

Searching for New Approaches to Prostate Cancer

Sarki Abdulkadir, MD, PhD, Professor of Urology and Pathology



Understanding the molecular mechanisms behind prostate cancer, one of the most common cancers in men, is a primary research objective for [Sarki Abdulkadir, MD, PhD](#), John T. Grayhack, MD, Professor of Urological Research.

Abdulkadir joined Northwestern University in December 2013 from Vanderbilt University. He earned a medical degree at Ahmadu Bello University in Nigeria, a doctorate in immunology from John Hopkins University, and completed his residency and a fellowship at Washington University School of Medicine in St. Louis.

In addition to serving as a professor of [Urology](#) and [Pathology](#) at Feinberg, Abdulkadir is director of international relations at the [Robert H. Lurie Comprehensive Cancer Center of Northwestern University](#). Through the position, he coordinates and works to expand the Lurie Cancer Center's global research efforts, alliances, and partnerships.

Q&A

What are your research interests?

I am interested in the mechanisms that drive the evolution of prostate cells through cancer initiation, progression, and recurrence following therapy. We are particularly interested in the aberrant gene programs that underlie these processes, how they operate in vivo, and possible approaches to counteract them. In one example, we identified two proteins, called MYC and PIM1, that work in tandem to promote the development of aggressive prostate cancer. We developed a new, rapid animal modeling approach to show that these two genes synergize to promote the development of aggressive prostate cancer when they are both active. Notably, while MYC function is hard to inhibit directly with drugs, PIM1 is an enzyme to which small molecule inhibitors can be more easily generated. We recently showed that a novel small molecule inhibitor of PIM1 that can be taken orally inhibits MYC function and tumorigenesis.

What is the ultimate goal of your research?

Ultimately, our goal is to develop approaches that translate into viable diagnostic tools or therapeutic agents for cancer patients.

How does your research advance medical science and knowledge?

First, our studies seek to elucidate the fundamental mechanisms of disease. Second, the experimental models we develop provide excellent platforms for testing new therapeutic agents in vivo. Finally, our work identifies novel therapeutic targets that can benefit cancer patients.

What types of collaborations are you engaged in across campus and beyond?

I collaborate with colleagues at Northwestern to investigate genetic and biochemical mechanisms of tumorigenesis ([David Gius, MD, PhD](#), and [Debu Chakravarti, PhD](#)) and to develop and test new therapeutic agents ([Frank Giles, MD](#), [Bene Carneiro, MD, MDC](#), and [Praveen Thumbikat, PhD](#)). I am actively involved in the Prostate SPORE (Specialized Program of Research Excellence) program here at Northwestern, collaborating with investigators including [William Catalona, MD](#), Walter Stadler, MD, of the University of Chicago, and Parkash Gill, MD, of the University of Southern California.

How is your research funded?

We are supported by RO1 grants from the National Cancer Institute and funds from the Zell Family Scholarship and the Grayhack Chair in Urological Research.

Where have you recently published papers?

We have published recently in the *Journal of Clinical Investigation*, *Cancer Cell*, the *Journal of the National Cancer Institute*, and *Oncogene*.

What do you enjoy about teaching and mentoring young scientists in the lab?

I enjoy seeing young scientists transition to a level where they can logically and convincingly challenge established concepts.