GENERAL DESCRIPTION AND LOCATION: The student will be involved in a cell biology/physiology project. The project aims to elucidate cellular and molecular mechanisms regulating fluid secretion in human epithelial cells (i.e., human colonic T84 cells). This project has ties with human diseases such as: cystic fibrosis or secretory diarrhea. The student will be involved in 1) culturing and maintaining stock cells, 2) testing by biochemical approaches (e.g., SDS-PAGE electrophoresis, blotting, and immunocytochemistry) interaction between proteins and fate of proteins, 3) analyzing and presenting data.

Scientific questions to be addressed:

- Is α-adducin and/or MARCKS involved in the Na-K-2Cl cotransporter internalization during protein kinase C activation?
- Fate of the Na-K-2Cl cotransporter in the endocytotic pathway (recycling or degradation).

REQUIREMENTS: Previous lab work (e.g., chemistry), Bio 171-172, is preferred, being familiar with standard software Word, Excel. Demonstrate motivation, organization and curiosity. An interest in cell biology, physiology and or biochemistry is important.

STIPEND: Each student will receive $3000 for 300 hours of research ($10 per hour). Housing will also be provided on VU’s campus.

APPLICATION: Available from Jennifer Cunningham (Jennifer.Cunningham1@valpo.edu), Prof. Leach (Katie.Leach@valpo.edu) and the MSEED website (http://www.valpo.edu/mseed/for-current-students/).

DEADLINE: Review of applications begins Friday, 18 March 2016. Successful applicants will be notified by 1 April 2016. Please contact Dr. Patrice Bouyer (Patrice.Bouyer@valpo.edu, x5487; NSC-105A) if you have any questions.