Title: Research Assistant II
Department: Environmental Studies
Reports to: Professors Anne Kapuscinski and Pallab Sarker
Salary Range: $32,000-$38,000 Commensurate with Experience

Position Purpose

1. Assist with research of Kapuscinski Lab on integrated food-energy systems, primarily project led by Research Assistant Professor Sarker and Prof. Kapuscinski to develop sustainable aquaculture diets via microalgae replacing fish oil and fishmeal ingredients.

2. Maintain smooth operations of new aquaculture research facility (3 miles north of campus at Dartmouth Organic Farm), including multiple recirculating aquaculture systems, life support systems, biosecurity, and alarm systems.

3. Conduct fish husbandry, biofilters management, water chemistry measurements, supplies ordering, and related tasks.

4. Conduct aquafeeds research tasks including making experimental diets, conducting feeding experiments with fish, certain chemical analyses of feeds and biological tissues, preparation of samples for more complex analyses, and data collection and management.

5. Coordinate research team work-flow including for experiments, compliance with animal care protocols, training and coordination of student research assistants, literature searches and may help with preparation of grant proposals and journal manuscripts.

Review of applications will begin on April 30, 2016.

Key Accountabilities

- Conduct feed digestibility and growth experiments in recirculating aquaculture systems (RAS) laboratory at the Dartmouth Organic Farm; and lab-bench aquafeeds preparation and sample chemical analyses on campus.
- Responsible for: daily fish care, and management of RAS, especially biofilters, to provide optimal conditions for research animals; safe and orderly management of lab bench research on campus; ordering and maintaining inventories of research equipment, chemicals, preparing solutions and reagents, feed, and other supplies.
- Take active role in: maintaining protocols for fish care (including reporting to Dartmouth’s Institutional Animal Care and Use Committee); developing and conducting standard operating procedures for maintenance of and experiments in the RAS lab and campus lab-bench; collecting data, managing databases and basic statistical analyses; training and coordination of student research assistants.
• Conduct proximate analysis methods for experimental diets and biological samples including dry weight, ash weight, and gross energy (bomb calorimetry).
• Prepare samples for more complex analyses of crude protein, phosphorus and other minerals, amino acids, lipids and fatty acids (done by other chemists).
• Help establish and then learn to conduct protocols for certain antinutrient analyses of microalgae ingredients.
• Help with occasional side experiments such as in-vitro digestion studies.
• Prepare data graphics and other visuals for presentations and manuscripts.
• Periodically assist with literature searches and preparation of manuscripts and proposals.
• Coordinate research team work-flow such as team meetings, experimental planning and schedules, and work of student research assistants.
• Communicate regularly with students, faculty, staff, suppliers, and other parties.
• Keep the Kapuscinski lab website updated.
• Must have means to commute to Dartmouth Organic Farm daily (3 miles from campus).
• Must be able to manage multiple projects/priorities and perform miscellaneous job-related duties as assigned.

Skills and Knowledge

• Strong organizational and time management skills and able to work independently.
• Eager to do physically demanding labor in an aquaculture setting.
• Solid experience with fish husbandry, preferably for tilapia and in recirculating aquaculture systems.
• Knowledge of and experience with water chemistry testing and management in aquaculture systems.
• Sufficient knowledge and experience with inorganic chemistry methods to readily learn to conduct proximate analyses, prepare samples for more complex nutrient analyses, and conduct certain anti-nutrient analyses.
• Familiarity with running fish culture experiments, preferably studies measuring growth and related parameters.
• Familiarity working with hand tools and basic computer skills to maintain water piping systems, aeration supply, UV water filters, computerized alarm systems, and other RAS components.
• Eager to do physically demanding labor in an aquaculture setting.
• Willing to feed fish on weekend day and holidays.
• Must have means to commute to Dartmouth Organic Farm (3 miles from campus).
• Strong, professional communication skills.

Minimum Experience

• Scientific knowledge of and hands-on experience with fish culture, preferably of tilapia and in recirculating aquaculture systems.
• Experience with basic inorganic chemistry and water chemistry techniques. Has worked with hand tools and basic computer software to maintain aquaculture systems.
Minimum Education

- Bachelor’s degree in relevant field with post-bac aquaculture work experience or Master’s degree that included research experience in relevant area.
- Course work or other educational training relevant to recirculating aquaculture systems, fish husbandry, inorganic chemistry and water quality.
- Preferred to have educational training or equivalent experience in sustainable aquaculture and/or fish nutrition.

Application Procedure

Review of applications will begin on April 30, 2016

Address cover letter to Dr. Anne Kapuscinski.

Required documents: resume, cover letter, names, title and organization, email addresses and phone numbers of three references

This position is a 19-month term position through December 31, 2017 with anticipated continuation thereafter contingent on funding and quality of performance.

Employment in this position is contingent upon consent to and successful completion of a pre-employment background check, which may include a criminal background check, reference checks, verification of work history, and verification of any required academic credentials, licenses, and/or certifications, with results acceptable to Dartmouth College. A criminal conviction will not automatically disqualify an applicant from employment. Background check information will be used in a confidential, non-discriminatory manner consistent with state and federal law.