Forensic Chemistry Research Topics:

2021-2022:

- Synthesis of Ferrofluids
- Comparison of five DNA extraction methods to extract genomic DNA from human body fluid and fly artifacts
- Comparison of Qiagen EZ1 and Promega Maxwell FSC to extract DNA from bones
- Quantification of bergamottin and dihydroxybergamotten in supplements by HPLC
- Effects of Cadmium doping of gold clusters
- Fatty acid extraction from feces
- Synthesis of Mechanistic Investigations
- Synthesis of halichonic acids

2022-2023:

- GCMS analysis of feces
- SERS Raman enhancement of GSR analytes
- Analysis of air pollutants

2023-2024:

- Quantification of smokeless powder analytes using GCMS
- DNA recovery of burned human remains
- Analysis of variation of DNA Methylation between smokers, E-cigarette users, occasional users and non-users employing PCR-HRM
- Analysis of disinfection byproducts in US drinking water by GCMS
- Carrier effects on compounds
- UV-Vis quantification of smokeless powder analytes
- (Capstone) Quantitative study of data sharing by authors in scientific journals

Forensic Chemistry Internship Sites:

2021-2022:

- Biotech Lab
- Baltimore City Division of Forensic Science
- Baltimore County Crime Lab

2022-2023:

- Maryland State Police Division of Forensic Science
- Baltimore City Division of Forensic Science

2023-2024:

- Baltimore County Crime Lab

- Baltimore City Division of Forensic Science
- New Jersey State Police Crime Lab
- Maryland State Police Division of Forensic Science