
KYLE CALTRIDER

8931 Tuscany Lane | Highlands Ranch, CO 80130 | T: 303.903.6629 | Email: Kyle.Caltrider@gmail.com
LinkedIn: <http://www.linkedin.com/in/kylecaltrider> | Web Portfolio: <https://kylecaltrider.github.io>

DEPARTMENT/PROJECT MANAGER

Forensic & Analytical Chemistry | Extensive Laboratory Experience | Critical Thinking & Interpretation

- Astute, highly motivated and meticulous professional, with over 5 years of analytical and forensic chemistry experience in dynamic, fast-paced laboratory environments. Comprehensive understanding of the skills needed to conduct complex metabolic, toxicological and biologic fluid data analyses, oversee departmental operations, and train and mentor personnel. Demonstrated ability to hypothesize, plan, and execute experimental protocols, while documenting, analyzing, and critically interpreting results. Advanced familiarity with numerous laboratory instruments and data analysis suites. 5 years of experience in a CLIA/OSHA certified lab, utilizing GLP and good QA/QC practices. Acknowledged for the ability to quickly master new methods, tasks, technologies and responsibilities. Specialized knowledge of management techniques.
- Regarded for excellent communication, and dynamic interpersonal skills, which have been used to develop and maintain strong relationships with laboratory staff and management. Proficient in the use of various software programs and applications. Adaptable and reliable in difficult conditions, prioritizing as needed. Collaborative interaction to maintain standards and functionality. Self-managed, and outcome-driven professional, who consistently strives to positively contribute to development and the achievement of objectives through the completion of interdependent tasks. Recognized for the effective management of a method development department.

LABORATORY TECHNIQUES

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| ▪ Gas & Liquid Chromatography | ▪ Immunoassays | ▪ Spectrophotometry |
| ▪ Mass Spectrometry | ▪ Aseptic Techniques | ▪ Medium Preparation |
| ▪ Cell Culture/Manipulation | ▪ Gel Electrophoresis | ▪ Cell Staining |
| ▪ Column Chromatography | ▪ Microscopy | ▪ PCR |
| ▪ Adult Murine & Embryo Dissection | ▪ TLC | ▪ SOP Writing |
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LABORATORY EXPERIENCE

Chematox Laboratory, Inc., Boulder Colorado

(2011-2016)

Forensic and Analytical Chemist

Contracted Boulder Diagnostics/Oxford Immunotec Researcher

Method Development Department Manager

- As *Forensic and Analytical Chemist*, led toxicological analysis of biological fluids, utilizing immunological and spectrophotometric techniques. Use broad spectrum of immunoassays for clinical and forensic toxicology purposes. Oversee maintenance and script programming on various Tecan autopipetter units and plate washers for optimization and performance of large ELISA runs. Staff subject-matter expert on set-up/implementation of new ELISA assays, procedures, or equipment. Troubleshoot clinical or forensic ELISA/toxicological screening issues. Specialized research and experiments:
 - Performed spectrophotometric and ELISA analysis of samples for toxic/illicit compounds.
 - Conducted liquid-to-liquid and solid phase column chromatography extractions of pharmaceuticals, illicit drugs, and respective metabolic analytes.
- As *Contracted Boulder Diagnostics/Oxford Immunotec Researcher*, performed complex contract work for Boulder Diagnostics and Oxford Immunotec, in conjunction with the Anschutz Medical Campus Infectious Diseases Department for the research and development of novel diagnostic biological-based assays. Specialized research experiments:

- Researched and Developed an immunological cell-based assay for the diagnosis of Lyme Disease, including cell purification, culture, handling, and manipulation of prokaryotic and eukaryotic cells.
 - Influential in method development of this assay, performing background literature research, designing and maintaining SOPs, and training individuals in laboratory techniques. Performed and optimized multiple sandwich ELISA procedures for the measurement of cytokine profiles.
 - Maintain and troubleshoot lab equipment, including automated cell counters, microscopes, CO2 incubators, BCL-2 biological safety cabinets, Dynex® ELISA processing unit, and more. Conducted SDS-PAGE and western blot analysis of bacterial strains and isolated components.
 - Engaged in bacterial cell culturing, included cloning and strain expansion. Extracted bacterial lipid components and performed preliminary analysis via thin layer chromatography and focused staining techniques; ran detailed UPLC/MS-MS analysis.
- As *Method Development Department Manager*, ran Forensic/Clinical Method Development Department for Chematox Lab, Inc. Specialized duties involved design and development of toxicological assays for drugs of abuse.. Coordinated R&D interdepartmental collaboration for validations and production phases. Utilized critical thinking and problem solving abilities to manipulate various chemical extraction techniques and detection systems.

University of Colorado Boulder, MCDB Dept., Van Blerkom Lab, Boulder, CO.

(2011-2013)

Undergraduate Researcher

- Performed broad spectrum of research techniques to elucidate mechanisms and functions of proteins in early human gamete fusion and early embryonic stability. Conducted human and murine cell culturing of oocytes and embryos, including isolation, micromanipulation, incubation, expansion, and thawing/cryopreservation of cells. Utilized various vital, chemical, and antibody-based fluorescent stains in the analysis of oocytes and embryos. Employed microscopic techniques, with an emphasis on fluorometric detection, and assays such as FRET using laser scanning confocal microscopy.

RESEARCH PUBLICATIONS

- **Sperm attachment and penetration competence in the human oocyte: A possible aetiology of fertilization failure involving the organization of oolemal lipid raft microdomains influenced by the $\Delta\Psi_m$ of subplasmalemmal mitochondria.** *Reproductive BioMedicine Online*. Van Blerkom, J., Caltrider, K. 23, December 2013. doi: 10.1016/j.rbmo.2013.09.011

EDUCATION & HONORS

University of Colorado Boulder
Bachelor of Arts Degree in Molecular, Cellular and Developmental Biology
Graduated in May, 2013

Sigma Xi Undergraduate Research Award-2013

TECHNICAL PROFICIENCIES & AFFILIATIONS

Systems/Software: MacOS; Windows; Linux; Laboratory Information Management Systems - Tecan, Dynex, Waters; Microsoft Office; KNIME; ImageJ; Photoshop; MassHunter; TargetLynx; Fusion 360 (CAD);

Full Stack Web Development: HTML, CSS, JavaScript, NodeJS, React, Python, Docker

Full Stack Certification: <https://www.freecodecamp.org/certification/kylecaltrider/full-stack>

Projects Repository: <https://github.com/kylecaltrider>

Sigma Xi Scientific Research Society, University of Colorado Chapter-Associate Member

REFERENCES AVAILABLE UPON REQUEST