

## EVAN MCMANIGAL

CHEMIST

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## EDUCATION AND AWARDS

### COLORADO STATE UNIVERSITY, AUG 2019-MAY 2021, B.S. CHEMISTRY

- Received Nancy E. Levinger Fellowship (2020)
- Received Gary E. Maciel Fund Scholarship (2020)
- Received Mark P. Sweet Chemistry Scholarship (2020)
- Received Steven L. Glade Scholarship (2020)
- Received ACS Award in Organic Chemistry (2021)

### UNIVERSITY OF MONTANA, AUG 2013-MARCH 2018, NO DEGREE

- Received General Chemistry Award (2016)

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## PRESENTATIONS

Speciation of decavanadate species important to signaling studies of the luteinizing hormone 2021 CSU CURC

Synthesis and Spectroscopic Properties of Vanadium(IV)-Citrate Complexes + Biological Applications 2020 CSU CURC

Role of Trinuclear Uranyl Carbonate Complex in Amidoxime Uptake 2017 Montana ACS Fall Meeting

Synthesis and Binding Constants for Poly-Amidoxime Uranyl Complexes for Sequestering Uranium from Seawater 2016 University of Montana Conference on Undergraduate Research

## EXPERIENCE

### QC SAMPLE COORDINATOR, Tolmar, Inc., QC Chemistry October 2021 -Present

- Within a cGMP environment, coordinate between multiple departments to ensure sample integrity for Quality Control testing
- Redline and edit company Standard Operating Procedures and Work Instructions to ensure Quality Control laboratory is operating under CFR 210 211 and cGMP standards
- Act as the SME during audits to support management when our practices concerning samples are questioned during regulatory and marketing partner audits
- Help determine and implement Corrective Action/ Preventative Actions (CAPA) when a Quality Event was initiated due to issues with our sample processes

### LEAD LAB TECHNICIAN, Colorado State University Organic Chemistry Stockroom, January 2020 – October 2021

- Kept inventory and coordinated with department stockroom to maintain appropriate stock level for upcoming experiments
- Ran routine IR, GC/MS, and <sup>1</sup>H NMR and collected spectra to support students learning initiatives
- Trained new lab techs on current best practices within the stockroom environment
- Mixed and prepared necessary chemical mixtures for the upcoming week's experiments.
- Designed and performed new organic reaction experiments for use in future organic chemistry labs

### RESEARCH ASSISTANT, DR. WILLIAMS LAB, DR. CRANS LAB, COLORADO STATE UNIVERSITY, SEPTEMBER 2019 – OCTOBER 2021

- Utilizing retrosynthetic analysis techniques designed, ran, and optimized organic synthesis reactions to develop and modify pathways of target natural products and drug compounds
- Performed spectroscopic analysis using HPLC, UV/Vis, LCMS, 1D NMR (<sup>1</sup>H, <sup>13</sup>C, <sup>19</sup>F, <sup>51</sup>V), 2D NMR (HSQC and HMBC), EPR, and IR
- Conducted kinetic and thermodynamic stability studies of synthesized products in aqueous, organic, and media solutions
- Collected and interpreted experimental results for presentation and updates at weekly group meetings
- Helped ensure lab efficiency through the regular maintenance of equipment and pumps
- Using SciFinder, WebofScience, and Google Scholar, stayed up to date on recent organic synthesis papers

### RESEARCH CHEMIST, SATELLITES DIP, MARCH 2018 -AUGUST 2019

- Expanding on known literature procedures and lead scientist insight, developed novel reaction pathways for the interconversion of natural cannabinoids using solid state catalysts
- Performed routine prep scale HPLC and column chromatography for the purification of large scale batch reactions
- Prepared, transported, and shipped samples for contract lab analysis
- Analyzed and interpreted NMR, UV/VIS, and GC spectrum to provide insight on future research goals
- Using electronic notebooks, kept meticulous notes on current experimental procedures to ensure reproducibility

### RESEARCH ASSISTANT, UNIVERSITY OF MONTANA CHEMISTRY DEPARTMENT, FEBRUARY 2015 – MARCH 2018

- Designed and ran synthetic organic reactions in various media: solventless, microwave reactor, air-free cross-coupling, organic and aqueous solutions
- Optimized current hit reaction pathways to follow green chemistry principles
- Using NMR and UV/Vis, performed various catalytic and coordination binding studies to determine catalytic turnover and gain thermodynamic insight
- Lead and participated in group meetings discussing current research projects, safety protocols, and scientific literature

