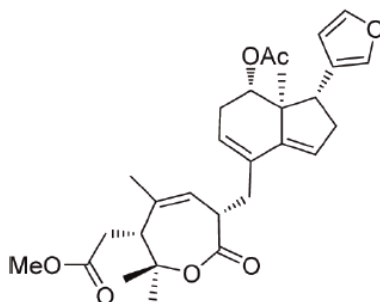


Gravel-Ward Synthetic Challenge #5 June 7, 2012

Total Synthesis of Aphanamixoid A



The goal of this Challenge is to develop and defend a synthetic strategy for the total synthesis of aphanamixoid A. This limonoid was isolated from *Aphanamixis polystachya*, collected in Yunnan province (Hao, He *et al. Org. Lett.* **2012**, *14*, 2524-2527). Its structure was determined from spectroscopic analysis, X-ray crystallography and computational methods.

Your presentation should consist of a brief retrosynthetic analysis explaining the reasons behind important disconnections, followed by a synthetic plan which details the reagents used and possible protecting groups. As would be the case for a real research proposal, issues of chemo-, diastereo- and enantioselectivity must be addressed. 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 ~30-45 minutes to present.

While this Challenge is not mandatory, both undergraduate and graduate students are strongly encouraged to participate. Students from other groups are also welcome. For this fifth edition of the Challenge, you are free to form your own teams, provided these rules are followed:

- 1) Teams of 1-4 players
- 2) Members from at least two different research groups

As soon as your team is formed, please provide the list of members as well as a team name to Dr. Gravel.