Virtual Research Experience for Undergraduates in Modeling and Computation for Discovery of Molecular Probes for SARS-CoV-2 Proteins

HQ: Northeastern University, Boston MA

June 8 – August 14, 2020

Summer research opportunity funded by NSF DBI-2031778

Principal Investigators:
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The primary focus is for the students to learn about and use computational techniques that will be applied to urgent research questions surrounding the functions and control mechanisms of the SARS-CoV-2 (the virus that causes COVID-19) proteins. Each student will be trained in some of the following skills: molecular modeling, ligand docking, molecular dynamics simulations, biomolecular electrostatics, and quantum mechanical electronic structure calculations. Students will analyze SARS-CoV-2 proteins and screen libraries of small molecules that can bind to and control these proteins.

Benefits:
1. Participate in research for 10 weeks
2. Learn computational techniques
3. Contribute to the solution of important problems facing the world
4. Work full-time from home on your computer
5. Career development workshops and networking events
6. $7000 stipend for 10 weeks
7. Assistance with hardware and connectivity, if needed
8. Opportunity to present your work at a national conference at a later time

Eligibility:
1. Undergraduate in good standing at an accredited college or university
2. Majoring in chemistry, biochemistry, bioengineering, biology, physics, computer science or other field related to the topic
3. United States citizen or permanent resident
4. Available to work full-time June 8 – August 14

Preference will be given to:
1. Students who were accepted to another 2020 REU that was cancelled because of the pandemic
2. Rising seniors for whom Summer 2020 is your last opportunity to join an REU

To apply: send your completed application document with your college transcript and arrange for two letters of reference to: NUvREU2020@gmail.com