Internship at PNNL

Poonam Phalak
PhD candidate-Henson Lab
UMass-Amherst
Host: Hyun Seob Song
Richland, Washington
Research Background

• Biofilms-Highly complex system

• Huge treatment cost

• High antibiotic tolerance

• Need better understanding in order to devise effective treatments
Why PNNL

• Research interest overlap

• Experience working in an industrial environment and academic institution

• Help to develop a 360 view of Education-Research-Implementation

• Get me in touch with brilliant minds across the globe

• Warm weather!
What has struck you most

• Interns are well received

• Employee-intern interactions

• Dedicated networking events for interns

• Professional grooming sessions
Expectations vs Reality

**Expectations**

- Interactions with subject matter experts
- Open to receive ideas
- Planned to learn new techniques relevant to my research
- Ample availability of resources

**Reality**

- Mentor was highly knowledgeable & personable
- Ideas were well received and encouraged
- Organization did provide avenues to learn new techniques
- Did not have computationally powerful devices
Takeaways

• Learnt new data fitting techniques, core metabolic model development, etc.
• Understanding of working in a national lab
• Good work life balance
• Developed a good professional network panning across the globe
Acknowledgments

- Prof. Michael A. Henson
- Prof. Jeanne Hardy
- Prof. Barbara A. Osborne
- Dr. Hyun Seob Song (PNNL)
- Collaborators
  - Jose Gomez and Prof. Paul Barton (MIT, biofilm modeling)
  - Prof. Ross Carlson (Montana State U., chronic wounds)
  - Prof. George O’Toole (Dartmouth, cystic fibrosis)
- Funding
  - National Institutes of Health (chronic wound biofilms)
  - National Science Foundation (biofilm modeling)
  - Army Research Office (biofilm modeling)
  - UMass-BTP

Questions?