

Contact Information**Work**

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Education

Date	Degree	Institution	Description
2010	BSc.	University of Debrecen, Hungary	Specialization: Laboratory Biology
2012	MSc.	Eötvös Loránd University, Budapest, Hungary	Specialization: Molecular-, immune and microbiology, thesis: Induction of apoptosis in melanoma cells using LC8/DYNLL dynein light chain binding peptides, supervisor: Prof. László Nyitray DSc
2018	PhD.	Eötvös Loránd University, Budapest, Hungary	Biology Doctoral School, Structural biochemistry Programme, research topic: Study of the metastasis-associated S100A4 protein and its interaction partners by in vitro and cell culture-based methods, supervisor: Prof. László Nyitray DSc (Dep. of Biochemistry)

Appointments/Affiliations

Date	Title	Institution
2022 - present	Affiliated researcher	Department of Medical Biochemistry and Biophysics, Karolinska Inst, Stockholm, Sweden
2022 - present	Biologist	Department of Selenoprotein Research, National Institute of Oncology, Budapest, Hungary
2022	Research fellow	Eötvös Loránd Research Centre, ELKH-ELTE Research Group of Peptide Chemistry, Budapest, Hungary
2021-22	Scientific assistant	National Public Health Centre, Budapest, Hungary
2018-20	Research fellow	ELKH-ELTE Research Group of Peptide Chemistry, Budapest, Hungary
2016-17	Assistant Research Fellow	Department of Biochemistry, Eötvös Loránd University, Budapest, Hungary
2015-16	Assistant Research Fellow	ELKH-ELTE Research Group of Peptide Chemistry, Budapest, Hungary

Bibliometry

As of December 01, 2022, a total of 23 articles in PubMed, cited 296 times with h-index of 11 (Google Scholar)

Publications

- Lilla Borbála Horváth, Martin Krátký, Václav Pflégr, Előd László Méhes, Gergő Gyulai, Gergely Kohut, Ákos Babiczky, Beáta Biri-Kovács, Zsuzsa Éva Baranyai, Jarmila Vinšová, Szilvia Bősze: Host cell targeting of novel antimycobacterial 4-aminosalicylic acid derivatives with tuftsin carrier peptides. EUROPEAN JOURNAL OF PHARMACEUTICS AND BIOPHARMACEUTICS 174: pp. 111–130 (2022), doi: 10.1016/j.ejpb.2022.03.009
- Kata Horváti, Kinga Fodor, Bernadett Pályi, Judit Henczkó, Gyula Balka, Gergő Gyulai, Éva Kiss, Beáta Biri-Kovács, Zsuzsanna Senoner, Szilvia Bősze: Novel assay platform to evaluate intracellular killing of Mycobacterium tuberculosis: in vitro and in vivo validation. FRONTIERS IN IMMUNOLOGY 12: Paper 750496. (2021) doi: 10.3389/fimmu.2021.750496
- Zsuzsa Baranyai, Beáta Biri-Kovács, Martin Krátký, Bálint Szeder, Márta L. Debreczeni, Johanna Budai, Bence Kovács, Lilla Horváth, Edit Pári, Zsuzsanna Németh, László Cervenak, Ferenc Zsila, Előd Méhes, Éva Kiss, Jarmila Vinšová, Szilvia Bősze: Cellular internalization and inhibition capacity of new anti-glioma peptide conjugates: physicochemical characterization and evaluation on various monolayer- and 3D-spheroid-based in vitro platforms. JOURNAL OF MEDICINAL CHEMISTRY 64(6): pp. 2982–3005. (2021), doi: 10.1021/acs.jmedchem.0c01399
- Mo'ath Yousef, Ildikó Szabó, Beáta Biri-Kovács, Bálint Szeder, Françoise Illien, Sandrine Sagan, Zoltán Bánóczy: Modification of short non-permeable peptides to increase cellular uptake and cytostatic activity of their conjugates. CHEMISTRYSELECT 6(38): pp. 10111–10120. (2021), doi: 10.1002/slct.202103150
- Mayra Quemé-Peña, Maria Ricci, Tünde Juhász, Kata Horváti, Szilvia Bősze, Beáta Biri-Kovács, Bálint Szeder, Ferenc Zsila, Tamás Beke-Somfai: Old polyanionic drug Suramin suppresses detrimental cytotoxicity of the host defense peptide LL-37. ACS PHARMACOLOGY & TRANSLATIONAL SCIENCE 4(1): pp. 155–167. (2021), doi: 10.1021/acspsci.0c00155
- Beáta Biri-Kovács*, Afrodité Adorján*, Ildikó Szabó, Bálint Szeder, Szilvia Bősze, Gábor Mező: Structure–activity relationship of HER2 receptor targeting peptide and its derivatives in targeted tumor therapy. BIOMOLECULES 10(2): Paper 183. (2020), doi: 10.3390/biom10020183; *: equal contribution
- Szilvia Bősze, Ferenc Zsila, Beáta Biri-Kovács, Bálint Szeder, Zsuzsa Majer, Ferenc Hudecz, Katalin Uray: Tailoring uptake efficacy of HSV-1 gD derived carrier peptides. BIOMOLECULES 10(5): Paper 721. (2020), doi: 10.3390/biom10050721
- Edit Pári, Kata Horváti, Szilvia Bősze, Beáta Biri-Kovács, Bálint Szeder, Ferenc Zsila, Éva Kiss: Drug Conjugation Induced Modulation of Structural and Membrane Interaction Features of Cationic Cell-Permeable Peptides. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES 21(6): Paper 2197. (2020), doi: 10.3390/ijms21062197

9. Andrea Angelo P. Tripodi, Ivan Randelović, Beáta Biri-Kovács, Bálint Szeder, Gábor Mező, József Tóvári: In Vivo Tumor Growth Inhibition and Antiangiogenic Effect of cyclic NGR peptide-daunorubicin conjugates developed for targeted drug delivery. *PATHOLOGY AND ONCOLOGY RESEARCH* 26(3): pp. 1879–1892. (2020), doi: 10.1007/s12253-019-00773-3;
10. Kata Horváti, Bernadett Pályi, Judit Henczkó, Gyula Balka, Eleonóra Szabó, Viktor Farkas, Beáta Biri-Kovács, Bálint Szeder, Kinga Fodor: A Convenient Synthetic Method to Improve Immunogenicity of Mycobacterium tuberculosis Related T-Cell Epitope Peptides. *VACCINES (BASEL)* 7(3): p. 101 (2019), doi: 10.3390/vaccines7030101
11. Előd Méhes*, Beáta Biri-Kovács*, Dona Gréta Isai, Márton Gulyás, László Nyitray, András Czírók: Matrigel patterning reflects multicellular contractility. *PLOS COMPUTATIONAL BIOLOGY* 15(10): Paper e1007431. (2019) doi: 10.1371/journal.pcbi.1007431; *: equal contribution
12. Krisztina Kiss, Beáta Biri-Kovács, Rita Szabó, Ivan Randelović, Kata Nóra Enyedi, Gitta Schlosser, Ádám Orosz, Bence Kapuvári, József Tóvári, Gábor Mező: Sequence modification of heptapeptide selected by phage display as homing device for HT-29 colon cancer cells to improve the anti-tumour activity of drug delivery systems. *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY* 176: pp. 105–116. (2019), doi: 10.1016/j.ejmech.2019.05.016
13. Gergő Gógl, Beáta Biri-Kovács, Fabien Durbesson, Pau Jane, Yves Nomine, Camille Kostmann, Viktória Bilics, Márton Simon, Attila Reményi, Renaud Vincentelli, Gilles Travé, László Nyitray: Rewiring of RSK-PDZ interactome by linear motif phosphorylation. *JOURNAL OF MOLECULAR BIOLOGY* 431(6): pp. 1234–1249. (2019), doi: 10.1016/j.jmb.2019.01.038
14. Gergő Gógl, Beáta Biri-Kovács, Ádám L. Póti, Henrietta Vadászi, Bálint Szeder, Andrea Bodor, Gitta Schlosser, András Ács, Lilla Turiák, László Buday, Anita Alexa, László Nyitray, Attila Reményi: Dynamic control of RSK complexes by phosphoswitch-based regulation. *FEBS JOURNAL* 285(1): pp. 46–71. (2018), doi: 10.1111/febs.14311
15. Sabine Schuster, Beáta Biri-Kovács, Bálint Szeder, László Buday, János Gardi, Zsuzsanna Szabó, Gábor Halmos, Gábor Mező: Enhanced in vitro antitumor activity of GnRH-III-daunorubicin bioconjugates influenced by sequence modification. *PHARMACEUTICS* 10(4): Paper 233. (2018), doi: 10.3390/pharmaceutics10040223
16. Eszter Lajkó, Sarah Spring, Rózsa Hegedüs, Beáta Biri-Kovács, Sven Ingebrandt, Gábor Mező, László Kőhidai: Comparative cell biological study of in vitro antitumor and antimetastatic activity on melanoma cells of GnRH-III-containing conjugates modified with short-chain fatty acids. *BEILSTEIN JOURNAL OF ORGANIC CHEMISTRY* 14(1): pp. 2495–2509. (2018), doi: 10.3762/bjoc.14.226
17. Péter Lukács, Máttyás C. Földi, Luca Valánszki, Emilio Casanova, Beáta Biri-Kovács, László Nyitray, András Málnási-Csizmadia, Árpád Mike: Non-blocking modulation contributes to sodium channel inhibition by a covalently attached photoreactive riluzole analog. *SCIENTIFIC REPORTS* 8: Paper 8110. (2018), doi: 10.1038/s41598-018-26444-y
18. Sabine Schuster, Beáta Biri-Kovács, Bálint Szeder, Viktor Farkas, László Buday, Zsuzsanna Szabó, Gábor Halmos, Gábor Mező: Synthesis and in vitro biochemical evaluation of oxime bond-linked daunorubicin–GnRH-III conjugates developed for targeted drug delivery. *BEILSTEIN JOURNAL OF ORGANIC CHEMISTRY* 2018(14): pp. 756–771. (2018), doi: 10.3762/bjoc.14.64
19. Beáta Biri-Kovács*, Bence Kiss*, Henrietta Vadászi*, Gergő Gógl, Gyula Pálfi, György Török, László Homolya, Andrea Bodor, László Nyitray: Ezrin interacts with S100A4 via both its N- and C-terminal domains. *PLOS ONE* 12(5): Paper e0177489. (2017), doi: 10.1371/journal.pone.0177489; *: equal contribution
20. Beáta Biri, Bence Kiss, Róbert Király, Gitta Schlosser, Orsolya Láng, László Kőhidai, László Fésűs, László Nyitray: Metastasis-associated S100A4 is a specific amine donor and an activity-independent binding partner of Transglutaminase-2. *BIOCHEMICAL JOURNAL* 473(1): pp. 31–42. (2016), doi: 10.1042/BJ20150843
21. Kirupharagan Thangaraju, Beáta Biri, Gitta Schlosser, Bence Kiss, László Nyitray, László Fésűs, Róbert Király: Real-time kinetic method to monitor isopeptidase activity of transglutaminase 2 on protein substrate. *ANALYTICAL BIOCHEMISTRY* 505: pp. 36–42. (2016), doi: 10.1016/j.ab.2016.04.012
22. Anikó Osteikoetxea-Molnár, Edina Szabó-Meleg, Eszter Angéla Tóth, Ádám Oszvald, Emese Izsépi, Mariann Kremlitzka, Beáta Biri, László Nyitray, Tamás Bozó, Péter Németh, Miklós Kellermayer, Miklós Nyitrai, Janos Matko: The growth determinants and transport properties of tunneling nanotube networks between B lymphocytes. *CELLULAR AND MOLECULAR LIFE SCIENCES* 73: Paper 2233. (2016), doi: 10.1007/s00018-016-2233-y
23. Annamária Zsákai, Zsolt Karkus, Katinka Utczás, Beáta Biri, Lynnette L. Sievert, Éva B. Bodzsár: Body fatness and endogenous sex hormones in the menopausal transition. *MATURITAS* 87: pp. 18–26. (2016), doi: 10.1016/j.maturitas.2016.02.006