

DEPARTMENT OF CHEMISTRY AND ENVIRONMENTAL SCIENCE
SEMINAR SERIES
SPRING 2019

DATE: TUESDAY, MARCH 26
LOCATION: Central King Bldg. - 303
TIME: 1:00pm – 2:20pm

GUEST SPEAKER

Yong Guo, Ph.D
Professor of Pharmaceutical Sciences
School of Pharmacy and Health Science
Fairleigh Dickinson University

TOPIC

Chromatographic research in support of drug development

ABSTRACT

Chromatographic methods are widely employed to perform drug assays and impurity analysis in support of drug development in the pharmaceutical industry. The drug development process and the chemical nature of the drug compounds constantly challenge the chromatographic methods. At the early stage of the drug development process, there is very limited information on the impurities and degradation products. However, the chromatographic methods are required to separate all the potential impurities. One approach to meet this challenge is to maximize the separation efficiency of the chromatographic method, but this strategy is difficult to implement with a lack of thorough theoretical understanding of the separation efficiency in gradient elution. Another common challenge is the polarity of the drug compounds. Polar drug compounds are very difficult to retain and separate in reversed-phase liquid chromatography (RPLC), but can be easily retained in hydrophilic interaction chromatography (HILIC). Being a relatively new mode of separation, some fundamental aspects of HILIC separation are not clearly understood. My research in the area of chromatography stems from these important questions from my experiences in supporting drug development and focuses on gaining a better understanding of the chromatographic methods.

Seminar Series Coordinator:
Dr. Yuanwei Zhang – yuanwei.zhang@njit.edu