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UNIVERSITY of WASHINGTON



MOLECULAR ENGINEERING & SCIENCES INSTITUTE

WINTER 2021

## INSTITUTE NEWS



**MoIES appoints Dr. Alshakim Nelson to be new Director of**

## Education

Alshakim Nelson, UW associate professor of chemistry, has been named Molecular Engineering & Sciences Institute (MoIES) Director of Education. Nelson replaces Christine Luscombe, professor of chemistry and materials science & engineering, who served in the role prior to her recent appointment as interim chair of the Materials Science & Engineering Department. Nelson will lead the Molecular Engineering (MoE) Ph.D. Program, an interdisciplinary graduate program housed in the UW Graduate School and administered by the Molecular Engineering & Sciences Institute.



### MoIES 2019-2020 annual report

The MoIES annual report for the 2019-2020 academic year is now available. The report features research highlights, faculty awards, our work to address racism in STEM, graduating students, and letters from the MoIES and MAF directors.



### New MoIES website

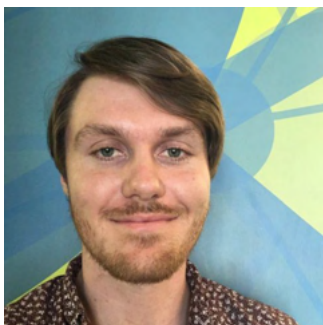
We are excited to present an updated MoIES website to showcase the amazing work and the people that make up our institute!



### Having hard conversations about race and STEM

The Gladstone Institutes, UW MoIES, Georgia Tech, and UT Austin have launched a new series, "Amplified: Race and Reality in STEM" to start a national conversation about race and diversity in STEM fields. [Register for future events here.](#)

## MoE STUDENTS



### [Characterizing microbial communities in the human gut and soil to understand their roles in health, disease, and the environment](#)

Alex Carr is a 3rd year MoE Ph.D. student co-advised by UW affiliated investigators Drs. [Sean Gibbons](#) and [Nitin Baliga](#) at the Institute for Systems Biology. We recently spoke with Carr about his research and his experience in the MoE Ph.D. program.



### [Tale of Two PhDs](#)

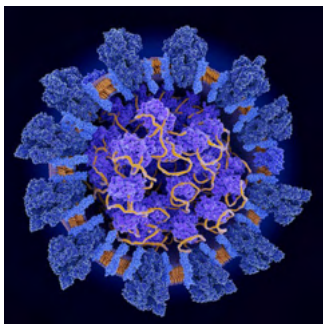
MoE Ph.D. students [Ayumi Pottenger](#) and [Phuong Nguyen](#) have created a new blog to share their journey navigating graduate school as women, first-generation students and friends. They post about everything from choosing a lab to racism in science and academia.

## RESEARCH HIGHLIGHTS



### [How to build a network of pharmaceutical biofactories](#)

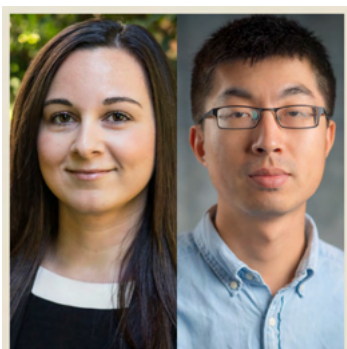
MoES faculty members Lilo Pozzo, Alshakim Nelson, and James Carothers received NSF funding to develop the technology and prototype modules for distributed chemical manufacturing. Advances in synthetic biology and biomaterials open up exciting prospects for distributed manufacturing of drugs, food products, and other commodities.



### Lab-made 'miniproteins' could block the coronavirus from infecting cells

Researchers from the Institute of Protein Design, including MoIE Ph.D. student Brian Coventry published an article in *Science* that was covered by [Scientific American](#) on producing a better Covid-19 therapy using synthetic peptides.

## CONGRATULATIONS



### Ellie Roumeli & Shuai Zhang receive UW's Royal Research Award

The Royal Research Award supports faculty, particularly in disciplines for which external funding opportunities are minimal; for faculty who are junior in rank; and in cases where funding may provide unique opportunities to increase applicants' competitiveness for subsequent funding.



### James Carothers and Jessica Ray listed among 1,000 inspiring black scientists

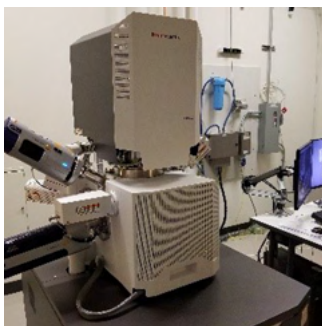
Among seven faculty and post-docs at UW, MoIES member faculty James Carothers and Jessica Ray were recognized among the 1,000 Inspiring Black Scientists in America!



### Biotech startup AltPep raises 23.1M in series A funding round

MoIES member faculty Valerie Daggett and recent MoIE PhD grad Dylan Shea, who was hired as the Principal Scientist for AltPep, helped drive a successful Series A funding round that will help their biotech startup tackle Alzheimer's and related diseases.

## MOLECULAR ANALYSIS FACILITY



### **Tool highlight: Apreo SEM now with EBSD+EDS**

The Apreo is now equipped with Electron Backscatter Diffraction and Energy Dispersive Spectroscopy (EBSD+EDS) from Oxford Instruments. This combination of detectors will enable you to acquire a wealth of microstructural information from your materials fast!

## UPCOMING EVENTS

**April 6, 1:00 – 2:00 PM PST | Science of Covid-19 Seminar**

***Lessons learned from university-wide COVID-19 testing program***

Helen Chu - Associate Professor, Medicine – Allergy and Infectious Disease, *University of Washington*

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