FULLY PAID ALGAL BIOFUELS RESEARCH INTERNSHIP
AT PACIFIC NORTHWEST NATIONAL LABORATORY

Internship Research Projects
The overall project objective is to utilize microalgae for biofuels production. The student will set up a series of photobioreactors for the cultivation of marine microalgae. This will involve preparing sterile medium using the autoclave, inoculating the flask and photobioreactor cultures, and monitoring the biomass concentration, measured as optical density using a spectrophotometer and as dry weight using an oven and balance, as a function of time. Throughout the experiment, the light intensity, pH, nitrate concentration, and temperature of the cultures will be monitored. We may also carry out culture experiments in small LED-lighted and temperature-controlled pilot-scale ponds (1000 liters each) located next to Sequim Bay, Washington, for clean seawater access. Additional potential internship projects include cultivation of seaweed for biofuels and proteins, biomass growth modeling, and extraction of algal biomass for antiviral activity testing.

Location and Duration
The position is located at the PNNL Marine and Coastal Research Laboratory in Sequim, WA (see photo). More information, including a 3 minutes video, is available at: https://www.pnnl.gov/marine-and-coastal-research-laboratory. The spring internship begins in January 2022 and lasts 16 weeks.

Required Qualifications
The applicant must be a junior, senior or recent graduate (BS/BA within 1 year) with a background in microbiology, chemistry, biochemistry, or biochemical/chemical engineering. The applicant must have basic laboratory skills and must have successfully completed laboratory course work. Additional training will be provided during the internship. US citizenship or Permanent Resident status is required. Depending on funding availability and performance, interns who are recent graduates (BS/BA) may have the option to continue as post-baccalaureate research associates, a two-year limited term position.

Contact Information
For more information on different internship options, stipends, housing allowance, and travel reimbursement, please contact Dr. Michael Huesemann (michael.huesemann@pnnl.gov, 360-681-3618) prior to August 1, 2021.