

Department of Pediatrics

COLLEGE OF MEDICINE

**SUMMER RESEARCH OPPORTUNITIES  
FOR UNDERGRADUATE WOMEN**

**APPLICATION DEADLINE: March 2, 2009**

*The Department of Pediatrics is pleased to offer the following research project for the summer of 2009. Interested students are urged to contact the faculty member(s) directing the project that most interests them. By contacting the faculty member, you can discover more about the project, learn what your responsibilities will be and if possible, develop a timetable for the twelve-week research period.*

**UNDERSTANDING THE MECHANISMS OF IMMUNOSUPPRESSION IN HIV/AIDS**

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**Project Description**

HIV remains one of the top infectious killers in the world at large. My research activity focused on **understanding the mechanisms of immunosuppression in HIV/AIDS**. In particular, my current research is focused on delineating the functional consequences of the interactions between the major HIV envelop protein and its receptor, the CD4 molecule. CD4 is expressed by critically important immune cells such as CD4+ T cells and antigen-presenting cells. The constant exposure of those immune cells to HIV virions has been shown to affect their functionality, and consequently, to play a role in the development of immunosuppression.

The main projects developed in the laboratory use in vitro models of exposure of immune cells to HIV viruses, including non-infectious viruses that can interact with CD4 but failed at inducing productive infection, as well as ex vivo analysis of cells isolated from HIV-infected patients.