People in research: Basketball scholarship brought Dr. Chambwe to U.S. for a career in cancer research

Growing up in Zimbabwe, Nyasha Chambwe thought her opportunities in life were limited. But when she landed a full-ride basketball scholarship to Jackson State University in Mississippi, everything changed.

Chambwe started university when she was 20 years old and said she was lucky to have a basketball coach who let her focus on her studies. She knew she wanted to become a doctor.
She’d seen the effects of HIV and other diseases on a regular basis while living in Africa. She also lost her father to cancer when she was only 2 years old.

Her plan changed the summer before her junior year, however, when she shadowed a doctor and realized she couldn’t handle the sadness she felt being in a hospital.

While she really cared about medicine, she found she enjoyed the academic side more. Going into her senior year, she applied to graduate school to get her Ph.D. rather than go to medical school.

“I’ve always wondered how come some people get cancer and some people don’t and why some people get really bad cancer and die really quickly and others don’t,” she said.

She was also always interested in the programming, logistics and analytics side of science as well.

“Computational biology brought all those things together,” she said.

In graduate school, Chambwe’s focus was mainly lymphoma and using data to classify patients into different risk categories.

Then, Dr. Ilya Shmulevich from Dr. Leroy Hood’s Institute for Systems Biology visited her campus in New York. He talked about the work he and the institute were doing on the cancer genome atlas. It stuck with her.

“It was a very impressive presentation and the lab has expertise in big data analysis, data management and machine learning,” she said. “I thought to take the next step in my career, those were things I needed to learn more about.”

She applied for a fellowship position and got it, joining ISB in 2014. She spent the last two years researching preterm birth, using
advanced computational analysis to find what conditions correlate with women who give birth prematurely.

In the next few months she will be switching to a new project where she will collaborate with researchers from the University of Washington to study glioblastoma and leukemia. While she said she liked the opportunity to broaden her research skills and become more well-rounded, she is excited to be moving back to cancer research, which has always been her core focus.

CLOSER LOOK

Nyasha Chambwe

Age: 33

Job: Postdoctoral fellow at the Institute for Systems Biology

Education: Bachelor’s degree in biology from Jackson State University in 2008; Ph.D. in computational biology from Weill Medical College of Cornell University in 2014.

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