

## A Unique Interdisciplinary Research Experience



The deadline to apply for  
Summer 2012 is

Friday, March 16, 2012

Visit our web site for application  
materials and more information  
about the program

<http://eng.rpi.edu/bmed/>

or contact:

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Department of Chemical & Biological  
Engineering  
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Troy, New York 12180

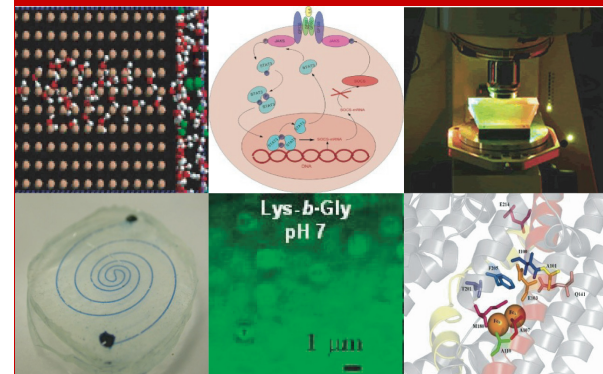
E-mail: [bmed-reu@rpi.edu](mailto:bmed-reu@rpi.edu)  
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# Rensselaer

Come join us for

**Materials and Systems  
Biology Research in  
Biotechnology and  
Biomedicine**



**Research  
Experience for  
Undergraduates**

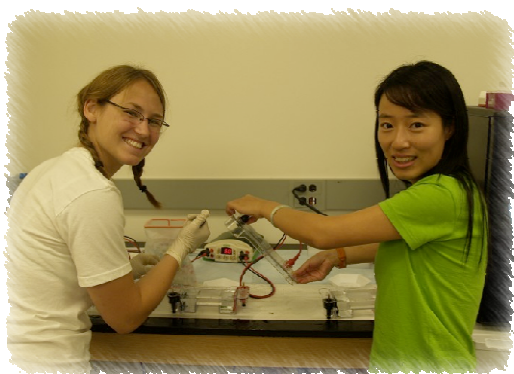
**Summer 2012**

Sponsored by  
the National Science Foundation

## Why Should I Apply?

If you've ever considered a career in research, an undergraduate research experience is a great place to start. Our program gives you the opportunity to work side by side with our faculty and graduate students to investigate a broad range of important and interesting problems at the forefront of Biomedical Engineering and Chemical Engineering.

Not only will you gain valuable hands-on experience, you'll also have the opportunity to see first hand some of the world class research underway at RPI and find out how discoveries made here help benefit society.



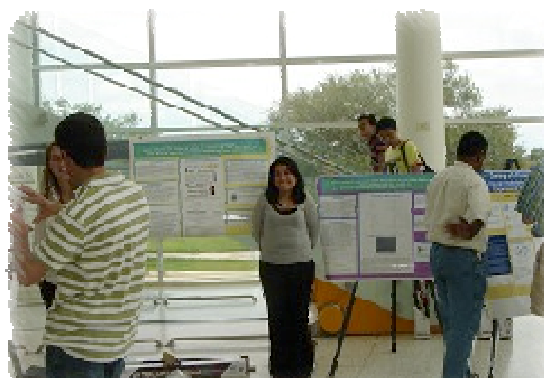
We'll help you learn more about research careers and show you how to create a winning graduate school application. You'll also have the opportunity to participate in fun activities and interact with dozens of fellow undergraduate researchers from all over the country. At the end of the program, you'll get a chance to present your results at a college-wide poster session.

## What Will I Do?

Serious about research? So are we. Take your pick of cutting edge projects to suit just about any interest. Examples of project areas include:

- Developing Improved Models of IL-6 Signal Transduction Pathways via Systems Biology
- Hybrid Materials for Biofuels and Biomolecular Separations
- Inter-kingdom Signal Recognition in *E. coli* Chemotaxis
- Developing Genome Shuffling as a Tool for Deciphering Complex Phenotypes
- Large-Scale Modeling of Infectious Disease Spread
- Fundamental Investigation of Transport Phenomena in Convectively Actuated Biochemical Reactors
- Protein Engineering of Hydrogenases for Hydrogen Production
- Antimicrobial Thin Films on Surfaces for Preventing Bacterial Transmission
- Building and Deconstructing Polyelectrolyte Nanofilms for Drug Delivery

Many of our students go on to present their results at national and international conferences, and publish them in scientific journals. This can really look good on your resume!



## How Does it Work?

Each participant will receive a stipend of \$4,500 for participation in the ten-week program held during Summer 2012. Other benefits include housing and travel allowances; participation in campus-wide REU activities; and full access to university recreational facilities.



To participate in the program, students must:

- Be US citizens or permanent residents
- Have a desire to participate in research
- Be majoring in biomedical engineering, chemical engineering or a related discipline (e.g. biology, chemistry, math, physics, or another field of engineering)
- Have a 3.3 GPA or greater and have rising junior or senior status with at least 60 semester hours (or equivalent quarter hours) completed toward their degree
- Provide application and all required supporting documentation by specified deadlines