

2018 NSE Grantees Conference

Susan Daniel

Bionote

Susan Daniel is an Associate Professor and the Director of Graduate Studies at the Robert Frederick Smith School of Chemical and Biomolecular Engineering at Cornell University. She leads a biotechnology research group that pioneered the use of “biomembrane chips” to conduct cell-free studies examining the interactions between biological “pathogenic” nanoparticles, including viruses, bacterial outer membrane vesicles, and oncogenic extracellular vesicles, with cell membrane surfaces. This work has elucidated how these interactions lead to specific biological outcomes like virus infection and disease, biofilm development, and new tissue growth. Her group’s most recent work leverages biomembrane chips for synthetic cellular biomanufacturing in “organelles-on-a-chip” to produce therapeutic biomolecules. Susan believes that access to education for all people is necessary to cultivate the creativity required to pursue this research and is committed to the promotion of inclusive and empowering environments in all aspects of education, but especially the STEM fields.

Susan’s work has garnered a number of recognitions for both her scientific and educational advocacy work. She is the recipient of a National Science Foundation CAREER award in 2011, the Denice Denton Emerging Leader Award in 2012, the Schwartz Life Sciences award in 2016, and in 2017, she was honored with the College of Engineering’s Research Excellence Award.

Susan’s commitment to increasing access to education for all students has been honored with the Zellman Warhaft Commitment to Diversity Award in 2014, the Alice H. Cook award in 2015, and selected to the shortlist of the 2016 international GEDC Airbus Diversity Award for her outreach program for 10th grade girls and their families from rural upstate communities, called WOMEN. She has been the faculty advisor for the Chemical and Biomolecular Engineering Graduate Women’s Group (CBE Women) since 2008, which serves to provide professional development and leadership opportunities to graduate students to complement their technical graduate education.

Susan holds a BS, MS and PhD from Lehigh University.