

**Tips on finding an adviser/lab  
for MOL 280/281**

# Learn about faculty research programs



Department Faculty & Research Postdoc Graduate Undergraduate Core Facilities Diversity & Inclusion Friends

## Faculty Profiles

Filter by Faculty Type

Filter by Research Area

Filter by Location

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Faculty

Research Areas






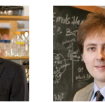

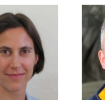
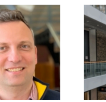





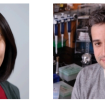

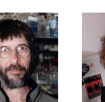





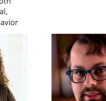











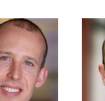

Faculty Publications

Research Labs

Open Positions

Lewis-Sigler Fellows

### Faculty

 Britt Adamson Icahn Laboratory - 144 badamson@princeton.edu The organization of cellular stress response networks and repair mechanisms	 Borrie L. Bassler Thomas Laboratory - 329 bbassler@princeton.edu Cell-to-Cell Communication in Bacteria	 John F. Brooks II Thomas Laboratory - 203 jfb6683@princeton.edu Circadian clock regulation of host-microbe dynamics.	 Martin Jonikas Thomas Laboratory - 303 mjonikas@princeton.edu Biogenesis, function and engineering of the eukaryotic CO2-fixing organelle, the pyrenoid	 Yibin Kang Thomas Laboratory - 255 ykang@princeton.edu Molecular mechanisms of cancer metastasis	 Alexei V. Korennykh Schultz Laboratory - 215 akorennykh@princeton.edu Structural biology and mechanisms of signal transduction in stress and immune responses	 Sabine Petry Schultz Laboratory - 415 spetry@princeton.edu Molecular architecture and function of the microtubule cytoskeleton	 Alexander Ploss Thomas Laboratory - 110 aploss@princeton.edu Human hepatotropic (viral) pathogens	 Ester Pośfal Thomas Laboratory - 234 eposfal@princeton.edu Quantitative approaches for understanding mammalian preimplantation embryo formation
 Rebecca D. Burdine Moffett Laboratory - 159 rburdine@princeton.edu Left-right patterning in the vertebrate embryo	 Michelle Chan Icahn Laboratory - 146 michchan@princeton.edu Mapping of cell fates using CRISPR-Cas9	 Ileana M. Cristea Thomas Laboratory - 210 icristea@princeton.edu Virology meets Proteomics: Cellular Host Defense versus Virus Immune Evasion	 Michael Levine Icahn Laboratory - 140 ml2@princeton.edu How noncoding regions of the genome function to control the differential patterns of gene expression, both spatial and temporal, that define cell behavior	 Ai Jing Lim Schultz Laboratory - 314 aijinglim@princeton.edu Deciphering Maternal-Offspring Immune Crosstalk	 Ricardo Mallerino Guyot Hall - 8 rmallerino@princeton.edu The molecular basis of evolutionary change.	 Paul D. Schedl Guyot Hall - 4 pschedl@princeton.edu Control of gene expression and early development in Drosophila melanogaster	 Jean E. Schwarzbauer Schultz Laboratory - 315 jschwarz@princeton.edu Extracellular matrix regulation of cell functions	 Stanislav Y. Shvartsman Icahn Laboratory - 248 stansy@princeton.edu Dynamics of living tissues
 Danelle Devenport Thomas Laboratory - 247 danelle@princeton.edu The cell biology of tissue polarity and epithelial patterning	 Mohamed S. Donia Icahn Laboratory - AS donias@princeton.edu Small-molecule-mediated interactions in complex microbial communities	 Elizabeth R. Gavis Schultz Laboratory - 416 gavis@princeton.edu RNA biology meets developmental biology: post-transcriptional gene regulation in Drosophila development	 Colleen T. Murphy Icahn Laboratory - 148 ctmurphy@princeton.edu Molecular mechanisms of aging	 Cameron A. Myhrvold Guyot Hall - M161 cmhrvold@princeton.edu CRISPR-based technologies for studying viral and cellular RNA	 Daniel A. Nottelman Thomas Laboratory - 219 dan@princeton.edu Genetic, epigenetic, and environmental interactions with child development and health	 Thomas J. Silhavy Thomas Laboratory - 310 tsilhavy@princeton.edu Protein targeting and signal transduction	 Jeffrey B. Stock Thomas Laboratory - 253 jstock@princeton.edu Membrane receptors and signal transduction	 A.J. te Velthuis Thomas Laboratory - 103 aj.te.velthuis@princeton.edu Innate immune responses and replication of RNA viruses
 Zemer Gitai Thomas Laboratory - 355 zgitai@princeton.edu Bacterial cell biology: fundamentals of cytoskeletal dynamics, polarity, and mitosis	 Frederick M. Hughson Schultz Laboratory - 215 hughson@princeton.edu Structural cell biology	 John R. Jimah Moffett Laboratory jimah@princeton.edu Membrane remodeling in human cells and parasites	 Sabine Petry Schultz Laboratory - 415 spetry@princeton.edu Molecular architecture and function of the microtubule cytoskeleton	 Alexander Ploss Thomas Laboratory - 110 aploss@princeton.edu Human hepatotropic (viral) pathogens	 Ester Pośfal Thomas Laboratory - 234 eposfal@princeton.edu Quantitative approaches for understanding mammalian preimplantation embryo formation	 Jared E. Toettcher Thomas Laboratory - 140 toettcher@princeton.edu Understanding and controlling complex cell behaviors	 Ned Wingreen Icahn Laboratory - 243 wingreen@princeton.edu Biological modeling: intracellular networks, molecular biophysics	 Martin H. Wühr Icahn Laboratory - 246 wuh@princeton.edu Develop and employ quantitative proteomics methods to obtain a systems level understanding of cellular organization


## also Associated Faculty

1) Go to Faculty & Research tab on Dept. of Molecular Biology website

2) Click on faculty picture to learn more about that person's research interests and check out their publications

3) Visit lab website

Damon B. Pfeiffer Professor of Molecular Biology  
Director of Undergraduate Studies



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**Faculty Assistant**  
 Matt Montondo

**Education**  
 M.D., Stanford University Medical School  
 Ph.D., Biochemistry, Stanford University Medical Center  
 B.S., Biology, Yale University

[Curriculum Vitae](#)

**Research Area**  
 Cell Biology, Development & Cancer

**Research Focus**  
 RNA biology meets developmental biology: post-transcriptional gene regulation in Drosophila development

**Website**  
[Gavis lab website](#)

Research Selected Publications Biography Honors & Awards

RNA biology meets developmental biology: post-transcriptional gene regulation in Drosophila development

Development requires that an organism's genes be expressed at precisely the right time and place, and controlling the transcription of genes to produce mRNAs is just the first step in ensuring that the proteins

# Contact Faculty

- Pick faculty who are doing research that sounds interesting to you.
- Read the abstracts from a few of their recent papers.
- Send an email that
  - Introduces yourself: I am a rising sophomore, prospective MOL major, am taking/have taken MOL 214 (or other relevant courses or experiences)
  - Indicates your interest in their research, including a brief explanation of why.
  - State that you want to get an early start on lab research, in fall 2025, and hope that they will consider taking you into their lab.
  - Indicates that you are available to meet in person or by Zoom to discuss opportunities.
  - Indicates that you plan to enroll in the MOL 280/281 sequence.
- Be sure to contact multiple faculty - not everyone has space available
- Be patient - faculty are busy, especially at the end of the academic year
- Send a follow up email if you don't hear back in 7-10 days.
- Understand that some faculty may not respond or may not have space - it isn't personal!