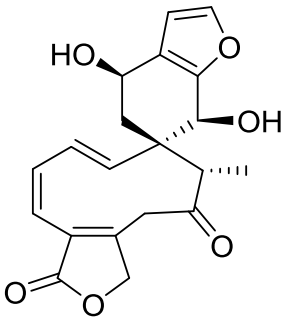
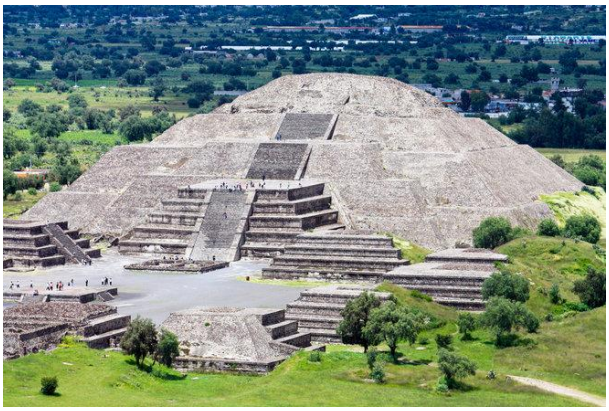
Synthetic Challenge #10
August 24, 2017

Total Synthesis of Teotihuacanin



teotihuacanin



Teotihuacán

The goal of this Challenge is to develop and defend a synthetic strategy for the total synthesis of teotihuacanin. This polyketide was isolated from the leaves and flowers of *Salvia amarissima* (Bautista *et al. Org. Lett.* **2015**, *17*, 3280-3282). Its structure and relative configuration was determined by 1D and 2D NMR analysis, and ultimately X-ray crystallography. The absolute configuration was established by anomalous dispersion effects in X-ray diffraction measurements. No interesting biological activity has been reported yet.

Your presentation should consist of a brief retrosynthetic analysis explaining the reasons behind important disconnections, followed by a synthetic plan detailing the reagents used and possible protecting groups. As would be the case for a real research proposal, issues of chemo- and diastereoselectivity must be addressed. You route doesn't have to be enantioselective, but it would be extra special if it was. Your synthesis should possess a good balance between originality and feasibility. In this regard, it would be beneficial to briefly show some precedent for the most difficult/uncertain steps in the sequence. Each team's synthesis should take ~30 minutes to present.

Your team has to consist of members of at least two research groups. Please provide the name of your team and a list of team members to Dr. Gravel or Dr. Ward at your earliest convenience.