

# The Personal and Professional Development of a Physician-Scientist

Cameron R. Bosinski, MD, MS

**M**entorship has been a crucial element to my success. As a member of the Mohawks of the Bay of Quinte, I did not have a well-worn path to becoming a physician, much less a physician-scientist. Throughout my journey, I was fortunate to meet and learn from several people who encouraged and mentored me. This kind of support has been essential during research endeavors and currently sustains me and my ambitions as a researcher and anesthesiologist.

Leaving home in Buffalo, New York, to attend college at Stony Brook University in Long Island was akin to living in an entirely new country. I adapted by trading my guitar for DJ turntables and switching from hockey to the crew team. Instead of spending nights in quiet neighborhoods, I spent time in the hustle and bustle of New York City. For these and other reasons, my academics suffered during my first year, and on top of that, I was found guilty of plagiarism. This served as a wake-up call for me and beckoned the question of whether I could put in the time and effort to become a physician. Although several people told me I would never get into medical school with this on my record, I resolved to apply myself more fully and reach my full potential.

After receiving an "A" in physiological psychology with Dr. Brenda Anderson, I asked to work as a research assistant in her lab. The lab focused on developing a rat model of psychological stress and whether this type of stress could lead to resilience. I learned several things, but most importantly, I learned to be overprepared. Dr. Anderson advised me to always be prepared for the possibility of failure. Because of my lackluster GPA, I decided to complete a master's in neuroscience at the University of Hartford before applying to medical school. I worked with Dr. Richard Mains on the protein kalirin and its subcellular localization. While working on my thesis, I could not obtain an appropriate control for one of my experiments. Dr. Mains instructed me to remove all the data that was dependent on this control from my final thesis, resulting in a large number of figures being removed. Although painful, I realized that I had to be completely confident in my data and that I could only publish the results I could be certain of.



Dr. Bosinski in the OR at Brigham and Women's Hospital (BWH). Photo courtesy of James Rathmell, MD, MBA, Chair of the Department of Anesthesiology, Perioperative, and Pain Medicine at BWH.

While studying for the MCAT, I realized that I did not know what it was like to be a physician. For this reason, I started working as a scribe in an emergency department and sought out additional shadowing opportunities in various specialties throughout the hospital. This clinical experience increased my enthusiasm for medicine as I submitted my application for medical school. Shortly after applying, I was invited to attend a preadmission workshop hosted by the Association of American Indian Physicians. There, I met many Native Americans physicians who provided me with the resources I needed to get into medical school. However, because of my interest in research, I was persuaded to switch my applications from MD only to MD/PhD programs. Additionally, I was advised to submit my application so that I was not considered for MD-only programs, as it would demonstrate my commitment to research. Suffice it to say that I did not receive any interviews from MD/PhD programs and was not accepted into medical school.

While waiting for the application cycle to open again, I sought to improve myself and my application by teaching general biology at a local college. Unfortunately, as a reapplicant, I received few interviews, and again no acceptance to medical school. Throughout this time, I kept in contact with Dr. Brian Thompson, a Native American OB/GYN at Upstate Medical University, who persuaded the admissions committee to enroll

me in a postbaccalaureate program at the University of Buffalo. This program guaranteed admission to medical school if I completed the program. I excelled academically, but navigating the nuances of interpersonal interactions within the program proved to be a greater hurdle. Dr. David Milling served as director of the program and gave me the tools that I needed to demonstrate the professionalism required to succeed in the medical profession. If I was to be a successful physician, I could not let bad habits ruin my ambitions.

As a medical student, I was lucky enough to take part in the Foundation for Anesthesia Education and Research (FAER) Medical Student Anesthesia Research Fellowship (MSARF) program in the lab of past FAER grantees Dr. Max Kelz and Dr. Alex Proekt at the University of Pennsylvania. Under their guidance, I spent summer 2018 conducting research and learning clinical anesthesia in the OR. I went on to present my project at FAER's Medical Student and Resident Scholar Research Symposium at the ANESTHESIOLOGY® annual meeting and was awarded first place for best abstract (and, yes, my mother still has the big check). My experience with the MSARF program was the culmination of my interest in psychology, neuroscience, and consciousness. After completing the program, I knew I wanted to be an anesthesiologist and saw that I could also conduct research at the same time. Without FAER, I would



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not have had access to the best mentors in the field of anesthesiology and I would have sold myself short on what I could accomplish. I want to thank Dr. Harriet Hopf, who led efforts around MSARF in 2018, Drs. Dolores Njoku and Paloma Toledo, who helped facilitate and elevate the program, Dr. Chad Brummett, who now helms the program, and all the wonderful FAER leaders, volunteers, and staff who make this program possible. I owe a great debt of gratitude to all of my mentors.

Currently, I am a resident in the research track at Brigham and Women's Hospital, and I conduct research on the mechanism of anesthesia with Dr. Christopher Connor. Although I would not have anticipated that I would end up training at a Harvard teaching hospital, I am extremely grateful for all of the mentorship, second chances, and generosity that I have received. Along the way, I have tried to give back to those who could use my help in the same way that I needed the help of others. I established an annual preadmission workshop at Upstate Medical University for Native American students applying to medical school and organized a two-day workshop, Health Equity in Native America, that highlighted pathway programs specifically for Native American students interested in health care (asamonitor.pub/41aPCtw; asamonitor.pub/3NcZHjZ). I serve as a co-chair of the Native American Affinity Group and as a mentor for the Four Directions Summer Research Program and the Harvard University Native American Program. In addition, I am the webmaster for Early-Stage Anesthesiology Scholars, where I maintain the resources for residents interested in research (asamonitor.pub/3R7gia4; asamonitor.pub/3t215jS; asamonitor.pub/4a7LeiX; asamonitor.pub/3uLtD04). Overall, my journey has been a bumpy road where I often found myself in a position without a path forward. I was lucky enough to find mentors to guide me to my final destination, and I look forward to helping others do the same. ■



Dr. Bosinski with his winner's check for taking 1st place for best medical student abstract at the FAER Research Symposium in 2018.