

Faculty Name:

Santiago Correa

Faculty Email:

sc5159@columbia.edu

Lab:

Nanoscale Immunoengineering Lab

Project Title:

Engineering liposome-based hydrogels

Description:

The student will develop and characterize a library of polymer-nanoparticle hydrogels with different nanoparticles using techniques as described by Dr. Correa's research (<https://onlinelibrary.wiley.com/doi/full/10.1002/adv.202103677>) beginning with liposomes, lipid nanoparticles, polystyrene nanoparticles, and gold nanoparticles. To make liposomes, a student will use both a microfluidic automatic nanoparticle system and rotary evaporator thin film rehydration, and hydrogels will be syringe-mixed and rheometrically characterized with our rheometer. Techniques include thin film evaporation, liposome extrusion, confocal microscopy, rheometric characterization, work with microfluidics, and basic lab techniques.

Location of Research:

On Site

of hrs/week:

35

Department/Program:

Biomedical Engineering

Eligibility:

BS, First Year, BS, Second Year, BS, Third Year

To apply, please contact:

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