Please join us for the following seminar!

**Total Synthesis of Acetyl-CoA Carboxylase Inhibitor Soraphen A**

Isolated in 1985 from the myxobacterium *Sorangium Cellulosum*, the type 1 polyketide soraphen A is a nanomolar allosteric inhibitor of Acetyl-CoA carboxylase and has potent antifungal and antitumor properties. Soraphen A's structure incorporates an unsaturated 18-membered lactone ring, an extra cyclic phenyl ring, and ten stereocenters. The present synthetic route of soraphen A was completed in 11 steps (LLS), less than half the previously required steps. The synthesis maximizes convergency by utilizing five asymmetric processes and four carbon-carbon formations. A key strategic element involves the development of a new synthetic method; a palladium-AntPhos catalyzed diastereoselective reduction of an allylic carbonate to reveal a terminal olefin for successive olefin cross-metathesis.