

Description: This project is an opportunity to apply what you have learned in Chemistry 242b to areas of current interest in organic chemistry research. The proposal can involve the synthesis of a newly isolated natural product or it may involve the synthesis of a natural product that has already been synthesized. The proposal may also be aimed at developing a new synthetic method, however this may require more care to assure novelty.

Novelty: It is the expectation that you will strive for novelty in your proposal. Consider three different classes of potential natural product targets:

1. A new natural product with a novel ring system.
2. A new natural product isolated which is a new member of a class of structures for which several synthetic approaches exist.
3. An existing natural product that has been successfully synthesized by one or more approaches.

In case 1, although no completed synthesis of the target or any related system has been achieved, there may exist published synthetic approaches by research groups detailing their synthetic progress and plans. In case 2, although the natural product is new, its overall structural features may be similar to well-known targets that have been the subject of much synthetic activity. In case 3, with a significant number of existing publications on successful and unsuccessful approaches to the target, a higher level of creativity is usually necessary to find a truly novel approach.

Format: The proposal should be presented as a 1-2 page written discussion and an accompanying scheme depicting the complete reaction sequence in the synthetic direction. The introduction should be a brief discussion concerning the origin and activity of the target molecule. The introduction should also disclose if closely related molecules have been the subject of previous synthetic achievements. A brief discussion of the main features of the strategy is expected (a general retrosynthetic scheme is optional). For steps in which stereoselectivity or regioselectivity is a potential issue, the discussion should provide rationale for the expected outcome. The written discussion should be properly referenced to the chemistry literature on important aspects of the proposal. References are not necessary for each reagent and each step of the synthesis.

Abstract: Prior to completion of the final report, a short abstract (<1 page) is requested which shows the target molecule of a synthetic proposal or the basic plan of a methods proposal. It is not necessary to present chemistry details of the proposal.

Abstract Due Date: Wednesday, February 27, 2008

Proposal Due Date: Wednesday, March 12, 2008

