



## Europass Curriculum Vitae

### Personal information

First name(s) / Surname(s)

**Olga Tcheremenskaia**

E-mail

[olga.tcheremenskaia@iss.it](mailto:olga.tcheremenskaia@iss.it)

Citizenship

Italian

Date of birth

30/11/1972

### Work experience

Dates

**2001-present**

Occupation or position held

Researcher

Name and address of employer

Istituto Superiore di Sanità (Italian National Institute of Health), Environmental and Health Department, viale Regina Elena 299, 00161, Rome, Italy

Main activities and responsibilities

#### Main Activities and Research topics:

regulatory toxicology, toxicological risk assessment of chemical in particular for carcinogenicity and genotoxicity endpoints, representation activity in different OECD expert groups, development of toxicological databases and expert predictive systems (for carcinogenicity and genotoxicity), evaluation and development of QSAR models, OECD QSAR toolbox software, read across, Toxicological Ontology and Data Standardisation; Integrated Approach to Testing and Assessment (IATA), Data analysis; Adverse outcome pathway (AOP), evaluation of uncertainties

#### Main Responsibilities:

- **Co-coordination of OECD QSAR assessment framework project group** (working group includes more than 40 international expert).  
Dr Tcheremenskaia is an **Italian representative at**
- OECD Extended Advisory Group on Molecular Screening and Toxicogenomics (EAGMST) including OECD coaches' group (EAGMST sub-group) for Adverse Outcome Pathway proposals
- OECD QSAR Toolbox Management Group,
- OECD IATA Case Studies Project.
- OECD group on the good computational method practices (GCMP)
- 2022-2025 **Project Coordinator: Contract: OC/EFSA/SCER/2021/05**: 'Update of the EFSA pesticides genotoxicity database'
- 2017-2019 **Project Manager: Contract OC/EFSA/PRAS/2016/01**: 'Evaluation of the applicability of existing (Q)SAR models for predicting the genotoxicity of pesticides and similarity analysis related with genotoxicity of pesticides for facilitating of grouping and read across' (consortium of three international partners).
- 2016-2020 - **Responsible for data standardization** within Project 689341-2 INTCATCH H2020-WATER-2015 "Development and application of Novel, Integrated Tools for monitoring and managing Catchments" (2026-2020)
- 2015-2017 **Project Coordinator: Contract: OC/EFSA/PRAS/2015/02** 'Development of a consolidated database covering EFSA pesticide outputs on active substances'
- From 2020- tutoring of students from Department of Industrial Engineering (INEG) of Arkansas University (capstone projects on toxicological data management and database design and development)

Dates

**2000-2021**

Occupation or position held

Researcher

Name and address of employer

*N. N. Semenov Institute of Chemical Physics*, Russian Academy of Sciences, Moscow, Russia.  
Address: Russia, 117977, Moscow, Kosygina st., 4,

## Education and training

Dates **1997-2000**  
Title of qualification awarded PhD  
Principal subjects/occupational skills covered Bioorganic chemistry  
Name and type of organisation providing education and training *N. N. Semenov Institute of Chemical Physics, Russian Academy of Sciences, Moscow, Russia. Address: Russia, 117977, Moscow, Kosygina st., 4*  
Level in national or international classification PhD in Chemistry (confirmed by certificate of equivalence to the Italian Doctorate Degree, Italian Ministry of Education)

Dates **1991-1997**  
Title of qualification awarded Master's degree in biotechnology and organic synthesis  
Principal subjects/occupational skills covered biotechnology and organic synthesis  
Name and type of organisation providing education and training *M. V. Lomonosov Moscow State Academy of Fine Chemical Technology, Moscow, Russia. Address: Russia, 119571, Moscow, prosp. Vernadskogo, 86*  
Level in national or international classification Master Degree in Chemistry (confirmed by certificate of equivalence to the Italian Master's Degree, University of Rome "La Sapienza")

Mother tongue(s)  
Other language(s)

**Russian**  
**English, Italian**

Self-assessment  
*European level (\*)*

**English**  
**Italian**

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C2	Proficient user	C1	Independent user	C1	Independent user	C2	Proficient user
C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user

Organisational skills and competences

Experience in coordination of projects (section Main Responsibilities), in collaborative development of software and databases, many years' experience as Italian representative at different OECD groups

Computer skills and competences

Many years' experience in database development, MySQL, JAVA, Eclipse, Oracle, SMILES/SMARTS chemical structure codification, OWL/XML/RDF, Protege ontology editor, IUCLID, ChemDraw, Cambridge soft ChemOffice, ACD/ChemFolder SAS, Statistica (StatSoft), R, Microsoft Office, Visual Basic and Visual Basic for Application, Microsoft Visual Studio, Development of the decision tree and expert systems (profilers) for mutagenicity and carcinogenicity prediction in Java/Eclipse, SMARTs/SMILES molecular structure codification for the open source software ToxTree, business analysis: identifications of needs and functional requirements, access rights for web-based databases, drafting of documentation for software products.

## Annexes

Selected recent projects, Selected recent publications

## Selected relevant projects

1. 2022-2025 Project of European Food Safety Authority (EFSA): OC/ Contract: OC/EFSA/SCER/2021/05: 'Update of the EFSA pesticides genotoxicity database', Role: Project Coordinator
2. 2017-2019 Project of European Food Safety Authority (EFSA): OC/EFSA/PRAS/2016/01: 'Evaluation of the applicability of existing (Q)SAR models for predicting the genotoxicity of pesticides and similarity analysis related with genotoxicity of pesticides for facilitating of grouping and read across' Role: Project Manager
3. 2015-2018 Project of European Food Safety Authority (EFSA): OC/EFSA/PRAS/2015/02 'Development of a consolidated database covering EFSA pesticide outputs on active substances' Role: Project Coordinator
4. 2015 Project ECHA/2015/31 "Preparation of carcinogenicity files for integration of carcinogenicity toxicological vocabularies/ontologies within the OECD QSAR Toolbox, Role: Project Coordinator
5. From 2016-2020- 689341-2 INTCATCH H2020-WATER-2015 "Development and application of Novel, Integrated Tools for monitoring and managing Catchments" (2026-2020) Role: Responsible for data standardization within the Project
6. 2011-2013 Multiple framework contract with re-opening of competition for the provision of scientific support services – **ONTOLOGY (ECHA/2011/25)** coordinated by ECHA and OECD. The role of our team was to implement the controlled vocabularies (Ontologies) suitable for the standardization and harmonization of the toxicity data in the OECD QSAR Toolbox for six different toxicity endpoints, including carcinogenicity and the AOP-related data for the skin sensitization, Role: Scientist
7. 2013-2014 **Scientific Review of the QSAR Toolbox and usability improvements** (Project **ECHA/2013/167**) coordinated by ECHA and OECD. The ISS team has performed an extensive review and reliability estimation of datasets, profilers, grouping methods and in silico methods for data gap filling included in the OECD QSAR Toolbox, with particular interest for the genotoxicity endpoint, Role: Scientist
8. ISS—Swiss Federal Office of Public Health: 'Construction of a chemical relational database on in vitro Micronucleus assay results'. 2013. Role: Data Scientist
9. ISS- Swiss Federal Office of Public Health, 'Construction of a chemical relational database on BIOCIDES'. 2012. Role: Scientist
10. 2009-2011, OpenTox - **An Open Source Predictive Toxicology Framework**, European Commission, FP7 Project, Reference Number Health-F5-2008-200787 The ISS team has led the WP "Toxicity Databases", Role: coordinator the OpenTox Ontology Working Group within the Project.

## .Selected relevant publications

1. Lorenzetti, S., Battistelli, C. L., Bossa, C., Cozzini, P., Giuliani, A., Nicolotti, O., **Tcheremenskaia, O.**, Calleri, M., Caloni, F., Failla, C. M., Granata, P., Kuan, M., Nevelli, F., Vitale, A. and De Angelis, I. (2021) "Application of computational methods in replacement – an IPAM webinar", ALTEX - Alternatives to animal experimentation, 38(2), pp. 348–350. doi: 10.14573/altex.2102011
2. **Olga Tcheremenskaia** & Romualdo Benigni (2021) Toward regulatory acceptance and improving the prediction confidence of in silico approaches: a case study of genotoxicity, Expert Opinion on Drug Metabolism & Toxicology, DOI: 10.1080/17425255.2021.1938540
3. Aksenova NA, **Tcheremenskaia O**, Timashev PS, Solovieva AB. Computational prediction of photosensitizers' toxicity. Journal of Porphyrins and Phthalocyanines. 2021;25(04)
4. Benigni R, Serafimova R, Parra Morte JM, Battistelli CL, Bossa C, Giuliani A, Fioravanzo E, Bassan A, Gatnik MF, Rathman J, Yang C, Mostrag-Szlichtyng A, Sacher O, **and Tcheremenskaia O**. Evaluation of the applicability of existing (Q)SAR models for predicting the genotoxicity of pesticides and similarity analysis related with genotoxicity of pesticides for facilitating of grouping and read across: An EFSA funded project. Regulatory Toxicology and Pharmacology. 2020;114. doi: 10.1016/j.yrtph.2020.104658.
5. Francescangeli F, Contavalli P, De Angelis ML, Careccia S, Signore M, Haas TL, Salaris F, Baiocchi M, Boe A, Giuliani A, **Tcheremenskaia O**, Pagliuca A, Guardiola O, Minchiotti G, Colace L, Ciardi A, D'Andrea V, La Torre F, Medema J, De Maria R, Zeuner A. A pre-existing population of ZEB2+ quiescent cells with stemness and mesenchymal features dictate chemoresistance in colorectal cancer. Journal of Experimental and Clinical Cancer Research. 2020;39(1). doi: 10.1186/s13046-019-1505-4.
6. **Tcheremenskaia O**, Battistelli CL, Giuliani A, Benigni R, Bossa C. In silico approaches for prediction of genotoxic and carcinogenic potential of cosmetic ingredients. Computational Toxicology. 2019;11:91-100. doi: 10.1016/j.comtox.2019.03.005.
7. Honma M, Kitazawa A, Cayley A, Williams RV, Barber C, Hanser T, Saiakhov R, Chakravarti S, Myatt GJ, Cross KP, Benfenati E, Raitano G, Mekenyan O, Petkov P, Bossa C, Benigni R, Battistelli CL, Giuliani A, **Tcheremenskaia O**, DeMeo C, Norinder U, Koga H, Jose C, Jeliaskova N, Kochev N, Paskaleva V, Yang C, Daga PR, Clark RD, Rathman J. Improvement of quantitative structure-activity relationship (QSAR) tools for predicting Ames mutagenicity: Outcomes of the Ames/QSAR International Challenge Project. Mutagenesis. 2019;34(1):41-8. doi: 10.1093/mutage/gey031.

8. Benigni R, Laura Battistelli C, Bossa C, Giuliani A, Fioravanzo E, Bassan A, Fuat Gatnik M, Rathman J, Yang C, **and Tcheremenskaia O**. Evaluation of the applicability of existing (Q)SAR models for predicting the genotoxicity of pesticides and similarity analysis related with genotoxicity of pesticides for facilitating of grouping and read across. EFSA Supporting Publications. 2019;16(3):1598E. doi: <https://doi.org/10.2903/sp.efsa.2019.EN-1598>.
9. Bossa C, Benigni R, **Tcheremenskaia O**, Battistelli CL. (Q)SAR methods for predicting genotoxicity and carcinogenicity: Scientific rationale and regulatory frameworks. *Methods in Molecular Biology*2018. p. 447-73.
10. Benigni R, Battistelli CL, Bossa C, Giuliani A, **Tcheremenskaia O**. Endocrine Disruptors: Data-based survey of in vivo tests, predictive models and the Adverse Outcome Pathway. *Regulatory Toxicology and Pharmacology*. 2017;86:18-24. doi: 10.1016/j.yrtph.2017.02.013.
11. Benigni R, Bossa C, **Tcheremenskaia O**. A data-based exploration of the adverse outcome pathway for skin sensitization points to the necessary requirements for its prediction with alternative methods. *Regulatory Toxicology and Pharmacology*. 2016;78:45-52. doi: 10.1016/j.yrtph.2016.04.003.
12. Benigni R, Bossa C, **Tcheremenskaia O**, Battistelli CL, Giuliani A. The Syrian hamster embryo cells transformation assay identifies efficiently nongenotoxic carcinogens, and can contribute to alternative, integrated testing strategies. *Mutation Research - Genetic Toxicology and Environmental Mutagenesis*. 2015;779:35-8. doi: 10.1016/j.mrgentox.2015.02.001.
13. Benigni R, Battistelli CL, Bossa C, Giuliani A, **Tcheremenskaia O**. Alternative Toxicity Testing: Analyses on Skin Sensitization, ToxCast Phases i and II, and Carcinogenicity Provide Indications on How to Model Mechanisms Linked to Adverse Outcome Pathways. *Journal of Environmental Science and Health - Part C Environmental Carcinogenesis and Ecotoxicology Reviews*. 2015;33(4):422-43. doi: 10.1080/10590501.2015.1096885.
14. Benigni R, Bossa C, **Tcheremenskaia O**. In vitro cell transformation assays for an integrated, alternative assessment of carcinogenicity: A data-based analysis. *Mutagenesis*. 2013;28(1):107-16. doi: 10.1093/mutage/ges059.
15. Benigni R, Bossa C, **Tcheremenskaia O**. Nongenotoxic carcinogenicity of chemicals: Mechanisms of action and early recognition through a new set of structural alerts. *Chemical Reviews*. 2013;113(5):2940-57. doi: 10.1021/cr300206t.
16. Benigni R, Bossa C, Battistelli CL, **Tcheremenskaia O**. IARC Classes 1 and 2 carcinogens are successfully identified by an alternative strategy that detects DNA-reactivity and cell transformation ability of chemicals. *Mutation Research - Genetic Toxicology and Environmental Mutagenesis*. 2013;758(1-2):56-61. doi: 10.1016/j.mrgentox.2013.09.006.
17. Benigni R, Battistelli CL, Bossa C, **Tcheremenskaia O**, Crettaz P. New perspectives in toxicological information management, and the role of ISSTOX databases in assessing chemical mutagenicity and carcinogenicity. *Mutagenesis*. 2013;28(4):401-9. doi: 10.1093/mutage/get016.
18. Benigni R, Battistelli CL, Bossa C, Colafranceschi M, **Tcheremenskaia O**. Mutagenicity, carcinogenicity, and other end points. *Methods in Molecular Biology*2013. p. 67-98.
19. **Tcheremenskaia O**, Benigni R, Nikolova I, Jeliaskova N, Escher SE, Batke M, Baier T, Poroikov V, Lagunin A, Rautenberg M, Hardy B. OpenTox predictive toxicology framework: Toxicological ontology and semantic media wiki-based OpenToxipedia. *Journal of Biomedical Semantics*. 2012;3(1). doi: 10.1186/2041-1480-3-S1-S7.
20. Benigni R, Bossa C, **Tcheremenskaia O**, Battistelli CL, Crettaz P. The new ISSMIC database on in vivo micronucleus and its role in assessing genotoxicity testing strategies. *Mutagenesis*. 2012;27(1):87-92. doi: 10.1093/mutage/ger064.
21. Benigni R, Bossa C, **Tcheremenskaia O**, Giuliani A. Alternatives to the carcinogenicity bioassay: In silico methods, and the in vitro and in vivo mutagenicity assays. *Expert Opinion on Drug Metabolism and Toxicology*. 2010;6(7):809-19. doi: 10.1517/17425255.2010.486400.
22. Benigni R, Bossa C, Giuliani A, **Tcheremenskaia O**. Exploring in vitro/in vivo correlation: Lessons learned from analyzing phase i results of the us EPA's toxcast project. *Journal of Environmental Science and Health - Part C Environmental Carcinogenesis and Ecotoxicology Reviews*. 2010;28(4):272-86. doi: 10.1080/10590501.2010.525781.

Rome, February 22, 2022

Dr. Olga Tcheremenskaia

