

Postdoctoral Research Associate - Microbiota-host  
immune interactions  
University of Massachusetts, Lowell

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Posted Apr. 7, 2020, set to expire Aug. 7, 2020

<b>Job Title</b>	Postdoctoral Research Associate - Microbiota-host immune interactions
<b>Department</b>	Biological Sciences <a href="https://www.uml.edu/sciences/biology/">https://www.uml.edu/sciences/biology/</a>
<b>Institution</b>	University of Massachusetts, Lowell Lowell, Massachusetts
<b>Date Posted</b>	Apr. 7, 2020
<b>Application Deadline</b>	Open until filled
<b>Position Start Date</b>	Available immediately
<b>Job Categories</b>	Post-Doc
<b>Academic Field(s)</b>	Biology - Microbiology
<b>Apply Online Here</b>	<a href="https://explorejobs.uml.edu/lowell/en-us/job/505320/postdoctoral-research-associate-microbiotahost-immune-interactions">https://explorejobs.uml.edu/lowell/en-us/job/505320/postdoctoral-research-associate-microbiotahost-immune-interactions</a>

**Apply By Email**

**Job Description**

Job no: 505320

Position type: Staff Full Time

Benefit Status: Benefited-Union

Campus: UMass Lowell

Department: Biological Sciences

Salary: Salary commensurate with experience and grant

Applications Open: Apr 03 2020

Applications Close:

General Summary of Position:

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A postdoctoral researcher position is available in Dr. Natalie Steinel research group in the Department of Biological Sciences at the University of Massachusetts Lowell.

Thanks to funding from the Gordon and Betty Moore Foundation's Symbiosis in Aquatic Systems Initiative (9323), the Steinel lab is embarking on a collaboration with Dr. Daniel Bolnick at the University of Connecticut (lead for project), Dr. Rebecca Carrier and Dr. Sam Scarpino at Northeastern University, and Dr. Katherine Milligan-Myhre at the University of Alaska Anchorage. We will develop a microfluidics gut-on-a-chip system to enable mechanistic study of the interactions between a small fish, threespine stickleback (*Gasterosteus aculeatus*), and its native gut microbiota. The postdoc will work primarily in the Steinel Lab at UML but will frequently collaborate with and visit the other research groups on the team, and work closely with Dr. Carrier at Northeastern University and a second postdoc based at the University of Connecticut. The postdoc will work on developing tools to assess immune activation and gut cell function in the microfluidic gut-on-a-chip system developed in the Carrier Lab. These cells will be isolated and genetically manipulated (from the Bolnick lab), observed during interaction with sticklebacks' gut microbiota (from the Milligan-Myhre lab), and assayed for cell activity using methods developed with the Steinel Lab, and statistical approaches developed in the Scarpino Lab. The postdoc's tasks will include the development, validation, and application of in vitro phenotyping assays, cell culture, manuscript preparation, presentations at scientific conferences, and some limited animal care.

For questions about this position, please email Dr. Steinel. For information about the Steinel Lab visit the lab website and Dr. Steinel's Google Scholar page.

1. Working on Research Projects: This will be done alongside and under the supervision of the Principal Investigator. This project will develop, validate, and apply of in vitro phenotyping assays in our stickleback gut-on-a-chip system.

This project will specifically involve developing assays and conducting data-collection and analysis activities:

Development and testing of immunofluorescent, RNA-FISH, or other methods to detect immune activation and/or modulation of gut epithelia in live cells in our gut-on-a-chip

Organized and methodical data collection and analysis

Ensuring all project-related activities are conducted on time and to the highest standard.

Prepare monthly status reports and deliverables in collaboration with the project's staff and under the direction of the Principal Investigators.

Serve as a liaison between the lab and collaborating research partners

Ensuring all deliverables are delivered on time and to the highest standard.

Attend national and international meetings and present data.

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Preparing and submitting manuscripts

The candidate must work collaboratively with other lab members and may oversee junior lab staff (graduate/undergraduate students and technicians).

While the majority of the research will take place in the lab at UML, the research associate will be required to travel to collaborator sites (Northeastern University and the University of Connecticut) for the development and execution of this project.

2. Take a lead role in developing future research: The Postdoctoral Research Associate will be involved in identifying and developing new research and applying for and securing new funding. This will involve:

Identifying relevant funding agencies, and sourcing relevant calls for research

Developing research ideas and proposing suitable methodologies and data analysis techniques.

Where relevant, identifying potential collaborators.

Writing and submitting grant and fellowship applications.

3. Undertake activities to develop your own research: The Postdoctoral Research Associate will be expected to dedicate time to their own research and writing activity. It is expected that these activities will support and be in accord with the wider mission of the lab. Example activities include:

Writing briefs and research publications

Attending conferences and presenting results of research findings

Developing and engaging in discussions of future directions of research

All of the above activities will be done alongside and under the supervision of the Principal Investigator.

Minimum Qualifications (Required):

Candidates must have a PhD or equivalent by the time of the appointment. Ideal candidates will have strong training in immunology or a closely related field with preference going to candidates with experience in mucosal immunology and/or host-microbiome interactions.

Postdoctoral experience: 0-3 years

A record of publication

Demonstrated commitment to basic/translational research

Experience with collaborative interdisciplinary research

Knowledge of the principles and techniques of the subject discipline

Knowledge of modern research methods, data collection, and analyses

Additional Considerations:

Experience in one or more of the following is desired: mucosal immunity, gut microbiome, host-microbiome interactions, fish model systems, cellular and molecular immunology, cell culture,



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immunofluorescence microscopy, RNA-FISH, confocal and epifluorescence microscopy, flow cytometry, and/or R programming language.

Special Instructions for Applicants:

Only current UML Employees within the Grants & Contracts (MTA/GRACE) bargaining unit will be considered during the first 10 business days of the posting. All other candidates considered after that period.

Initial review of applications will begin immediately and continue until the position is filled. However, the position may close when an adequate number of qualified applications are received.

This position is contingent upon funding. The initial appointment will be for one year with a possibility of renewal up to 2.5 years, contingent upon funding and successful performance.

Please include a resume and cover letter with your application. Names and contact information of three references will be required during the application process.

### **EEO/AA Policy**

The University of Massachusetts Lowell is committed to increasing diversity in its faculty, staff, and student populations, as well as curriculum and support programs, while promoting an inclusive environment. We seek candidates who can contribute to that goal and encourage you to apply and to identify your strengths in this area.

The University of Massachusetts Lowell is an Equal Opportunity/Affirmative Action, Title IX employer. All qualified applicants will receive consideration for employment without regard to race, sex, color, religion, national origin, ancestry, age over 40, protected veteran status, disability, sexual orientation, gender identity/expression, marital status, or other protected class.

### **Contact Information**

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

### **Contact**



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