



Washington University in St. Louis

SCHOOL OF MEDICINE

Biochemistry & Molecular Biophysics Summer Undergraduate Research Program

The Department of Biochemistry and Molecular Biophysics (BMB) at the Washington University School of Medicine in St. Louis invites undergraduate students interested in completing an 8-week research program over the summer of 2022 to apply to our inaugural summer research program.

Students will join a lab that matches their interests where they will complete real-life research at the cutting edge of molecular biochemistry and biophysics. Research areas in the department range from single-molecule spectroscopy to molecular simulations to mitochondrial biochemistry. As well as conducting research, students will also attend workshops that cover various important areas in science, including how to design experiments, how to read papers, scientific communication, and guidance on graduate school applications, etc.

No prior research experience is required, and we strongly encourage applicants from diverse backgrounds to apply. Travel to Saint Louis, housing, local travel, a meal plan, and an additional monthly stipend of \$2000 will be provided (total of \$4000 for the 8-week program). The program will run roughly between June 6th – July 29th, 2022. Applicants must have completed their sophomore year before June 2022, and the ideal candidates will be considering applications to graduate school in the fall of 2022.

To apply please submit an application that includes the following information:

1. A full CV and unofficial academic transcript
2. A letter of recommendation that can speak to why you would be a good applicant for the program
3. A statement of purpose (up to two pages) with the following headed sections:
 - What motivates and excites you about science?
 - Tell us about a time you have faced a challenge and how you overcame it (or are planning/working to overcome it)?
 - Why are you interested in this program?
 - What do you hope to get out of the program?
4. A list of 2-3 labs in the department that you think look interesting (see <https://biochem.wustl.edu/faculty>) and (optionally) information on the type of research you think you'd enjoy and would not enjoy

Application instructions: Please email the application documents to bmbsummerprogram@wustl.edu, and have your letter-writer send their letter to the same address with your name in the subject line.

The application deadline is April 15th. Applicants will be notified of success within two weeks of the submission deadline.

FAQs:

I don't live in Missouri, do I need to cover travel expenses to Saint Louis?

No, we will cover one round trip flight expense to Saint Louis, MO.

I don't really know what 'doing research' means?

Then this program might be for you! One of our goals is to help students with limited opportunities to engage in academic research to get that experience at a world-class scientific institution in a supportive environment to see if they think scientific research might be of interest to them after college.

Are there specific courses you expect students to have taken?

No, but we will use your unofficial transcript to ensure your well-matched in terms of the project or lab you end up perusing.

Does it matter where I am currently a student?

No. We require you to be enrolled in a tertiary education institution, be that a four-year college or two-year community college, but the perceived prestige of your current institution and its geographical location will not be used in selection.

How will applicants be selected?

Selection will be based on identifying students where we feel that the program could be most impactful in a student's career. This does not mean that the students who are selected will necessarily have the most prior experience, the most rigorous course load, or come from the most prestigious schools. Instead, we want to identify students where this experience could be transformative in their academic trajectory. GPA will not be a major determinant of selection.

Where will the research take place?

All research experiences will take place in the Dept. of Biochemistry and Biophysics at Washington University in St. Louis Medical School in Saint Louis, Missouri.

Where will I stay during the research experience?

All students will live in dorms at Washington University in St. Louis. The dorms are a short ride on the Metrolink (overground train system) away from the medical school, and all students will have free public transit provided for the duration of their stay. Students have their own furnished bedroom within a larger suite. Each suite contains a shared bathroom and kitchen. In addition to a kitchen, the program will provide a meal plan and the local dining halls around campus (as well as some off-campus locations) can accept payment via this meal plan.

How many students do you expect to enroll?

We plan to enroll between 4 and 6 students.

Who should write my letter of recommendation?

We suggest having a faculty member who can speak to one or more about your drive to succeed, your strengths in scientific areas, or provide a compelling narrative for why this would be a good opportunity for you.

I'm not the strongest in math, but biochemistry and biophysics sounds like it has a lot of math...?

Yes and no - this depends a lot on where you focus to do research; don't be put off because these areas sound hard! You will receive all the support and training you need to succeed in your research program.

Can first-year undergraduate students apply?

Sadly not right now. We require students to have completed the sophomore year of their undergraduate degree.

I will finish my undergraduate degree in June 2022, can I apply?

No, unfortunately this opportunity is limited to students who will be enrolled in an undergraduate degree over the summer of 2022.

I am an international student, can I apply?

Yes - there are currently no restrictions on student nationality or background, as long as you are currently based in the US. We cannot provide support for visas and international students must be already enrolled in a four-year degree from a recognized institution of higher education.

I want to go to medical school, should I apply?

This program is designed to serve students who are planning to apply for graduate school in the biomedical sciences (broadly), or for students who are interested in learning about academic research to guide that decision.

How might the program be affected by COVID-19?

We still hope to bring students safely to campus, we may move to a remote or partially remote experience should events necessitate that transition.

How are lab placements made?

Based on the students' research interests, background, and submitted labs of interest, accepted students will complete short standardized interviews with several PIs and based on those interviews final assignments will be made.

What is the time commitment?

This is a full-time (40/week) rigorous research experience. Students are unable to take summer classes, nor work additional jobs during the summer.

Can I come for part of the program?

No. Eight weeks is already a short period of time for research, and reducing that further would make achieving the goals of the program impossible. Students must be willing to commit to being in St. Louis between June 6th and July 29th inclusive. We plan to fly all students in on June 2nd so they can attend orientation on Friday, June 3rd.

I have never been to Saint Louis, what is there to do during our off time?

There are a host of activities to do in Saint Louis and all very close to campus. Please visit this webpage for more information on Saint Louis.

<https://dbbs.wustl.edu/resources/VisitingStLouis/Pages/default.aspx>