphespinal axonal regeneration and promotes functional recovery after spinal cord injury. *Journal of Neuropathology and Experimental Neurology*, 80(2): 169-181. ***Corresponding author.**
9. Bhowmick S, D'Mello V, Caruso D, **Muneer PMA** (2019). Traumatic brain injury-induced downregulation of Nrf2 activates inflammatory response and apoptotic cell death. *Journal of Molecular Medicine* (Berl). 2019 Dec;97(12):1627-1641. ***Corresponding author.**
10. Bhowmick S, D'Mello V, Wallerstein A, Caruso D, **Muneer PMA*** (2019). Impairment of endothelial cell-pericyte cross-talk leads to blood-brain barrier damage following traumatic brain injury. *Experimental Neurology*, 317: 260-270. ***Corresponding author.**
11. Bhowmick S, D'Mello V, **Muneer PMA*** (2018). Synergistic Inhibition of ERK1/2 and JNK, Not p38, Phosphorylation Ameliorates Neuronal Damages after Traumatic Brain Injury. *Molecular Neurobiology,* DOI: 10.1007/s12035-018-1132-7. ***Corresponding author.**
12. Bhowmick S, D'Mello V, **Muneer PMA*** (2017). Neurodegeneration and sensorimotor deficits in the mouse model of traumatic brain injury. *Brain Sciences,* Jan 6; 8(1). Pii:E11. doi 10.3390/brainsci8010011. ***Corresponding author.**
13. **Muneer PMA*,** Bhowmick S, Briski N (2017). Angiotensin II causes neuronal damage in stretch injured neurons: protective effects of losartan, an angiotensin II type 1 receptor antagonist. *Molecular Neurobiology,* doi: 10.1007/s12035-017-0812-z. ***Corresponding author.**
14. **Muneer PMA,** Alikunju S, Schuetz H, Szlachetka AM, Ma X, and Haorah J (2017). Impairment of Thiamine Transport at the GUT-BBB-axis Contributes to Wernicke Encephalopathy. *Molecular Neurobiology;* doi: 10.1007/s12035-017-0811-0.
15. Patel RK, Prasad N, Kuwar R, Haldar D, **Muneer PMA*** (2017). Transforming growth factor-beta 1 signaling regulates neuroinflammation and apoptosis in mild traumatic brain injury. *Brain, Behavior, and Immunity;* 64:244-258. doi: 10.1016/j.bbi.2017.04.012. ***Corresponding author.**
16. **Muneer PMA**, Alikunju S, Mishra V, Szlachetka AM, and Haorah J* (2017). Activation of NLRP3 inflammasome by cholesterol crystals in alcohol intake induces atherosclerotic lesions. *Brain, behavior and Immunity,* 62:291-305. doi: 10.1016/j.bbi.2017.02.014.

17. Ohtake Y, Wong D, **Muneer PMA,** Selzer ME, Li S* (2016). Two PTP receptors mediate CSPG inhibition by convergent and divergent signaling pathways in neurons. *Scientific reports, 6:37152.* doi: 10.1038/srep37152.
18. **Muneer PMA*,** Conte AA, Haldar D, Long M, Santhakumar V, Overall CM, Pfister BJ (2016). Traumatic brain injury-induced matrix metalloproteinase-2 cleaves CXCL12α (stromal cell derived factor 1α) and causes neurodegeneration. *Brain, Behavior and Immunity,* 59:190-199. http://dx.doi.org/10.1016/j.bbi.2016.09.002. ***Corresponding author.**
19. **Muneer PMA*,** Long M, Conte AA, Santhakumar V, Pfister BJ (2015). High Ca^{2+} influx during traumatic brain injury leads to caspase-1 dependent neuroinflammation and cell death. *Molecular Neurobiology*. DOI: 10.1007/s12035-016-9949-4. ***Corresponding author.**
20. **Muneer PMA* (2016).** MicroRNA in the pathophysiology of CNS injury: implication in neuroregenerative medicine. *CNS Neuroscience and therapeutics,* 22(7):543-545. ***Corresponding author.**
21. **Muneer PMA*,** Pfister BJ, Haorah J, Chandra N (2015). Role of matrix metalloproteinases in the pathogenesis of traumatic brain injury and other neurological diseases. *Molecular Neurobiology,* 53(9):6106-6123. DOI: 10.1007/s12035-015-9520-8. Review manuscript. ***Corresponding author.**
22. Zhang G, Zhao H, **Muneer PMA**, Cao H, Li X and Geller AI (2014). Neurons can be labeled with unique hues by helper virus-free HSV-1 vectors expressing brainbow. J *Neuroscience methods,* doi.org/10.1016/j.jneumeth.2014.11.009.
23. **Muneer PMA*,** Chandra N, Haorah J (2014). Interactions of oxidative stress and neurovascular inflammation in the pathogenesis of secondary mild traumatic brain injury. *Molecular Neurobiology*, 51(3):966-979. Review manuscript. ***Corresponding author**.
24. Otake Y, Park D**Muneer PMA,** Li H, Xu B, Sharma K, Smith GM, Selzer ME and Li S (2014). The effect of systemic PTEN antagonist peptides on axon growth and functional recovery after spinal cord injury. *Biomaterials*, 35(16):4610-4626.
25. **Muneer PMA**, Schueltz H, Wang F, Skotak M, Jones J, Gorantla S, Zimmerman MC, Chandra N and Haorah J (2013). Induction of Oxidative and Nitrosative damage leads to Cerebrovascular Inflammation in Animal Model of Mild Traumatic Brain Injury Induced by Primary Blast. *Free Radical Biology and Medicine*; 60(2013)282–291.
26. Li H, Park D, **Muneer PMA,** Xu B, Wang H, Xing B, Wu D and Li S (2013). PI3Kγ inhibition alleviates symptoms and increases axon number in experimental autoimmune encephalomyelitis mice. *Neuroscience*; 253:89-99.
27. **Muneer PMA**, Alikunju S, Szlachetka AM, and Haorah J (2012). The Mechanisms of Cerebral Vascular Dysfunction and Neuroinflammation by MMP-mediated Degradation of VEGFR-2 in Alcohol Ingestion. *Arteriosclerosis, Thrombosis and Vascular Biology*; 32: 1167-1177.
28. Alikunju S*, **Muneer PMA***, Zhang Y, Szlachetka AM, and Haorah J (2011). The inflammatory footprints of alcohol-induced oxidative damage in neurovascular components. *Brain Behavior and Immunity*, 25 Suppl 1:S129-36. *Joint-first authors.
29. Rump TJ, **Muneer PMA,** Szlachetka AM, Lamb A, Haorei C, Alikunju S, Xiong H, Keblesh J, Liu J, Zimmerman MC, Jones J, and Haorah J (2010). Acetyl-L-carnitine Protects Neuronal Function from Alcohol-induced Oxidative Damage in the Brain. *Free Radical Biology and Medicine*, 49(10): 1494-1504.
30. **Muneer PMA***, Alikunju S*, Szlachetka AM, and Haorah J (2011). Methamphetamine Inhibits Glucose Uptake by Human Astrocytes and Neurons: Stabilization by Acetyl-L-carnitine. *PLoS ONE*, 6(4): e19258. *Joint-first authors.

31. **Muneer PMA**, Alikunju S, Szlachetka AM, Murrin CL, and Haorah J (2011). Impairment of brain endothelial glucose transporter by methamphetamine causes blood-brain barrier dysfunction. *Molecular Neurodegeneration*, 6:23. **Highly accessed.**
32. **Muneer PMA**, Alikunju S, Szlachetka AM, and Haorah J (2011). Inhibitory effects of alcohol on glucose transport across the blood–brain barrier leads to neurodegeneration: preventive role of acetyl-L-carnitine. *Psychopharmacology*. 214(3): 707-718.
33. **Muneer PMA**, Alikunju S, Szlachetka AM, and Haorah J (2011). Ethanol impairs glucose uptake by human astrocytes and neurons: protective effects of acetyl-L-carnitine. *Int J Physiol Pathophysiol Pharmacol*. 2011; 3(1): 48-56.
34. Floreani NA, Rump TJ, **Muneer PMA**, Alikunju S, Morsey BA, Brodie MR, Persidsky Y and Haorah J (2010). Alcohol-Induced Interactive Phosphorylation of Src and Toll-like Receptor Regulates the Secretion of Inflammatory Mediators by Human Astrocytes. *Journal of Neuroimmune pharmacology*, 5(4): 533-545.
35. Musammilu KK, **Muneer PMA***, Gopalakrishnan A, Basheer VS, Gupta H, Lal KK, Mohindra V, and Ponniah AG (2014). Identification and characterization of microsatellite markers for population genetic structure in endemic red-tailed barb, *Gonoprokterus curmuca*. *Molecular Biology Reports,* 41(5):3051-62 **Corresponding author**.
36. **Muneer PMA*** (2014). Application of microsatellite markers in Conservation Genetics and Fisheries management: Recent advances in population genetic structure and conservation strategies. *Genetics Research International*, 2014:691759.. Review manuscript. ***Corresponding author**.
37. Roy TSC, Gopalakrishnan A, **Muneer PMA,** John L, Musammilu KK and Basheer VS (2014). Resolution of taxonomic ambiguity in groupers (Pisces: Serranidae) by the random amplified polymorphic DNA (RAPD) technique. *Indian J Fish*, 61(2): 28-34.
38. **Muneer PMA***, Gopalakrishnan A, Musammilu KK, Basheer VS, Mohindra V, Lal KK, Padmakumar KG and Ponniah AG (2012). Comparative assessment of genetic variability in the populations of endemic and endangered yellow catfish, *Horabagrus brachysoma* (Hoarabagridae) based on allozymes, RAPD and microsatellite markers. *Biochemical Genetics*, 50(3-4):192-212. ***Corresponding author**.
39. **Muneer PMA***, Gopalakrishnan A, Sivanandan R, Basheer VS, and Ponniah AG (2011). Genetic variation and phylogenetic relationships between two species of yellow catfish, *Horabagrus brachysoma* and *H. nigricollaris* using RAPD and microsatellite markers. *Molecular Biology Reports*, 38 (4): 2225-2232. ***Corresponding author**.
40. **Muneer PMA***, Sivanandan R, Gopalakrishnan A, Basheer VS, Musammilu KK, and Ponniah AG (2011). Identification and characterization of RAPD and microsatellite markers for genetic variation analysis in critically endangered yellow catfish, *Horabagrus nigricollaris*. *Biochemical Genetics*, 49(1): 83-95. ***Corresponding author**.
41. Skaria R, Sen S, and **Muneer PMA** (2011). Analysis of genetic variability in rice varieties (Oryza sativa l) of kerala using RAPD markers. *Genetic Engineering and Biotechnology Journal*, Volume 2011: GEBJ-24.
42. Sen S, Skaria R and **Muneer PMA*** (2010). Genetic Diversity Analysis in Piper Species (Piperaceae) Using RAPD Markers. *Molecular Biotechnology*, 46(1): 72-79. **Corresponding author**.
43. **Muneer PMA***, Gopalakrishnan A, Musammilu KK, Lal KK, Mohindra V, Basheer VS and Lakra WS (2009). Genetic variation and population structure of endemic yellow catfish, *Horabagrus brachysoma* (Bagridae) among three populations of Western Ghat region using microsatellite and RAPD markers. *Molecular Biology Reports*; 36: 1771-1791. ***Corresponding author**.
44. **Muneer PMA***, Gopalakrishnan A, Basheer VS and Lakra WS (2008). Identification of RAPD markers in endemic yellow catfish, *Horabagrus brachysoma* (Gunther, 1864). *Asian Fisheries Science*, 21, 293-304. ***Corresponding author**.

45. **Muneer PMA**, Gopalakrishnan A, Lal KK, and Mohindra V. (2007). Population genetic structure of endemic and endangered yellow catfish, *Horabagrus brachysoma* using allozyme markers. *Biochemical Genetics*, 45 (9-10), 637-645. (**Corresponding author**).
46. Gopalakrishnan A, **Muneer PMA**, Lal KK, Mohindra V, Kapoor D and Ponniah AG (2006). Primers from the orders Siluriform and Osteoglossiform detect polymorphic microsatellite loci in sun-catfish, *Horabagrus brachysoma*. *Journal of Applied Ichthyology*, 22: 456-458.
47. Gopalakrishnan A, **Muneer PMA**, Thomas PC, Lal KK, Mohindra V, Kapoor D and Ponniah AG (2006). Identification of allozyme markers for population structure analysis in yellow catfish, *Horabagrus brachysoma* (Gunther, 1864). *Indian Journal of fisheries*, 53(3): 253-261.
48. Nagarajan M, Haniffa MA, Gopalakrishnan A, Basheer VS and **Muneer PMA** (2006). Genetic variability of *Channa punctatus* populations using randomly amplified polymorphic DNA. *Aquaculture research*, 37: 1151-1155.
49. Gopalakrishnan A, Musammilu KK, **Muneer PMA**, Lal KK, Kapoor D, Ponniah AG and Mohindra V. (2004). Microsatellite DNA markers to assess population structure of red-tailed barb, *Gonoproktopterus curmuca*. *Current Zoology*, 50 (4): 686-690.

B. Abstracts/Papers in Conference/Symposium Proceedings

1. **Muneer PMA**, Poovanthodi Y, and Bhowmick S (2025). Design and evaluation of PAD4 antagonistic peptides for blocking neutrophil extracellular trap formation after traumatic brain injury. (Abstract in the Society for Neuroscience conference held at San Diego, CA during Nov 16-19, 2025).
2. Saikia BS, Poovanthodi Y, **Muneer PMA*** (2024). Transmigration of leukocytes and the formation of neutrophil extracellular traps in TBI: a novel peptide therapeutic strategy. (Abstract submitted to Society for Neuroscience conference and poster presented held at Chicago, IL during Oct 05-11, 2024).
3. Saikia BS, Poovanthodi Y, Kassim Z, **Muneer PMA*** (2024). Nrf2 activator peptide promotes recovery from neurovascular dysfunction in alcohol ingestion (Poster presented in Research Society on Alcoholism conference held at Minneapolis, MN during Jun 22-26, 2024. Abstract published in 'Alcohol: clinical and experimental research).
4. Saikia BS, Poovanthodi Y, **Muneer PMA*** (2024). Role of mir-135b-5p in regulating stim-2-dependent pathogenesis following mild tbi (Poster presented in National Neurotrauma Society conference held at San Francisco, CA during Jun 08-12, 2024. Abstract published in 'Journal of Neurotrauma).
5. Preetha Rani MR, Saikia BS, Bhowmick S, **Muneer PMA*** (2023). Intercellular adhesion molecule-1 promotes the transmigration of neutrophils and the formation of extracellular traps in traumatic brain injury (Abstract submitted to Society for Neuroscience conference held at Washington, DC during Nov 11-15, 2023).
6. **Muneer PMA*,** Saikia BS, M.R. Preetha Rani (2023). Peptide therapy for protecting the brain from alcohol-induced neuropathology and functional deficits. (Abstract submitted to Research Society on Alcoholism (RSA) conference held at Bellevue, Seattle, WA during June 26-June 30, 2023).
7. **Muneer PMA*,** M.R. Preetha Rani, Saikia BS, Bhowmick S (2022). Mechanisms of formation of neutrophil extracellular trap in traumatic brain injury: neuroprotection using antagonistic peptides. (Abstract submitted to Society for Neuroscience conference held at San Diego, CA during Nov 11-15, 2022).
8. **Muneer PMA*,** Bhowmick S, Saikia BS (2022). Mechanisms of formation of neutrophil extracellular trap in alcohol use disorder. (Abstract submitted to Research Society on Alcoholism (RSA) conference held at Orlando, FL during June 27-June 30, 2022).

9. Saikia BS, Bhowmick S, **Muneer PMA*** (2022). Deletion of ICAM-1 using CRISPR/Cas9 protects neurovascular damage after traumatic brain injury. (Abstract submitted to the National Neurotrauma Society conference held at Austin, TX during June 28-July 01, 2022).
10. **Muneer PMA***, Saurav Bhowmick, Veera D'Mello (2019). GDF10 promotes axonal regeneration and functional recovery: a novel gene therapy strategy for spinal cord injury. (Abstract: Society for Neuroscience conference held at Chicago, IL during 19-23 Oct 2019).
11. **Muneer PMA*,** Saurav Bhowmick, Veera D'Mello, Danielle Caruso, Christina Finn (2019). Nrf2 protects the brain from the transmigration of blood cells by down-regulating ICAM-1 after traumatic brain injury. (Abstract submitted to the National Neurotrauma Society conference held at Pittsburg, PA during June 29-July 03, 2019).
12. Saurav Bhowmick, Veera D'Mello, Alex Wallerstein, Danielle Caruso, **Muneer PMA** (2018). Loss of pericyte impairs the blood-brain barrier following brain injury. (The first author presented the poster at Society for Neuroscience conference held at San Diego, CA during 04-07 Nov 2018).
13. **Muneer PMA*,** Patel RK, Briski N, Haldar D. Nrf2 signaling as a therapeutic target against traumatic brain injury. (The first author presented the poster at Society for Neuroscience conference will be held at Washington DC during 10-15 Nov 2017).
14. Younger D, **Muneer PMA,** Haldar D, Prasad N, Chandra N (2016). Pathophysiological Changes Due to Blast Induced Neurotrauma Is Affected By Animal Orientation. Abstract in annual National Neurotrauma Society conference held at Lexington, KY during June 26-29, 2016.
15. **Muneer PMA**, Long M, Conte AA, Pfister BJ (2015). Ca^{2+} influx in mild stretch neuronal injury causes caspase-1 dependent neuroinflammation and cell death. Abstract for an oral presentation in the annual Biomedical Engineering Society (BMES) conference held at Tampa, FL during Oct 7-10, 2015.
16. Haorah J, Mishra V, **Muneer PMA** (2015). The inflammatory interface of blood to brain neuronal degeneration in alcohol intake. Abstracts of the 38th Annual Scientific Meeting of the Research Society on Alcoholism JUNE 20-24, 2015, San Antonio, TX. Special Issue: *Alcoholism: Clinical and Experimental Research,* 39(S1): 258A-258A.
17. **Muneer PMA**, Li H, Ohtake Y, Park P, Longo F, Li S (2013). Role of LAR phosphatase in restricting axon regeneration after spinal cord injury. Abstracts of Annual Scientific Meeting of Society for Neuroscience held at San Diego, CA during Nov 9-13, 2013.
18. Skotak M, **Muneer PMA,** Schueltz H, Wang F, Chandra N and Haorah J (2013). Primary blast-induced oxidative and nitrosative Stress causes cerebrovascular inflammation in an animal model of mild traumatic brain injury. Abstracts of the 31st Annual National Neurotrauma Symposium, Aug 4-7, 2013, Nashville, Tennessee. Special Issue: *Journal of Neurotrauma 30: A-1–A-183.*
19. Haorah J, **Muneer PMA**, Alikunju S and Szlachetka AM (2013). The Mechanisms of Cerebral Vascular Dysfunction and Neuroinflammation by MMP-mediated Degradation of VEGFR-2 in Alcohol Ingestion. Abstracts of the 36th Annual Scientific Meeting of the Research Society on Alcoholism JUNE 22-26, 2013, Orlando, Florida. Special Issue: *Alcoholism: Clinical and Experimental Research, 37 (S2): 199A.*
20. Haorah J, **Muneer PMA** and Szlachetka AM (2013). Mechanisms of Cerebral Hemorrhagic Lesions in Drug Abuse Neuroaids. Abstracts of the 19th Annual Scientific Meeting of the Society for Neuroimmune Pharmacology, April 2-7, 2013, Puerto Rico. Special Issue: *J Neuroimmune Pharmacol (2013) 8: 478.*
21. **Muneer PMA,** Schueltz H, Alikunju S, Szlachetka AM, and Haorah J (2012). Mechanisms of alcohol-induced thiamine deficiency in brain pathogenesis: therapeutic role of acetyl-L-carnitine. Abstracts of the 35th Annual Scientific Meeting of the Research Society on Alcoholism JUNE 23-27, 2012, San Francisco, California. Special Issue: *Alcoholism: Clinical and Experimental Research, 35 (S1): 122A.*

22. Haorah J and **Muneer PMA** (2012). Oxidative damage, cholesterol accumulation and immune cell infiltration in an animal model of stroke. Abstracts of the 35th Annual Scientific Meeting of the Research Society on Alcoholism; June 23-27, 2012, San Francisco, California. Special Issue: *Alcoholism: Clinical and Experimental Research, 35 (S1): 348A.*
23. Haorah J, Schueltz H, **Muneer PMA** and Szlachetka AM (2012). Oxidative Injury and Bio-fuel Imbalance as Unifying Mechanisms for Neurological Disorders in Alcohol and Neuroaids. Abstracts of the 18th Annual Scientific Conference on Neuroimmune Pharmacology, April 24-28, 2012, Honolulu, HI, USA. Special Issue: *Journal of Neuroimmune Pharmacology, 7 (S1): S5-S81.*
24. **Muneer PMA,** Alikunju S, Szlachetka AM, and Haorah J (2012). Blood-brain barrier dysfunction and Neuroinflammation by MMP-mediated Degradation of VEGFR-2 in Alcohol Abuse. International symposium on advances in Biological Sciences, March 15-17, 2012, Kannur, Kerala, India.
25. **Muneer PMA,** Alikunju S, Szlachetka AM, and Haorah J (2011). Alcohol-Induced Activation of Matrix Metalloproteinases and Reduction of VEGRF-2 Protein Leads to Blood-Brain Barrier Dysfunction. Abstracts of the 34th Annual Scientific Meeting of the Research Society on Alcoholism June 25-29, 2011, Atlanta, Georgia. Special Issue: *Alcoholism: Clinical and Experimental Research, 35 (S1): 239A.*
26. Haorah J, **Muneer PMA,** Alikunju S, and Szlachetka AM (2011). NLRP3 inflammasome signaling in an alcohol-induced animal model of Atherosclerotic stroke. Abstracts of the 34th Annual Scientific Meeting of the Research Society on Alcoholism June 25-29, 2011, Atlanta, Georgia. Special Issue: *Alcoholism: Clinical and Experimental Research. 34 (S1): 304A.*
27. Haorah J, **Muneer PMA**, Alikunju S, and Szlachetka AM (2011). Mechanisms of BBB damage and hemorrhagic stroke in chronic methamphetamine abuse. Abstracts of the 17th Annual Scientific Conference on Neuroimmune Pharmacology, April 5-10, 2011, Clearwater Beach, Florida. Special Issue: *Journal of Neuroimmune Pharmacology, 6 (S1): S49-S50.*
28. **Muneer PMA**, Alikunju S, Szlachetka AM, and Haorah J (2010). Alcohol consumption disrupts glucose transport across the blood-brain barrier and glucose utilization in the brain. Abstracts of the 33rd Annual Scientific Meeting of the Research Society on Alcoholism JUNE 26-30, 2010, San Antonio, Texas. Special Issue: *Alcoholism: Clinical and Experimental Research, 34 (S2): 9A–10A.*
29. Sen S, Skaria R and **Muneer PMA** (2008). Analysis of genetic diversity and phylogenetic relationships among eight species of *Piper* (Piperaceae) using molecular markers. Poster presented in the international symposium held at Center for Cellular and Molecular Biology (CCMB), Hyderabad on 'Nuclear architecture and Chromatin Dynamics', during Nov 26-29, 2008.
30. Skaria R, Sen S and **Muneer PMA** (2008). RAPD analysis of genetic variability among eight varieties of rice (*Oryza sativa* L.) in Kerala region. Poster presented in the international symposium held at Center for Cellular and Molecular Biology (CCMB), Hyderabad on 'Nuclear architecture and Chromatin Dynamics', during Nov 26-29, 2008.
31. **Muneer PMA,** Gopalakrishnan A, Musammilu KK, Lal KK, Mohindra V and Kapoor D (2004). Detection of genetic variation in the natural populations of endemic yellow catfish, *Horabagrus brachysoma* using molecular markers. Paper presented (oral) by the first author in International Conference on Biotechnology and Neuroscience during 29-31 Dec. 2004. **Awarded best presentation for this paper.**
32. Chandrasekharan M, **Muneer PMA,** Appukuttan PC, and Nair KB (1998). "Screening of polyphosphate (polyP) accumulating bacteria from marine environments". Paper presented (poster by the second author) in the National symposium organized by the Association of Microbiologists of India at Mangalore during Dec. 5-7, 1998.

33. Ponniah AG, Gopalakrishnan A, Basheer VS, **Muneer PMA,** Paul B, Padmakumar KG and A Krishnan. "Captive breeding and gene banking of endangered, endemic yellow catfish *Horabagrus brachysoma*", Paper presented (oral by the second author) in the National Seminar and Exhibition on Sustainable Fisheries and Aquaculture, Chennai, Nov.29- Dec.2, 2000.
34. Gopalakrishnan A, Basheer VS, **Muneer PMA,** Lal KK, Ponniah AG, Kapoor D, Padmakumar KG and Krishnan A. "Captive breeding of yellow catfish *Horabagrus brachysoma*, Gunther. Paper presented (oral by the second author) in the National Seminar on Responsible Fisheries and Aquaculture, organized by College of Fisheries Berhampur, Orissa. Feb.12-13, 2004.

C. Book chapter

1) Mallia JV, Thomas PC, Muthiah P and **Muneer PMA** (2004). Application of allozymes as genetic markers in triploid *Crassostrea madrasensis*. *Proceedings in International Conference on Biotechnology and Neuroscience*. Pp 274-278.

D. Google scholar citations

https://scholar.google.com/citations?user=SGQLHjEAAAAJ&hl=en&oi=ao

E. Gene sequences published in NCBI site (www.ncbi.nlm.nih.gov)

16 gene sequences submitted in NCBI site.

1. Accession # DQ780014.1
2. Accession # DQ780022.1
3. Accession # DQ780015.1
4. Accession # DQ780023.1
5. Accession # DQ780016.1
6. Accession # EF582608.1
7. Accession # DQ780017.1
8. Accession # EF582609.1
9. Accession # DQ780018.1
10. Accession # EF582610.1
11. Accession # DQ780019.1
12. Accession # DQ780020.1
13. Accession # DQ780021.1
14. Accession # EF582611.1
15. Accession # EF582613.1
16. Accession # EF582612.1

F. Funded grants

Active:

1. NIH/NINDS R01. Period: 03/06/2024 to 02/28/2029.
   Title: Neutrophil extracellular traps and associated pathogenesis in TBI: a novel peptide therapeutic strategy.
   Amount: 2,213,750.00; Role: Principal Investigator (sole)

Completed:

1. **NIH/NIAAA R21:** Period: 05/01/2023 to 04/30/2025. Title: Peptide therapy for alcohol-induced brain injury. Amount: $464,887.00. Role: Principal Investigator (sole).
2. New Jersey Commission on Brain Injury Research (NJCBIR) pilot grant: **CBIR19PIL010**. Role: Principal Investigator, **Year: 2019-2021**, Amount: $180,000.
3. New Jersey Commission on Spinal Cord Research (NJCSCR) pilot grant: **CSCR18ERG007.** Role: Principal Investigator, **Year: 2018-2020**, Amount: $200,000.
4. New Jersey Commission on Brain Injury Research (NJCBIR) pilot grant: **CBIR16PIL021**. Role: Principal Investigator, Year: 2016-2018, Amount: $177,464.
5. New Jersey Commission on Spinal Cord Research (NJCSCR): CSCR17TTT007-technical training grant, 2017.

G. Pending grants

1. NINDS R01
   PI: Mohammed Abdul Muneer
   Title: PIWI proteins and piRNAs in the pathogenesis of mild traumatic brain injury.
   (Discussed; will be resubmitted in June 2026).
   Direct cost: 1,250,000.00; total budget: 1,843,750.00
2. NIAAA R21
   PI: Mohammed Abdul Muneer
   Alcohol use disorder and NETosis: mechanisms of neuropathology and a novel therapeutic strategy.
   (This proposal has been submitted in Oct 2025 and pending review).
   Direct cost: 250,000.00; total budget: 368,000.00

H. Poster/Oral presentations in Conferences/Symposia

a) Design and evaluation of PAD4 antagonistic peptides for blocking neutrophil extracellular trap formation after traumatic brain injury. (**Oral presentation** in the Society for Neuroscience conference held at San Diego, CA during Nov 16-19, 2025).

b) Transmigration of leukocytes and the formation of neutrophil extracellular traps in TBI: a novel peptide therapeutic strategy. (Poster presented in the Society for Neuroscience conference held at Chicago, IL during Oct 05-11, 2024).

c) Nrf2 activator peptide promotes recovery from neurovascular dysfunction in alcohol ingestion (Poster presented in Research Society on Alcoholism conference held at Minneapolis, MN during Jun 22-26, 2024).

d) Role of miR-135b-5p in regulating STIM-2-dependent pathogenesis following mild TBI (Poster presented in National Neurotrauma Society conference held at San Francisco, CA during Jun 08-12, 2024.

e) Peptide therapy for protecting the brain from alcohol-induced neuropathology and functional deficits. (Abstract submitted to Research Society on Alcoholism (RSA) conference held at Bellevue, Seattle, WA during June 26-June 30, 2023).

f) Mechanisms of formation of neutrophil extracellular trap in traumatic brain injury: neuroprotection using antagonistic peptides. (Abstract submitted to Society for Neuroscience conference held at San Diego, CA during Nov 11-15, 2022).

g) Mechanisms of formation of neutrophil extracellular trap in alcohol use disorder. (Abstract submitted to Research Society on Alcoholism (RSA) conference held at Orlando, FL during June 27-June 30, 2022).

h) GDF10 promotes axonal regeneration and functional recovery: a novel gene therapy strategy for spinal cord injury. Society for Neuroscience conference held at Chicago, IL during 19-23 Oct 2019.

i) Nrf2 protects the brain from the transmigration of blood cells by down-regulating ICAM-1 after traumatic brain injury. National Neurotrauma Society conference will be held at Pittsburg, PA from June 29-July 03 2019.

j) Loss of pericytes impairs the blood-brain barrier following brain injury. (poster presented the poster at Society for Neuroscience conference held at San Diego, CA during 04-07 Nov 2018).

k) Nrf2 signaling as a therapeutic target against traumatic brain injury. Poster presentation in Annual Scientific Meeting of Society for Neuroscience held at Washington DC during 10-15 Nov 2017.

l) Ca^{2+} influx in mild stretch neuronal injury causes caspase-1 dependent neuroinflammation and cell death. Oral presentation in annual Biomedical Engineering Society (BMES) conference held at Tampa, FL during Oct 7-10, 2015.

m) Role of LAR phosphatase in restricting axon regeneration after spinal cord injury. Poster presentation in Annual Scientific Meeting of Society for Neuroscience held at San Diego, CA during Nov 9-13, 2013.

n) Mechanisms of alcohol-induced thiamine deficiency in brain pathogenesis: therapeutic role of acetyl-L-carnitine. 35th Annual Scientific Meeting of the Research Society on Alcoholism JUNE 23-27, 2012, San Francisco, California.

o) Blood-brain barrier Dysfunction and Neuroinflammation by MMP-mediated Degradation of VEGFR-2 in Alcohol Abuse. International symposium on advances in Biological Sciences, March 15-17, 2012, Kannur, Kerala, India.

p) Alcohol-Induced Activation of Matrix Metalloproteinases and Reduction of VEGFR-2 Protein Leads to Blood-Brain Barrier Dysfunction. 34th Annual Scientific Meeting of the Research Society on Alcoholism JUNE 25-29, 2011, Atlanta, Georgia.

q) Alcohol-induced oxidative stress in neurovascular components. Midland Society for Neuroscience conference held at Boys Town Hospital, Omaha, Nebraska on Dec 6, 2010.

r) Alcohol consumption disrupts glucose transport across the blood-brain barrier and glucose utilization in the brain. 33rd Annual Scientific Meeting of the Research Society on Alcoholism JUNE 26-30, 2010, San Antonio, Texas.

s) Blood-brain barrier damage as an index for brain injury in mild TBI. Poster presented on Symposium on "traumatic brain injury" at University of Lincoln, Nebraska on April 27, 2012.

t) Methamphetamine inhibits glucose transport across the blood-brain barrier. Midland Society for Neuroscience conference held at Boys Town Hospital, Omaha, Nebraska on Dec, 2009.

u) Analysis of genetic diversity and phylogenetic relationships among eight species of *Piper* (Piperaceae) using molecular markers. International Symposium held at Center for Cellular and Molecular Biology (CCMB), Hyderabad on 'Nuclear architecture and Chromatin Dynamics', during Nov 26-29, 2008.

v) RAPD analysis of genetic variability among eight varieties of rice (*Oryza sativa* L.) in the Kerala region. International Symposium held at Center for Cellular and Molecular Biology (CCMB), Hyderabad on 'Nuclear architecture and Chromatin Dynamics', during Nov 26-29, 2008.

w) Detection of genetic variation in the natural populations of endemic yellow catfish, *Horabagrus brachysoma* using molecular markers. International Conference on Biotechnology and Neuroscience during 29-31 Dec. 2004. **The awarded best oral presentation for this paper.**

x) Screening of polyphosphate (polyP) accumulating bacteria from marine environments. National symposium organized by the Association of Microbiologists of India at Mangalore during Dec. 5-7, 1998.

I. Media News/Coverage/Interviews

a) NIH R01 grant news.

i. https://www.healio.com/news/neurology/20240412/nih-awards-22m-grant-to-advance-research-for-novel-therapy-to-improve-tbi-recovery

ii. https://www.roi-nj.com/2024/04/11/healthcare/hackensack-meridian-neuroscience-institute-at-jfk-university-medical-center-receives-2-2m-grant/

iii. https://njbiz.com/hackensack-meridian-researchers-receive-2-2m-federal-grant/

iv. https://patch.com/new-jersey/woodbridge/jfk-university-medical-center-receives-2-2-million-research-grant-nodx

v. https://hellenicnews.com/hackensack-meridian-neuroscience-institute-at-jfk-university-medical-center-receives-2-2-million-research-grant-to-study-a-novel-traumatic-brain-injury-treatment/#google_vignette

vi. https://www.newswise.com/articles/hackensack-meridian-neuroscience-institute-at-jfk-university-medical-center-receives-2-2-million-research-grant-to-study-a-novel-traumatic-brain-injury-treatment

vii. https://www.hackensackmeridianhealth.org/en/news/2024/04/09/hmni-at-jfkumc-receives-2-million-research-grant

viii. https://www.manoramaonline.com/global-malayali/us/2023/12/04/malayalam-doctor-wins-nihs-highest-grant.html

ix. https://www.kasargodvartha.com/news/top-headlines/scientist-from-kasaragod-won-researchhtml/cid14030007.htm

x. https://pravasichannel.com/videos/5470

b) NIH R21 grant news.

i. https://patch.com/new-jersey/woodbridge/neuroscience-institute-jfkumc-awarded-research-grant-nodx

ii. https://hellenicnews.com/hackensack-meridian-neuroscience-institute-at-jfk-university-medical-center-awarded-research-grant-to-study-novel-approach-to-repair-central-nervous-system-damage-from-chronic-alcohol-abuse/

iii. https://www.newswise.com/articles/hackensack-meridian-neuroscience-institute-at-jfk-university-medical-center-awarded-research-grant-to-study-novel-approach-to-repair-central-nervous-system-damage-from-chronic-alcohol-abuse

iv. https://www.hackensackmeridianhealth.org/en/news/2023/06/15/hmh-neuroscience-institute-at-jfkumc-awarded-grant-to-study-nervous-system-damage-from-alcohol-abuse

c) eNeuro publication news:

https://www.onmanorama.com/lifestyle/health/2021/06/27/keralite-researcher-study-brain-injury-provides-breakthrough.html

d) Media coverage on spinal cord research
https://spinalcordresearchandadvocacy.wordpress.com/2019/10/24/gdf10-promotes-axonal-regeneration-and-functional-recovery-a-novel-gene-therapy-strategy-for-spinal-cord-injury/?

e) Radio interview on a program, 'Science Scope' at Radiomacfast-FM 90.4, on 8/6/2018.

TEACHING ACTIVITIES

A. Appointments

Dates	Title and Institute	Teaching activities
05/13/2025 to current	**Associate Professor,** Department of Biomedical Engineering, Florida International University, Miami, FL-33174.	Teaching and lab training in Molecular Neuroscience and Neural Engineering for graduate, and undergraduate students.
03/28/2016 to 05/09/2025	**Associate Professor:** JFK Neuroscience Institute, Hackensack Meridian Health JFK University Medical Center, 65 James St, Edison, NJ.	Teaching and lab training in Molecular Neuroscience for postdocs, and undergraduate, masters and MD resident students.

07/14/2014 to 03/25/2016	**Assistant Research Professor:** Dept. of Biomedical Engineering, New Jersey Institute of Technology, Newark, NJ.	Training for master's and undergraduate students. Supervised (adviser and mentor) one master's thesis.
12/01/2007 to 12/28/2008	**Assistant Professor and Head:** Mar Athanasios College for Advanced Studies, Tiruvalla.	Teaching and lab practical in Molecular Biology, Genetic Engineering, Immunology and Biochemistry subjects for MSc students. Supervised (adviser and mentor) MSc theses. Opened a new research unit.
06-07-2004 to 21-4-2005	**Lecturer:** Mar Athanasios College for Advanced Studies, Tiruvalla, Kerala.	Teaching and lab practical in Molecular Biology, Genetic Engineering, Immunology and Biochemistry subjects for MSc students
05-01-2002 to 05-31-2004	**Teaching Assistant:** Maharajas College Ernakulam, MG University.	Teaching and lab practical in Molecular Biology for undergraduate and master's students

B. Courses Taught

BME 5411 Molecular Engineering	: Florida International University (PhD)
BME 661 Neural Engineering	: New Jersey Institute of Technology (MS).
NSC 922 Molecular and Cellular Neuroscience	: University of Nebraska Medical Center (PhD).
Molecular Biology	: Macfast College, MG University (MSc).
Genetic Engineering	: Macfast College, MG University (MSc).
Laboratory Techniques in Molecular Biology	: Macfast College, MG University (MSc).
Laboratory Techniques in Genetic Engineering	: Macfast College, MG University (MSc).

C. Invited talks (details)

a. "Brain Injury: Insights into Therapeutic Advancements", at the Department of Zoology, Govt College Kasaragod, on Oct 3, 2025.
b. "Therapeutic advancements for Brain Injury", at Kerala Govt NORKA Scientific and professional meet, held on Sep 27, 2025 at Cochin, India.
c. "Transmigration of leukocytes and formation of neutrophil extracellular traps in TBI: a novel peptide therapeutic strategy". Invited talk on Sep 25, 2024 at the Department of Pharmacology, Toxicology and Addiction Science, University of Tennessee Health Science Center, Memphis.
d. "Transmigration of leukocytes and formation of neutrophil extracellular traps in TBI: a novel peptide therapeutic strategy". Invited talk on Sep 13, 2024 at the Department of Biomedical Engineering, Florida International University, Miami, FL.
e. "Neutrophil extracellular traps and associated pathogenesis in TBI". Invited talk on Aug 22, 2024 at the Department of Neurosurgery, University of South Florida, Tampa, FL.
f. "Neutrophil extracellular traps and associated pathogenesis in TBI". Invited talk on June 26, 2024 at the Department of Biological Science, Rowan University, NJ.
g. "Neutrophil extracellular traps and associated pathogenesis in TBI". Invited talk on June 13, 2024 at the Department of Molecular and Translational Medicine, Texas Tech university Health Science Center, El Paso, TX.
h. "Transmigration of leukocytes and formation of neutrophil extracellular traps in TBI: a novel peptide therapeutic strategy". Invited talk on Apr 24, 2024 at the Department of Pharmacology and Toxicology, Michigan State University, East Lansing, MI.
i. "Traumatic brain injury: mechanisms of pathogenesis and therapeutic developments". Invited talk, Society for Neuroscience, India held at Newman College, Kerala on Dec 13, 2024.
j. "Traumatic brain injury: mechanisms of pathogenesis". Invited talk on Aug 1, 2022 at Department of Biotechnology, Cochin University of Science and Technology, Kerala, India.

k. "Traumatic brain injury: mechanisms of pathogenesis". Invited talk (webinar) on March 22, 2021 at St. Albert's College, Kerala, India.
l. "Biomedical research opportunities in US", invited talk (webinar) on Sep 12, 2020, at Meem Academy, Calicut, India.
m. "Traumatic Brain Injury: mechanisms of pathophysiology and therapeutic interventions". Department of Pharmacology, Physiology, and Neuroscience, Rutgers New Jersey Medical School, Newark, NJ. On 25th Nov 2019.
n. 'Role of GDF10 in axonal regeneration and functional recovery after spinal cord injury: a novel gene therapy strategy' at JFK Neuroscience Institute on Zappulla Research Day Oct 2019.
o. 'Central Nervous System Injury: Mechanisms of pathophysiology and therapeutic strategies' at JFK Neuroscience Institute on Zappulla Research Day Oct 24, 2018.
p. "Nrf2 signaling as a therapeutic target against traumatic brain injury" at JFK Neuroscience Institute on *Zappulla Research Day* June 2017.
q. "Mechanisms of neurovascular dysfunction in traumatic brain injury" at JFK Neuroscience Institute on *Zappulla Research Day* June 1, 2016.
r. "Mechanisms of neurovascular dysfunction, neuroinflammation and neurodegeneration in brain injury" at Dept of Neurosurgery, University of Texas, Houston on 13th Jan 2016. Part of the hiring process.
s. "Mechanisms of neurovascular dysfunction in CNS injury" at JFK Neuroscience Institute, Edison on 4th Jan 2016. (Part of the hiring process).
t. "Blood-brain barrier damage and neurovascular inflammation associated with substance of abuse" at Biosciences and Bioengineering Department, Indian Institute of Technology, Bombay on 29th September 2011.

D. Thesis advisor for Ph.D Graduate Students

Sl. No.	Name of Student and course	Semester and Year	Institute	Research topic
1	Ms. Thalia Barrios Lizon	Aug 2025	FIU	To investigate the mechanisms of formation of neutrophil extracellular traps in traumatic brain injury.
2	Ms. Salonee Chavan	Jan 2026	FIU	NET-induced thrombosis in traumatic brain injury.
3	Mr. Sreenath Meloth	May 2026	FIU	Role of PiRNA in the pathogenesis of traumatic brain injury.
4	Mrs. Thajunnisa Ashraf	May 2026	FIU	Glymphatic system and NET in traumatic brain injury.

E. Thesis advisor for graduate students (Masters)

Sl. No.	Name of Student and course	Year	Institute	Research topic
1	Alyssa Lutchmansingh (mentor and advisor)	2026	FIU	Nrf2 in angiogenesis after traumatic brain injury.
2	Andriano Conte (mentor and advisor)	2015	NJIT, NJ	Role of SDF-1α in Traumatic brain injury associated neurodegeneration
3	Reby Skaria (mentor and advisor)	2008	MG University, Kerala.	Development of genetic markers for rice cultivars of Kerala.
4	Sandeep Sen (mentor and advisor)	2008	MG University, Kerala.	Analysis of genetic diversity among eight species of *Piper* (Piperaceae).
5	Remya Shivanandan (mentor and co-advisor)	2004	Periyar University, Tamil Nadu.	Microsatellite profiling in endangered catfish, *Horabagrus nigricollaris.*
6	Shobha Mariam (mentor and co-advisor)	2003	Anna University, Tamil Nadu.	Analysis of Genetic variation in *Tor kudree* using RAPD markers

7	Lijo John (mentor and co-advisor)	2003	Periyar University, Tamil Nadu.	Microsatellite markers in *Puntius denisonii*.
8	Archana Krishnan (mentor and co-advisor).	2003	Periyar University, Tamil Nadu.	Microsatellite profiling of *Etroplus suratensis* for the analysis of Genetic variation.

F. Mentoring/Training for postdoctoral fellows

Sl. No.	Name of Student and year	Year	Institute
1	Dr. Bibhuti Saikia	Oct 2021-05/09/2025	HMH-JFK
2	Dr. Preetha Rani Muthukrishnan	Mar 2022-Feb 2024	HMH-JFK
3	Dr. Venkat Perumal	Nov 2021-Feb 2022	HMH-JFK
4	Dr. Saurav Bhowmick	Aug 2017-July 2021	HMH-JFK
5	Dr. Anitha Malat	Oct 2019-Aug 2020.	HMH-JFK
6	Dr. Veera D'Mello	Jul 2018- Aug 2019	HMH-JFK
7	Dr. Ram Kuwar	May 2016-Feb 2017	HMH-JFK

G. Training/supervision for BS/MS/HS students

Sl. No.	Name of Student and year	Year/period	BS or MS and subject area	Institute
1	Hugo Sinisterra	01/26/2026 to current	BS, BME	FIU
2	Isabelle Belizaire	11/20/2025 to current	BS, BME	FIU
3	Sofia Martinez	09/08/2025 to current	BS, BME	FIU
4	Felipe Bilder Cordero	09/02/2025 to current	BS, BME	FIU
5	Darielle John	08/25/2025 to current	BS, BME	FIU
6	Michael Cabral	08/25/2025 to current	BS, BME	FIU
7	Ramdhan Russell	7/16/2024 to 8/20/2024	BS, UPENN	HMH-JFK
8	Sriya Mangatt	7/09/2024 to 8/10/2024	BS, Temple University	HMH-JFK
9	Yemin Poovanthodi	8/15/2023 to 12/31/2024	BS, Rutgers	HMH-JFK
10	Zayan Kassim	7/15/2023 to 8/31/2024	BS, Rutgers	HMH-JFK
11	Sujoy Menon	6/22/2023 to 8/31/2023	BS, Rutgers	HMH-JFK
12	Almas Thaha	6/22/2022 to 8/31/2022	BS, Drexel University	HMH-JFK
13	Shubham Singh	7/15/2019 to 8/31/2023	BS, Seton Hall University	HMH-JFK
14	Sonali Koduri	7/15/2019 to 8/31/2019	BS, Thomas Jefferson	HMH-JFK
15	Zeba Shafi	6/1/2019 to 7/10/2019	BS, NY University	HMH-JFK
16	Danielle Caruso	3/13/2018-31/12/2019	BS, Rutgers	HMH-JFK
17	Nitish Nimmi	2018 and 2019 summer	HS, JP Steven	HMH-JFK
18	Mahnoor Goraya	2018 summer	BS, MCC	HMH-JFK
19	Sara Rasool	2018 summer	BS, Rutgers	HMH-JFK
20	Alex Wallerstein	12/2017-03/2018	Masters, Rutgers	HMH-JFK
21	Akhil Hashem	10/2017	HS, JP Stevens	HMH-JFK
22	Veera D'Mello	09/2017-07/15/2020	Post PhD	HMH-JFK
23	Nizmi Ponery	09/2017-8/2019	Post BS, W Virginia Uni	HMH-JFK
24	John Amato	06/2017	BS, Rutgers University	HMH-JFK
25	Shriya Eiren	2017 and 2018 summer	Miami University	HMH-JFK
26	Eric Dworsky	06/2017	BS, Rutgers University	HMH-JFK
27	Christina Finn	2017 and 2018 summer	BS, Georgetown	HMH-JFK
28	Marley Perlstein	06/2016	BS	HMH-JFK
29	Jyothsna Nechuri	09/2016	Post PhD	HMH-JFK
30	Nicholas Briski	06/19/2016-11/30/2017	BS, Rutgers University	HMH-JFK

31	Debanjan Haldar	2015-16	BS, NJIT	NJIT, HMH-JFK
32	Rachel Patel	2015-16	BS, NJIT	NJIT, HMH-JFK
33	Sadie Gann	2015	BS, NJIT	NJIT
34	Neha Pandya	2015	MS, NJIT	NJIT
35	Rempee Kalia	2015	BS, NJIT	NJIT
36	Nithisha Prasad	2015-2016	BS, NJIT	NJIT, HMH-JFK
37	Monica Krause	2012	BS	UNMC
38	Eric Hong	2012	BS	UNMC
39	Heather Schueltz	2011-2012	BS	UNMC
40	Yan Zhang	2010	High school	UNMC
41	David Tylor	2009	BS	UNMC
42	Alleyson Lamb	2009	BS	UNMC

OTHER ACADEMIC SERVICE ACTIVITIES

a. Evaluation of PhD Theses

a. Evaluated a Ph.D. thesis: Rutgers University, New Jersey Medical School. Title of thesis: Effects of TGF-beta receptor inhibition to prevent cellular death and promote recovery in neonatal hypoxic-ischemic brain injury.

b. Evaluated a Ph.D. thesis from Mangalore University, India. Title of thesis: "Population genetic structure of Cobia, Rachycentron canadum (Linnaeus 1766) along the Indian coast using molecular markers".

c. Evaluated a Ph.D. thesis from Cochin University of Science and Technology, India. Title of thesis: Genetic divergence in Lobsters (Crustacea: Palinuridae and Scyllaridae) from Indian EEZ.

b. Peer Reviewing of Manuscripts and abstracts.

a) Reviewed around 125 manuscripts from peer-reviewed journals during the last 15 years.
b) Reviewed 22 poster abstracts for the National Neurotrauma Society Conference in 2017 and 2018.

c. Ad-hoc Reviewer for Journals

1	Arteriosclerosis Thrombosis and Vascular Biology	13	Frontiers Cellular Neuroscience
2	Molecular Therapy	14	Journal of spinal cord medicine
3	Neuropsychopharmacology	15	Journal of neurochemistry
4	Neurotherapeutics	16	Plos One
5	Free Radical Biology and Medicine	17	Neurotoxicology
6	Molecular Neurobiology	18	International Journal of Molecular Sciences
7	Journal of Neuroinflammation	19	Neurochemistry International
8	Brain, behavior, and Immunity	20	Toxicology letter
9	Experimental Neurology	21	Experimental Brain Research
10	Cell death and disease	22	Environmental Toxicology and Pharmacology
11	Neurobiology of Disease	23	Behavioural Brain Research
12	Journal of Neurotrauma		

d. Community/college activities

2025- Faculty search committee, Department of Biomedical Engineering, FIU.
2020- Faculty search committee, Hackensack Meridian Health JFK University Med Center.
2016- Research training for high school, undergraduate, and Master's students.
2020- Academic Research Council member: Kannur University, Kerala, India.

2016-	Research Development Committee member: Mar Athanacious College for Advanced Studied, Kerala, India.
2017-	Patron of Research: MES college Aluva, Kerala, India.
2019-2021	Education Director: 2019-2021: NANMMA Association, USA.
2007-2011	Curriculum development committee member: MG University, Kerala, India.
