University	Peter the Great St. Petersburg Polytechnic University
Level of English proficiency	Fluent
Courses and fields of studies offered for applicants	1.5.3 Molecular biology
Projects for potential academic supervision	Study of the biological activity of recombinant immunobiological preparations Development of recombinant veterinary vaccines virus Investigation of the biological activity of recombinant immunobiological preparations
Topics offered for prospective researches	Molecular biology, molecular virology, influenza virus, phylogeny of viruses, RNA interference, intracellular delivery of nucleic acids, development of recombinant immunobiological products
 Research supervisor: Brodskaia Aleksandra Valerievna, PhD in biology ("Research Institute of Influenza" the Russian Health Ministry)	*Biochemistry and Molecular Biology*
	Study program highlights Interdisciplinary approach to molecular cell biology
	Supervisor's specific requirements: Biological, biotechnical, interdisciplinary education with deep knowledge of mathematics, physics, chemistry and biology. Experience working in a «wet» biological and chemical laboratory
	Supervisor's publications 1. Aleksandra V Brodskaia, Alexander S Timin, Andrey N Gorshkov, Albert R Muslimov, Andrei B Bondarenko, Yana V Tarakanchikova, Yana A Zabrodskaya, Irina L Baranovskaya, Eugenia V Il'inskaja, Elena I Sakhenberg, Gleb B Sukhorukov, Andrey V Vasin. Inhibition of influenza A virus by mixed siRNAs, targeting the PA, NP, and NS genes, delivered by hybrid microcarriers. Antiviral Research 2018, 158: 147-160. https://doi.org/10.1016/j.antiviral.2018.08.003 IF=4,9, Q1 2. Raik, Sergei V. ; Andranovitš, Stanislav ; Petrova, Valentina A. ; Xu, Yingying ; Lam, Jenny Ka-Wing ; Morris, Gordon ; Brodskaia, Alexandra V. ; Casettari, Luca ; Kritchenkov, Andreii S. ; Skorik, Yury A./ Comparative Study of Diethylaminoethyl-Chitosan and Methylglycol-Chitosan as Potential Non-Viral Vectors for Gene Therapy. Polymers. 2018 ; Vol. 10, No.4. https://doi.org/10.3390/polym10040442 IF=3,54, Q1 3. Purvinsh, L.; Gorshkov, A.; Brodskaia, A.; Vasin, A. Extracellular Vesicles in Viral Pathogenesis: A Case of Dr. Jekyll and Mr. Hyde. Life 2021, 11, 45. https://doi.org/10.3390/life11010045, Q1 4. Zabrodskaya, Y.A., Gorshkova, Y.E., Shyrigina, A.-S., Brodskaya, A.V., Bobkov, D.E., Gorshkov, A.N., Bondarenko, A.B., Lebedev, D.V. & Egorov, V.V. Model System for Antiviral Peptide Transport Characterization. Crystallography Reports, 2021, vol. 66, no. 6, pp. 1013-1022.DOI 10.1134/S1063774521050242 5. Gorshkov A, Purvinsh L, Brodskaia A, Vasin A. Exosomes as Natural Nanocarriers for RNA-Based Therapy and Prophylaxis. Nanomaterials. 2022; 12(3):524.

	https://doi.org/10.3390/nano12030524, Q1