

Title of Position: Laboratory Technician (Academic Hourly)

Primary Function of Position: The successful applicant will perform cell culture, liquid chromatography, organic extractions and quantitative assays to support the preparation of compounds used in a NIH-funded research project in the Rienstra and Burke laboratories. The aims of this research project are to understand the interactions of amphotericin B, an antifungal drug, with sterols found in yeast (ergosterol) and human (cholesterol) cells in order to develop drugs with an improved therapeutic index. This position will provide excellent opportunities for development of new skills and career advancement, including co-authorship of high-impact publications.

Major Duties and Responsibilities (Detailed Job Description of Position):

- Perform cell culture, including preparation of growth media, inoculation, and incubation under sterile conditions
- Perform solid-liquid extractions of natural products from cell culture
- Perform liquid chromatography (MPLC and HPLC) to purify the natural products, including amphotericin B, ergosterol and cholesterol
- Utilize isotopically labeled starting materials to prepare samples suitable for NMR spectroscopy
- Develop and optimize protocols and procedures to increase yield and purity of the natural products, by means of:
 - Optimizing extraction methods of amphotericin B from *S. nodosus* cultures
 - Determine a sustainable way to keep and store *S. nodosus* spores
 - Investigate cost-effective isotopic labeling strategies
- Assist graduate students and post-doctoral researchers in their research requirements with regards to sample preparation
- Contribute productively and creatively to a highly interactive team of scientists performing internationally recognized research

Organizational Chart:

Provost
Dean, College of Liberal Arts and Sciences
Director, School of Chemical Sciences (SCS)

Position Requirements and Qualifications:

Education:

Required: Bachelor's degree in chemistry, biochemistry, molecular biology, or a related field

Preferred: Undergraduate GPA of 3.5 or higher

Experience:

Required: Undergraduate research experience in chemistry, biochemistry, molecular biology or related field

Preferred: Experience with sterile technique, cell cultures, biosynthesis, and chromatography

Knowledge (optional):

Required: Standard chemical and biological laboratory techniques and laboratory safety

Training (optional):

Preferred: NMR Spectroscopy; Mass Spectrometry