

**The 2018 NCI Cancer Systems Biology Consortium and Physical Sciences-Oncology Network  
Junior Investigators Meeting**

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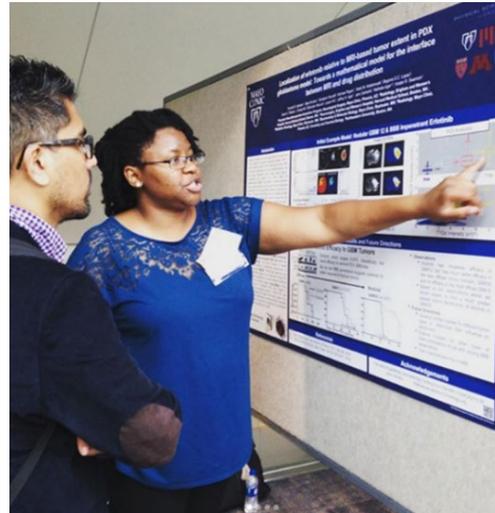
The [Cancer Systems Biology Consortium \(CSBC\)](#) and the [Physical Sciences – Oncology Network \(PS-ON\)](#) are transdisciplinary programs of the National Cancer Institute (NCI) that integrate quantitative approaches, including computational methods and other physical sciences, with cancer biology.

Junior investigators of the CSBC and PS-ON are early stage faculty members, post-doctoral fellows, and late-stage graduate students. These investigators are an integral part of CSBC and PS-ON scientific projects and outreach activities, and both programs actively support the development of this community of researchers. A committee of junior investigators, with support from the NCI, organized the 2018 CSBC/PS-ON Junior Investigator Meeting that was held in Bethesda on September 23-24.

The first day of the conference included presentations on the role of metabolism in cancer progression and treatment resistance, tumor evolution from the cellular level to the macroscale, and the effects of cancer heterogeneity on therapeutic responses. The junior investigators also built collaborations with a speed-networking session and an outdoor scavenger hunt of Maryland and D.C. landmarks.

Scientific talks by the junior investigators on the second day of the meeting focused on understanding cancer treatment responses using mathematical models, identifying molecular markers of cancer cell phenotypes, and determining mechanisms of metastasis. At the afternoon poster session, CSBC and PS-ON graduate students and postdocs shared their research ranging from studies of genetic instability in tumors to the migration of cancer cells throughout the body. Additionally, Dr. Anthony Letai from the Dana-Farber Cancer Institute gave a keynote presentation about his research journey from basic studies of cell death signaling pathways to recent translational work investigating the role of pro-cell death proteins in cancer precision medicine.

Along with these scientific discussions, the conference included discussions about patient advocacy and career development. Bob Riter, a patient advocate with the Cornell University PS-ON Center, described the importance of connecting early-stage researchers with patient advocates and cancer patients. At the end of the day, the junior investigators learned about different career paths by talking



Pamela Jackson, Ph.D., presenting a poster at the CSBC/PS-ON Junior Investigators Meeting (credit: Claire McCarthy)



Participants of the CSBC/PS-ON Junior Investigators Meeting (credit: @NCIsysbio)

with scientists working in industry, academia, government, and science policy.

Overall, the meeting highlighted the integrative research advances of emerging scientists in the CSBC and PS-ON programs and career development opportunities in basic cancer research.

**Footnote:** To join CSBC and PS-ON conversations on Twitter, follow @NCIsysbio and @NCIPhySci, respectively. Also, see what people were saying about the CSBC/PS-ON Junior Investigator's Meeting (#CSBCPSONJI2018) on social media at <http://wke.it/w/s/p0D8u>.