Graduate Spotlight – Lory Henderson

As a part of last month’s Graduate Spotlight series, we continue to explore the life and work of our current Microbiology Students. This month we had the pleasure of talking to 2nd year graduate student, Lory Henderson. Lory currently works in the Martin Wiedmann Lab at Stocking Hall and was happy to talk to us about her research.

**What kind of research is done in the Wiedmann Lab?**

There are two major areas of study in our Lab, both of which are centered around food-borne pathogens. The first is the “MilK Quality Improvement Program” (MQIP). This is an applied field of study and is mostly dedicated to the improved/safe production of dairy products. However, I work in the second area of study, the “Food Safety Lab” (FSL), which is oriented towards basic research.

**What is the focus of your research?**

My work focuses on better defining the mechanisms of virulence in Listeria monocytogenes. This pathogen is the third highest cause of deaths related to food-borne illnesses in the country, which is mostly passed on through contaminated food products. This highlights the importance of better understanding how this organism acts in the host.

**Can you tell us a bit more about these mechanisms of virulence and how this relates to your research?**

L. monocytogenes, much like Bacillus subtilis, has a SigB regulon, which encodes genes that are part of the general stress response. Additionally, L. monocytogenes also has PrfA, a protein that regulates a set of genes involved in virulence. We think that there is some overlap between these two gene sets. I’m currently working on detecting global gene expression patterns with RNAseq to further understand how these two regulons are connected.

**Are you currently working on other projects?**

Yes, a secondary project of mine is to see which physiologically relevant conditions, such as salt concentration and pH, help inhibit L. monocytogenes growth.

**Why did you decide to work with pathogens?**

Pathogens have always intrigued me. In the future I would like to work for the Centers for Disease Control and Prevention (CDC), so I think the Wiedmann Lab is a great starting point for me.

**What do you like to do in your free time?**

Normally I go to the gym and, if the weather allows it, hiking. I also enjoy going on bike rides with Kalia Bistolas (from the Hewson Lab).

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**News Highlights**

**1. Coffee Hour @ Wing Hall**

On March 26th, FoMS organized its Spring Coffee Hour at Wing 406.

**2. Congratulations to Dr. Pete Chandransu!**

On Sunday, March 20th, the Chandransu family welcomed their newest family member, baby girl Meredith Chandransu.

**3. Dr. Tony Hendry – Postdoc Candidate Seminars**

On March 15th, Dr. Hendry invited Dr. Jason Wulff (from Texas A&M) to give a postdoc-candidate seminar about his bioinformatics-focused research of plant-insect interactions.

**4. Dr. Kevin Griffith @ Riley Robb**

On March 22nd, Dr. Griffith (from UMass Amherst) was invited by the Microbiology Department to give a talk about his current research on the complex mechanisms of quorum sensing in Bacillus subtilis as part of the Microbiology Seminar Series.

**Upcoming Events**

- **April 28th**
  - Content for next issue due

- **April 29th**
  - Coffee Hour

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**Latest Publications**

- **Helmann Lab**
  - Pi et al. 2016 – The *Listeria monocytogenes* Fur-regulated virulence protein FrvA is an Fe(II) efflux $P_{ac}$-type ATPase (Molecular Microbiology)

- **Hewson Lab**
  - Gudenaufk & Hewson, 2016 – Comparative metagenomics of viral assemblages inhabiting four phyla of marine invertebrates (Frontiers in Marine Science)

**Significant Milestones!**

- **Dr. Annie Otwell**
  - On March 4th, Annie defended her PhD thesis making her an official PhD Graduand!

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**Upcoming News**

- **FoMS workshop**
  - FoMS is in the process of organizing a bioinformatics workshop later in the semester. We have already received your feedback from the surveys we sent out and are currently working to organize a series of workshops to help accommodate people’s requests. We will keep you posted so stay tuned!

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**More pics & updates on Facebook**

- **Field of Microbiology Students**

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