

Yevheniia Bushman, Dr. rer. nat.

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My current focus is to investigate molecular mechanisms behind proteostasis pathologies and ageing. I am open to the new challenges and complex research questions. My goal is to promote diversity in science and support international scientists.

Education and Positions

2024 – now	Postdoctoral Researcher UNC Charlotte Group of Dr. Andrew Truman	Charlotte, USA
2023 – 2024	Postdoctoral Researcher (wrap-up Postdoc) MPI of Biochemistry/Technical University Munich, <u>Group of:</u> Prof. Dr. Johannes Buchner	Munich, Germany
2018 - 2023	Doctoral Degree Technische Universität München (TUM) TUM School of Natural Sciences and IMPRS for Molecular Life Sciences: From Biological Structures to Neural Circuits <u>Thesis:</u> “Investigation of functional and structural divergence of the Hsp16 chaperone family in <i>Caenorhabditis elegans</i> ”. <u>Group of:</u> Prof. Dr. Johannes Buchner	Munich, Germany
2016 - 2017	MSc Biotechnology University of Glasgow College of Medical, Veterinary and Life Sciences <u>Thesis:</u> “An investigation of the folding and assembly of novel antibody formats” <u>Group of:</u> Prof. Dr. Neil Bullied	Glasgow, UK
2011 - 2015	BSc Biotechnology National Technical University „KPI of Ihor Sikorskyj” Industrial Biotechnology <u>Thesis:</u> “Technology of the riboxine production. Area of the inoculum preparation”.	Kyiv, Ukraine

Skills

Research skills	mass spectrometry (XL-MS, co-IP/MS, HDX-MS), molecular biology (PCR, qRT-PCR, site-directed mutagenesis, CRISPR), FRET, <i>in vivo</i> work (<i>C. elegans</i> , mammalian cell culture), recombinant protein purification, protein characterization (SDS-PAGE, western blot, circular dichroism (CD), AUC, SEC-MALS, HPLC, DSC), data analysis and visualization (cytoscape, Adobe Illustrator, OriginLab, etc.).
Teaching	- supervision of Bachelor and Master level students, 5 students in total (2018-2023) - main supervisor of laboratory practical course “Cellular Biochemistry”, 50-80 students per year (2018-2023); teaching, marking, and offering feedback.

- 2 student research assistants (2018, 2022-now).

Languages English, German, Russian, Ukrainian (native).

Interests watercolour painting, languages, engage in charity and humanitarian help.

Conferences and seminars

- 26th IMPRS-LS Seminar, (2019), poster presentation, Martinsried, Germany.
- MaxQuant Summer School (2021), virtual; training in MS analysis.
- 32nd IMPRS-LS Seminar, (2022), poster presentation, Martinsried, Germany.
- Bushman, et al., (2022). Structural and functional divergence of Hsp-16 family in *Caenorhabditis elegans*. [abstracts]. In: "Protein Homeostasis in Health and Disease – CSHL", CSHL, New York, USA. Poster presentation.
- MaxQuant Summer School (2022). Barcelona, Spain; training in MS analysis.
- 4th CSSI workshop on sHSPs (2022), virtual, oral presentation.
- GRC Stress Proteins in Growth, Development and Disease (2023), Lucca, Italy, poster presentation.
- Proteome Discoverer 3.0 workshop (2024), virtual.

Memberships and scientific appointments

2023 – present	Member of Ukrainian Science Diaspora
2024 – present	Member of National Postdoctoral Association
2024 – present	Reviewer for Cell Stress and Chaperones
2024 – present	Member of Cell Stress Society International

Publications

Strauch, A., Rossa, B., Köhler, F., Haeussler, S., Mühlhofer, M., Rührnößl, F., Körösy, C., **Bushman, Y.**, Conradt, B., Haslbeck, M., Weinkauff, S., & Buchner, J. (2023). The permanently chaperone- active small heat shock protein Hsp17 from *Caenorhabditis elegans* exhibits topological separation of its N-terminal regions. *Journal of Biological Chemistry*, 299(1), 102753. <https://doi.org/10.1016/j.jbc.2022.102753>

Ecroyd, H., Bartelt-Kirbach, B., Ben-Zvi, A., Bonavita, R., **Bushman, Y.** et al. The beauty and complexity of the small heat shock proteins: a report on the proceedings of the fourth workshop on small heat shock proteins. *Cell Stress and Chaperones* (2023). <https://doi.org/10.1007/s12192-023-01360-x>

Bushman, Y., Peters, C., Haslbeck, M., Buchner, J. (2024). Molecular chaperones with many talents: Hsp16s of the sHsp protein family show structural and functional divergence. [*manuscript*].
