

Shevchenko, Andrej, PhD (A01)

Personal Data

Title	Dr. (Russland)
First name	Andrej
Name	Shevchenko
Current position	Group Leader (C3); permanent position
Current institution(s)/site(s), country	MPI of Molecular Cell Biology and Genetics, Dresden, Pfothenhauerstr. 108, 01307 Dresden, Germany
Identifiers/ORCID	ORCID-ID: 0000-0002-5079-1109

Qualifications and Career

Stages	Periods and Details
Degree programme: Chemistry	1979 – 1984, Leningrad State University (22.06.1984: Diploma in Chemistry w. Distinction), Leningrad, USSR
Doctorate: PhD thesis	29.10.1991: Supervisor: Olga Mirgorodskaya, <i>Proteolysis of endogenous and synthetic regulatory peptides in human body fluids</i> , Leningrad Institute of Technology, St. Petersburg, Russian Federation
Stages of academic / professional career	
Since 2001	Group Leader, MPI of Molecular Cell Biology and Genetics, Dresden, Germany
1994 – 2001	Scientist (since 1997: Staff Scientist) in European Molecular Biology Laboratory (EMBL), Heidelberg, Germany
1984 – 1991	Scientist (since 1991: Senior Scientist) in the Institute for Analytical Instrumentation of Russian Academy of Sciences, St. Petersburg, Russian Federation
1979 – 1984	Study of chemistry in Faculty of Chemistry in the Leningrad State University, Leningrad, USSR

Engagement in the Research System

- Executive Editor: J.Proteomics (since 2019)
- Editorial Boards: Molecular Omics (RSC) (since 2020); Proteomes (since 2021); Molecular & Cellular Proteomics (2003 – 2012)
- Participation in Research Consortia (selected): LiSyM (BMBF, since 2010); SFB/TR 83 Molecular Architecture and Cellular Functions of Lipid / Protein Assemblies (2010 – 2022); de.NBI (BMBF), partner project Lipidomics Informatics for Life Science (LIFS) (2016 – 2019); KFO 249 (2013 – 2016) Defekte des angeborenen Immunsystems bei autoinflammatorischen und autoimmunologischen Erkrankungen

Scientific Results

Category A, * contributed equally, # open access

1. Vvedenskaya O, Rose TD, Knittelfelder O, Palladini A, Wodke JAH, Schuhmann K, Ackerman JM, Wang Y, Has C, Brosch M, Thangapandi VR, Buch S, Züllig T, Hartler J, Köfeler HC, Röcken C, Coskun Ü, Klipp E, von Schoenfels W, Gross J, Schafmayer C,

- Hampe J, Pauling JK, **Shevchenko A**. Nonalcoholic fatty liver disease stratification by liver lipidomics. **J Lipid Res** 2021; 62:100104. doi: 10.1016/j.jlr.2021.100104. #
2. Wang Y, Hinz S, Uckermann O, Honscheid P, von Schonfels W, Burmeister G, Hendricks A, Ackerman JM, Baretton GB, Hampe J, Brosch M, Schafmayer C, **Shevchenko A***, Zeissig S*. Shotgun lipidomics-based characterization of the landscape of lipid metabolism in colorectal cancer. **Biochim Biophys Acta Mol Cell Biol Lipids** 2020; 1865:158579. doi: 10.1016/j.bbalip.2019.158579.
 3. Schuhmann K, Moon H, Thomas H, Ackerman JM, Groessl M, Wagner N, Kellmann M, Henry I, Nadler A, **Shevchenko A**. Quantitative fragmentation model for bottom-up shotgun lipidomics. **Anal Chem** 2019; 91:12085-12093. doi: 10.1021/acs.analchem.9b03270. #
 4. Knittelfelder O, Traikov S, Vvedenskaya O, Schuhmann A, Segeletz S, Shevchenko A, **Shevchenko A**. Shotgun lipidomics combined with laser capture microdissection: a tool to analyze histological zones in cryosections of tissues. **Anal Chem** 2018; 90:9868-9878. doi: 10.1021/acs.analchem.8b02004.
 5. Schuhmann K, Srzentic K, Nagornov KO, Thomas H, Gutmann T, Coskun Ü, Tsybin YO, **Shevchenko A**. Monitoring membrane lipidome turnover by metabolic ¹⁵N labeling and shotgun ultra-high-resolution orbitrap Fourier transform mass spectrometry. **Anal Chem** 2017; 89:12857-12865. doi: 10.1021/acs.analchem.7b03437.
 6. Schuhmann K, Thomas H, Ackerman JM, Nagornov KO, Tsybin YO, **Shevchenko A**. Intensity-independent noise filtering in FT MS and FT MS/MS spectra for shotgun lipidomics. **Anal Chem** 2017; 89:7046-7052. doi: 10.1021/acs.analchem.7b00794.
 7. Sales S, Graessler J, Ciucci S, Al-Atrib R, Vihervaara T, Schuhmann K, Kauhanen D, Sysi-Aho M, Bornstein SR, Bickle M, Cannistraci CV, Ekroos K, **Shevchenko A**. Gender, contraceptives and individual metabolic predisposition shape a healthy plasma lipidome. **Sci Rep** 2016; 6:27710. doi: 10.1038/srep27710. #
 8. Herzog R, Schwudke D, Schuhmann K, Sampaio JL, Bornstein SR, Schroeder M, **Shevchenko A**. A novel informatics concept for high-throughput shotgun lipidomics based on the molecular fragmentation query language. **Genome Biol** 2011; 12:R8. doi: 10.1186/gb-2011-12-1-r8. #
 9. Sampaio JL, Gerl MJ, Klose C, Ejsing CS, Beug H, Simons K, **Shevchenko A**. Membrane lipidome of an epithelial cell line. **Proc Natl Acad Sci U S A** 2011; 108:1903-1907. doi: 10.1073/pnas.1019267108. #
 10. Ejsing CS, Sampaio JL, Surendranath V, Duchoslav E, Ekroos K, Klemm RW, Simons K, **Shevchenko A**. Global analysis of the yeast lipidome by quantitative shotgun mass spectrometry. **Proc Nat Acad U S A** 2009; 106:2136-2141. doi: 10.1073/pnas.0811700106. #

Academic Distinctions

- Preis für Biochemische Analytik der Deutschen Gesellschaft für Klinische Chemie und Laboratoriumsmedizin (2022)
- Preis der Deutschen Gesellschaft für Massenspektrometrie "*Massenspektrometrie in den Lebenswissenschaften*" (2011)

Collaborators

No.	Collaboration partners	Location/Institution
1	Jochen Hampe	Dresden, Germany, TUD
2	Robert Ahrends	Vienna, Austria, University of Vienna
3	Dominik Schwudke	Borstel, Germany, Forschungszentrum Borstel
4	Vadim Arshavsky	Durham, USA, Duke University
5	Jens Rister	Boston, USA, University Massachusets
6	Mikael Simons	Munich, Germany, Technical University

Fields of Research

No.	Fields of research
1	201-01 Biochemistry
2	324-01 Analytical chemistry