

ORGANIC SEMINAR

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"Syntheses of furanone natural products and signaling hormones from *Streptomyces avermitilis* and *Delisea pulchra*"

Natural products (NPs) are important sources of leads for medicines, agricultural agents, and chemical probes for biological systems. Additionally, they serve as important signaling and protective molecules for the organisms that produce them. We have developed diversifiable syntheses of the quorum sensing molecule, avenolide, from *Streptomyces avermitilis* and the defensive halogenated furanones from *Delisea pulchra*. Both molecules are challenging to access from their native hosts, either being produced in very low titers or coming from difficult to source organisms. Therefore, synthetic routes to these molecules, and derivatives, were carried out for the purpose of further study of their bioactivities and potential applications.