



VINOGRADOVA LAB

Chemical Immunology and Proteomics



We are hiring!

Position: Postdoctoral Associate

Laboratory of Chemical Immunology and Proteomics, The Rockefeller University

Apply: Send your CV, cover letter, and 3 letters of reference to Prof. Ekaterina (Katya) Vinogradova to vinograd@rockefeller.edu

The Rockefeller University is the world's leading biomedical research University. Our groundbreaking discoveries in basic and clinical research are transforming medicine. We share a singular commitment to advancing science for the benefit of humanity. Our collaborative culture drives each of us to achieve a higher level, fueling the breakthroughs for which we are known.

We seek a Synthetic Chemistry Postdoctoral Associate to join the newly established Laboratory of Chemical Immunology and Proteomics. This role will have a significant impact on the long-term design and culture of the Laboratory. As a founding member of the laboratory, you will have an opportunity to work directly with the Head of the Laboratory establishing both the organization and culture of the Laboratory and will have extensive opportunities to gain new skills through interactions with colleagues and collaborators in other labs. This is an exciting opportunity for a candidate who is interested in working in an interdisciplinary environment, contributing with their synthetic skillset, while gaining expertise in proteomics methods and chemical biology and immunology.

Laboratory Description

The laboratory of Chemical Immunology and Proteomics applies synthetic chemistry, chemical biology, and proteomics methods toward the goals of discovering and characterizing (a) novel selective chemical probes that perturb the functions of key proteins regulating immunological and neuroimmunological processes; (b) new mechanisms for small molecule-induced protein degradation; and, more broadly, (c) the pharmacological landscape and signal transduction pathways in immune and neuroimmunological disorders. Achieving these objectives is enhanced through the development of new chemical scaffolds targeting cysteine and other nucleophilic residues. By developing and applying innovative chemical proteomic profiling technologies, we aim to enrich our understanding of the molecular differences between pathologic and physiologic states in immune cells and cells of the nervous system (including microglia and oligodendrocytes, which are implicated in the autoimmune disorder multiple sclerosis). The lab also plans to explore how those differences can be further leveraged from a pharmacological perspective for the development of new therapies that not only target specific immune cell subtypes, but also the defined activation states of these cells. Please see www.vinogradovalab.com for more information.

Responsibilities

- Development and execution of clear synthetic routes using state-of-the-art synthetic methodologies with complete independence;
- Purification of the products of multiple-step syntheses on milligram to gram reaction scales;
- Characterization of the products of chemical reactions using appropriate instrumentation including, but not limited to, NMR, IR spectroscopy, mass spectrometry and elemental analysis. (1D and 2D NMR, HPLC, LC-MS, etc.)

- Design and interpretation of SAR with a clear understanding of the biological data;
- Keep current with the chemistry literature as well as key biology publications related to ongoing projects;
- Mentor/lead/manage other chemistry team members;
- You will have the opportunity and be encouraged to develop both independent and collaborative research projects within the scope of the Laboratory's interests, under the mentorship of the Head of Laboratory.

Job Requirements/Qualifications

- 3+ years of research experience in organic chemistry, including multi-step organic synthesis, in either an academic or industry setting;
- Thorough working knowledge of organic chemistry, experience with modern chromatographic and analytical techniques, including flash chromatography, HPLC, LCMS, NMR, and elemental analysis for compound characterization;
- Ability to perform purification and characterization of multi-step syntheses on milligram to gram reaction scales, chromatography and distillation techniques, handling of air and moisture sensitive compounds;
- Must be detail-oriented and be able to work independently as well as part of a multi-disciplinary team in a fast-paced, highly collaborative environment;
- Consistent track record of academic accomplishments (e.g., peer-reviewed publications and/or patents);
- Initial understanding of biological and pharmaceutical principles and a working knowledge of the use of structure-based or other computer-aided drug design tools;
- Effective written and oral communication skills;
- Critical thinking to resolve synthetic and chemical biology challenges;
- PhD degree in Organic chemistry, Medicinal Chemistry, Pharmacology, Chemical Biology, or related field required.

How to Apply

We offer a competitive salary, comprehensive benefits, and a collaborative work environment.

Please e-mail your CV and a cover letter to Prof. Ekaterina (Katya) Vinogradova (vinograd@rockefeller.edu) and arrange for 3 reference letters to be sent directly to Prof. Vinogradova.

The Rockefeller University is an Equal Opportunity Employer - Minorities/Women/Disabled/Veterans