

CSBC Investigator Highlight

Portia Thomas Advocates for Black Lives and Uses Systems Biology to Study Cancer in Diverse Patient Populations

Portia Thomas, an M.D./Ph.D. student and CSBC junior investigator at Meharry Medical College, loves working with children. Even though she is busy with medical school and her thesis research, she makes time to mentor and teach young students. Based on this passion, Portia wants to be a pediatric oncologist and research therapies for pediatric brain tumors as a physician-scientist.

In this interview, she discusses her career journey, her current thesis research, and the CSBC Junior Investigator Diversity Statement.



- **Why are you pursuing a career in pediatric oncology?**

I experienced pediatric cancer within my own family. I had a 7-year-old cousin who died from a brain tumor. It was devastating to me at the time because we were very close, and I didn't fully understand everything that was happening.

As I got older, I started to realize that maybe his death could have been prevented if he had received an earlier diagnosis. I want to be able to help families as much as possible, so they don't have to go through that same experience of losing a child to cancer.

- **What advice would you give to the next generation of scientists interested in studying cancer?**

Dive into the field and familiarize yourself with various approaches as soon as you can!

If you're choosing to go into cancer research, you should make it a priority to learn computational techniques.

I think that cancer systems biology is the new way forward and it's going to be integral to new discoveries in the field of cancer research. With systems approaches, we'll start to gain a deeper knowledge of cancer processes that are very complex, like intracellular networks that have baffled us for decades. With the integration of experimental and computational approaches, we're getting closer and closer to finding successful treatments for cancer.

- **Can you describe your CSBC research?**

I am performing research in [Dr. Christine Lovly's lab](#) in the Vanderbilt Center for Cancer Systems Biology through the [Meharry-Vanderbilt Alliance](#).

The work is a collaboration with [Lisa Coussens' lab](#) at Oregon Health and Sciences University. Using a technology that they developed, I plan on studying the tumor immune microenvironment in small-cell lung cancer.

This approach allows us to look at a wider breadth of immune cells than has ever been assessed before in patients' tumors, which is critical to our understanding of why immune checkpoint blockade (a type of immunotherapy) hasn't worked as well in patients who have small-cell lung cancer.

- **How will this research ultimately help cancer patients?**

Even though immunotherapy is being used in the treatment of small-cell lung cancer, we don't really see patients benefiting from it. My lab is trying to check for the presence of immune cells to see if patients have a functional immune system in place for immunotherapy to work.

Reducing health disparities is also a huge goal for me. We plan on assessing the differences that we see in the immune system of black patients who have small-cell lung cancer. We're trying to do some comparison studies to make sure that when we deliver therapies to patients, they can be equally effective in all populations.

- **Could you talk about the [NCI CSBC Junior Investigator \(JI\) Diversity Statement](#), since you took a leadership role in developing this document?**

It was a group effort and every single member of the planning committee contributed to the creation of this statement.

It's something that we wanted to put out there to say that, as a committee, we do value black lives. As a diverse group, I think it was important to us because we ourselves experience discrimination in our everyday lives. It emphasizes that things need to change. It says we're not going to tolerate people being outright bold in their statements of hate, bigotry, racism, or sexism.

It's a commitment to be inclusive of all people and to foster diversity.

- **How can we increase diversity in the cancer research workforce?**

I would like to highlight the importance of Historical Black Colleges and Universities (HBCUs) in the biomedical training of minorities, specifically Black scientists, physicians, and dentists. They play a huge role in bringing minorities into STEM fields and the biomedical research pipeline. Data shows that 25% of Black graduates with STEM degrees come from HBCUs.

Additionally, HBCUs are very inclusive and welcome people of all races, ethnicities, genders, and backgrounds. Their mission is to help individuals enter the workforce pipeline into fields that historically excluded them.

Links

[AACR Minority Scholar Award Profile of Portia Thomas](#)

[Article about Portia Thomas: Diversity Role Model Inspires Career Path](#)

[Discussing Cancer Disparities Video Featuring Portia Thomas](#)

[Vanderbilt Quantitative Systems Biology Center](#)

[Vanderbilt Center for Cancer Systems Biology](#)