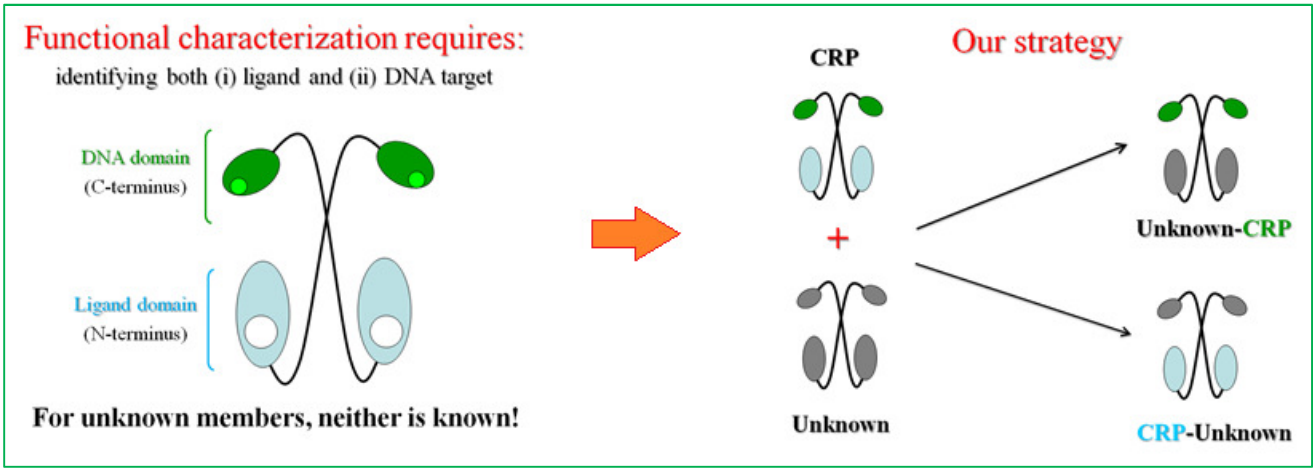
Department of Biology presents a seminar

Dr. Hwan Youn

Associate Professor of Biology

California State University, Fresno

"Studying bacterial transcription factors in the post-genomic era"



The *Escherichia coli* cAMP receptor protein (CRP) has been the model transcription factor for our understanding of ligand sensing, DNA recognition and transcriptional regulation. In recent years, bacterial genomes have continuously been sequenced, which has generated more than 7,000 proteins similar to CRP, termed CRP homologs. Most of these CRP homologs are currently unstudied. Accumulated knowledge indicates that these CRP homologs are certain to sense a variety of environmental signals by binding to small ligand molecules and to bind target DNA sequences to regulate the genes required for the environmental adaptions. Consequently, two essential functions of these proteins are ligand sensing and DNA binding, and functional characterization entails identifying both their ligand and DNA target. My long-term research goal is to rapidly and systematically characterize the diverse functions (diverse ligands and target DNA sequences) displayed by these CRP homologs. My talk introduces new strategies that can significantly speed up the functional characterization of various CRP homologs, including unstudied ones. The talk also discusses our recent proof-of-principle experiments designed for testing the applicability of the strategies.

Friday, January 30, 2015

3:00–4:00 PM

Science 2, Room 109

For further information: www.csufresno.edu/biology or phone 278-2001

If you need a disability-related accommodation or wheelchair access information, please contact the Department of Biology @ 278-2001 (at least one week in advance of the event).