

Andrej Shevchenko, PhD

1 | General information

Contact details: MPI of Molecular Cell Biology and Genetics)
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Current position: Group Leader

Researcher unique identifier(s): ORCID: 0000-0002-5079-1109,



2 | Academic education

1979-1984 Study of Chemistry in Leningrad State University, USSR

3 | Advanced academic qualifications:

1991 Doctoral Thesis [Dr. (Russland)] *"Proteolysis of endogenous and synthetic regulatory peptides in human body fluids"*, Leningrad Institute of Technology, St. Petersburg, Russian Federation (Supervisor: Olga Mirgorodskaya)

4 | Postgraduate professional career:

Since 2001 Group Leader, MPI of Molecular Cell Biology and Genetics, Dresden
1994 – 2001 Staff Scientist, European Molecular Biology Laboratory (EMBL), Heidelberg
1984 – 1994 Senior Scientist, Institute for Analytical Instrumentation of Russian Academy of Sciences, St. Petersburg, Russian Federation

5 | Other:

Awards/Honors

2011 Prize of the German Society for Mass Spectrometry *"Massenspektrometrie in den Lebenswissenschaften"*

Other professional activities:

- Executive Editor: Journal of Proteomics (since 2019)
- Editorial Board Member: Molecular Omics (since 2019), Proteomes (since 2021), Molecular and Cellular Proteomics (2002-2010)

6 | Selected publications:

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
2. Wang Y, Hinz S, Uckermann O, Honscheid P, von Schoenfels 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
3. Schuhmann K, Moon H, Thomas H, Ackerman JM, Groessl M, Wagner N, Kellmann M, Henry I, Nadler A, and **Shevchenko A**. Quantitative fragmentation model for bottom-up shotgun lipidomics. **Anal Chem** 2019; 91:12085-12093

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
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
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
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
8. Herzog R, Schwudke D, Schuhmann K, Sampaio JL, Bornstein SR, Schroeder M, and **Shevchenko A**. A novel informatics concept for high-throughput shotgun lipidomics based on the molecular fragmentation query language. **Genome Biol** 2011; 12: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
10. Ejsing CS, Sampaio JL, Surendranath V, Duchoslav E, Ekroos K, Klemm RW, Simons K, and **Shevchenko A**. Global analysis of the yeast lipidome by quantitative shotgun mass spectrometry. **Proc Nat Acad U S A** 2009; 106:2136-2141

*contributed equally