

## Work Study Job Description

<b>Job Title:</b>	Azadinium Laboratory Intern
<b>Department:</b>	Washington Sea Grant
<b>Location:</b>	NOAA - Northwest Fisheries Science Center - Montlake
<b>Pay Rate:</b>	15.45 - 20 / hour
<b>Employment Period:</b>	Academic year, Summer
<b>Hours Per Week:</b>	Up to 40 hours per week (Summer)
<b>Contact Supervisor:</b>	Teri King
<b>Phone Number:</b>	360.432.3054
<b>Email Address:</b>	wsgcanal@uw.edu
<b>Website:</b>	wsg.washington.edu
<b>Box Number:</b>	355060

### NATURE OF ORGANIZATION

The scientists of the Northwest Fisheries Science Center conduct leading-edge research and analyses that provide the foundation for management decisions to protect, recover, restore, and sustain ecosystems and living marine resources in the Pacific Northwest. The NWFSC's mission is to conduct the science necessary to conserve marine and anadromous species and their habitats off the Washington, Oregon, and northern California coasts and in freshwater rivers of Washington, Oregon, and Idaho. Our research provides reliable, relevant, and credible information to help decision-makers and natural resource managers build sustainable fisheries, recover endangered and threatened species, maintain healthy ecosystems, and protect human health. The Center is also dedicated to enhancing public awareness, education, and stewardship of our marine resources.

### DUTIES AND RESPONSIBILITIES

1. To prepare SPATT disks for field deployment. 2. To prepare and ship sampling kits. 3. To filter water samples, extract DNA, and perform qPCR. 4. To conduct extractions of SPATT disks. 5. To processing of tissue sampling for analysis. 6. To prepare shellfish and seawater sample for AZA analysis using liquid chromatography tandem mass spectroscopy per existing protocols.

### MINIMUM QUALIFICATIONS

1. Work study student 2. At least 1 year lab experience using pipettors, making solutions, calculation molarities, 3. Experience with molecular biology techniques 4. Works well with an integrative lab team but can also work well independently 5. Good time management and writing skills 6. Computer savvy, experience with Microsoft Word and Excel is preferred 7. Good with troubleshooting

### EDUCATIONAL BENEFITS

Recent undiagnosed illnesses reported to the Washington State Department of Health following ingestion of shellfish has resulted in increasing concerns that new toxins from yet uncharacterized harmful algal species may

be a risk to human health in Puget Sound. The use of molecular probes in the summer of 2014 allowed the detection of three species of a small flagellate, Azadinium, which can produce potent toxins called azaspiracids, a suite of polycyclic ether toxins. The first incidence of azaspiracid shellfish poisoning in Ireland in 1995, resulted in the regulation of this toxin in the European Union. However, azaspiracids (AZAs), although detected in Puget Sound shellfish at levels below the EU regulatory guidance values, are not yet regulated in the USA. The goals of this project are to characterize the risk of AZAs in Puget Sound to human health through a collaborative project between the Northwest Fisheries Science Center and the University of Washington, Tacoma. The specific objectives are to: 1. Use solid-phase absorption tracking devices (SPATT) deployed at field sites to characterize the suite of AZAs in seawater 2. Using this information from SPATT, to measure AZAs in shellfish at high-risk sites Expected outcomes 1. Knowledge of the distribution, concentration and speciation of AZAs in Puget Sound 2. Experience utilizing advanced analytical instrumentation 3. Ideally, the student will be a co-author on a scientific publication resulting from this study.

### HOW TO APPLY

Email your resume and cover letter to [wsgcanal@uw.edu](mailto:wsgcanal@uw.edu). No phone calls please.

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Job Number: WSGR02 | Category: Science & Health | Program: Federal | Class: 0875 | 51% Comparable to Classified: Y