Welcome to the Department of Biochemistry and Molecular Biophysics

Washington University in St. Louis
School of Medicine

https://biochem.wustl.edu
1) Go to biochem.wustl.edu

2) Click Media and Newsletters

3) Click Display TV Announcements

Heteroarylamide smoothened inhibitors: Discovery of N-[2,4-dimethyl-5-(1-methylimidazol-4-yl)phenyl]-4-(2-pyridylmethoxy)benzamide (AZD8542) and N-[5-(1H-imidazol-2-yl)-2,4-dimethyl-phenyl]-4-(2-pyridylmethoxy)benzamide (AZD7254).

Presenting the 2020 John E. Majors Award to:

Sarem Hailemariam  
Brian Lananna  
Mary Elizabeth Methyer

Thursday, January 30th, 2020
4:00 PM
264 McDonnell Sciences Building
(Reception to follow)

The John E. Majors award was created in 2019 to recognize an outstanding senior-level PhD student for their outstanding research and teaching accomplishments.
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

See more research: [biochem.wustl.edu/spotlight](http://biochem.wustl.edu/spotlight)
Singh S.P., Soranno A., Sparks M.A., & Galletto R.

Branched unwinding mechanism of the Pif1 family of DNA helicases.

January 17th, 2020 – **Weikai Li, PhD**, Associate Professor of Biochemistry and Molecular Biophysics, along with Laura Schuettpelz, MD, PhD, Associate Professor of Pediatrics, received an Interdisciplinary Research Initiatives grant award from the Children’s Discovery Institute for their work entitled “*Regulation of normal and malignant B cells by the tetraspanin CD53*.”
Computer not working?
Not getting email on your smartphone?

We are here to help with the many computing issues that may pop up in your day-to-day operations.

Support email: support@biochem.wustl.edu
Support website: BMBSupport.wustl.edu

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

See more research: [biochem.wustl.edu/spotlight](http://biochem.wustl.edu/spotlight)
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.
Andres Jara Oseguera, Ph.D.
NINDS, National Institutes of Health

“Sensing and gating mechanisms in TRP channels”

Tuesday, January 28th, 2020
10:30 AM
264 McDonnell Sciences Building, Biochemistry Seminar Room
Host: John Cooper and Colin Nichols
(Refreshments provided)
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.

See more research: [biochem.wustl.edu/spotlight](http://biochem.wustl.edu/spotlight)
HAVING ISSUES AT WORK?
WE’RE HERE TO HELP.

Contact any of the following for help

- Jayma Mikes, Business Manager, jmikes@wustl.edu, 314-362-0262
- John Cooper, Department Head, jcooper11@gmail.com, 314-362-3964
- Jessica Kennedy – Title IX Director, jwkennedy@wustl.edu, 314-935-3118
- Jessica Kuchta-Miller – Staff/Postdoc/Graduate Student Ombuds, 314-379-8110
- Karen O’Malley – Medical Student Ombuds, 314-660-2089
- Jim Fehr – Faculty Ombuds, 314-660-2089
Your **BMB ID** is used for network files shares, remote VPN access, and BMB WiFi.

You can now change your BMB ID password, reset it if you have forgotten it, or even recover your BMB ID if you don't remember what it is!

Just visit:  

**bmbid.wustl.edu**
Greenberg Z.J., Monlish D.A., Bartnett R.L., Yang Y., Shen G., Li W., Bednarski J.J., & Schuettpelz L.G.

**The Tetraspanin CD53 Regulates Early B Cell Development by Promoting IL-7R Signaling.**

Don't Forget!

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

Don’t forget your keys!

Please remember to take OFF your gloves when leaving the lab.
Are your files backed up?

If you are not keeping your files on a network file server, running a local backup client, or utilizing cloud storage, then it is possible that your files are not backed up!

Want to make sure your data is backed up? We provide several backup solutions.

BMBSupport.wustl.edu/backups

Box  OneDrive  Retrospect  CODE42
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BMB SCIENCE FRIDAYS

a forum for new data, new ideas
and works in progress

Science Fridays and Happy Hour:
EVERY FRIDAY, starting at 4PM.
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.

See more research: [biochem.wustl.edu/spotlight](http://biochem.wustl.edu/spotlight)
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<thead>
<tr>
<th>Holiday</th>
<th>Day</th>
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<tr>
<td>New Year's Eve</td>
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Do you need assistance with your writing process?

Are you working on a manuscript for publication, grant, personal statement, or other writing piece?

The Writing Center staff are available to help you out! This is a free service provided to all students, faculty, staff, and postdocs.

Visit writingcenter.wustl.edu for more information!
Andres Jara Oseguera, Ph.D.
NINDS, National Institutes of Health

“Sensing and gating mechanisms in TRP channels”

Tuesday, January 28th, 2020
10:30 AM

264 McDonnell Sciences Building, Biochemistry Seminar Room
Host: John Cooper and Colin Nichols
(Refreshments provided)
Farmer’s Market

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

Every Thursday!
10:00 am - 2:00 pm
Are you paid monthly?

Please remember that your time report is due by the 5th of each month.
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.

See more research: biochem.wustl.edu/spotlight
The Mutation R94C InTNNT2-encoded Troponin T Predisposes to Restrictive Cardiomyopathy and Pediatric Sudden Death Through Impaired Thin Filament Relaxation Resulting in Myocardial Diastolic Dysfunction


Cryo-EM Structure of Nucleotide-Bound Tel1ATM Unravels the Molecular Basis of Inhibition and Structural Rationale for Disease-Associated Mutations.

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.

See more research:
biochem.wustl.edu/spotlight