Electrical Communication and Energy Transfer in Natural and Engineered Biofilms

The Glaven group at the Naval Research Laboratory (NRL) in Washington, DC, is seeking postdoctoral candidates with expertise in the areas of molecular genetics, microbiology and computational biology that are experienced or interested in working on environmentally relevant organisms. Our group uses a combination of microbiology, molecular genetics, and electrochemistry to understand the extracellular electron transfer (EET) pathways and long range electrical conduction in bacteria and microbial biofilms. Through this understanding we are developing microbial synthesis of chemicals and materials, engineered electrical communication with non-living devices, and new environmental sensors. Current research opportunities include developing Marinobacter as a synthetic biology chassis, engineering natural microbial communities, and understanding ionic conduction in bacterial biofilms.

References

