Jason M. Lajoie

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Education

University of Wisconsin Madison ***Expected: December 2015***

- 4th year Graduate student
- Pursuing PhD in Chemical and Biological Engineering (CBE)

University of Massachusetts Amherst ***Graduated: February 2010***

- Bachelors of Science in Chemical Engineering
- GPA: 3.95/4.00

Academic Research Experience

Shusta Research Group – Professor Eric Shusta: UW Madison ***October 2010 - Present***

Graduate Student

- Employ yeast surface display for the selection and characterization of antibodies that bind blood-brain barrier membrane proteins involved in receptor-mediated transport.
- Mine recent transcriptomic data for

Huber Research Group- Professor George Huber: UMass Amherst ***January – August 2010***

Lab Technician/Researcher

- Worked as part of a team on a DARPA funded project.
- Conducted research on converting biomass-derived sugars into fuel-grade hydrocarbons.

Sun Research Group - Professor Lianhong Sun: UMass Amherst ***January - December 2009***

Commonwealth College Honors Thesis Project

- Investigated altering substrate specificity of the LuxR protein to aid in directed evolution of the RhlI protein.
- Developed dual selection method (On/Off selections) based on literature reviews and laboratory troubleshooting.

Sun Research Group - Professor Lianhong Sun: UMass Amherst ***September 2006 - May 2008***

Independent/Collaborative Research Project

- Conducted independent and collaborative research focusing on quorum sensing and protein engineering in bacteria.
- Employed random mutagenesis and genetic screening methods to alter the substrate specificity of the RhlI protein.

Publications:

- Lajoie JM and Shusta EV. Targeting receptor-mediated transport for delivery of biologics across the blood-brain barrier. *Annual Reviews in Pharmacology and Toxicology.* (2015) Submitted
- Tillotson BJ, Lajoie JM, and Shusta EV. Yeast display-based antibody affinity maturation using detergent-solubilized cell lysates. *Methods in Molecular Biology.* (2014) Submitted
- Holcay H *et al.* Production of renewable petroleum refinery diesel and jet fuel feedstocks from hemicellulose sugar streams. *Energy and Environmental Science.* (2013) 6, Pages 205-216
- Kambam PKR, Eriksen DT, Lajoie JM, *et al.* Altering the Substrate Specificity of RhlI by Directed Evolution. *ChemBioChem.* (2009) 10.3, Pages 553-558

Academic Honors

- Commonwealth College Honors Research Grant (2009)
- UW CBE Dahlke-Hougen Fellowship (2010-2013)
- NIH BTP Traineeship (2010-2013)

Undergraduate Lab Assistants

I have mentored the following undergraduates on independent research projects in the Shusta Lab

- Peter Guerrin (January 2014 – Present)
- Blake Houg (January 2013 – December 2013)
- Jhazy Jhazera (May 2012-August 2012)

Industrial Research Experience

Abbott Bioresearch Center: Worcester, MA ***May 2008 – December 2008***

Process Sciences Co-Op

- Worked in the Cell Culture department developing and testing mammalian cell culture processes for the production of therapeutic monoclonal antibodies.