

Pharmacy Student Summer Research Fellowship Proposal for 2020

FACULTY INFORMATION:

NAME: Brendan Frett, PhD
DEPARTMENT: Pharmaceutical Sciences

LOCATION: BioMed II 166-2

PROJECT INFORMATION:

TITLE: Development of Precision Medicine for Oncology

LOCATION OF THE PROJECT: BioMed II

BRIEF DESCRIPTION OF THE PROJECT: Drug development is largely target-driven, where drugs are developed to modulate a pharmacologically, relevant target in a given disease state. This type of drug development has been heavily utilized for oncology to improve effectiveness and reduce toxicity to chemotherapy. The Frett laboratory is interested in further improving target-based drug discovery in oncology. We have numerous, active projects which aim to uncover next-generation strategies to target malignant disease. Trainees in my laboratory will learn a variety of techniques including organic chemistry (drug synthesis), analytical chemistry, biochemistry (drug/target studies), and cell culture all in the context of drug discovery and development. This Summer Research Fellowship opportunity will provide PharmD students a unique approach to learn where drugs come from and how they are produced.

STUDENT'S RESPONSIBILITIES-DUTIES IN THE PROPOSED PROJECT: Students involved in this project will obtain significant experience in the drug development cycle. Day-to-day, the student will spend time designing and synthesizing new potential drugs, which can be further refined as the project progresses. State-of-the-art equipment will be readily available for use by the student to help expedite research efforts.

ESTIMATED TIME FOR PROJECT COMPLETION: ___12___ weeks

DOES THE WORK INVOLVE ANIMAL RESEARCH? YES -----
NO -----X-----

ORAL/POSTER PRESENTATION OPPORTUNITY: It is required that the student present their work at lab meetings to improve oral communication and presentation skills. The student is encouraged to present work at any applicable national or international meeting.

MANUSCRIPT SUBMISSION: Journal of Medicinal Chemistry, PNAS, Angewandte Chemie, European Journal of Medicinal Chemistry