Welcome to the Department of Biochemistry and Molecular Biophysics

Washington University in St. Louis
School of Medicine
Congratulations to Jim Janetka, whose published work on UTI treatments was featured in *The Source*.

You can read more at [biochem.wustl.edu/news](http://biochem.wustl.edu/news)
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<tr>
<th>Holiday</th>
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<tr>
<td>Memorial Day</td>
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<td>May 29\text{th}, 2017</td>
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<td>Independence Day</td>
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<td>July 4\text{th}, 2017</td>
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<td>Labor Day</td>
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<td>September 4\text{th}, 2017</td>
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<td>Thanksgiving</td>
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<td>Day After Thanksgiving</td>
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<td>Christmas</td>
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Technical Advance: New in vitro method for assaying the migration of primary B cells using an endothelial monolayer as substrate.

The Marshall Lab performs a synergistic application of organic synthesis (solution- and solid-phase chemistry), enzymatic assays (electrophoretic mobility shift assays (EMSA) and surface plasmon resonance (SPR)), and computational chemistry techniques (homology modeling, molecular docking, molecular dynamics simulations, QSAR and 3D QSAR models) to rationally develop novel isoform-selective Lysine Deacetylases Inhibitors (KDACIs) as new therapeutics for the treatment of cancer, HIV-1, schistosomiasis and malaria.
Kunkel T.A. and Burgers P.M.

Arranging eukaryotic nuclear DNA polymerases for replication: Specific interactions with accessory proteins arrange Pols α, δ, and ε in the replisome for leading-strand and lagging-strand DNA replication.

Bioessays. 39(8). (2017)
Xuhui Huang, Ph.D.
The Hong Kong University of Science and Technology

“From Molecular Dynamics to Genomic Biology: Constructing Kinetic Network Models to Elucidate Transcriptional Fidelity of RNA Polymerase II”

Tuesday, September 12th, 2017
10:30 am
Biochemistry Seminar Room, 264 McDonnell Sciences
Host: Greg Bowman
(Refreshments provided)
Welcome!

Please welcome **Jeremias Incicco** to **Dr. Tim Lohman's** Lab!

**Dr. Jeremias Incicco** is a Fullbright Scholar visiting from the University of Buenos Aires, Argentina.
Frieden C., Wang H., and Ho C.M.W.

A mechanism for lipid binding to apoE and the role of intrinsically disordered regions coupled to domain-domain interactions.

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Noroviruses Co-opt the Function of Host Proteins VAPA and VAPB for Replication via a Phenylalanine-Phenylalanine-Acidic-Tract-Motif Mimic in Nonstructural Viral Protein NS1/2.

MBio. 8(4) (2017)
The Cooper Lab is interested in how cells migrate, in particular how cells cross the endothelium as they move into or out of the blood stream. Immune cell migration is important for fighting infection, and cancer cell migration is important for combatting cancer metastasis. These cells use their actin cytoskeletons to accomplish this movement.
Don't Forget!

Please keep your lab locked if no one is in the lab when you leave.

And take your keys with you!

Please remember to take your gloves off when leaving the lab.
Caitlin N. Spaulding, Roger D. Klein, Ségolène Ruer, Andrew L. Kau, Henry L. Schreiber, Zachary T. Cusumano, Karen W. Dodson, Jerome S. Pinkner, Daved H. Fremont, James W. Janetka, Han Remaut, Jeffrey I. Gordon, & Scott J. Hultgren

Selective depletion of uropathogenic E. coli from the gut by a FimH antagonist

Nature (2017)
The Greenberg Lab focuses on how cytoskeletal motors function in both health and disease. Currently, the lab is studying mutations that cause familial cardiomyopathies, the leading cause of sudden cardiac death in people under 30 years old. The lab uses an array of biochemical, biophysical, and cell biological techniques to decipher how these mutations affect heart contraction from the level of single molecules to the level of engineered tissues. Insights into the disease pathogenesis will guide efforts to develop novel therapies.
CARMIL family proteins as multidomain regulators of actin-based motility.

Farmer’s Market

Inside the McDonnell Pediatric Research Building
or
Outside on the Plaza
(weather permitting)

Every Thursday!
10:00 am - 2:00 pm
Rebekah H. Griesenauer and Michael S. Kinch

2016 in review: FDA approvals of new molecular entities

The Bowman Lab seeks to understand the distribution of different structures a protein adopts and how this ensemble determines a protein’s function. Examples of ongoing research projects include 1) understanding how mutations in the enzyme beta-lactamase change its specificity without changing the protein’s crystal structure, 2) designing allosteric drugs, and 3) developing algorithms for quickly building models of the different structures a protein adopts.
NEW WASTE SORTING GUIDELINES
ALWAYS EMPTY FOODS AND LIQUIDS BEFORE RECYCLING CONTAINERS

- TO-GO BOXES
- COFFEE CUPS & PLASTIC LIDS
- PLASTIC UTENSILS

WHEN COMPOST IS NOT AVAILABLE

- COMPOST
- RECYCLE
- LANDFILL
**RECYCLE**

WASTE SORTING GUIDE: 2-STREAM

- METAL & GLASS
- PLASTICS NO #6 OR BAGS
- PAPER, CARTONS & CARDBOARD

FOOD CONTAMINATES RECYCLING

**LANDFILL**

- FOOD/LIQUIDS TO-GO BOXES
- PLASTIC UTENSILS
- PLASTIC #6 PAPER CUPS STYROFOAM
- SNACK WRAPPERS SOFT PLASTICS & BAGS

QUESTIONS? SUSTAINABILITY.WUSTL.EDU

Department of Biochemistry and Molecular Biophysics
Washington University in St. Louis • School of Medicine
Franziska Zosel, Dominik Haenni, Andrea Soranno, Daniel Nettels, and Benjamin Schuler

Combining short- and long-range fluorescence reporters with simulations to explore the intramolecular dynamics of an intrinsically disordered protein

The Cooper Lab is interested in how the actin filaments in cells assemble and how that assembly controls cell shape and movement. One focus is an actin-binding protein called "capping protein," which caps one end of the actin filament. Capping protein is in turn regulated by intrinsically disordered regions of the CARMIL family of proteins, which exhibit positive linkage in their binding interactions.
Computer not working?
Not getting email on your smartphone?

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Support website: BiochemSupport.wustl.edu

Just send us an email or visit our website and click on *Request Support* to get help!
Welcome!

Please welcome Mingzhou Zhou, Keona Kalu, Maureen Highkin, and Vishnu Damalanka to Dr. Jim Janetka's Lab!
“From Molecular Dynamics to Genomic Biology: Constructing Kinetic Network Models to Elucidate Transcriptional Fidelity of RNA Polymerase II”

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TEA TIME

for Faculty, Staff, Postdocs & Students

Tuesdays & Thursdays
3:00-4:00 pm

Biochemistry Break Room
201 McDonnell Sciences Building

Coffee, tea and cookies are served.

Combinations of isoform-targeted histone deacetylase inhibitors and bryostatin analogues display remarkable potency to activate latent HIV without global T-cell activation.

The Galburt Lab strives to understand the physical mechanisms of transcription initiation and other important DNA-protein interactions. More specifically, we use a variety of single-molecule and ensemble biophysical techniques including both optical and magnetic tweezers and fluorescent microscopy to investigate how the assembly of initiation complexes on gene promoters leads to DNA unwinding and transcription. Our work is currently focused on the mechanisms of basal transcription initiation in Eukaryotes and on factor-regulated transcription in Mycobacterium tuberculosis.
Glutamate promotes SSB protein-protein Interactions via intrinsically disordered regions.

The Burgers Lab studies DNA replication and DNA damage response in eukaryotic cells. Using yeast as a model organism, the lab integrates the biochemical analysis of DNA-protein interactions in purified model systems with the genetic analysis of targeted yeast mutants. Specific areas of interest are lagging strand DNA replication and Okazaki fragment maturation, damage induced mutagenesis, and DNA damage cell cycle checkpoints.

Right: DNA replication fork and Okazaki fragment maturation
Are you paid monthly?

Please remember that your time report is due by the 5th of each month.
Research in the Lohman Lab focuses on obtaining a molecular understanding of the mechanisms of protein-nucleic acid interactions involved in DNA metabolism, in particular, DNA motor proteins (helicases/translocases) and single stranded DNA binding proteins. Thermodynamic, kinetic, structural and single molecule approaches are used to probe these interactions at the molecular level.
Science Fridays and Happy Hour:  
EVERY FRIDAY, starting at 4PM.