

Summer Undergraduate Research Program  
**Faculty Project Proposal Submission**

**Faculty Name:**

Robert M. Stroud

**Department/Organization Affiliation:**

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**Project Name(s):**

- 1) How do Membrane protein transporters work at the atomic level?
- 2) The keys to RNA- protein recognition?
- 3) Computational approaches to understanding channel mechanisms

**General Topic (Keywords):**

Expression, Purification, characterization of proteins, RNA, membrane proteins.  
Molecular mechanics to assess mechanisms of channel conductances.

**Project Description(s):**

Projects aim for structure determination using X-ray crystallography of proteins, protein mutants, and proteins with specific inhibitors bound to them.

**Desired Skills or Experience:**

Either biochemistry of protein expression, or membrane protein expression to purification, crystallization, or X-ray crystallography, or computer program development with scientific application.

**Time Commitment:**

full time preferred

**Preferred Starting Date:**

open summer dates please specify in application