

Learning for Life ladies,

I've never had a science lesson so exciting! I think we all felt the enthusiasm in the room from Dr. Amy Paller and Vicky Kalogera.

Amy introduced us to her lab and collaborations, which are working on using the skin for three key reasons: diagnosis, monitoring and drug delivery. Amy spoke about advancements using 3D cultures to reconstruct skin and then use it as research-test material. That means she's able to discover new treatment approaches to things like wound care in her lab. She also noted that innovations in collection, which can now be done through tape strips, and monitoring, which can happen through skin-like sensors are improving outcomes for patients as young as neonates. Additional monitoring devices are leading to improved health and care in international populations; in UV-light monitoring; in skin conditions, where sensors monitor the motion and sound of scratching; and in the use and efficacy of compression socks.

While Amy is making scientific discoveries at the microscopic level, Vicky spoke about the telescopic level. Vicky shared with us the details of the "once in a century discovery" of which she and her lab were involved, specifically the presence of gravitational waves created when two black holes merged. Vicky spoke so clearly about scale both the tiny and the enormous. They were able to measure 0.2 seconds of the first gravitational waves in a black hole merger that actually happened a billion years ago. Vicky also discussed a finding in which her lab took the lead. That of the merger of two neutron stars, which take longer to spiral and collide, but also result in the production of gold and platinum. Vicky taught us that most of the elements we use aren't made in the Earth but from the recycling of star and planet formation. That's a whole new kind of recycling!

I hope you were as inspired as I was, and that you're planning to join us for dinner next week when we will hear from Vicki Medvec on women and negotiations, and Annelise Riles on problem-solving through online discourse.

Together in learning,
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