BIOGRAPHICAL SKETCH – Akshata R. Naik, PhD

NAME: Naik, Akshata

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Assistant Professor

Education and Training			
Wayne State University	Ph.D.	2019	Physiology
University of Mumbai, INDIA	M.S.	2010	Life Sciences (Biological Macromolecules)
University of Mumbai, INDIA	B.Sc.	2008	Microbiology

A. Professional Experience

Assistant Professor of Foundational Medical Studies **September 2021 - Current**
Oakland University William Beaumont School of Medicine (OUWB)

Medical Writer **June 2021 – September 2021**
Health and Wellness Partners

Post-doctoral Researcher **September 2019 - April 2021**
Wayne State University

B. Personal Statement

Dr. Akshata R. Naik is a trained basic scientist who successfully transitioned into the role of a medical educator after joining Oakland University William Beaumont School of Medicine in September 2021. Her prior research experience includes understanding cellular and muscle physiology during which she has published numerous papers and won several accolades.

After joining OUWB, Dr. Naik has created a research niche for herself in medical education to align with OUWB's vision. Her current research has two underlying themes: a) Dissecting social vs biological constructs within medical education and b) Innovative & inclusive physiology teaching practices. Her research contributions have garnered recognition by organizations such as the International Association of Medical Science Educators (IAMSE), and the American Physiological Society (APS). Indeed, in the past year Dr. Naik won the "Faculty Travel Award" by the IAMSE and the "Teaching of Physiology" award by the APS.

Dr. Naik's future research goals include integrating her physiology training with her current field of medical education. As such she is aiming to applying physiological tools and methodologies on educational practices to provide insights into better educational interventions and outcomes, thus informing evidence-based medical education practices.

C. Professional Memberships

05/2022 - Present	International Association of Medical Science Educators
05/2022 - Present	American Physiological Society
03/2023 - Present	Team-Based Learning Collaborative

D. Awards & Honors

International

06/2024	IAMSE Travel Award 2024, International Association of Medical Science Educators (IAMSE)
04/2024	William Galey Scholarship Award, American Physiological Society - Teaching of Physiology Section
06/2014	Travel award, American Society for Reproductive Immunology

National

06/2016	Richard Barber Summer Fellowship
06/2015	Richard Barber Summer Fellowship

Institutional

04/2019	2nd place, 3-minute thesis competition (Wayne State University)
08/2017	Graduate Student Incentive Award (Wayne State University)
08/2016	Marion I. Barnhart Best Graduate Student Award (Wayne State University)
02/2013	1st place poster presentation, Wayne Day (Wayne State University)

C. Selected Peer-Reviewed Publications

1. Naik AR. Cancer Epigenetics and Nanomedicine: Targeting the Right Player via Nanotechnology. First ed: Elsevier Inc.; 2024.
2. Naik AR, Davidson CJ, Hurse DN, Kemp K. A preliminary study of educational experiences that promote perceptions of college readiness in individuals from lower socioeconomic backgrounds interested in pursuing a career in science, technology, engineering, math, or medicine (STEMM). presented at: Frontiers in Education2024.
3. Kemp KL, Davidson CJ, Hurse DN, Naik AR. Exploring educational experiences that correlate with self-directed learning in college students seeking to pursue science, technology, engineering, math, and medical (STEMM) fields. presented at: Frontiers in Education2024.
4. Kemp K, Lewis B, Naik AR, Uhley VE. Utilizing a medical school outreach program to help high school students explore the impact of food security and ultraprocessed foods on health risks. Advances in Physiology Education. 2024;48(2):421-426.
5. George S, Kim MY, Naik AR, Lewis BE. Examining Inclusive Language in Clinical Narratives in Medical Biochemistry Textbooks to Model Equitable Patient-Centered Care in Preclinical Undergraduate Medical Education. Medical Science Educator. 2024:1-7.
6. Naik Akshata R BS, Mohiyeddini Changiz. What is culture? Frontiers for Young Minds. 2023;11:1150335.
7. Lewis BE, Naik AR. A scoping review to identify and organize literature trends of bias research within medical student and resident education. BMC Medical Education. 2023;23(1):919.
8. Cukovic D, Bagla S, Ukasik D, et al. Exosomes in epilepsy of tuberous sclerosis complex: Carriers of pro-inflammatory microRNAs. Non-coding RNA. 2021;7(3):40.
9. Campbell CJ, Pall AE, Naik AR, Thompson LN, Stemmler TL. Molecular Details of the Frataxin–Scaffold Interaction during Mitochondrial Fe–S Cluster Assembly. International Journal of Molecular Sciences. 2021;22(11):6006.

10. Pernal SP, Liyanaarachchi A, Gatti DL, et al. Nanoscale imaging using differential expansion microscopy. Histochemistry and cell biology. 2020;153:469-480.
11. Naik AR, Formosa BJ, Pulvender RG, Liyanaarachchi AG, Jena BP. vH+-ATPase-induced intracellular acidification is critical to glucose-stimulated insulin secretion in beta cells. Histochemistry and Cell Biology. 2020;153(4):279-285.
12. Naik AR, Pernal S, Lewis KT, et al. Human skeletal muscle cells on engineered 3d platform express key growth and developmental proteins. ACS biomaterials science & engineering. 2019;5(2):970-976.
13. Naik AR, Kuhn ER, Lewis KT, et al. Self-assembly and biogenesis of the cellular membrane are dictated by membrane stretch and composition. The Journal of Physical Chemistry B. 2019;123(32):6997-7005.
14. Benjamins JA, Nedelkoska L, Touil H, et al. Exosome-enriched fractions from MS B cells induce oligodendrocyte death. Neurology: Neuroimmunology & Neuroinflammation. 2019;6(3):e550.
15. Yedulla NR, Naik AR, Kokotovich KM, Yu W, Greenberg ML, Jena BP. Valproate inhibits glucose-stimulated insulin secretion in beta cells. Histochemistry and cell biology. 2018;150:395-401.
16. Lewis KT, Naik AR, Laha SS, et al. Secretion induces cell pH dynamics impacting assembly-disassembly of the fusion protein complex: a combined fluorescence and atomic force microscopy study. presented at: Seminars in Cell & Developmental Biology 2018.
17. Kuhn ER, Naik AR, Lewis BE, et al. Nanothermometry reveals calcium-induced remodeling of myosin. Nano letters. 2018;18(11):7021-7029.
18. Lewis KT, Maddipati KR, Naik AR, Jena BP. Unique lipid chemistry of synaptic vesicle and synaptosome membrane revealed using mass spectrometry. ACS Chemical Neuroscience. 2017;8(6):1163-1169.
19. Lewis K, Maddipati K, Naik A, Jena B. Unique lipid chemistry of synaptic vesicle and synaptosome membrane revealed using mass spectrometry. ACS Chem Neurosci 8: 1163–11692017.
20. Laha SS, Naik AR, Kuhn ER, et al. Nanothermometry measure of muscle efficiency. Nano letters. 2017;17(2):1262-1268.
21. Arachchige MP, Laha SS, Naik AR, Lewis KT, Naik R, Jena BP. Functionalized nanoparticles enable tracking the rapid entry and release of doxorubicin in human pancreatic cancer cells. Micron. 2017;92:25-31.
22. Naik AR, Lewis KT, Jena BP. The neuronal porosome complex in health and disease. Experimental Biology and Medicine. 2016;241(2):115-130.
23. Naik AR, Kulkarni SP, Lewis KT, Taatjes DJ, Jena BP. Functional reconstitution of the insulin-secreting porosome complex in live cells. Endocrinology. 2016;157(1):54-60.

F. Other Support (Current through Past 5 Years)

06/2022 Black Faculty Association Grant, Co-investigator, $2500, Black Faculty Association

06/2023- Departmental Award, Co-investigator, $10,000, Foundational Medical Studies, OUWB
06/2024