

# Evolution in Immune Systems



## Michael Deem

Michael Deem is a computational theorist whose work has contributed significantly to our understanding of important aspects of immunology, evolution and materials science. He researches Newton's laws of biology, the theory of personalized critical care, physical theories of pathogen evolution, and the structure of zeolites. He has shown that the speed at which life evolves is constantly increasing because of horizontal gene transfer and created a database of more than 4 million possible molecular configurations for zeolites. He will discuss methods he has developed for predicting vaccine effectiveness and for determining which strains of the flu to cover in annual vaccine formulations. Michael Deem is the John W. Cox Professor in Bioengineering and a professor of physics & astronomy at Rice University.

**Wednesday, March 6, 2013 - 8 pm**  
**Great Hall, Memorial Union**

**Zeolites: New Materials for Carbon Capture**  
**March 6 - 11 am - 2019 Morill Hall**

Sponsored by:  
Phi Beta Kappa, Chemical and  
Biological Engineering, Honors Program,  
College of Liberal Arts & Sciences  
Miller Lecture Fund, Committee on  
Lectures (funded by GSB)