

*Please join us for the 2nd annual*

# Yale Day of Instrumentation

January 24, 2020

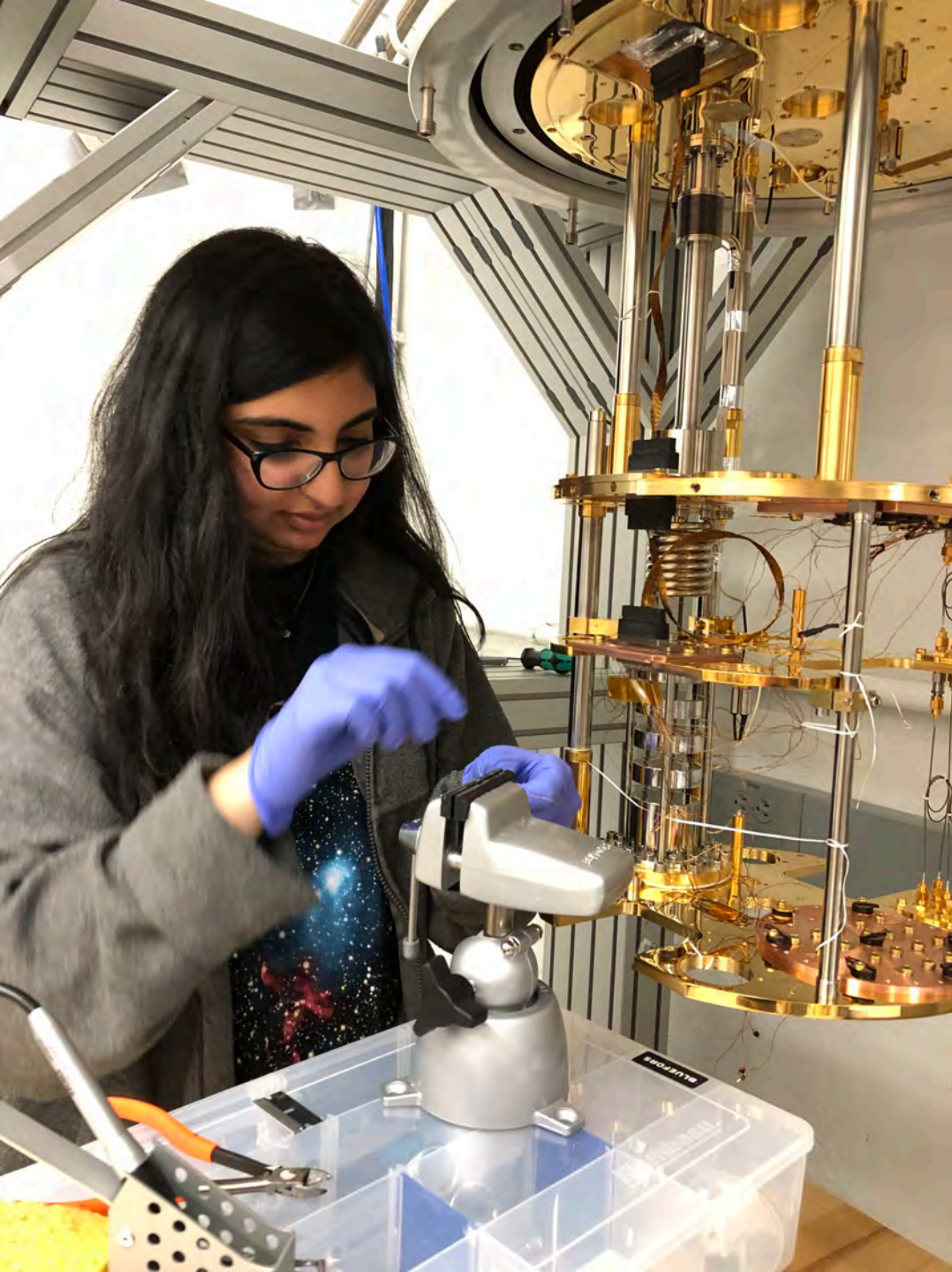
More information and registration at:  
**[instrumentation.yale.edu](https://instrumentation.yale.edu)**

Yale

Submit to our photo and video contests at:  
[instrumentation.yale.edu/contests](https://instrumentation.yale.edu/contests)

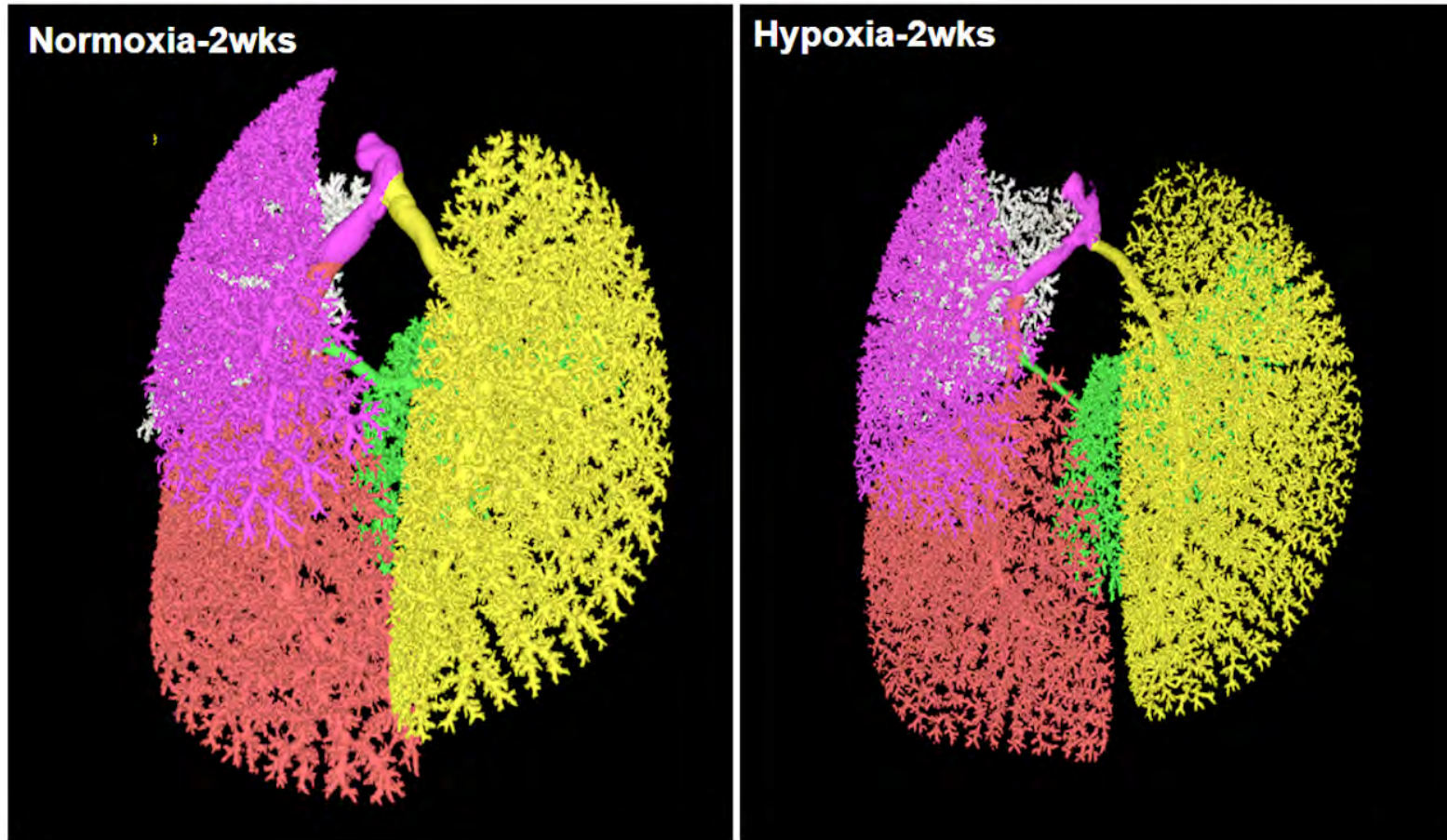
# 2020 Yale Day of Instrumentation Photography Contest





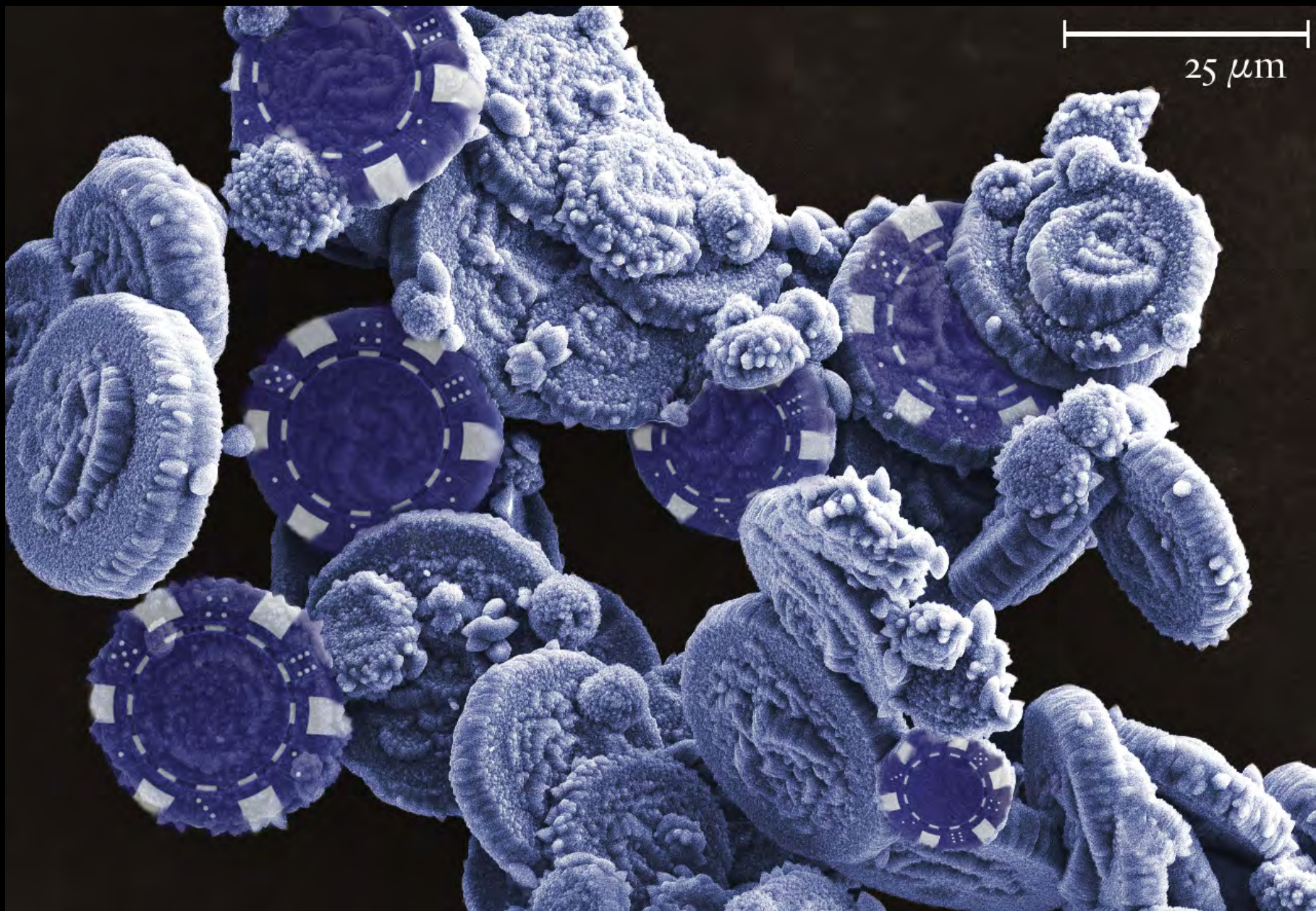
Sanah Bhimani makes some fixes to the Simons Observatory thermometry next to the Newburgh Lab dilution refrigerator. - *Lauren Saunders*

## Hypoxia-induced Pulmonary Arterial Hypertension in Mice



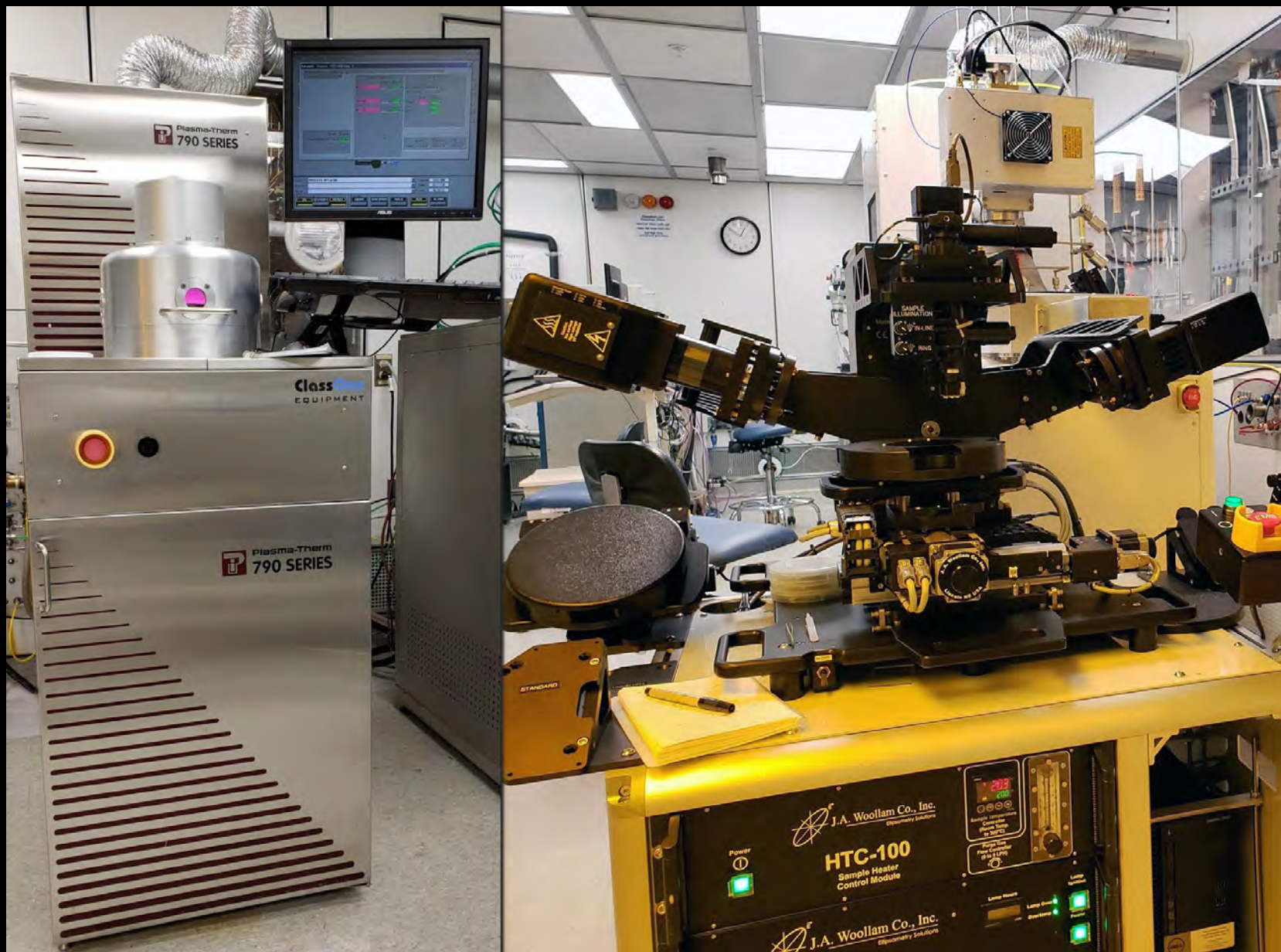
Long-term hypoxia can cause high blood pressure in the lung vasculature. High-resolution microCT pulmonary angiograms showed that both the large pulmonary artery remodeled and the small pulmonary arterioles rarefactional in mice with 2 weeks-hypoxia. - *Zhenwu Zhuang, Peiyu Chen, Edward Manning, Hanqiang Deng, Naftali Kaminski, Michael Simons*





The metal organic framework (MOF)  $\text{Zn}_2(\text{TTFTB})$  looks like poker chips under SEM. - *Sarah Ostresh*





Dielectric films grown via a Plasma-Therm 790 plasma-enhanced chemical vapor deposition (PECVD) system are subsequently characterized with a J. A. Woollam M-2000 Ellipsometer. - Sean Rinehart

m/z: 255.1925

A

m/z: 303.1886

B

m/z: 327.1862

C

m/z: 673.4141

D

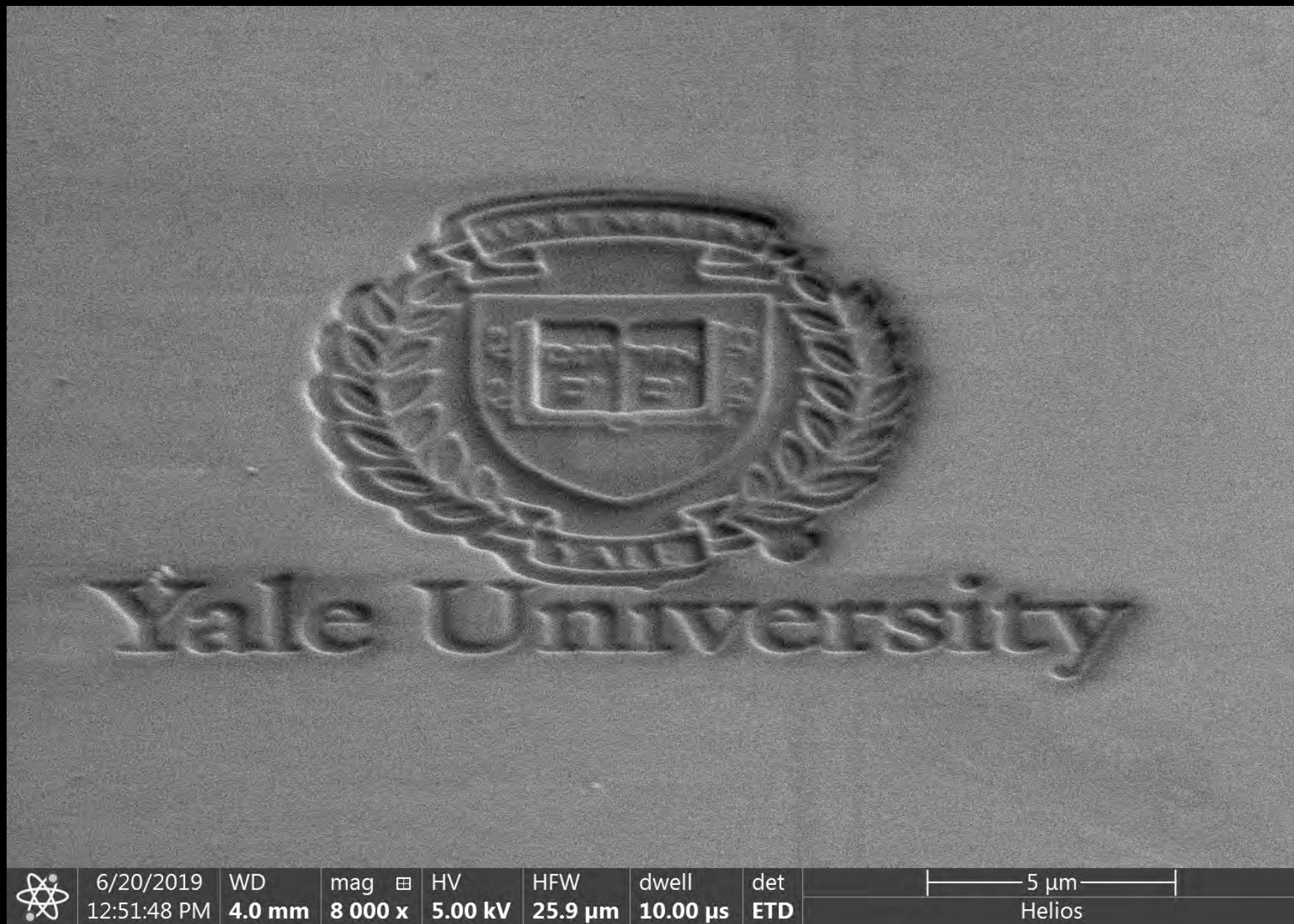
Tissue Imaging Mass Spectrometry with Matrix Assisted Laser Desorption Ionization: High resolution (50 $\mu$ m) images, illustrating the spatial distribution of intermediate (A-C) and higher molecular weight (D) lipids of the brain in an *Aldh16a1*(-/-) mouse. -  
*Georgia Charkoftaki, MPharm, MSc, PhD*





Dilution refrigerator with ruthenium oxide temperature sensors (constructed in Newburgh Lab waiting to be cooled down/calibrated to 100mK. - *Sanah Bhimani*)





Micro-size Yale logo etched on a silicon chip by ion beam. - Lei Wang and Min Li, Yale MCC





Self portrait: Emily, covered in shavings of polyurethane spray foam, after meticulously sculpting a container intended to hold 500L of liquid nitrogen for noise temperature testing. – *Emily Kuhn*





Prof Laura Newburgh and Maile Harris (Pierson '22) calibrate drone system location at Owens Valley Radio Observatory. – *Emily Kuhn*





Prof. Laura Newburgh, Dr. Benjamin Saliwanchik, and Maile Harris (Pierson '22) tune scientific payload of Newburgh Lab Drone, before calibration flights at Owens Valley Radio Observatory.— *Emily Kuhn*





Annie Polish (TD '21) and Kabelo Kesebonye wade through the weeds outside of Wright Lab – *Emily Kuhn*





Evening maintenance of a Deep Synoptic Array dish, which the Yale drone calibration team characterized during recent test flights at Owens Valley Radio Observatory. – *Emily Kuhn*





The Mesa Antenna 1600-ft range at NASA's Jet Propulsion Laboratory overlooks Los Angeles, CA on a quiet October evening. On the mount is an antenna belonging to Prof Laura Newburgh's research group, which will be used for telescope calibration once its own characterization is complete. – *Emily Kuhn*



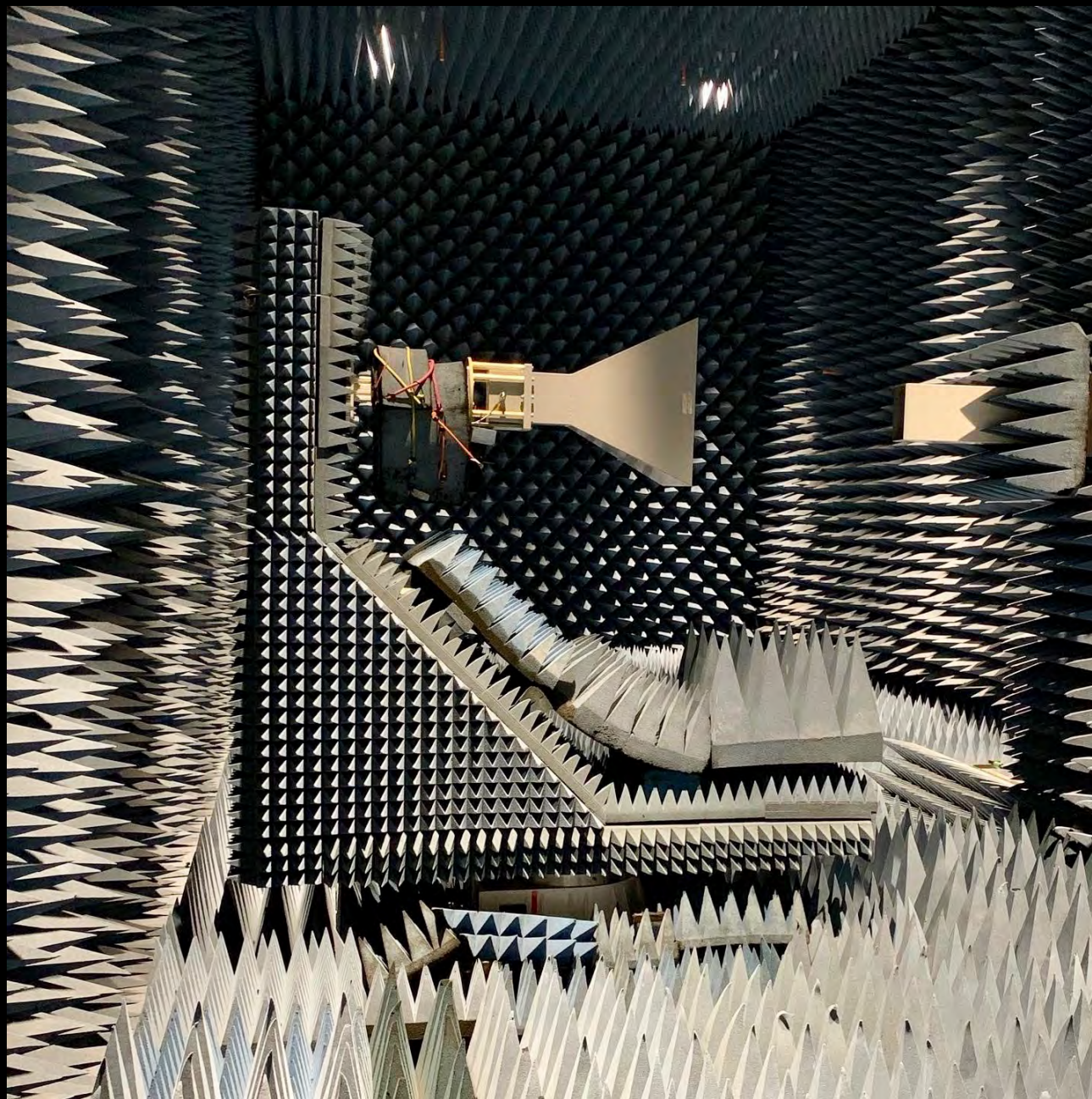
Newburgh drone flight at sunset over Bishop, CA. – *Emily Kuhn*





500 liters of liquid nitrogen, venting off in the Wright Laboratory vault space. – *Emily Kuhn*





Antenna testing facility at NASA JPL. – *Emily Kuhn*





from the canon. - *Anonymous*, YPMB '79





A user with PPE (Personal Protective Equipment) is cleaning the glass slides using Piranha solution at Yale West Campus Cleanroom. - *Zhiliang Bai and Lei Wang*