

Curriculum vitae

Univ. Prof. Dr. Bojan Žagrović, PhD

Max Perutz Labs, University of Vienna

Personal Data

Date of birth: 8th November, 1974; Place of birth: Zagreb, Croatia; ORCID ID: [0000-0003-3814-3675](https://orcid.org/0000-0003-3814-3675)

URL for web site: <https://www.mfpl.ac.at/groups/mfpl-group/group-info/zagrovic.html>

Education

1995-1997 BSc in Biochemistry, Harvard University, USA

1997-2004 PhD in Biophysics, Stanford University, USA

Professional Career

2004 - 2007 EMBO Post-Doctoral Fellow, ETH Zurich, Switzerland

2007 - 2008 Scientific Director, Mediterranean Institute for Life Sciences, Split, Croatia

2007 - 2010 Group leader, Mediterranean Institute for Life Sciences, Split, Croatia

2010 - 2014 Junior Group Leader and Assistant Professor, Department of Structural and Computational Biology, Max F. Perutz Laboratories, University of Vienna, Austria

2014 - 2017 Associate Professor, Department of Structural and Computational Biology, Max F. Perutz Laboratories, University of Vienna, Austria

2017 - present University Professor of Molecular Biophysics, Department of Structural and Computational Biology, Max Perutz Labs, University of Vienna, Austria

Main Areas of Research

- analysis of the fundamental physicochemical principles of RNA-protein interactions
- analysis of frameshifts in different biological contexts
- development and application of molecular dynamics simulations and structural bioinformatics techniques to study structure, dynamics and interactions of biomolecules at atomistic level
- study of configurational entropy and its influence on biomolecular interactions

Key Research Achievements

- founding member of **Folding@Home**, a grid-computing project to study protein dynamics
- showed effects of **conformational averaging** in NMR, fiber diffraction and X-ray crystallography
- discovered and characterized autogenous **mRNA-protein compositional complementarity**
- demonstrated that **frameshifted protein sequences retain important physicochemical properties**

- developed a number of **publicly available software/servers** (*PARENT* suite for conformational entropy estimation, *Volpes* server for analysis of physicochemical sequence properties, a functional enrichment tool *fuento*, *ViennaPTM* server for analysis of protein post-translational modifications)

Supervision of Graduate Students and Postdoctoral Fellows

2007 – 2026 8 Postdocs / 10 PhD (*3 in progress*) / 12 Master Students at Mediterranean Institute of Life Sciences, Split, Croatia (2007-2010) & University of Vienna, Austria (2010-2024)

Fellowships and Distinctions

1997 - 2000 Stanford Graduate Fellowship (Lucille P. Markey Fellow)
 1998 - 2003 Howard Hughes Medical Institute Predoctoral Fellowship
 2003 McGraw-Hill Award (best talk), European Protein Society Meeting, Florence, Italy
 2005 - 2007 EMBO Postdoctoral Fellowship
 2008 Tomorrow's PI Award, Genome Technology magazine
 2010 START Prize, FWF Austrian Science Fund
 2013 member of the Young Academy of the Austrian Academy of Sciences
 2023 Houska Prize finalist
 2024 Annual Teaching Award, University of Vienna

Selected Commissions of Trust and Expert Activities

2012 – 2014 Steering Committee member, Unity through Knowledge Fund, Croatia
 2011 – 2014 Coordinator of PhD Student Selections, MFPL Vienna
 2017 – 2019 Scientific Panel member, Volkswagenstiftung, LIFE Initiative
 2019 – 2025 Deputy member, Senate, University of Vienna
 2022 – 2025 Head, Department of Structural and Computational Biology, University of Vienna
 2020 – Coordinator, Doctoral Program in Phase Separation Biology, Max Perutz Labs

Most important funded research projects (>4 million Euros of third-party funding as PI)

- National Science Foundation of Croatia Installation Grant, 01/2008 – 04/2010, 125,000 €
- Austrian Research Fund FWF START Award, 08/2010 – 08/2012, 250,000 €
- ERC Starting Independent Grant, 2009/11 – 03/2017, 1.495,790 €
- FWF Doctoral Program Integrative Structural Biology, 01/01/2016 – 31/12/2019, 214,691 €
- Austrian Research Fund FWF Standalone grant on RNA-protein interactions in an unstructured context", 01/09/2017 – 31/08/2020, 323,449.89 €

- Austrian Research Fund FWF Standalone grant on 2' vs. 3' aminoacylation in biological translation, 01/04/2018 – 31/03/2021, 323,449.89 €
- ERC Proof of Concept grant, 01/07/2018 – 31/12/2019, 150,000 €
- Volkswagenstiftung LIFE grant, 01/11/2020 – 31/10/2025, 460,000 €
- Member of FWF Doctoral Program Doc. Fund Ellipse, 01/10/2021 – 30/09/2025, 178,600 €
- Austrian Research Fund FWF Standalone grant on impact of frameshifting mutations on protein structure, 01/07/2026 – 31/06/2029, 433,508.17 €

Reviewing activities *Scientific journals (40+ journals)*: Nature Communications, PNAS, PLOS Computational Biology, JACS, Biophysical Journal, Biochemistry, Nucleic Acids Research and other; *for foreign funding organizations*: DFG, Wellcome Trust, UK; Volkswagenstiftung, Germany; SRA, Slovenia; Swiss Science Foundation, Switzerland; UKF Fund, Croatia; NSF, Croatia; Leverhulme Trust, UK and other

Intellectual property Patent application on protein solubilization via RNA (EP 20792686.6, US 17/771,790)

Select talks (2020-2026) Rockefeller University, 2020; Columbia University; UT Austin, 2020; MRC LMCB, London, 2020; Evolution Workshop, Salzburg, 2022; Biophysics Austria Congress, 2022; Phase Separation Colloquium, 2023; EMBO YIP meeting 2023; Origins of Life Symposium, Stony Brook, 2024; CECAM Entropy Workshop, 2025; Codon Usage Conference, Montreal, 2026.

Publication summary: 107 publications in peer-reviewed journal

Top 10 peer-review publications

1. T Kapral & B Zagrovic. **Nucleic Acids Research** 54, 11 (2026). DOI: 10.1093/nar/gkag540.
2. M Adlhart, Hoffmann, D, AA Polyansky & B Zagrovic. **Proceedings of the National Academy of Sciences** 122, 4 (2025). DOI: 10.1073/pnas.2413721122.
3. AA Polyansky, LD Gallego, RG Efremov, A Köhler & B Zagrovic. **eLife** 12 (2023): e80038. DOI: 10.7554/eLife.80038.
4. TH Kapral, F Farnhamer, W Zhao, ZJ Lu & B Zagrovic. **Nucleic Acids Research** 50, 17 (2022). DOI: 10.1093/nar/gkac756.
5. L Bartonek, D Braun & B Zagrovic. **Proceedings of the National Academy of Sciences** 117, 11 (2020). DOI: 10.1073/pnas.1911203117.
6. A Kuzmanic, NS Pannu, & B Zagrovic. **Nature Communications** 5 (2014). DOI: 10.1038/ncomms4220.
7. AA Polyansky, M Hlevnjak & B Zagrovic. **Nature Communications** 4 (2013). DOI: 10.1038/ncomms3784.

8. M Hlevnjak, AA Polyansky, & B Zagrovic. **Nucleic Acids Research** 40 (2012): 8874-8882. DOI: 10.1093/nar/gks679.
9. T Wlodarski & B Zagrovic. **Proceedings of the National Academy of Sciences USA** 106 (2009). DOI: 10.1073/pnas.0906966106.
10. B Zagrovic, EJ Sorin & VS Pande. **Journal of Molecular Biology** 313 (2001). DOI:10.1006/jmbi.2001.5033