

Spring 2022 Diversity in Chemistry Seminar

Dr. Steven D. Townsend

May 6, 2022 3:30-5:00pm 555 Buehler Hall
(light refreshments served at 3:15 PM)

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“Preventing Premature Birth with Human Milk”

Abstract: For sheer structural audacity, complexity, and chemical novelty, few classes of natural products can rival oligosaccharides. While there has previously been a tendency to dismiss this class of molecules as artifacts of rogue enzymatic machinery, their manifold biological activity has earned them serious attention from chemists and biologists alike. Our discussion will focus on the application of human milk oligosaccharides to the prevention of premature birth.

Bio: Steve was born and raised on the East Side of Detroit, Michigan. He completed his undergraduate education in 2005 at Oakland University, earning a B.S. with honors in chemistry under the mentorship of Prof. Amanda Bryant-Friedrich. In 2010, he earned a PhD in Organic Chemistry at Vanderbilt University with Prof. Gary Sulikowski working on the synthesis of bielschowskysin. He completed his training with Prof. Sam Danishefsky at Columbia University and Sloan Kettering Institute working on the synthesis of glycoproteins. In 2014, he returned to Vanderbilt as an Assistant Professor of Chemistry and has risen through the ranks to Professor of Chemistry. His group studies the synthesis and biology of complex carbohydrates and glycoconjugates. The team has earned several awards, including the Camille-Dreyfus Teacher Scholar Award, the Alfred P. Sloan Fellowship, and the David Gin Young Investigator Award.