Interested in a fun and enriching experience this summer? The Department of Chemical and Biological Engineering at Iowa State University hosts a summer research experience for undergraduate students. The program will create novel research experiences for undergraduate students in the areas of biological materials and processes (BioMaP). The students will be active members of interdisciplinary groups and will interact with faculty, postdocs, graduate students, and industry. The students will 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), Mexico. As part of this international component, some students will participate in research projects at ITESM.

Here is a list of some of the research projects you will be working on:

- Nanovaccines against Infectious Diseases
- Nano-Carriers for Multi-Enzyme Complexes
- Drug and Gene Delivery
- Fluorescent Markers for Intracellular Delivery
- Microemulsion-Based Degradable Nanoparticles
- Aptamer-Based Catalyst Design
- Molecular Modeling of Peptide Mimics
- Cellular Uptake of Engineered Nanomaterials
- Thermal Depolymerization of Biomass
- Mechanisms of Fast Pyrolysis
- Enzyme Structure and Function
- Intracellular Processes during Cell Migration
- Metabolic Engineering
- Recovery of High-Value Biological Products
- Solvent Effects on Fractal Nanoparticle Diffusion

To complement the research experience and provide opportunities for the students to know each other better, a number of social and recreational activities will be organized, taking advantage of life in Ames, one of the most livable small cities in the nation. During the summer, Ames hosts the Central Iowa Festival of the Arts, the Iowa Games, and much more. Central Iowa is also well suited for outdoor activities including hiking, biking, and sailing.

Application deadline: March 15, 2010

You can apply for the 2010 BioMaP Program at our web site or you may request a form by contacting

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