



2020-2021 POCC Lecture Series

April 29, 2021, 7:30 PM

Virtual reception at 7:00 PM prior to the seminar

Prof. Seth Herzon

Yale University

Total synthesis of complex terpenoid natural products

Virtual Seminar by Zoom ([LINK](#))

SPECIAL NOTE:

The *Biennial POCC Industrial Award & Poster Session* will occur prior to the reception from 5 to 7 PM, Poster awards will be presented after the seminar.

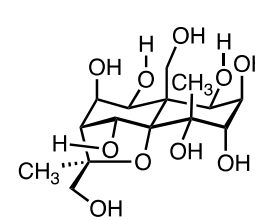
See [HERE](#) for details!

The Philadelphia Organic
Chemist's Club

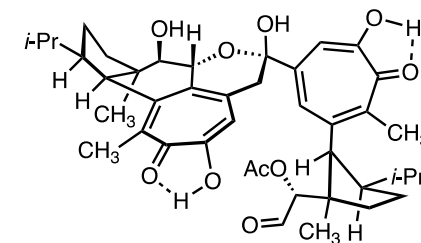


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Abstract: This lecture will focus on the synthesis of the complex terpenoid natural products euonyminol and gukulenin A. Euonyminol is a highly-oxygenated trans-decalin derivative that constitutes the core structure of the complex alkaloids known as the cathedulins. We developed the first enantioselective synthetic route to euonyminol. The synthetic route features several key transformations including a highly diastereoselective intramolecular alkene oxyalkylation to establish the C10 quaternary center, a radical-mediated ene-yne cyclization to access the tricyclic scaffold of the target, a tandem lactonization-epoxide opening to form the trans-C2-C3 vicinal diol residue, and a late-stage diastereoselective α -ketol rearrangement. Progress toward the complex bis(tropolone) natural product known as gukulenin A will also be discussed.



euonyminol



gukulenin A

About the speaker: Seth Herzon completed his undergraduate studies at Temple University, obtained a PhD in 2006 from Harvard University under the guidance of Professor Andrew G. Myers, and was an NIH postdoctoral fellow with Professor John F. Hartwig at the University of Illinois, Urbana-Champaign. He began at Yale in 2008 and is currently the Milton Harris '29 Ph.D. Professor of Chemistry. He holds joint appointments in the Department of Pharmacology at the Yale School of Medicine and the Yale Cancer Center. Herzon's research is centered on complex molecule synthesis with applications to synthetic and translational studies of genotoxic and microbiome-derived natural products, and antibiotic development. Since 2018 he has served as an Associate Editor for *The Journal of Organic Chemistry*.