University of Rochester Medicine
Golisano Children's

Division of Pediatrics Nephrology

Oleh Akchurin, MD, PhD
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POST-DOCTORAL POSITION - Iron Metabolism and Kidney Disease

The Akchurin Laboratory at the University of Rochester Medical Center is seeking a **highly motivated Research Specialist or Postdoctoral Research Associate** to join our NIH-funded research program investigating the role of iron metabolism in kidney disease.

Our research focuses on understanding how altered iron handling contributes to kidney injury and fibrosis, as well as anemia in chronic kidney disease (CKD). We are particularly interested in the interactions between iron metabolism, immune cells, and renal tissue, and how these pathways might be targeted to improve outcomes for patients.

Current projects investigate the effects of iron availability and intracellular iron handling on chronic kidney injury, including the roles of macrophages, renal tubular cells, and molecular pathways regulating iron storage and transport.

This is an opportunity to take ownership of meaningful research and help turn scientific discoveries into treatments that could benefit millions of people.

Research Environment

Our work integrates experimental models of kidney disease via applying various molecular and cellular biology techniques, flow cytometry, cell culture, and analysis of human biospecimens. The laboratory combines mechanistic studies with clinically relevant questions.

We value **scientific curiosity, initiative, motivation, independence, and a collaborative approach to research.**

Responsibilities

- Design, perform, and troubleshoot laboratory experiments.
- Conduct studies using experimental models of kidney disease, including mouse models and cell culture systems.
- Perform **flow cytometry**, including sample preparation, immunophenotyping, data acquisition, and analysis.
- Apply molecular and cellular biology techniques to investigate iron metabolism, inflammation, and kidney injury.
- Analyze and interpret experimental results and contribute to research presentations and publications.
- Participate in laboratory organization and maintenance, research protocol development, and training of junior laboratory members.
- Collaborate with other researchers and institutional core facilities.

Required Qualifications

- **Hands-on experience with flow cytometry**, including experimental preparation, data acquisition, and analysis.
- Prior laboratory research experience in molecular biology, cell biology, immunology, physiology, or a related biomedical field.
- Basic statistical analysis skills, experience analyzing experimental data
- Strong motivation to conduct research, learn new techniques, and contribute to scientific discovery.
- Ability to work independently, troubleshoot experiments, and collaborate effectively within a research team.
- Outstanding organizational, analytical, and communication skills.
- Strong work ethic, scientific integrity, and responsible conduct of research.

Educational background: Candidates with bachelor's, master's, or doctoral degrees in relevant scientific disciplines will be considered, with the position and responsibilities determined by qualifications and experience. A PhD or equivalent doctoral degree is required for appointment as a Postdoctoral Research Associate.

Preferred Qualifications

Experience in one or more of the following areas is particularly welcome:

- Iron metabolism, kidney biology, inflammation, or tissue fibrosis.
- Experience with tissue dissociation and isolation of viable primary cells from tissues.
- Fluorescence-activated cell sorting (FACS).
- Mouse models of human disease and animal experimentation.
- Cell culture and molecular biology techniques.
- Bioinformatics / computational analysis of large-scale biological data.
- First-author publications.

Prior experience in kidney disease or iron biology is an advantage but is not required. We are particularly interested in candidates who demonstrate enthusiasm, intellectual curiosity, and a strong commitment to research.

How to Inquire

Interested candidates are encouraged to email a CV or résumé and a brief description of their research experience, technical skills, and scientific interests to: **Oleh_Akchurin@urmc.rochester.edu**

Please describe why this research opportunity interests you.