

DEPART OF PEDIATRICS
COLLEGE OF MEDICINE

SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATE students

FOR APPLICATION YEAR: 2026

PROJECT TITLE: Computational regulatory genomics

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Project Description

Our laboratory investigates the molecular mechanisms that control gene expression during various developmental processes and pediatric diseases. Using integrative computational approaches, we investigate how non-coding regions of the genome, including enhancers, promoters, and other regulatory elements, orchestrate the precise timing and location of gene activity. Students will gain hands-on experience in computational biology and genomics research, with opportunities to analyze large-scale datasets, explore gene regulatory networks, and contribute to projects with direct relevance to understanding pediatric health. Students will develop skills in bioinformatics, data analysis, and scientific communication while working alongside other lab members and faculty. This experience is ideal for students interested in the intersection of computational science, developmental biology, and pediatric diseases, providing a foundation for future multidisciplinary scientists. Laboratory web page:

<https://www.computbio.org>