

ORGANIC SEMINAR

A Labor of Love: Enantioselective Total Syntheses of Complex Natural Products

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Malaria needs little introduction, as its status of infectious disease has reached epidemic proportions, with over 250 million individuals affected globally. Annual death tolls are estimated to be around 600,000, with over 75% of these deaths being African children under the age of 5. Waning efficacy of current artemisinin-based therapies has prompted global efforts to discover novel equipotent molecular scaffolds. To this end, Reyes uncovered four macrolides from *Strasseria geniculata*, named strasseriolides A-D, which possessed potent antiplasmodial activity against *P. falciparum*, the deadliest strain of malaria. Of the four members, strasseriolide B is the most efficacious, with an activity of 13 nM. This seminar will disseminate the 27 and 28 step syntheses of strasseriolides A and B, respectively, with key steps including asymmetric aldol and alkylation reactions, Johnson-Claisen rearrangement, NHK reaction, and Yamaguchi macrolactonization.



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4:30 pm



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