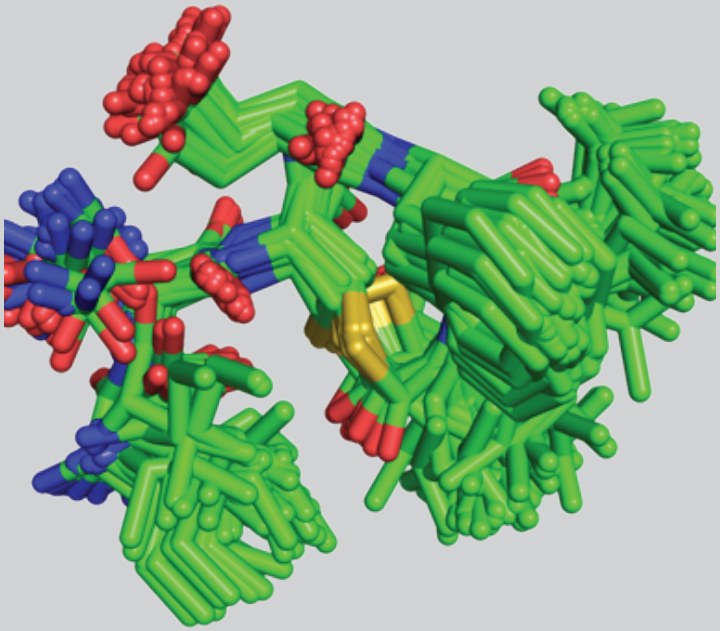
POST DOCTORAL SEMINAR SERIES

Speaker: Yftah Tal Gan, PhD (Blackwell Group)

Title: Using Peptide Based Tools to Study Quorum Sensing in *Staphylococcus aureus*

Quorum sensing (QS) is an intercellular signaling mechanism that enables bacteria to communicate and coordinate specific phenotypes at high cell density. As many bacterial pathogens use QS to control virulence, the development of techniques to interfere with QS signaling has attracted significant attention as a potential anti-infective therapy. *Staphylococcus aureus* is a dangerous human pathogen that utilizes autoinducing peptide (AIP) signals to mediate QS and thereby regulate virulence factor production. Our aim is to develop a new set of chemical tools and use it to gain better understanding of the accessory gene regulator (agr) QS circuit in *S. aureus*. This talk will focus on our efforts to synthesize these novel QS modulators, using solid phase techniques, and to evaluate their activities as QS modulators in *S. aureus* strains. An analysis of the NMR structures of active compounds will be presented and the resulting structure-activity relationships will be discussed.



When: Friday, Nov 16, 2012
12:30 pm
Where: Rm 9341 Chemistry

Pizza and drinks at 12:15 pm (Provided by Sigma Aldrich)