2025-2026 POCC Lecture Series

February 19, 2026, 7:30 PM

Dr. Susan Zultanski

Merck & Co.

Advancing Peptide Drug Discovery and Development at Merck

IN PERSON @:

Carolyn Hoff Lynch Lecture Hall

Chemistry Building, University of Pennsylvania

6:30 Reception in the Nobel Hall

Food and drinks to be provided!

The Philadelphia Organic Chemist's Club

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Abstract: Macrocyclic peptides (MPs) are a growing new modality in the pharmaceutical industry, as they hold the promise of targeting challenging protein-protein interactions and of replacing injectable biologics with oral alternatives. Two oral drug candidates are poised to enter the market this year, J&J's icotrokinra for psoriasis (IL-23) and Merck's enlicitide decanoate for cholesterol (PCSK9). Merck's Discovery Process Chemistry group works closely with Discovery Chemistry in their SAR undertakings, while maintaining a line-of-sight to clinical scale-up. This presentation will comprise Merck's Discovery Process Chemistry's strategy toward enabling peptide program SAR by both improving drug properties and increasing speed to the clinic. Areas of focus include the hypothesis-driven design of ncAA classes and enzymatic routes to access them, LSF strategies, and flow solid-phase peptide synthesis..

Bio: Sue began her academic training as an undergraduate at the University of Rochester. She then moved to Merck in Boston for two years, where she developed a basic understanding of discovery chemistry. In 2008, she undertook her PhD studies at MIT with Gregory Fu, where she developed Ni- and photo-induced Cu-catalyzed processes. She then joined the lab of Shannon Stahl at the University of Wisconsin as an NIH postdoctoral fellow. In 2016, Sue began her career at Merck in NJ as a process chemist. Appreciating the open-endedness of the interface between discovery and process chemistry, she shifted to the discovery process chemistry group in 2020, where she worked on macrocyclic peptide programs through 2025. She collaborated closely with the mRNA display, discovery chemistry, protein engineering and biocatalysis groups, and her area of focus was on the hypothesis-driven development of non-canonical amino acid classes for the improvement of drug properties. These amino acid classes have been by-and-large made, or envisioned to eventually be made, via economical one- or two-pot biocatalytic long-term routes. In 2026, Sue moved into Merck's Chemical Biotechnologies group, which is composed of protein engineering and biocatalysis.