

IEH Undergraduate Intern Mentoring Opportunity

Deadline: **February 22, 2013**

Selections Announced: **mid-March, 2013**

Name/Title/Institution(s) of senior mentor(s): Tawnya D. Peterson

Name/Title/Institution(s) of frontline mentor(s): Michelle A. Maier

Project Title: Food web dynamics in the Columbia River

Context for Project:

Spring diatom blooms in the lower Columbia River are often highly parasitized by fungi known as 'chytrids.' Upon infection, chytrid parasites extract organic carbon from diatom hosts and release the material as small particles rich in polyunsaturated fats and sterols. These small particles, known as zoospores, are more easily consumed than host diatoms and may effectively increase the availability of organic carbon from the base of the food web to higher trophic levels.

Proposed Outcomes/Broader Impact:

This project will focus on elucidating the role that chytrid zoospores play in the Columbia River aquatic food web by evaluating the growth and nutritional value of rotifers, a key food source of fish fry, when grown on a diet of chytrids and diatoms.

Proposed timeline (within a 10 week span):

1st 5 weeks: Background reading on rotifers & summary, media preparation for rotifers and phytoplankton, set up culturing vessels & propagate rotifers, rotifer grazing experiments, midterm report.

2nd 5 weeks: Continue rotifer grazing experiments & evaluation of outcome measures, final report and presentation.