

NICHOLAS R. LEWANDOWSKI, MS

Thornton, CO

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RESEARCH CHEMIST/SCIENTIST

Organic Chemistry ✦ Process Development/Improvements ✦ Laboratory Skills/Techniques

Knowledgeable, resourceful chemist highly regarded for a solid chemical product development background primarily in Process Chemistry. Extensive educational and hands-on research experience with numerous techniques while excelling in both team and independent-oriented environments that expect a high level of dedication and project management. Possesses a passion for research in chemistry with strong critical thinking and project development skills. Exceptional oral and written communication skills. Exceptional academic qualifications, including a Master of Science degree in Chemical Product Development from Concordia University Wisconsin with a strong focus on organic and process chemistry.

CORE COMPETENCIES

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|---------------------------------------|----------------------------------------|------------------------------------|
| ▪ Chemistry and Organic Chemistry | ▪ Laboratory Protocols | ▪ ISO Quality Standards |
| ▪ Analytical Techniques and Equipment | ▪ Experiment Design/Execution | ▪ Laboratory Techniques/Skills |
| ▪ Process Chemistry | ▪ Process Development | ▪ Results Interpretation/Reporting |
| ▪ current Good Manufacturing Practice | ▪ Research/Development | ▪ Technical and Mechanical Skills |
| ▪ Safe Chemical Handling Methods | ▪ Wide Range of Laboratory Instruments | ▪ Computer Skills |

PROFESSIONAL EXPERIENCE

Mile High Labs ✦ Loveland, CO ✦ 2023 – Present Senior Scientist, R&D

- Perform process chemistry on early and late development of different Cannabinoid compounds to bring to production.
- Run samples and perform maintenance on HPLC and GC-FID.
- Participate in Bi-weekly meetings for project updates.
- Perform validation on discovered processes.
- Work along side production to help transfer discovered processes.
- Run reactions on mg to Kg scale.
- Perform/assist with purifications and recrystallizations to help improve and isolate high purity material.

Pfizer Boulder ✦ Boulder, CO ✦ 2022 – 2023 Medicinal Chemist – Synthesis development/Process Chemistry

- Assist with medicinal chemist in making drug targets for ongoing projects, such as making intermediates.
- Work along side CRD to help in development of synthetic routes for scaling up APIs.
- Scale up of APIs for ETS, Toxicology lots, and for R1 campaigns.
- Work with ARD to help coordinate with COA and with the development of new analytical methods for newly made APIs.
- Work with Product Development to determine different polymorphs and the stability of API solids.
- Participate in Bi-weekly update meetings regarding ongoing projects.
- Coordinate with biology and toxicology to hand off made APIs for onsite studies.
- Perform reactions in round bottom flasks/EasyMax all the way up to 20 L jacketed glass reactors.
- Work independently on projects to further assist the team by working on the chemistry bench, paper chemistry and project meetings.

Millipore Sigma ✦ Milwaukee, WI ✦ 2021 – 2022
Process Development Scientist

- Focus on process optimization and scale-up of Continuous Flow reactions in a manner that allows safe, practical, and economical scale-up of such reactions in Production scale equipment Globally.
- Participate in ongoing technology advancement through close interactions with engineers and equipment providers.
- Interact with operations and business colleagues to implement your learnings in other parts of the company.

Battelle ✦ Pueblo, CO ✦ 2020 – 2021
Chemist Researcher I/II

- Performs sample receipt, preparation and analysis of air, solid and liquid samples as assigned to meet schedule time constraints. Troubleshoots the testing process when expected results are not obtained. Recommends and executes path forward to resolve analysis problems.
- Performs assignments using moderately complex instrumentation to include, but not limited to, Gas Chromatograph equipped with a Flame Photometric Detector (GC-FPD), Gas Chromatograph equipped with a Mass Selective Detector, spectrophotometer, pH meters, and thermal desorption systems.
- Performs method detection limit studies and optimizes instrument parameter to validate method performance in support of process sample requirements. Recommends and executes path forward to resolve method performance or instrument issues.
- Interprets analytical results, qualifies data appropriately and develops analytical data packages.
- Performs independent technical reviews and assessments of test data, laboratory operating procedures, technical specifications, performance charting, and instrument operating conditions and limits are maintained in accordance with governing plans and policy.
- Builds and fosters relationships with internal clients. Has limited contact with external clients.
- May oversee lower-level staff in extracting and preparing data of less experienced staff members.

UW-Milwaukee ✦ Milwaukee, WI ✦ 2018 – 2020
TA/RA, Organic Chemistry

- Teach, grade and proctor undergraduate students both in a lab and classroom setting.
- Perform new and old reactions regarding research projects.
- Analyze reactions/compounds using TLC, HPLC, LCMS-2020, 500MHz NMR, and Optical Purity.
- Write procedures to newly performed reactions.
- Research literature for new reactions.
- Keep reactions organized and well kept in a laboratory notebook using GLP.
- Bi-weekly meetings regarding thesis project and research.

Millipore Sigma ✦ Milwaukee, WI ✦ 2017 – 2018, 2020
Chemist I

- Manufactured and evaluated products according to established protocols.
- Provided technical support to others and performed operations in support of the department.
- Safely performed operations to meet quality expectations.
- Ensured quality throughout processes.
- Contributed to support functions of the lab, such as waste disposal, maintaining equipment, restocking supplies, and preparing reagents.
- Communicated the status of operations to team and supervisor.

- Provided clear, complete, and accurate records that were consistent with quality guidelines.
- Ensured all log books have been filled out as required by procedures.
- Accurately performed procedures independently.

PUBLICATIONS

Process Development of the Weiss–Cook Reaction for the Preparation of *cis*-1,5-Dimethylbicyclo[3.3.0]octane-3,7-dione in the Undergraduate Organic Laboratory. Matthew Korman, Eric Paz, Tylor Franklin, Nicholas R. Lewandowski, Bethany Sullivan, Andrea M. Imhoff, Luke Fisher, Katherine A. Bichler, and Scott G. Van Ornum. *Journal of Chemical Education*. 2020 97 (10), 3835-3838. DOI: 10.1021/acs.jchemed.9b00653

The Microwave-Mediated Tandem Pauson-Khand Reaction. Eric Bauer, Vilermina Carlos, Abbie Collova, Tyron Gruber, **Nicholas Lewandowski**, David Pelton, Bethany Sullivan, Brandon M. Tutkowski, and Scott G. Van Ornum* to be submitted to *Tetrahedron Letters*, pending.

EDUCATION

University Wisconsin Milwaukee, Milwaukee, WI: 2018 – 2020

PhD Candidate – Organic Chemistry (GPA: 3.80)

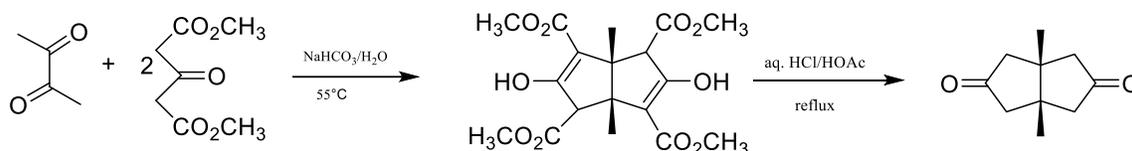
- **Relevant Coursework:** Advanced Survey of Organic Chemistry, Pulsed NMR Spectroscopy, Topics in Organic Chemistry, Medicinal Chemistry, Biochemistry: Protein Structure and Function, Physical Organic Chemistry, Total Synthesis, Organic Mechanistic Puzzles.
- **Relevant Project:** Design, Synthesis, and Biological Evaluation of Novel Antimicrobials to Treat Drug Resistance Bacteria

Concordia University Wisconsin, Mequon, WI: 2017

Master of Science – Chemical Product Development (GPA: 3.77)

- **Relevant Coursework:** Process Chemistry and Pharmaceutical Manufacturing, Drug and Consumer Product Design, Product Development Project, Analytical Characterization of Drugs and Other Chemicals, Project Management, Sustainable Business Practices, Sustainability and Social Entrepreneurship.
- **Relevant Projects:** Master Thesis – Part 1: Process Chemistry Development of *cis*-1,5-dimethylbicyclo[3.3.0]octane-3,7-dione via the Weiss-Cook Reaction. Part 2: Preparation of a Cysteine Reversal Agent for Neuromuscular Blocking Compounds.

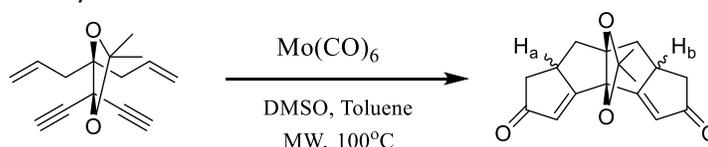
Weiss-Cook Reaction Scheme:



Concordia University Wisconsin, Mequon, WI: 2015

Bachelor of Science – Chemistry

- **Relevant Projects:** Undergraduate Research on the Microwave Mediated Tandem Pauson-Khand reaction to compare yields and regioselectivity.



TECHNICAL SKILLS

Lab Techniques/Instruments: proton, carbon-13, and COSY Nuclear Magnetic Resonance, Infrared Spectroscopy, Near Infrared Spectroscopy, Ramen Spectroscopy, Stability Studies, High Performance Liquid Chromatography, Flash Column Chromatography, Thin Layer Chromatography, Crystal-16, Ultraviolet-Vis Spectroscopy, Gas Chromatography.

Research and Process Development: Gram scale to 100's gram scale, 5-Liter jacketed reactor, cGMP like using Master Batch Record, Optimizing conditions using a Design of Experiments approach, Optimizing recrystallization conditions and finding the meta-stable zone, Exploring telescoping procedures, Stability studies.

Applications: Mathematica, Microsoft Office (Word, Excel, PowerPoint, Outlook, Projects), ChemDraw, SpinWorks, Chromeleon, Mestrenova.

Operating Systems: Windows

ADDITIONAL CREDENTIALS

PROFESSIONAL DEVELOPMENT	<ul style="list-style-type: none"> ▪ Business Certificate, Concordia University Wisconsin, Mequon, WI: 2016 ▪ Secrets of Batch Process Scale-up Certificate, Scientific Update Class: 2022 ▪ Chemical Development & Scale-up in the Fine Chemical & Pharmaceutical Industries Certificate, Scientific Update Class: 2022 ▪ Residential School on Medicinal Chemistry and Biology in Drug Discovery Certificate, Drew University Class: 2023
INTERESTS	<ul style="list-style-type: none"> ▪ Football, running/exercising, hiking, skiing, biking, fishing, hanging out with friends and family, and learning more about chemistry.

Detailed Professional References Available upon Request

