The Graduate Program in Molecular Cell Biology provides students with the best possible training for careers as researchers in the life sciences. Students and faculty in the Program study a wide array of fundamental processes with the goal of understanding how macromolecules orchestrate cellular activities. A key strength of the Program is the diversity of research questions that can be explored in animal, plant, and bacterial cells. Molecular and cellular approaches are essential for revealing the functions of genes identified from sequencing the genomes of humans, mice and model organisms. A common theme is the desire to understand how a gene and its product functions at the cellular level and how this is integrated into the physiology of a tissue, organ and organism. Students participate in pioneering, multidisciplinary research with implications for human health and disease.

**Research Environment**
The Molecular Cell Biology Program conducts research in diverse areas including:
- Cytoskeleton assembly, cell motility and chemotaxis
- Protein trafficking
- Organelle biogenesis
- Signal transduction molecules and pathways
- Apoptosis
- Metabolism
- Extracellular matrix and tissue mechanics
- Vascular biology and coagulation
- Membrane excitability
- Cell cycle regulation
- Mechanisms of transcription and tissue-specific transcription regulation
- Regulation of gene expression and translational control
- Chromosome biology and genome maintenance
- DNA repair, replication and recombination
- New imaging technologies for cells and whole animals
- Mechanisms of enzyme catalysis and inhibition
- Receptor-ligand interactions in regulation of cell growth and cell phenotype
- Prion diseases and neural degeneration

**What is molecular cell biology?**
Molecular cell biology is a discipline in which fundamental cellular processes and the mechanisms that control them are studied at molecular resolution. Cell biologists investigate cellular properties, structure, organelles, and cell division and death, at both the level of single-celled and multicellular organisms. Cell biologists are also interested in understanding the molecular and cellular underpinnings of disease.

**For More Information:**

[http://dbbs.wustl.edu/divprograms/cellbio/](http://dbbs.wustl.edu/divprograms/cellbio/)

To request information: [dbbs-info@wustl.edu](mailto:dbbs-info@wustl.edu)
Faculty Honors
Among the Molecular Cell Biology faculty are the following awardees:
- Members, National Academy of Sciences’ Institute of Medicine (4)
- Members, National Academy of Sciences (4)
- Howard Hughes Medical Institute investigators (3)
- Fellows, American Association for the Advancement of Science (9)
- Pew Scholars (4)
- Searle Scholars (5)
- National Institutes of Health Merit Award recipients (8)
- Kimmel Award recipient
- Keck Young Scholar recipient

Find information on MCB faculty research by visiting:

http://dbbs.wustl.edu/divprograms/cellbio/Pages/Faculty.aspx

Admissions Information:
September 1 - December 1
No Application Fee

benefits
- Health, life and disability coverage are provided.
- Students in the Division enjoy access to all of Washington University’s educational, entertainment and recreational resources.
- The University’s MetroPass provides all students with free use of Metro-Link light rail and Metro buses. MetroLink connects students to all Washington University campuses, Forest Park, Clayton, Lambert Airport and downtown.

stipends and support
- Each student accepted into the Division is guaranteed a generous stipend and tuition is provided for the duration of training as long as all academic standards are upheld.
- Many students hold national fellowship awards, such as those offered by the National Science Foundation.
- Funds are provided for students to attend and participate in a scientific meeting.

DBBS celebrates diversity in all of its forms. We invite all students to apply, especially those from backgrounds historically underrepresented in the sciences such as African, Latin and Native Americans, those with disabilities and individuals from low-income backgrounds.

To learn more about diversity initiatives in DBBS please visit http://dbbs.wustl.edu/divoutreach/Pages/DiversityOutreach.aspx