

Qualitative Confirmatory Identification of Growth Hormones

The Customs and Border Protection (CBP) Laboratories and Scientific Services Directorate (LSSD) is seeking to host one or more NSF student scientists with backgrounds in biology, chemistry or related disciplines to collaborate with LSSD analysts and scientists. LSSD provides forensic and scientific analysis in the areas of trade enforcement, weapons of mass destruction, intellectual property, import safety, and narcotics enforcement. Fulfilling this mission can involve providing technical and scientific advice through testing and identification of specific growth hormone peptides toward enforcing U.S. laws and regulations.

- **Project Duration:** TBD
- **Start Date:** Spring, Summer or Fall 2018
- **Location:** LSSD, Long Beach, California

Project Overview

The objective of this project is to develop methodology to confirm growth hormones with the Los Angeles Laboratory's current light chromatography (LC) and mass spectroscopy (MS). This will involve studying instruments, knowledge of LC and MS, addressing the limitations of efficiency, column stability, and detector sensitivity for proper method development, determining detection levels and bias and training laboratory personnel on the validated methods. The product of this project will be a written, validated analytical methods for the method team submission and possible publication. This project may include, but is not limited to, the following tasks:

- Develop analytical methods with LSSD Los Angeles Laboratory's LC/MS and LC-QTOF.
- Identify the growth hormones to study, including somatropin.
- Participate in lab activities not limited to seminar, webinars and training.
- Present findings, train personnel, complete documentation.
- Present status reports, findings and methods in writing and orally.

Qualifications

The ideal candidate will have a strong background in analytical chemistry with LC-MS experience and peptide analysis knowledge. The candidate shall be detail-oriented and possess excellent organizational, presentation, and written skills, and be able to perform tasks independently with little supervision.

Eligibility Requirements

- Citizenship: U.S. Citizen Only
- Degree: Chemistry and/or Biological sciences
- Discipline(s): chemistry and biological science

Contact

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