Curriculum Vitae

Personal Data

Title	Prof. Dr.
First name	Olga Vaceslavovna
Name	Kalinina
Current position	Full (W3) professor for drug bioinformatics
Current institution(s)/site(s), country	Medical Faculty, Saarland University / Helmholtz Institute for Pharmaceutical Research Saarland (HIPS), Helmholtz Centre for Infection Research (HZI)
Identifiers/ORCID	https://orcid.org/0000-0002-9445-477X https://scholar.google.com/citations?user=3sn2stEAAAAJ&hl=en

Qualifications and Career

Stages	Periods and Details
Degree programme	1998-2003: Diploma (M.Sc. equivalent) in mathematics, Department of Mathematics and Mechanics, Moscow State University (with distinction), Moscow, Russia
Doctorate	2007: Ph.D. in molecular biology, Engelhardt Institute for Molecular Biology RAS, Moscow, Russia. Supervisor: Prof. Mikhail S. Gelfand
Stages of academic/professional career	• Since 05/2023: Full (W3) professor, Saarland University, Saarbrücken, Germany • 01/2019-05/2023: Associate (W2) professor, Saarland University, Saarbrücken, Germany • 2018: Habilitation, *venia legendi* bioinformatics, Saarland University, Saarbrücken, Germany • 04/2012-12/2018: Senior Researcher (group leader), Department for Bioinformatics and Applied Algorithmics, Max Planck Institute for Informatics, Saarbrücken, Germany • 09/2011-04/2012: Researcher, Department for Bioinformatics and Applied Algorithmics, Max Planck Institute for Informatics, Saarbrücken, Germany • 11/2009-08/2011: Postdoctoral fellow, Russell group, Excellencecluster CellNetworks, University of Heidelberg, Heidelberg, Germany • 11/2007-11/2009: Postdoctoral fellow, Russell group, Structural and Computational Biology Unit, EMBL-Heidelberg, Heidelberg, Germany (EMBO long term fellowship)

Supplementary Career Information N/A

Activities in the Research System

- **Speaker** for the Research Focus **"Antimicrobial resistance"** at the Helmholtz Centre for Infection Research (HZI) (since 2021)
- **Representative** of the Helmholtz Centre for Infection Research (HZI) at the Helmholtz Information & Data Science Incubator (since 2021)
- **Dean of studies** for Bachelor and Master programs in Bioinformatics, Saarland University (since 2020)
- Member of **Center Council** Center for Bioinformatics Saar (since 2012)
- **Mentor** in the LEAP (Leadership and Excellence for Aspiring Postdocs) mentorship program for young female scientists organized by EMBL
- Regular **program committee member** and **reviewer** for ISMB, ECCB, RECOMB, GCB, MCCMB conference series
- **Panel member**, Agence nationale de la recherche and regular **grant proposal reviewer** for major European funding agencies (DFG, BMBF, Humboldt Foundation, Agence nationale de la recherche, Medical Research Council, FWO Research Foundation Flanders, etc.)

Supervision of Researchers in Early Career Phases N/A

Scientific Results

Category A

1. Joeres R, Bojar D, **Kalinina OV** (2023) GlyLES: Grammar-based parsing of glycans from IUPAC-condensed to SMILES, *J Cheminform*, 15: 37.
2. Adam S, Zheng D, Klein A, Volz C, Mullen W, Shirran S, Smith B, **Kalinina OV**, Müller R, Koehnke J (2023) Unusual peptide-binding proteins guide pyrroloindoline alkaloid formation in crocagin biosynthesis. *Nat Chem*, 15, 560–568.
3. Srikakulam SK, Keller S, Dabbaghie F, Bals R, **Kalinina OV** (2023) MetaProFi: A protein-based Bloom filter for storing and querying sequence data for accurate identification of functionally relevant genetic variants, *Bioinformatics*, 39(3): btad101.
4. Sousa CF, Kamal MAM, Richter R, Elamaldeniya K, Hartmann RW, Empting M, Lehr C-M*, **Kalinina OV*** (2022) Modeling the effect of hydrophobicity on the passive permeation of solutes across a bacterial model membrane. *J Chem Inf Model* 62, 5023–5033.
5. Gress A, Srikakulam SK, Keller S, Ramensky V, **Kalinina OV** (2022) d-StructMAn: Containerized structural annotation on the scale from genetic variants to whole proteomes. *GigaScience*, 11, giac086.
6. Klink GV, **Kalinina OV**, Bazykin GA (2022) Phylogenetic inference of changes in amino acid propensities with single-position resolution. *PLOS Comp Biol*, 18 (2), e1009878.
7. Louadi Z, Yuan K, Gress A, Tsoy O, **Kalinina OV**, Baumbach J, Kacprowski T, List M (2020) DIGGER: Exploring the functional role of alternative splicing in protein interactions. *Nucl Acids Res*, 2020 49(D1): D309–D318.
8. Gress A, Ramensky V, **Kalinina OV** (2017). Spatial distribution of disease-associated variants in three-dimensional structures of protein complexes. *Oncogenesis*, 6(9): e380.
9. Bastys T, Gapsys V, Walter H, Heger E, Doncheva NT, Kaiser R, de Groot BL, **Kalinina OV** (2020) Non-active site mutants of HIV-1 protease influence resistance and sensitization towards protease inhibitors, *Retrovirology,* 17: 13.
10. Sikandar A, Franz L, Adam S, Santos-Aberturas J, Horbal L, Luzhetskyy A, Truman AW, **Kalinina OV**, Koehnke J (2020) The post-translational amino acid epimerase BotH defines a new group of atypical alpha/beta-hydrolase-fold enzymes. *Nature Chem Biol*, 16: 1013-1018.

Category B

1. Dabbaghie F, Srikakulam SK, Marschall T*, **Kalinina OV*** (2023) PanPA: generation and alignment of panproteome graphs, *bioRxiv* doi:10.1101/2023.01.19.524778.
2. Keller S, Miettinen P, **Kalinina OV** (2020) Frequent subgraph mining for biologically meaningful structural motifs, *bioRxiv* doi:10.1101/2020.05.14.095695.

Academic Distinctions

- 2022: “Supervisor of the Year” award, Helmholtz Centre for Infection Research (HZI)
- 2022: Full professorship (W3) for Bioinformatics, Heidelberg University, declined
- 2022: Tenured professorship (W2) at the Regensburg University, declined
- 2019: Junior professorship (W1) at the Greifswald University, declined
- 2007-2009: EMBO long-term postdoc fellowship