

POLINA TUROVA
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EDUCATION

Lomonosov Moscow State University, Chemistry Department (2017 – 2021 expected)

PhD in Analytical Chemistry

- PhD thesis: “Development of new methods of detection and identification of plant’s materials components by mass-spectrometric data”

Lomonosov Moscow State University, Chemistry Department (2011 – 2017)

Master of Chemistry

- GPA 4.6

RESEARCH INTERESTS

- Mass spectrometry and liquid chromatography for herbal extract analysis
- Data analysis in Python
- Machine learning application for LC-MS data treatment
- Employment of tensor decomposition (PARAFAC, TUCKER) for experimental data processing

PUBLICATIONS

- K. Bogolitsyn, A. Druzhinin, D. Ovchinnikov, A. Parshin, E. Shulgin, P. Turova, and A. Stavrianidi, Polyphenols of arctic brown algae: isolation, polymolecular composition. *Chemistry of Raw Plant Materials*, (4), 65-75, 2019.
- E. Stekolshchikova, P. Turova, O. Shpigun, I. Rodin, and A. Stavrianidi. Application of quantitative analysis of multi-component system approach for determination of ginsenosides in different mass-spectrometric conditions. *Journal of Chromatography A*, 1574:82–90, 2018, [10.1016/j.chroma.2018.09.005](https://doi.org/10.1016/j.chroma.2018.09.005)
- P. Turova, E. Stekolshchikova, T. Baygildiev, O. Shpigun, I. Rodin, and A. Stavrianidi. Unified strategy for HPLC-MS evaluation of bioactive compounds for quality control of herbal products. *Biomedical Chromatography*, 32(12):e4363, 2018, [10.1002/bmc.4363](https://doi.org/10.1002/bmc.4363)
- A. N. Stavrianidi, E. A. Stekolshchikova, P. N. Turova, I. A. Rodin, and O. A. Shpigun. Quantitative analysis of a multicomponent system for liquid chromatography–mass spectrometry determination of diosgenin, dioscin and protodioscin in plant extracts of tribulus terrestris. *Moscow University Chemistry Bulletin*, 72(3):135–143, 2017, [10.3103/S0027131417030063](https://doi.org/10.3103/S0027131417030063)

RESEARCH EXPERIENCE

University of Birmingham, School of Computer Science (Mar. 2020 – May 2020)

Visiting research student

- Development of multivariate computation techniques for the analysis of data from High Performance Liquid Chromatography-Mass Spectrometry experiment of plant extract

CERTIFICATES

- “SCIEX Advanced QTrap Training”, Moscow, Russia, 2019
- “Introduction to Ecometabolomics For Ecologists”, German Centre for Integrative Biodiversity Research, Germany, Leipzig, 2019
- “An Introduction to Data Visualization and Cluster Analysis (using R)”, Radboud Summer School, Nijmegen, Netherlands, 2019

- “Green sample preparation for new generation of analytical chemists: new concepts and fundamentals”, 48th International Symposium on High-Performance Liquid Phase Separations and Related Techniques, Milan, Italy, 2019
- “Statistical analysis of chromatographic data: a practical guide”, 48th International Symposium on High-Performance Liquid Phase Separations and Related Techniques, Milan, Italy, 2019

SCHOLARSHIPS

- GFC (Groupe Français de Chimométrie) scholarship for PhD students for participation in CAC 2020
- ERASMUS scholarship for internship in University of Birmingham (2020)
- Scholarship of Russian Federation Government for PhD students (2019/2020)
- Grant for PhD research from Russian Foundation for Basic Research, project number 19-31-27001 (2019 – 2021)
- EcoMetEoR travel award for iDiv Summer School (2019)
- ERASMUS scholarship for Radboud Summer School (2019)
- Student’s State Academic Scholarship for special achievements (2012, 2013, 2014, 2015, 2016)

PRESENTATIONS

- “Application of HPLC-MS and PARAFAC method for discrimination of samples of plant materials”, Mass spectrometry and applied problems, Moscow, Russia, 2019
- “New methods of treatment of data arrays from mass spectrometric analysis of plant extracts”, III All-Russian Conference on Analytical Spectroscopy with International Participation, Krasnodar, Russia, 2019
- “Development of new approaches for determination and identification of components from plant materials using HPLC-MS”, 48th International Symposium on High-Performance Liquid Phase Separations and Related Techniques, Milan, Italy, 2019.
- “Application of the HPLC-MS/MS method for the simultaneous determination of flavonoid aglycones and their glycosides in plant extracts”, V All-Russian Symposium with international participation "Separation and Concentration in Analytical Chemistry and Radiochemistry", Krasnodar, Russia, 2018.
- “New approaches for the group identification and determination of saponins in medical plants and products”, Third congress of Russian Analytics, Russia, Moscow, 2017.
- “About possibility of relative correction factors usage for the ginsenosides determination by HPLC-MS method”, VII scientific conference of young scientists: "Innovations in chemistry", Moscow, Russia, 2017.
- “Application of QAMS method for the HPLC-MS determination of diosgenin, dioscin and protodioscin in plant extracts of *Tribulus terrestris*”, International Scientific Lomonosov Conference, Moscow, Russia, 2017.
- “Application of the method of quantitative analysis of a multicomponent system for the determination of ginsenosides”, The Fifth All-Russian Symposium with international participation: Kinetics and dynamics of metabolic processes. The role of Separation Science in the development of breakthrough directions of modern science (nanochemistry and biomedicine), Moscow, Russia, 2016.
- “HPLC-MS Method Development for Multi-component Determination of Less Polar Ginsenosides in Urine”, Mass-spectrometry: Application to the Clinical Lab, Salzburg, Austria, 2016

TEACHING EXPERIENCE

Lomonosov Moscow State University (2018 – 2019)

Teaching assistant

- Course of analytical chemistry for students from Biology Department
- Seminars, laboratory classes and student's assessment

PROFESSIONAL EXPERIENCE

Chromsystemslab (Jan. 2019 – present)

Analytical Chemist

- Development, validation and optimization of HPLC-MS analytical techniques for determination of target compounds (hormones, vitamins, etc.) in blood and urine
- Day-to-day and routine analysis of fat and water soluble vitamins, amino acids, hormones, etc. in urine, blood, plasma, serum, saliva by HPLC-MS, completed in an effective and timely manner

Janssen (Johnson & Johnson) (2017 – 2018)

Regulatory affairs Professional

- Products registration in accordance with EAEU legislation
- Support of GMP inspections in Europe
- Product life cycle management projects (RLC remediation, updated module 3, normative documents review and correction, ePackMat activities)
- Regulatory support in Moldova

Avis Rus (Pharma) (2016 – 2017)

Regulatory Affairs Manager

- Initiated and developed normative documents for several medical products
- Full registration cycle in accordance with CTD dossier format with successful implementation of more than 5 drugs
- Clients support in quality assessment during certification stages

Sanofi S. A. (2014 – 2016)

Medical department trainee

- Responsible for full registration cycle and for launching of 5 new pharmaceutical products in a foreign market (Mongolia)
- Technical support of registered products database in Russia and Mongolia

LANGUAGES

English: Advanced (TOEFL IBT (Aug. 2018) – 84; IELTS Academic (Nov. 2019) – 7.0)

Russian: Native

TECHNICAL SKILLS

Python, Matlab, R, Microsoft Office, Outlook, AspenONE, ACD labs, Origin, Chem Draw, Lab Solutions, Analyst, SCIEX OS, XCMS, MetaboAnalyst

REFERENCES

Stavrianidi Andrey, Assoc. Prof., Ph.D.

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