



Idaho State Police Forensic Services



Mary M. Mosburg
Forensic Scientist I
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Education:

- 12/2022 University of California, Davis – Davis, CA
Master of Science – Forensic Science
- 05/2018 University of Idaho – Moscow, ID
Bachelor of Science – Chemistry – Forensics Option

Experience:

- 02/2024 - Present Forensic Scientist I
Idaho State Police Forensic Services, Coeur d'Alene, ID
Duties: Controlled Substances
- 05/2022 – 02/2024 Screening Chemist
KL Maddy Equine Analytical Chemistry Laboratory, University of
California, Davis, Davis, CA
Duties: Analyzed blood and urine for banned and controlled substances
- 04/2021 – 05/2022 Graduate Student Researcher
KL Maddy Equine Analytical Chemistry Laboratory, University of
California, Davis, Davis, CA
Duties: Develop Liquid Chromatography-Tandem Mass Spectrometry
method. Assist with other method development projects.
- 05/2019 – 09/2019 Sample Receiving Technician
Anatek Labs, Moscow, ID
Duties: Received and logged in samples

Testimony:

I have testified in Idaho district court as an expert witness relating to the analysis of controlled substances.

<https://isp.idaho.gov/forensics>

EQUAL OPPORTUNITY EMPLOYER

Revised 1/20/26

Mary Mosburg

Continuing Education; Association Meetings; Conferences:

2023 Thermo Fisher TSQ Altis Plus Triple Quadrupole – Davis, CA
2022 Thermo Fisher Q Exactive Orbitrap – Davis, CA
2021 Thermo Fisher TSQ Altis Triple Quadrupole – Davis, CA
AAFS Annual Scientific Meeting – Virtual

Research; Publications:

Trott, J. F., Falt, T. D., **Mosburg, M. M.**, Moeller, B. C., Solomon, G. M., & Hovey, R. C. (2026). Determining the sex of store-bought beef to distinguish between endogenous and exogenous hormone residues. *Meat Science*. <https://doi.org/10.1016/j.meatsci.2026.110040>

Mosburg, M., Li, Y., Helmes, E., Falt, T., Trott, J., Solomon, G., Hovey, R., and Moeller, B. (2024). Determination of Hormonal Growth Promotants in Beef Using Liquid Chromatography–Tandem Mass Spectrometry. *Drug Test Anal.* <https://doi.org/10.1002/dta.3827>

Thilakaratne, R., Castorina, R., Solomon, G., **Mosburg, M. M.**, Moeller, B. C., Trott, J. F., ... & Hovey, R. C. (2024). Estimated human intake of endogenous and exogenous hormones from beef in the United States. *Journal of Exposure Science & Environmental Epidemiology*. <https://doi.org/10.1038/s41370-024-00727-1>

Mosburg, M. (2022). Development of a Liquid Chromatography Tandem-Mass Spectrometry Method for Hormonal Growth Promotants in Beef Cattle. *University of California, Davis*.

Moeller, B.C., Flores, L., Clifford, A., Alarcio, G., **Mosburg, M.**, & Arthur, R.M. (2021). Detection of Methylphenidate in Equine Hair Using Liquid Chromatography–High-Resolution Mass Spectrometry. *Molecules*, 26(19), 5798. <https://doi.org/10.3390/molecules26195798>