Petro Starokadomskyy, PhD

Phone: 972-339-2588; e-mail: starokadomskyy@gmail.com

SUMMARY

For the last 5 years, I have focused on the molecular mechanisms of immune/autoimmune disorders in human with significant success in the discovery of novel inflammatory targets and mechanisms (**two first-authored publications in Nature Immunology and JCI**). Main areas of my expertise:

- Target discovery in immune- and oncology-related signaling pathways using RNAi, CRISPR, immunoassay analysis, and NGS techniques.
- Biochemical characterization of signaling pathways and protein networks in cancer and inflamed cells.
- Establishment of cellular and animal experimental models of diseases, including primary human cells.

EXPERIENCE

UT Southwestern Medical Center (Dallas, TX). *Mentor – Prof Ezra Burstein* **2010-present**

Research Scientist / Postdoctoral Researcher II

- Discovered the causative gene and novel molecular mechanism leading to multiple inflammatory disorders in patients with XLPDR syndrome, a primary immunodeficiency with autoinflammatory features. The discovery provides the new therapeutic target for treatment of immune disorders like Aicardi-Goutier syndrome and SLE (*article has been submitted*).
- Discovered the new regulatory role of CCDC22 protein in the human immune response using primary and immortalized cell lines from patients with XLID (*published in JCI*).

Weizmann Institute of Science (Israel). *Mentor – Prof David Wallach* **2007-2010**

Postdoctoral Fellow

- Identified a mechanism regulating the expression of a major inflammatory regulator NIK (MAP3K14).
- Invented and patented as a single author a new technology of Ultrasound-Assisted Immunoassay.

Institute of Molecular Biology and Genetics (Ukraine). *Mentor – Prof Vitali Kordium* **2005-2007**

Staff Scientist / Doctorate Student

- Developed intein-based technology for affinity purification of recombinant human growth hormone.
- Developed single-step folding protocol for a recombinant β-interferon.

Phage Biotechnology Corporation (Ukraine). **2000-2005**

Senior Engineer-biologist

- Designed and executed a successful preclinical study of chewing gum with insulin for diabetes-associated oral disorders.
- Patented the insulin-containing chewing gum as a new concept of anti-diabetic drug.

EDUCATION

Ph.D. Biotechnology	2006	Institute of Molecular Biology and Genetics, Kiev, Ukraine **GPA – 5.0** (5.0 is the top score)
M.S. Biochemistry	1999	National University 'Ivan Franko', Lviv, Ukraine **GPA – 4.75** (5.0 is the top score; top 10% of students)

SELECTED PATENTS AND PUBLICATIONS:

Patent applications:

1. **Starokadomskyy P.** Ultrasound assisted immunoassay. US Patent Application 13386881 (**2010**); EP Patent 2459999 (**2012**).

Publications (out of total 10):

1. **Starokadomskyy P**, Gluck N, et al. (**2013**). CCDC22 deficiency in humans blunts activation of pro-inflammatory NF-kB signaling. Journal of Clinical Investigation, 123(5): 2244-2256.

2. **Starokadomskyy P,** Burstein E. (**2015**). Detection of IκB degradation dynamics and IκB-α ubiquitination. Methods in Molecular Biology, 1280: 15-24.

3. Li H, Chan L, Bartuzi P, Melton SD, Weber A, Ben-Shlomo S, Varol C, Raetz M, Mao X, **Starokadomskyy P,** et al. (**2014**). COMMD1 restrains pro-inflammatory gene expression and protects from colitis and cancer progression. Gastroenterology, 147(1):184-195.

SELECTED HONORS AND AWARDS

2006 First place award in the category of "Best cycle of scientific publication in the field of biotechnology" given by Institute of Molecular biology and Genetics (Ukraine)

2005 Yearly National Scholarship Award from Worldwide Federation of Scientist (Switzerland)

SKILLS

- *Molecular Techniques*: RNAi, CRISPR, flow cytometry, confocal and fluorescence microscopy; immunologic techniques including ELISA, Western blotting, Immunofluorescence; Multiplex assay, PCR, ChIP, microarray, DNA sequencing, DNA/RNA extraction, RNA-seq, microarray.
- *Cell biology*: establishing primary and immortalized cell lines including mouse and human, mammalian cell culture, viral works, cell-based assays, confocal microscopy.
- *Animal Experience*: implementing wild-type and transgenic murine, rat, and hamster disease models.
- *Software*: Vector NTI, Total Lab, LSM Image Browser, ImageJ, genomic and proteomic databases.

LEADERSHIP AND ORGANIZATION EXPERIENCE

Member of Scientific Expert Panel of the Skolkovo Foundation **2012-present**

- Scientific evaluation of Innovation Projects, Grant Applications, and Grant Reports in fields of biotechnology and pharmacology.

Cofounder and Editor-in-Chief of scientific internet journal "Biomolecula. Ru" **2006-present**

- Evaluation and editing of submitted manuscripts.
- Organizer and Jury member of the Annual Scientific conference "Biomolecula.ru".

TEACHING AND SUPERVISING ACTIVITIES **2005-present**

- Four summer students successfully presented their projects under my supervision;
- One master's-degree student successfully graduated his Master's Thesis in Molecular Biology as my trainee.