**CARTI Scholars Program Testimonial\_ N. Pandey (CARTI Scholar 2023)**

I am Nikhil, a biomedical engineer in my fourth year of postdoctoral training at the University of Maryland Baltimore's School of Medicine, Department of Neurosurgery. I specialize in translational nano-therapeutic development for neuro-oncology and have the privilege of being one of the six **Center for Advanced Research Training & Innovation (CARTI)** scholars that received CARTI-mediated mentorship and guidance as the inaugural cohort of early career scientists, selected as CARTI scholar trainees for the **2022-2023 CARTI Scholars Program**.

As one of the six CARTI scholars, I am extremely thrilled to share my experience with the 2022-2023 CARTI Scholars program, an exceptional academic program that has truly transformed my journey as an early career scientist. This program encompasses a multitude of invaluable aspects that have not only enhanced my scientific intellectual knowledge and skills but also shaped my perspective on scientific research and inquiry and its deep significant societal impact.

Firstly, the **didactic portions of the CARTI Scholars Program** provided me with a comprehensive understanding of the required rigor in scientific project design and analysis. This program leverages **highly experienced UMB faculty** to provide engaging scientific lectures, interactive discussions, and experiential learning, which enabled me to gain the essential tools and methodologies necessary to design and execute a well-founded scientific proposal. The program's emphasis on developing a solid foundation in hypothesis-driven research project design and scientific analysis has equipped me with the confidence and expertise needed to tackle complex scientific challenges.

Another remarkable aspect of this program was the inclusion of **peer project presentations**, specifically designed to enhance scientific communication skills. These presentations served as a platform for me to refine my ability to articulate the complexities of my scientific project and effectively communicate my research findings and engage with a diverse set of peer CARTI scholars and CARTI faculty mentors. The constructive feedback and supportive environment fostered a sense of collaboration, enabling me to sharpen my communication skills and become a more effective and persuasive science communicator.

In addition, **one of the most valuable components of this program centered on** **NIH grantsmanship**, which focused on **scientific writing and the development of high-standard NIH-style grants**. Through meticulous guidance by the CARTI faculty mentors and rigorous training, I acquired the necessary skills to craft compelling grant proposals. The program's emphasis on writing excellence has not only empowered me to produce high-quality grant applications but has also elevated my overall scientific writing abilities, enabling me to effectively communicate my research vision and potential impact to funding agencies and the scientific community; A skill that is extremely challenging to develop in isolation, especially for early career scientists.

Furthermore, the grantsmanship aspect of the CARTI scholars program provided an exceptionally unique opportunity to gain invaluable insights into the inner workings of an **NIH study section-mediated grant review process**. My participation in the mock NIH study section review panels and engaging in thoughtful discussions on me and my peer scholars’ grants, enabled me to develop an enhanced understanding of how NIH grants are reviewed, evaluated, and scored for funding. This invaluable experience has not only demystified the NIH grant review process but has also equipped me with the knowledge and perspective to strategically align my scientific research proposals with the priorities of funding agencies.

Finally, the **program's commitment to high-standard mentoring and fostering camaraderie among early career scientist**s has been truly inspiring. The dedicated CARTI faculty mentors provided steadfast support, guidance, and vital expertise, helping me navigate the challenges and uncertainties of a scientific career as a postdoctoral trainee. The camaraderie among CARTI leadership, mentor faculty, and my fellow CARTI peer scholars created a nurturing and collaborative environment, fostering meaningful connections and providing a support system to share career experiences, scientific ideas, and aspirations.

Moreover, the **CARTI leadership’s mentoring** has been instrumental in shaping my long-term motivations and reinforcing within me a profound guiding thought of- Finding the “Why”- in one’s pursuit of a scientific career. This work philosophy, instilled by the CARTI leadership’s mentoring practices is a part of my scientific mindset that will serve me well in my pursuit of a meaningful career in science.

In summary, I found the 2022-2023 CARTI scholars program to be a transformative academic program fostering scientific excellence among early career scientists training here at the University of Maryland Baltimore. **The didactic portions, peer project presentations, grantsmanship training, NIH study section reviews, and exceptional mentoring and camaraderie** have collectively shaped me into a confident and well-rounded early career scientist. I am grateful for the opportunities, the mentorship, and the rigorous and meaningful scientific training this program has provided to me as a postdoctoral fellow. It has equipped me with a robust scientific skill set, a heightened scientific perspective, and a steady resolve for making a meaningful impact as a biomedical engineer working to create clinically translatory technologies to solve unmet clinical challenges. I am taking my early career steps right here at the University of Maryland Baltimore, propelled by the 2022-2023 CARTI scholars program.

I strongly endorse the CARTI Scholars Program to any aspiring early career scientists seeking the right mentoring platform to elevate their scientific portfolio, excel in their scientific pursuits and accelerate their career growth.

Sincerely,

N.P

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