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
Sparks M.A., Singh S.P, **Burgers P.M.**, & **Galletto R.**

*Complementary roles of Pif1 helicase and single stranded DNA binding proteins in stimulating DNA replication through G-quadruplexes.*

Congratulations to Dr. Elson

Dr. Elliot Elson will be awarded the 2020 Ignacio Tinoco Award from the Biophysics Society.

The award will be presented to Dr. Elson at the Annual Meeting of the Biophysical Society in San Diego, California on February 15-19, 2020.

More information about the award can be found on the web site of our department and the Biophysical Society.
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!
The Research Infrastructure Services (RIS) group has begun piloting WashU ELN, an electronic lab notebook service powered by LabArchives.

The LabArchives Electronic Lab Notebook is a cloud-based application that facilitates the creation, storage, sharing and management of research data.

RIS invites the research community to participate in upcoming LabArchives training sessions.

Visit biochem.wustl.edu/news to read more!
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
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.
Shinn M.K., Kozlov A.G., Nguyen B., Bujalowski W.M., & Lohman T.M.

Are the intrinsically disordered linkers involved in SSB binding to accessory proteins?

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
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
Science Fridays and Happy Hour: EVERY FRIDAY, starting at 4PM.
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
July 23rd, 2019 – **Eric Galburt, PhD**, Associate Professor, Department of Biochemistry and Molecular Biophysics, received a new four year grant award from the National Institute of General Medical Sciences for his research entitled *“Kinetic regulation of mycobacterial transcription”*. 
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
Ordabayev Y.A., Nguyen B., Kozlov A.G., Jia H., & Lohman T.M.

**UvrD helicase activation by MutL involves rotation of its 2B subdomain.**

## Holiday Schedule

<table>
<thead>
<tr>
<th>Holiday</th>
<th>Day</th>
<th>Date Observed at WU</th>
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<tbody>
<tr>
<td>Independence Day</td>
<td>Thursday</td>
<td>July 4th, 2019</td>
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<tr>
<td>Labor Day</td>
<td>Monday</td>
<td>September 2nd, 2019</td>
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<tr>
<td>Thanksgiving Day</td>
<td>Thursday</td>
<td>November 28th, 2019</td>
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<tr>
<td>Friday after Thanksgiving</td>
<td>Friday</td>
<td>November 29th, 2019</td>
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<tr>
<td>Christmas Eve</td>
<td>Tuesday</td>
<td>December 24th, 2019</td>
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<tr>
<td>Christmas Day</td>
<td>Wednesday</td>
<td>December 25th, 2019</td>
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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
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](http://biochem.wustl.edu/spotlight)
Are you paid *monthly*?

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

Running low on storage?

WashU IT Research Storage is available to all Faculty members (totally separate from BMB Network storage).

The first 5TB of storage are provided at no-cost to you!

Visit for more information:
BMBSupport.wustl.edu
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
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
Vishnu C. Damalanka, Scott A. Wildman, & James W. Janetka

Piperidine carbamate peptidomimetic inhibitors of the serine proteases HGFA, matriptase and hepsin

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)