

Research Opportunities 2025 SMRF Program

Below is a listing of research opportunities that are available for Rowan-Virtua SOM Medical Students who have an interest in submitting applications for approval to participate in the 2025 Summer Medical Research Fellowship Program.

Contact Name/Department	Contact Information	Project Title/Information
Dr. Nimish Acharya NJISA Science Center, Room A101	Email: acharynk@rowan.edu	Impaired blood-brain barrier (BBB) is widely implicated in initiating and perpetuating neurodegenerative changes in aging, Alzheimer's disease, and traumatic brain injury (TBI). Using rodent model with TBI and BBB breakdown, we will investigate potential role of extravasated vascular components in mediating neurodegenerative changes.
Dr. Vincent Beachley Translational Biomedical Engineering & Sciences 232 Engineering Hall, Glassboro	Email: beachley@rowan.edu	Polymer nanofiber engineering and their use in aligned tissue regeneration. The tissue engineering areas that we focus on are in orthopedic applications and peripheral nerve regeneration.
Dr. Sergi Borukhov Molecular Biology Science Center, Room B130	Email: borukhse@rowan.edu	Molecular mechanisms of transcription and its regulation. Structure and function of bacterial transcription factors acting through the secondary channel of RNA polymerase. Mechanisms of SARS COV2 transcription and replication by RNA-dependent RNA polymerase and regulation of its activity by viral and host cell factors.
Dr. Erik Brewer Biomedical Engineering Glassboro, Engineering Hall, Room 226	Email: brewere@rowan.edu	My lab deals with the commercial development of a spinal prosthetic. Our engineering lab does benchtop work to justify the safety and efficacy of the device, as well as support our clinical arm by analyzing data from our clinical studies. Students can be expected to work with both of our engineering and clinical teams for a complex workload understanding how both can benefit each other in a regulatory and entrepreneurial context.
Dr. Steve Garwood Academic Affairs Suite 210, Room 219	Email: garwoods@rowan.edu	We are currently studying various aspects of student use of lecture capture and transcripts. We are currently looking at best practices, process improvement, and approaches that students can utilize with lecture capture transcription.
Dr. Joanne Kaiser-Smith Graduate Medical Education 113 E Laurel Rd. Stratford NJ	Email: kaiserjo@rowan.edu	Development of this program-a health care navigator for students- will help them take steps toward their own health responsibility and enable them to counsel their patients about their health journey. Students who engage in self-care report less stress and better quality of life.

Dr. Dmitriy Markov Cell Biology and Neuroscience Stratford, Science Center, B230	Email: markovdm@rowan.edu	Post-transcriptional processing of mitochondrial RNA in budding yeast.
Dr. Rachel Navarra Neuroscience Science Center, Room 221	Email: navarra@rowan.edu	The effects of traumatic brain injury on behavior and catecholamine regulatory proteins.
Dr. Rachel Pruchno NJISA Suite 2300 UDP	Email: pruchnra@rowan.edu	I'm a psychologist interested in successful aging. Happy to work with students who want to collect survey information about physical and emotional well-being. I successfully mentored a student this year who did a study of caffeine intake and sleep.
Dr. Ashley Rowan Internal Med Tanyard Rd. Medical School, Suite B1	Email: colemana@rowan.edu	Multiple projects 1) Education of residents in behavioral health and patient outcomes 2) education and prevention of outreach STD prevention (possible pending grant) 3. QI-targeting high risk ascvd with aggressive lipid reduction.
Dr. Seenivasan	Email: natarajaseenivasan@gmail.com	The research conducted in our laboratory is centered on elucidating the molecular mechanisms that govern glial metabolism within the context of both drug abuse and HIV infection. Our recent studies have provided insight into the impact of cocaine abuse and HIV infection on mitochondrial Ca ²⁺ modulation, glial metabolism (Cell Death and Disease, 2018), and disruption of astrocytic cholesterol homeostasis (Glia, 2018; iScience, 2022).
Dr. Santhanam Shanmughapriya (Dr. Priya) Science Center	Email: priyaonco@gmail.com	Join our team in exploring the link between 'ionic dysregulation' and 'mitochondrial dysfunction' hypotheses to develop potent therapeutic strategies to address heart failure. With over a decade of experience manipulating mitochondrial ion homeostasis signaling pathways, I aim to contribute to answering mechanistic and translational questions related to mitochondrial dysfunction in cardiac diseases. Our work is not just about understanding the problem but also about finding solutions that can bridge the gap between bench-side experiments and bedside cures.
Dr. Brian Weiser Molecular Biology Science Center 307A	Email: weiser@rowan.edu	The student would use different programs (Prism, SAS, and python) to model existing biochemical datasets with several non-linear functions. This work is sometimes assisted by an AI interface to facilitate coding and curve fitting.

If you have an interest in any of the above projects, please reach out right away to the contact person for that department.

NOTE: The deadline for application submissions is **(Wednesday) February 12, 2025.**

The **2025 SMRF Program Instructions/Guidelines and the Application Cover Page** are available at <http://som.rowan.edu/oursom/pipeline/research/smrf.html>

If you have any questions, or difficulty accessing the hyperlink above, please contact the Rowan-Virtua SOM Research Office at somresearch@rowan.edu.