# Synthesis-Enabled Studies of the amphotericin B-based ion channel

Daniel Palacios and Martin Burke

The treatment of choice for systemic fungal infections over the past five decades has been and continues to be amphotericin B. Evidence suggests that amphotericin B inserts into sterol-rich lipid bilayers and self assembles into a membrane-spanning ion channel that can disrupt the transmembrane cellular electrochemical gradient. We have utilized a degradative synthesis from the natural product to interrogate the structure-function relationships that underlie this prototypical small-molecule based ion channel.