

## Kuznetsova, Irina, PhD

### Personal Data

Title	PhD
First name	Irina
Name	Kuznetsova
Current position	Postdoctoral researcher
Current institution(s)/site(s), country	Department of Medicine V Internal Medicine, Infectious Diseases and Infection Control, University Hospital Giessen and Marburg (UKGM), University of Gießen (JLU) Germany
Identifiers/ORCID	0009-0000-7109-3177

### Qualifications and Career

Stages	Periods and Details
Degree programme	<u>2001-2005</u> : <b>Bachelor of Science</b> , Sankt-Petersburg State University, Faculty of Biology & Soil Science, Department of Microbiology, Sankt-Petersburg, Russia
	<u>2005-2007</u> : <b>Master of Science</b> , Sankt-Petersburg State University, Faculty of Biology & Soil Science, Department of Microbiology, Sankt-Petersburg, Russia
Doctorate	<u>02/2015-05/2020</u> : <b>Virology</b> (PhD), University of Gießen, Institute of Medical Virology Mentor: Prof. Dr. Stephan Pleschka
Stages of academic/professional career	<u>since 02/2019</u> : <b>Postdoc</b> , Department of Medicine V Internal Medicine, Infectious Diseases and Infection Control, UKGM/JLU, Germany, group of Prof. Dr. Dr. Susanne Herold <u>02/2008 - 02/2013</u> : <b>Research fellow</b> , Medical University of Vienna, Department of Surgery, Vienna, Austria group of Ao. Univ.-Prof. Dr. Michael Bergmann <u>10/2004-01/2008</u> <b>Technical assistant</b> , Research Institute of Influenza virus, Department of Biotechnology, Sankt-Petersburg, Russia group of Prof. Dr. Anna Sominina

### Supplementary Career Information

1 child, born in 03/2013

Full-time parenting periods: 03/2013-12/2014

### Activities in the Research System

#### Memberships in scientific societies and committees

since 2025      Deutsche Gesellschaft für Pneumologie und Beatmungsmedizin (DGP)  
 since 2026      The European Respiratory Society (ERS)

### Supervision of Researchers in Early Career Phases

Name	Title of the PhD thesis	Time to graduate	Further career
Kira Marie Wiehen	Human iPSC-Derived Lung Organoid Model for Respiratory Virus Research	since 09/2025	
Zahra Ibrahim	Development of protocol for cryopreserving of human iPSC-derived lung organoid	since 01/2026	

### Scientific Results

#### Category A (10 most important papers)

1. Sturlan S, Sachet M, Baumann S, **Kuznetsova I**<sup>1,2,4</sup>, Spittler A, Bergmann M. Influenza A virus induces an immediate cytotoxic activity in all major subsets of peripheral blood mononuclear cells *PLoS One*. 2009;4(1):e4122, [OA]
2. Wolschek M, Samm E, Seper H, Sturlan S, **Kuznetsova I**<sup>2,4</sup>, Schwager C, Khassidov A, Kittel C, Muster T, Egorov A, Bergmann M. Establishment of a chimeric, replication-deficient influenza A virus vector by modulation of splicing efficiency. *J Virol* 2011 (85): 2469-2473, [OA]
3. **I.Kuznetsova**<sup>1,2,4,5</sup>, A-P.Shurygina, B.Wolf, M.Wolschek, F.Enzmann, A.Sansyzbay, B.Khairullin, N. Sandybayev, M. Stukova, O. Kiselev, A.Egorov, M. Bergmann Adaptive mutation in NEP allows stable transgene expression in a chimeric influenza A virus vector *J Gen Virol*. 2014;95(Pt 2):337-49
4. T. Aschacher, A. Krokhin, **I. Kuznetsova**<sup>1,2,4</sup>, J. Längle, V. Nebolsin, A. Egorov, M. Bergmann Effect of the antiviral drug Ingavirin® (imidazolyl ethanamide pentandioic acid) on the interferon status of cells under conditions of viral infection. *Epidemiology and Infectious Diseases*. 2016; 21(4), [OA]
5. Hock K, Laengle J, **Kuznetsova I**<sup>1,2,4</sup>, Egorov A, Hegedus B, Dome B, Wekerle T, Sachet M, Bergmann M. Oncolytic influenza A virus expressing interleukin-15 decreases tumor growth in vivo. *Surgery*. 2017 Mar;161(3):735-746, [OA]
6. **Kuznetsova I**<sup>1,2,4,5</sup>, Arnold T., Aschacher T., Schwager C., Hegedus B., Garay T., Stukova M., Pisareva M., Pleschka S., Bergmann M., Egorov A. Targeting an Oncolytic Influenza A Virus to Tumor Tissue by Elastase. *Mol Ther Oncolytics*. 2017 Sep 8;7:37-44. doi: 10.1016/j.omto.2017.09.002, [OA]
7. Dam S., Weber A., Saul V V., **Kuznetsova I**<sup>1,2,4</sup>, Müller C., Fritz-Wolf K., Becker K., Gu H., Pleschka S., Kracht M., and SCHMITZ M. L. Phosphoproteome analysis of cells infected with adapted and non-adapted influenza A virus reveals novel pro- and antiviral signaling networks. *Journal of Virology* 93(13), April 2019, doi: 10.1128/JVI.00528-19, [OA]
8. Peteranderl C, **Kuznetsova I**<sup>1,2,4</sup>, Schulze J, Hardt M, Lecuona E, Sznajder JI, et al. Influenza A virus infection induces apical redistribution of Na<sup>+</sup>/K<sup>+</sup>-ATPase in lung epithelial cells in vitro and in vivo. *Am J Respir Cell Mol Biol* 2019;61:395–398, [OA]
9. Sauerhering L\*, **Kuznetsova I**<sup>\*1,2,4,6</sup>, Kupke A, Meier L, Halwe S, Rohde C, et al. Cyclosporin A reveals potent antiviral effects in preclinical models of SARS-CoV-2 infection. *Am J Respir Crit Care Med*. 2022;205(8):964-8., (\*shared first author) [OA]

<https://doi.org/10.1164/rccm.202108-1830I>

10. Khadim A, Kiliaris G, Vazquez-Armendariz AI, Procida-Kowalski T, Glaser D, Bartkuhn M, Malik T, Chu X, Moiseenko A, **Kuznetsova I**<sup>1,2,4</sup>, Ahmadvand N, Lingampally A, Hadzic S, Alexopoulos I, Chen Y, Günther A, Behr J, Neumann J, Schiller HB, Li X, Weissmann N, Braun T, Seeger W, Wygrecka M, Morty RE, Herold S, El Agha E. Myofibroblasts emerge during alveolar regeneration following influenza-virus-induced lung injury. *Cell Rep.* 2025 Feb 25;44(2):115248. doi: 10.1016/j.celrep.2025.115248. Epub 2025 Feb 3. PMID: 39903667. [OA]

## Category B

### Patents

- 22/2020      Rock inhibitors for use in treating or preventing pulmonary edema, Europ. Appl. Nr. LU101746
- 09/2012      Stable influenza A virus vector, Europ. Appl. Nr. 12184041.7

## Academic Distinctions

- Early Career Support, Clinical Research Unit Universities Gießen and Marburg Lung Center (2021)
- CPI Flex Fund: Heart-lung crosstalk in respiratory viral infection: Mechanisms of heart failure—associated virus susceptibility and virus-induced cardiopulmonary dysfunction (2026)
- ILH Post-Acute Infection Syndrome (PAIS): Cardio-metabolic disease and disturbed lung regeneration after ARVI (2026)

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