

Biotechnology and Russian



**A Summer Science and Language Program
for Undergraduates at Moscow State University**

May 17 - June 23, 2012



Department of Microbiology, Immunology & Tropical Medicine

www.gwumc.edu/microbiology

In our contemporary international society and global economy, an understanding of the cultural context of science is essential for the future biomedical researchers of our Nation. The *Biotechnology and Russian* program sponsored by The George Washington University provides undergraduate life science majors with a first-hand experience in the Russian research environment, an introduction to the culture of science at our partner Moscow State University, and additional Russian language training. The program also seeks to provide students an opportunity to initiate personal relationships that will better enable them to collaborate with foreign scientists in the future.

Biotechnology and Russian is supported by a grant from the U.S.-Russia Program of the U.S. Department of Education's Fund for the Improvement of Postsecondary Education. The program encourages applications from U.S. science students with intermediate-level proficiency in the Russian language to participate in a program that combines advanced language study in Moscow with advanced training in biotechnology at one of Russia's leading research institutions. The partnership between The George Washington University and Moscow State University also provides an opportunity for Russian students in Moscow to learn side-by-side with U.S. students during a two-week biotechnology laboratory course.

Program Essentials

- Up to seven students will be selected to participate for the Summer 2012 program.
- Participants will be provided with round-trip coach airfare from their home city to Moscow; room and board for five weeks; and paid tuition for language and science courses.
- The program included intensive instruction in Russian at the Russian Language Centre of Moscow State University. Instruction will be supplemented with sessions on Russian scientific terminology.
- Students will also participate in an advanced biotechnology lecture/laboratory course, conducted in Russian, with biology students from the Faculty of Biology. They will also be involved in the life of The Faculty of Biology by attending seminars and other events.
- Participants are responsible for the cost of obtaining a U.S. Passport and a visa from the Russian Federation as well as incidental expenses. Students have the option of traveling to St. Petersburg for a long weekend in the middle of the program.
- The terms of the student visa issued by the Russian Federation do not allow students to extend their stay in Russia beyond the official end of the program.
- Students must be able to participate in the entire program.

Program Dates

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| Thursday, May 17 | Students travel to Moscow |
| Friday, May 18 | Students arrive in Moscow |
| Saturday /Sunday, May 19-20 | Orientation to Program, University and City |
| Monday, May 21 | Program begins |
| Friday, June 22 | Program ends |
| Saturday, June 23 | Students depart Moscow State University |

Student Eligibility

- Enrolled undergraduate student in good academic standing at The George Washington University or a U.S. member institution of the Association for Slavic, East European, and Eurasian Studies (ASEEES)* in 2010 and 2011.
 - * Amherst C; Arizona State U; Brigham Young U; Brown U; Bryn Mawr C; Columbia U; Dartmouth C; The George Washington U; Georgetown U; Harvard U; Haverford C; Indiana U; Michigan State U; New York U; Northern Illinois U; Princeton U; Rutgers, The State University of New Jersey; Stanford U; Stetson U; U of California, Berkeley; U of Illinois, Urbana-Champaign; U of Kansas; U of Michigan; U of North Carolina; U of Oklahoma; U of Oregon; U of Pittsburgh; U of Texas, Austin; U of Washington; U of Wisconsin-Madison; US Air Force Academy; Vassar C; Villanova U; Webster U; Wittenberg U; Yale U
- Majoring in Biology, Biochemistry, Molecular Biology, Biomedical Engineering or a program where experience in biotechnology would enhance the student's education.
- Completed general biology and at least one upper-level course in cellular/molecular biology.
- Completed at least two semesters of college-level Russian or equivalent; preference will be given to students with strong language capabilities and potential.
- Social and cross-cultural sensitivity; maturity; ability to adapt successfully to a different environment and a new education system; ability to exhibit appropriate behavior in a variety of situations and to abide by regulations of the program and Moscow State University.

Moscow State University

Lomonosov Moscow State University is the largest and oldest University of Russia. It was founded in 1755 by the poet and scientist Mikhail Lomonosov. More than 40000 graduate and postgraduate students and 7,000 undergraduates are enrolled in almost 40 different Faculties. The campus is located in the middle of a huge park at the outside of the city center on the former Lenin Hills, a 15 minute metro ride from Red Square. The large campus includes libraries hosting more than 6 million books, internet cafés, kiosks, banks, cinemas, theaters, as well as sport and leisure facilities.

The language program will be provided by the highly-regarded Russian Language Centre of Lomonosov Moscow State University (MGU-Russian). The Centre was established 20 years ago and each year provides instruction to 700 students from more than 50 countries. Classes are taught by faculty of Moscow State University.

Comprising 28 departments, the Faculty of Biology has over 50 research laboratories as well as shared core facilities supporting electronic microscopy, experimental animal research, sediment analysis, and isotope analysis. The Faculty has active affiliations with a biological station in Zvenigorod, a marine station on the White Sea, the Muzeum of Zoology, the Botanical Gardens on Vorobyevy Hills and Prospect Mira, and a wildlife rehabilitation and research centre.

The Faculty's comprehensive research program includes work on physical and biochemical principles of self-organization in biological systems (material and energetic component relationships in complex biological systems); comparative physiology and biochemistry of microorganisms; protein and nucleic acids structure, synthesis and functions; genetic engineering on pro- and eukaryotic organisms; histogenesis of connective tissue cells; biological membrane structure and functions; energetic processes of photosynthesis, human and animal physiology (physiology of cardiovascular system and visceral systems, blood physiology); genetics; evolutionary and ecological physiology; and the theoretical basis for modeling of biological systems.

Application Process and Deadline

Application deadline: Friday, January 13, 2012; 5:00 p.m. Eastern Standard Time

The following items should be submitted by the application deadline:

- A completed application form* submitted by the student by e-mail as a PDF that includes responses to the following:
 - Rationale for pursuing this study abroad opportunity and its relevance to your long-term educational and career plans.
 - A description of prior Russian language study.
 - A description of prior foreign study/travel experience.
 - A description of past experience that provides evidence of your ability to adapt successfully to challenging situations and requirements.
 - A description of prior laboratory research experience.

- Letters of recommendation submitted by e-mail by the letter writer as a PDF:
 - One letter of recommendation from a science professor or research mentor who can provide insight into your potential for a career in biomedical research.
 - One letter of recommendation from a foreign language professor who can assess your language proficiency and your potential to benefit from an intensive, immersion experience.

- An official transcript from the college or university you are currently attending. The transcript should be sent by mail directly by your institution's registrar.

Your application and letters of recommendation should be e-mailed to:

jsich@gwu.edu

The official transcript should be mailed to:

Dr. Jeffrey Sich, Director of Educational Programs
Dept. of Microbiology, Immunology & Tropical Medicine
The George Washington University Medical Center
2300 Eye Street, NW; Ross Hall Room 731B
Washington, DC 20037

Selection Process

- All application materials must be received by the stated deadline. Only complete applications (letter of application; two letters of recommendation; official transcript) will be reviewed.
- Phone interviews will be conducted with top candidates in late January to assess the student's Russian language ability and potential to benefit from the program's scientific experience.
- All applicants will be notified of their status on February 1.
- Students who are offered a position will have one week to formally accept the offer. A waiting list will be used to fill any remaining positions.

Additional Information

Questions about the program may be directed to Michael Bukrinsky, M.D., Ph.D.:

E-mail: mtmmib@gwumc.edu Phone: 202-994-2036

Questions about the application process may be directed to Jeffrey Sich, Ph.D.:

E-mail: jsich@gwu.edu Phone: 202-994-7613