

**CHILDRENS HOSPITAL  
Department of Pediatrics**

**SUMMER RESEARCH OPPORTUNITIES  
FOR UNDERGRADUATE WOMEN**

**APPLICATION DEADLINE: March 1, 2006**

*The Department of Department of Pediatrics is pleased to offer the following research project for the summer of 2006. 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.*

**MUSCULOSKELETAL DISORDERS OF CHILDHOOD AND ADOLESCENCE**

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The purpose of the Orthopaedic Research Laboratory of Cincinnati Children's is to improve the treatment, diagnosis, and prevention of musculoskeletal disorders of childhood and adolescence. Particular emphasis is given to the most severely affected surgical patients, and to those with the most common injuries. The core competence of the laboratory is biomechanics. In addition, we collaborate with other divisions integral to surgery, such as radiology and pathology, and have strong industrial connections. Our main project focuses on a potential new surgical treatment for idiopathic scoliosis. Other studies include mechanical testing of fracture fixation techniques to assess initial stability of bone fragments, and possible improvements in surgical procedures for limb lengthening. Possible student projects include assisting with analysis of spine intervertebral disc pressures from preclinical studies of the proposed new spine treatment, biomechanical testing of spine segments for sensor calibration, and abstract preparation for July submission for the 2006 Orthopaedic Research Society.