

Lauren E. Markham, PhD

PATENT AGENT

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Dr. Lauren Markham assists Choate's life sciences clients by utilizing her background in chemistry to help with the preparation and prosecution of patent applications, as well as freedom to operate and patentability analyses.

Prior to joining Choate, Lauren received her PhD in Synthetic Organic Chemistry from Dartmouth College. As a Doctoral Student in the lab of Professor Glenn C. Micalizio, she focused on stereoselective synthesis and the invention of reaction technology and synthesis strategies capable of fueling discovery of natural product-inspired compositions of matter that have unique and medicinally relevant biological activities. Lauren's thesis describes the design and synthesis of novel, potent, and selective fatty acid mimetics. Specifically, her dissertation outlines the synthesis of palmitoleic acid mimetics targeting the ToxT receptor and oleic acid mimetics targeting GPR40, GPR120, and TLX. In 2023, she was the recipient of the Karen E. Wetterhahn Graduate Fellowship in Chemistry.

Lauren received her Bachelor of Science in Chemistry from Baylor University. During her studies, she worked as an undergraduate research assistant in the synthetic organic chemistry lab of Professor John L. Wood. As a member of the Wood Group, Lauren assisted graduate students in various stages of their organic synthesis projects, including in the development of a procedure describing the modular and facile synthesis of chiral tetramic acids.

Focus Areas

Intellectual Property

IP Counseling

Publications and Presentations

- "From Functional Fatty Acids to Potent and Selective Natural Product-Inspired Mimetics via Conformational Profiling," first author, *ACS Cent. Sci.*, February 2024
- "Design and Synthesis of Chiral, Conformationally Constrained Fatty Acid Mimetics," first author, *Dartmouth College Ph.D. Dissertations*, September 2023
- "General Enantioselective and Stereochemically Divergent Four-Stage Approach to Fused Tetracyclic Terpenoid Systems," co-author, *Journal of Organic Chemistry*, February 2022
- "An Enantiodefined Conformationally Constrained Fatty Acid Mimetic and Potent Inhibitor of ToxT," first author, *ACS Medicinal Chemistry Letters,* August 2021
- "Synthesis of Chiral Tetramic Acids: Preparation of (S)-5-Benzylpyrrolidine-2,4-dione from L-Phenylalanine Methyl Ester Hydrochloride," co-author, *Organic Syntheses,* 2019

Education & Credentials

- Dartmouth College, PhD (2023) *Synthetic Organic Chemistry*

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- Baylor University, BS (2019) *ChemistryU.S. Patent & Trademark Office*

Admissions

- U.S. Patent & Trademark Office