BLAST IX Talk Program

Monday, Jan 15 – 9:00 AM-12:00 PM – Chemoreceptors – Sandy Parkinson, chair

Alexander, Roger  Molecular evolution of signaling and adaptation in microbial chemoreceptors
Lai, Run-Zhi  Tale of a chemoreceptor tail
Watts, Kylie  Structural analysis of the Aer HAMP and signaling regions
Li, Mingshan  Characterizing activities of isolated chemoreceptor homodimers using Nanodiscs™
Gloor, Susan  Domain Motions and Contact Faces of the Histidine Kinase, CheA
Pollard, Abiola  Biochemical and structural studies of a kinase-receptor signaling complex in bacterial chemotaxis
Emonet, Thierry  Modelling noise and adaptation in bacterial chemotaxis at the single cell level

Monday, Jan 15 – 7:30-9:30 PM – Behavior & Gliding Motility – Judy Armitage, chair

Krause, Duncan  Cell-independent gliding by the terminal organelle of the wall-less prokaryote M. pneumoniae
Nakane, Daisuke  Jellyfish structure of gliding bacterium, Mycoplasma mobile
Wu, Mingming  Collective bacterial dynamics revealed with a three-dimensional population scale defocused particle tracking technique
Ward, Mandy  Behavioural responses in the dissimilatory metal reducing bacterium Shewanella oneidensis MR-1
Lowenthal, Andrew  Quantitative analysis of the effect of genetic lesions and chemical gradients on the swimming behavior of H. pylori.
Berleman, James  Predataxis

Tuesday, Jan 16 – 9:00 AM-12:00 PM – Development – John Kirby, chair

Zusman, David  Towards uncovering the mystery of a-motility in M. xanthus
Jenal, Urs  Activation of a histidine kinase by a single domain response regulator controls cyclic di-gmp dependent development
Guvener, Zehra  P. aeruginosa Wsp proteins have atypical subcellular localization and respond to growth on surfaces
Marden, Jeremiah  Regulation of cyst formation in the purple photosynthetic bacterium Rhodospirillum centenum
Shimkets, Larry  Alien genes and a novel sensory pathway regulate biofilm formation, chemotaxis, and fruiting body development
Higgs, Penelope  Several unusual histidine kinase proteins regulate progression through the developmental program in M. xanthus
Leonardy, Simone  Dynamic protein localization and morphogenetic cell movements in M. xanthus
Miller, Lance  The major chemotaxis gene cluster of Rhizobium leguminosarum bv. viciae is essential for competitive nodulation

Tuesday, Jan 16 – 7:30-9:30 PM – Regulation – Phil Matsumura, chair

Swem, Lee  Quorum sensing in V. harveyi: Analysis of the AI-1-LuxN binding site and signaling pathway
Mitra, Arindam  The BarA-UvrY two component system and the Csr system regulate LuxS expression in E. coli
Hendrixson, David  Transcriptional activation of flagellar genes in C. jejuni: Roles of flagellar export and the FlgSR two-component system
Pruess, Birgit  Aer-mediated gene regulation affects colonization of the mouse intestine
BLAST IX Talk Program

Taylor, Rion  
Transcriptional regulators that control emergent multicellular behavior in M. xanthus.

Wang, Tim  
The Rcs signaling system inversely regulates motility and Spi-1 virulence with capsule synthesis

Wednesday, Jan 17 – 9:00 AM-12:00 PM - Flagella – Howard Berg, chair

Aizawa, Chi  
Roles of the hook in a rotating tethered cell

Charon, Nyles W.  
A new look at the spirochete B. burgdorferi and its periplasmic flagella using transmission cryo-EM tomography

Faulds-Pain, Alex  
The mechanism of filament assembly in C. crescentus

Li, Guanglai  
Dependence of the switching frequency of the Caulobacter flagellar motor on rotation rate

Darnton, Nicholas  
Torque and tumbling in swimming cells

Dyer, Collin M  
Monitoring the CheY-FliM-flim interaction in solution by NMR

Kawagishi, Ikuro  
The polar and lateral flagellar motors of V. alginolyticus are controlled by a single CheY species

Kojima, Seiji  
Crystal structure of MotY, which is essential for torque generation by the sodium-driven flagellar motor of V. alginolyticus

Thursday, Jan 18 – 9:00 AM-12:00 PM - Two-Component Systems –Bob Bourret, chair

Crosson, Sean  
Probing the function of a blue-light sensor histidine kinase in C. crescentus

Cunningham, Katherine  
Interaction of the histidine kinase inhibitor Sda with its target kinases

Dubrac, Sarah  
The YycG/YycF regulon of S. aureus

Galperin, Michael  
New output domains in bacterial and archaeal response regulators

Kenney, Linda  
SsrA/B is an enigmatic two-component regulatory system on Salmonella pathogenicity island 2 (Spi-2)

Scaramozzino, Francesca  
A unique sporulation sensor histidine kinase utilizing GTP and regulated in vivo by sensor domains of B. anthracis.

Bourret, Bob  
The effect of nonconserved active site residues on response regulator phosphorylation reactions

White, Robert  
Specificity determinants of the two-component phospho-transfer interaction

Thursday, Jan 18 – 7:30-9:30 PM – Signaling – Mike Manson, chair

Cohen-Ben-Lulu, Galit  
Unexpected linkage between the respiratory enzyme fumarate reductase and the flagellar switch of E. coli

Kristich, Chris  
A novel one-component signal transduction protein containing a ser/thr kinase domain in Enterococcus faecalis

Loevdok, Linda  
Dynamics of the chemotaxis pathway in E. coli

Visick, Karen  
Diguanylate cyclases inhibit motility of V. fischeri in the absence of magnesium

Wadham, George  
Subcellular dynamics of components of the chemotaxis signalling pathways in R. sphaeroides

Wolfe, Alan  
Turning excess carbon to advantage: new life breathed into old hypotheses