

STUDENT PERSPECTIVE

VIEWS ON THE EDUCATIONAL EXPERIENCE



"I am grateful for the privilege of pursuing higher education as a first-generation college graduate. Engaging with DScD mentorship at Penn has taught me how to overcome the necessary barriers to contribute at the forefront of this profession. This is the key differentiator that is unique for students participating in the Penn DScD program. "

- DENNIS SOURVANOS (GD'21, GR'22)

Excelling at Translational Research and Clinical Innovation

Contributed by Dennis Sourvanos, GD'21, GR'22

Students in the Penn Dental Medicine Advanced Graduate Dental Education Programs have equitable access to a transformational academic experience. Resources are inclusively bolstered through mentorship, professional development, and research execution. The dialogue between students and attending faculty is keenly focused on the future of our profession.

I am currently a T-90/R-90 Fellow with the inaugural cohort of the NIDCR Postdoctoral Training Program in the Center for Innovation & Precision Dentistry (CiPD), through the schools of Dental Medicine and Engineering. I am also a TL-1 Fellow with the Perelman School of Medicine, Institute for Translational Medicine, and Therapeutics (ITMAT) - a candidate for the Certificate of Translational Research in Regulatory Sciences.

Technology and innovation have been at the forefront of my education as a Doctor of Science in Dentistry (DScD) student and graduate periodontics resident at Penn Dental Medicine. I have had the freedom to cultivate a multidisciplinary pathway as a training periodontal clinician scientist. My long-term career

focus will be in translational research, where I can take scientific concepts from the preclinical setting and translate those ideas into dental practice.

Graduate students at Penn Dental Medicine have access to a world-class research enterprise and can engage with centers across the entire University ecosystem. Because every school at Penn operates under the same brand, I've been able to develop relationships and recruit mentors that are supporting my diverse research interests. I work daily with key opinion leaders in dentistry, medicine, engineering, medical physics, radiation biology, and translational research.

My T-90 Fellowship and DScD research is guided by Periodontics Program Director Dr. Joseph P. Fiorellini, and co-mentor Dr. Timothy C. Zhu, a medical physicist from the Department of Radiation Oncology at the Perelman Center for Advanced Medicine. Our primary research focus is with the innovation of Low-Level Laser Therapeutics (LLLT) to upregulate specific growth factors and promote tissue regeneration.

This mentorship team is a modern-day intellectual frontier where we explore and innovate technologies for dentistry and medicine. Both mentors have provided a platform where we exchange ideas and share unparalleled resources. By actively building on expertise from Dr. Zhu's lab, we are working to better understand the irradiation parameters of specific laser systems. This has allowed the development of a preclinical modeling system that will eventually guide prescription dosing of LLLT. My goal is to translate these findings for clinical care within the oral-craniofacial complex. We are also extending our experience with hand-held imaging technologies from dental implant surgery. This will guide a novel preclinical modeling platform that will capture geospatial imaging of non-dental anatomical features.

Overall, I have found this to be a truly transformational experience. I am grateful for the sense of inclusion, diversity, and cultural competence of this research group. As a student here at Penn and in this DScD cohort, you realize that we are developing a future of what will become a profoundly active community network of clinicians and scientists.