Nikolay Gresko

nikolay.gresko@gmail.com •
New Haven, Connecticut 06511, US • 12038240277

Results-driven Medical Scientist with extensive international experience managing complex biomedical research projects.

Proven history of dedication and success, accredited by expediting multiple projects in pharma preclinical studies as a Deputy Senior Manager. In-depth knowledge of biology and physiology with associated techniques and processes. Capable of assessing disease biology, drug properties, and pharmacology to coordinate drug discovery and development. Offering technical leadership to establish SOPs for clinical testing by collaborating with multi-disciplinary functions. Articulate communicator and speaker with demonstrated ability to communicate findings with medical and applied basic science professionals. Keen learner with proficiency in learning new skills/technologies and adapting to new environments.

Areas of Expertise

- Project Lifecycle Management
- Laboratory Management
- Novel Method Implementation
- Research & Development
- Leadership & Staff Training
- Strategic Planning & Execution
- Drug Development Coordination
- Regulatory Compliance
- Reporting & Documentation

Career Accomplishments

- Directed scientist on collaborative preclinical study projects between Yale and EpiGen pharmaceuticals from 6/2015 to 3/2017 (project fibrosis), Yale and GlaxoSmithKline PKD section from 4/2017 to 1/2018, and Yale and Vertex pharmaceuticals since 2/2018.
- Discovered and characterized a molecular pathway link that associates salt sensitive hypertension with hyperglycemia in type2 diabetes patients.
- Carried out analytical mutagenesis of KIR2DL4 receptor, which resulted in identifying and characterizing retention signal at cytoplasmic tail of receptor in NK cells.

Career Experience

Research Faculty Scientist **10/2017 – Present**
Postdoctoral Fellow/Associate, Dpt. of Cellular and Molecular Physiology, Yale School of Medicine, 10/2011 – 10/2017

Oversaw scheduled project of creating transcription database by using material acquired from biologic specimen with genetically manipulated expression of PKD1 gene, a key regulator of polycystic kidney disease development. Implemented several new techniques such as RNA library preparation, RNAseq., QPCR, acetylation assay, acetyl-coA measurement assay, hypoxia/hyperoxia assay, 3D matrigel cell culture, confocal laser scanning microscopy, mitochondria activity assay, Seahorse cell metabolism assay, site directed mutagenesis, survival small rodent surgeries, and fluorescence based biosensor kinase assay.

Key Contributions:

- Highlighted several targets within database, which resulted in initiating research projects regarding ADPKD (autosomal dominant polycystic kidney disease) and cell metabolism, control of proliferation, and oxidative phosphorylation.
- Delivered leadership to design, integrate, and manage several research projects, while supervising MD and undergraduate students as well as PhD students.
- Upskilled technical and research personnel via training and supervision.
- Played a key role as Speaker at ASN kidney week in 2016, FASEB PKD meeting on 7/2017, American PKD society meeting in 2018, and ASN kidney week in 2018.
- Completed multiple publications (www.ncbi.nlm.nih.gov/pubmed/30215740) along with two additional manuscripts (currently at final stages of preparation).

...continued...

PhD candidate (Doctoral Research) **9/2005 – 9/2011**
Faculty of Mathematics & Natural Sciences, University of Zurich, Switzerland **/ Medical Faculty,** University of Fribourg, Switzerland

Led designated project, investigating mechanisms of renal epithelial sodium channel intracellular trafficking along with function using biochemistry, molecular biology, and electrophysiology techniques. Focused on comprehending molecular link between sodium homeostasis and glucose metabolism in context of metabolic syndrome. Integrated advices provided by scientific Ph.D. committee, while searching and applying new research tools/techniques. Offered supervision and guidance to undergraduate and summer students. Ensured robust maintenance of functional electrophysiology and tissue culture facilities in lab. Led students in using BL2+ retroviral gene overexpression setup, while supporting senior teacher as a Teaching Assistant on normal histology I-III course for medical students. Used multiple new techniques, namely: small animal surgery and microperfusions, cell surface labeling via primary amines/sugars biotinylation approach, transepithelial ion flux recordings using type chamber, lentiviral overexpression system, and Li-COR infrared imaging system.

Key Contributions:

- Served as a member of examine committee for normal histology from 2007 to 2010.
- Acquired certification in Ph.D. dissertation defense as well as project management certification in research.
- Delivered detailed publications (www.ncbi.nlm.nih.gov/pubmed/20861076, www.ncbi.nlm.nih.gov/pubmed/23447069, and www.ncbi.nlm.nih.gov/pubmed/22466139).
- Developed molecular model that explained a key synergy between renal sodium and body glucose homeostasis regulation.

Visiting Research Fellow (Research for MD Diploma) **2/2004 – 5/2005**
Institute for Cancer Research, Fox Chase Cancer Center, Philadelphia, PA

Examined molecular mechanisms of intracellular trafficking along with function of KIR2DL4 receptor in human natural killer cells. Maintained seamless progress of scientific project in compliance with instruction of supervising investigator, while executing all steps of analytical mutagenesis, constructs generation, expression of constructs in experimental cell model, functional cytotoxicity assay. Leveraged from new techniques such as FACS analysis and sorting, standard biochemistry/molecular biology techniques, tissue cell culture, radioactive cytotoxicity assay, recombinant interferon gamma production and purification, GST-tag technique of recombinant proteins purification, immunofluorescence, bacteria transformation, transfection of eukaryotic cells, and gene transduction using retroviral technique.

Key Contributions:

- Recognized for exceptional performance which led to selection as part of research exchange program, initiating research for MD thesis at a leading medical institutions, Fox Chase Cancer Center in Philadelphia, PA.
- Acquired certification in M.D. dissertation defense.

*Prior experience as **Part-time Research Associate** from 12/2000 to 12/2003 at Institute of the Bioorganic Chemistry, Russian Academy of Science, Moscow.*

Education

Postdoctoral training, Yale University School of Medicine, United States

Ph.D. Natural Sciences (Integrative Human Medicine & Physiology), University of Zurich, Switzerland

M.D. (focus in Medical Biochemistry, Special Research Training in Molecular Immunobiology), Russian State Medical University, Moscow, Russia

Publications

Polycystin-1 regulates bone development through an interaction with the transcriptional coactivator TAZ | Human Molecular Genetics, 2019

Rapid dephosphorylation of the renal sodium chloride cotransporter in response to oral potassium intake in mice. | Kidney International, 2013

Immunofluorescent localization of the Rab-GAP protein TBC1D4 (AS160) in mouse kidney. | Histochemistry Cell Biology 2012

In vivo nuclear translocation of mineralocorticoid and glucocorticoid receptors in rat kidney: differential effect of corticosteroids along the distal tubule. | AJP Renal Physiology, 2010