

# BioMaP REU 2016

Biological Materials and Processes Research Experience for Undergraduates

Summer Research Experience for Undergraduate Students

**IOWA STATE UNIVERSITY**  
Department of Chemical and Biological Engineering

May 31 - August 5, 2016

Stipend: \$450/week

Travel Expenses Paid: Up to \$800

Food &  
Housing  
Allowance:  
up to \$2,500



Ames, IA has been named one of the ten best places to live in the nation

**Choose from these research projects:**

Immunomodulatory Nanovaccines against Infectious Diseases

Drug and Gene Delivery

Hyperspectral Imaging of DNA and Protein-Linked Metal Nanoparticles

Aptamer-based Catalyst Design

Competition between Soluble and Extracellular Matrix Signals during Cell Migration

Model Validation for Photosynthetically Active Radiation Transport in Algal Photobioreactors

Contribution of Membrane Proteins to Microbial Robustness

Thermal Deconstruction of Biomass

The Artificial Pancreas Project

Polymer Properties that Activate Macrophages to Kill Lymphoma Cells

Bacteriophages on Porous Surfaces used for the Detection of Bacteria

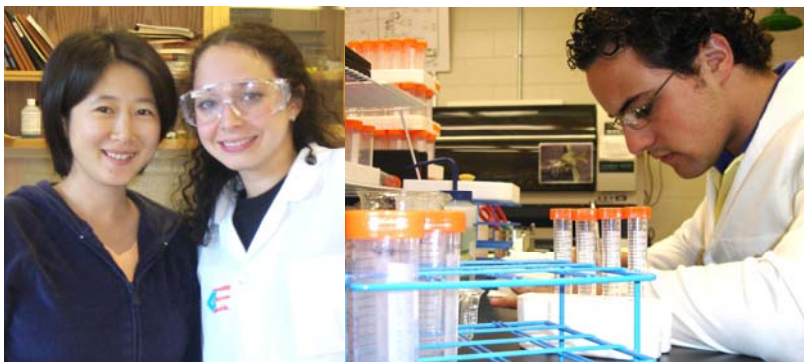
Understanding the Relation between Aptamer Structure and Function for Sensors and Synthetic Biology

ex vivo Mini-gut Mucosal System for the Investigation of New Oral Vaccine

The Social Network of Plants

Genome Engineering in *Lactococcus lactis*

Probiotic Engineering



Expand your "toolbox"

Open pathways to your future

This program creates novel research experiences for undergrad students from around the country in the areas of biological materials and processes, referred to as "BioMaP." Students are active members of interdisciplinary groups and interact with faculty, post-doctoral researchers, graduate students and industry. Students also participate in cohort experiences such as short courses, joint seminars/meetings, workshops, tours of research facilities and field trips.

A unique component of the program is a partnership with the Department of Chemical Engineering at the Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), Monterrey, Mexico.

BioMaP REU at Iowa State is funded by the National Science Foundation. All undergraduate and community college students who are U.S. citizens or permanent residents are encouraged to apply. Application process includes submitting a resume and two letters of recommendation.



Apply online at:

[www.cbe.iastate.edu/research/undergraduate-research/](http://www.cbe.iastate.edu/research/undergraduate-research/)

Registration deadline: May 8, 2016