

Welcome to the Department of Biochemistry and Molecular Biophysics

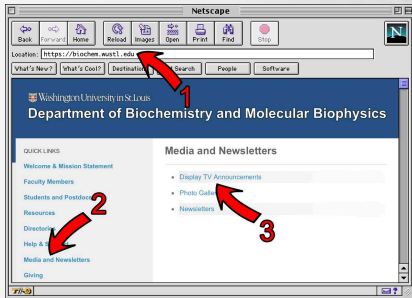


Washington University in St. Louis
School of Medicine

<https://biochem.wustl.edu>

View these slides online!

- 1) Go to biochem.wustl.edu
- 2) Click **Media and Newsletters**
- 3) Click **Display TV Announcements**



January Publication



Yang B., Hird A.W., Bodnarchuk M.S., Zheng X., Dakin L., Su Q., Daly K., Godin R., Hattersley M.M., Brassil P., Redmond S., John Russell D., & **Janetka J.W.**

Heteroarylamide smoothed 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).

Bioorg Med Chem. 28(2):115227. doi: 10.1016/j.bmc.2019.115227. (2020)

Special Seminar/Presentation

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

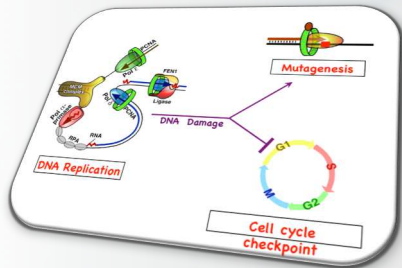
(Reception to follow)

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

Spotlight on Research

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

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Congratulations to Dr. Li



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***".

BMB Support

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

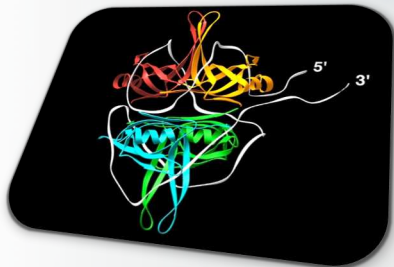
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Spotlight on Research

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

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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.

December Publication

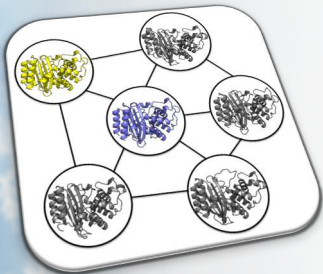


Maybruck B.T., Lam W.C., Specht C.A., **Ilagan M.X.G.**, Donlin M.J., & Lodge J.K.

The Aminoalkylindole BML-190 Negatively Regulates Chitosan Synthesis via the Cyclic AMP/Protein Kinase A1 Pathway in Cryptococcus neoformans.

mBio. 10(6). pii: e02264-19. doi: 10.1128/mBio.02264-19. (2019)

Spotlight on Research



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

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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

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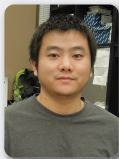
Just visit:

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January Publication



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

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

Immunol. 204(1):58-67. doi: 10.4049/jimmunol.1900539. (2020)

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.**



Back Up Your Stuff!

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.**

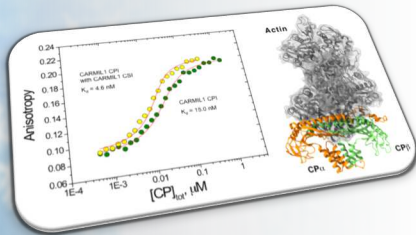
BMBSupport.wustl.edu/backups



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Spotlight on Research



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

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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.**

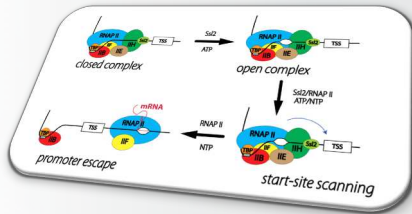
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Spotlight on Research

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

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Holiday Schedule

Holiday	Day	Date Observed at WU
Martin Luther King, Jr.	Monday	January 20 th , 2020
Memorial Day	Monday	May 25th, 2020
Independence Day	Friday	July 3 rd , 2020
Labor Day	Monday	September 7 th , 2020
Thanksgiving Day	Thursday	November 26 th , 2020
Friday after Thanksgiving	Friday	November 27 th , 2020

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December Publication



Welty R., Rau M., Pabit S., Dunstan M.S., Conn G.L., Pollack L., & **Hall K.B.**

Ribosomal Protein L11 Selectively Stabilizes a Tertiary Structure of the GTPase Center rRNA Domain.

J Mol Biol. pii: S0022-2836(19)30710-7. doi: 10.1016/j.jmb.2019.12.010. (2019)

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Farmer's Market

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

**Every Thursday!
10:00 am - 2:00 pm**

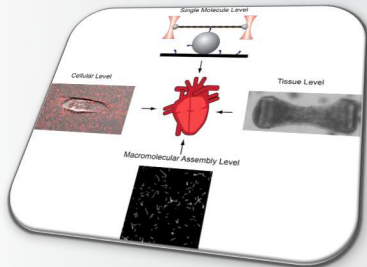


Are you paid **monthly?**

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

Spotlight on Research

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:
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