

## Publications of Department of Biochemistry and Molecular Biology in 2023

1. Csősz, É., Darula, Z., Drahos, L., Emri, M., Hunyadi-Gulyás, É., Janáky, T., Juhász, G., Kalló, G., Kékesi, K., Klement, É., Márk, L., Medzihradzky-Fölkl, K., Pettkó-Szandtner, A., Révész, Á., Schlosser, G., Szabó, Z., Tóth, G., Turiák, L.: Bevezetés a proteomikába: a fehérjék korszerű vizsgálata.

*Semmelweis Egyetem, Budapest*, 201 p., 2023. ISBN: 9789633316009

2. Rehó, B., Fadel, L., Brázda, P., Benziane, A., Hegedűs, É., Sen, P., Gadella, T., Tóth, K., Nagy, L., Vámosi, G.: Agonist-controlled competition of RAR and VDR nuclear receptors for heterodimerization with RXR is manifested in their DNA-binding.

*J. Biol. Chem.* 299 (2), 1-16, 2023.

**IF: 4**

3. Adil Ali, M., Garabuczi, É., Tarban, N., Sarang, Z.: All-trans retinoic acid and dexamethasone regulate phagocytosis-related gene expression and enhance dead cell uptake in C2C12 myoblast cells.

*Sci. Rep.* 13 (1), 1-8, 2023.

**IF: 3.8**

4. Gönczi, M., Teixeira, J., Barrera-Vilarmau, S., Mediani, L., Antoniani, F., Nagy, T., Fehér, K., Ráduly, Z., Ambrus, V., Tózsér, J., Barta, E., Kövér, K., Csernoch, L., Carra, S., Fuxreiter, M.: Alternatively spliced exon regulates context-dependent MEF2D higher-order assembly during myogenesis.

*Nat Comms.* 14 1329, 2023.

**IF: 14.7**

5. Alonso-Alonso, S., Vázquez, N., Chacón, M., Caballero-Sánchez, N., Del Olmo-Aguado, S., Suárez, C., Alfonso-Bartolozzi, B., Fernández-Vega-Cueto, L., Nagy, L., Merayo-Llodes, J., Meana, A.: An effective method for culturing functional human corneal endothelial cells using a xenogeneic free culture medium.

*Sci. Rep.* 13 (1), 1-11, 2023.

**IF: 3.8**

6. Jambrovics, K., Póliska, S., Scholtz, B., Uray, I., Balajthy, Z.: ATO Increases ROS Production and Apoptosis of Cells by Enhancing Calpain-Mediated Degradation of the Cancer Survival Protein TG2.

*Int. J. Mol. Sci.* 24 (13), 1-11, 2023.

**IF: 4.9**

7. Merzah, M., Póliska, S., Balogh, L., Sándor, J., Szász, I., Natae, S., Fiala, S.: A Transcriptomic Analysis of Smoking-Induced Gene Expression Alterations in Coronary Artery Disease Patients.

*Int. J. Mol. Sci.* 24 (18), 1-14, 2023.

**IF: 4.9**

8. Gruper, Y., Wolff, A., Glanz, L., Spoutil, F., Marthinussen, M., Osíčková, A., Herzig, Y., Goldfarb, Y., Aranaz-Novaliches, G., Dobeš, J., Kadouri, N., Ben-Nun, O., Binyamin, A., Lavi, B., Givony, T., Khalaila, R., Gome, T., Wald, T., Mrazkova, B., Sochen, C., Besnard, M., Ben-Dor, S., Feldmesser, E., Orlova, E., Hegedűs, C., Lampé, I., Papp, T., Felszeghy, S., Sedlacek, R., Davidovich, E., Tal, N., Shouval, D., Shamir, R., Guillonneau, C., **Szondy, Z.**, Lundin, K., Osička, R., Prochazka, J., Husebye, E., Abramson, J.: Autoimmune amelogenesis imperfecta in patients with APS-1 and coeliac disease.

*Nature*. 624 653-662, 2023.

**IF: 50.5**

9. Arianti, R., **Vinnai, B.**, Győry, F., **Guba, A.**, **Csősz, É.**, **Kristóf, E.**, **Fésüs, L.**: Availability of abundant thiamine determines efficiency of thermogenic activation in human neck area derived adipocytes.

*J. Nutr. Biochem.* 119 1-13, 2023.

**IF: 4.8**

10. Dull, K., Lénárt, K., Dajnoki, Z., **Póliska, S.**, Uchiyama, E., Hendrik, Z., Szegedi, A., Töröcsik, D.: Barrier function-related genes and proteins have an altered expression in acne-involved skin.

*J. Eur. Acad. Dermatol. Venereol.* 37 (7), 1415-1425, 2023.

**IF: 8.4**

11. Feró, O., Karányi, Z., **Nagy, É.**, Mosolygó, Á., Szaker, H., Csorba, T., **Székvölgyi, L.**: Coding and noncoding transcriptomes of NODULIN HOMEBOX (NDX)-deficient *Arabidopsis* inflorescence.

*Sci Data*. 10 (1), 1-12, 2023.

**IF: 5.8**

12. **Nokhoijav, E.**, **Guba, A.**, **Vadadokhau, U.**, **Tózsér, J.**, Győri, Z., **Kalló, G.**, **Csősz, É.**: Comparative Analysis of Amino Acid and Biogenic Amine Compositions of Fermented Grape Beverages.

*Metabolites*. 13 (8), 1-13, 2023.

**IF: 3.4**

13. Caballero-Sánchez, N., Winn, N., Rosa Neto, J., **Nagy, L.**: Corrigendum: Editorial: Cross-talk between heterogeneous cell types in skeletal muscle: implications for glucose metabolism.

*Front Endocrinol (Lausanne)*. 14 1-2, 2023.

**IF: 3.9**

14. **Vámos, A.**, **Arianti, R.**, **Vinnai, B.**, **Alrifai, R.**, **Shaw, A.**, **Póliska, S.**, **Guba, A.**, **Csősz, É.**, Csomós, I., Mocsár, G., Lányi, C., **Balajthy, Z.**, **Fésüs, L.**, **Kristóf, E.**: Corrigendum: Human abdominal subcutaneous-derived active beige adipocytes carrying FTO rs1421085 obesity-risk alleles exert lower thermogenic capacity.

*Front. Cell. Dev. Biol.* 11 1-2, 2023.

**IF: 4.6**

15. Gellén, G., Klement, É., Biwott, K., Schlosser, G., **Kalló, G., Csósz, É.**, Medzihradzsky-Fölkl, K., Bacsó, Z.: Cross-Linking Mass Spectrometry on P-Glycoprotein.  
*Int. J. Mol. Sci.* 24 (13), 1-24, 2023.

**IF: 4.9**

16. Rumpler, É., Göcz, B., Skrapits, K., Sárvári, M., Takács, S., Farkas, I., **Póliska, S.**, Papp, M., Solymosi, N., Hrabovszky, E.: Development of a versatile LCM-Seq method for spatial transcriptomics of fluorescently tagged cholinergic neuron populations.  
*J. Biol. Chem.* 299 (9), 1-13, 2023.

**IF: 4**

17. **Caballero-Sánchez, N.**, Winn, N., Neto, J., **Nagy, L.**: Editorial: Cross-talk between heterogeneous cell types in skeletal muscle : implications for glucose metabolism.  
*Front Endocrinol (Lausanne)*. 14 1-3, 2023.

**IF: 3.9**

18. **Shaw, A., Kristóf, E.**, Cereijo, R.: Editorial: Novel regulatory mechanisms behind thermogenesis of brown and beige adipocytes.  
*Front Endocrinol (Lausanne)*. 14 1-3, 2023.

**IF: 3.9**

19. Szűcs, D., Miklós, V., Monostori, T., Guba, M., Kun-Varga, A., **Póliska, S.**, Kis, E., Bende, B., Kemény, L., Veréb, Z.: Effect of Inflammatory Microenvironment on the Regenerative Capacity of Adipose-Derived Mesenchymal Stem Cells.  
*Cells*. 12 (15), 1-19, 2023.

**IF: 5.1**

20. **Vinnai, B., Arianti, R.**, Győry, F., Bacsó, Z., **Fésüs, L., Kristóf, E.**: Extracellular thiamine concentration influences thermogenic competency of differentiating neck area-derived human adipocytes.  
*Front. Nutr.* 10 1-15, 2023.

**IF: 4**

21. **Vámos, A., Arianti, R., Vinnai, B., Alrifai, R., Shaw, A., Póliska, S., Guba, A., Csósz, É.**, Csomós, I., Mocsár, G., Lányi, C., **Balajthy, Z., Fésüs, L., Kristóf, E.**: Human Abdominal Subcutaneous-Derived Active Beige Adipocytes Carrying FTO rs1421085 Obesity-Risk Alleles Exert Lower Thermogenic Capacity.  
*Front. Cell. Dev. Biol.* 11 1-18, 2023.

**IF: 4.6**

22. Martos, R., Tar, I., Nagy, A., **Csősz, É.**, Kiss, C., **Márton, I.**: Hypercitrullination and anti-citrullinated protein antibodies in chronic apical periodontitis, a laboratory investigation. Does autoimmunity contribute to the pathogenesis?

*Int. Endod. J.* 56 (5), 584-592, 2023.

**IF: 5.4**

23. **Miltner, N., Kalló, G., Csősz, É., Miczi, M.,** Nagy, T., **Mahdi, M., Mótyán, J., Tózsér, J.**: Identification of SARS-CoV-2 Main Protease (Mpro) Cleavage Sites Using Two-Dimensional Electrophoresis and In Silico Cleavage Site Prediction.

*Int. J. Mol. Sci.* 24 (4), 1-19, 2023.

**IF: 4.9**

24. **Morales Granda, N., Toldi, V., Miczi, M., Lassoued, M., Szabó, A.**: Inhibition of mouse trypsin isoforms by SPINK1 and effect of human pancreatitis-associated mutations.

*Pancreatology.* 23 (4), 358-366, 2023.

**IF: 2.8**

25. Takács, R., **Póliska, S.,** Juhász, T., Barna, K., Matta, C.: Isolation of High-Quality Total RNA from Small Animal Articular Cartilage for Next-Generation Sequencing.

*Current Protocols.* 3 (3), 1-18, 2023.

**IF: 2.1**

26. Kotmayer, L., László, T., Mikala, G., Kiss, R., Lévy, L., Hegyi, L., Gróf, S., **Nagy, T.,** Barna, G., Farkas, P., Weisinger, J., Nagy, Z., Balogh, A., Masszi, T., Demeter, J., Sulák, A., Kohl, Z., Alizadeh, H., Egyed, M., Pettendi, P., Gergely, L., Plander, M., Pauker, Z., Masszi, A., Matolcsy, A., Szász, R., Bödör, C., Alpár, D.: Landscape of BCL2 Resistance Mutations in a Real-World Cohort of Patients with Relapsed/Refractory Chronic Lymphocytic Leukemia Treated with Venetoclax.

*Int. J. Mol. Sci.* 24 (6), 1-15, 2023.

**IF: 4.9**

27. Kovács, D., Camera, E., **Póliska, S.,** Cavallo, A., Maiellaro, M., Dull, K., Gruber, F., Zouboulis, C., Szegedi, A., Töröcsik, D.: Linoleic Acid Induced Changes in SZ95 Sebocytes- Comparison with Palmitic Acid and Arachidonic Acid.

*Nutrients.* 15 (15), 1-20, 2023.

**IF: 4.8**

28. Tarban, N., Papp, A., Deák, D., Szentesi, P., Halász, H., Patsalos, A., Csernoch, L., **Sarang, Z., Szondy, Z.**: Loss of adenosine A3 receptors accelerates skeletal muscle regeneration in mice following cardiotoxin-induced injury.

*Cell Death Dis.* 14 (10), 706, 2023.

**IF: 8.1**

29. Mittli, D., Tukacs, V., Ravasz, L., **Csősz, É.**, Kozma, T., Kardos, J., Juhász, G., Kékesi, K.: LPS-induced acute neuroinflammation, involving interleukin-1 beta signaling, leads to proteomic, cellular, and network-level changes in the prefrontal cortex of mice.  
*Brain, Behavior, & Immunity - Health*. 28 1-15, 2023.

**IF: 8.8**

30. Dániel, B., Belk, J., Meier, S., Chen, A., Sándor, K., **Czimmerer, Z.**, **Varga, Z.**, Bene, K., Buquicchio, F., Qi, Y., Kitano, H., Wheeler, J., Foster, D., Januszyk, M., Longaker, M., Chang, H., Satpathy, A.: Macrophage inflammatory and regenerative response periodicity is programmed by cell cycle and chromatin state.  
*Mol. Cell*. 83 (1), 121-138, 2023.

**IF: 14.5**

31. Chang Chien, Y., Madarász, K., Csoma, S., **Mótyán, J.**, Huang, H., Méhes, G., Mokánszki, A.: Molecular Identification and In Silico Protein Analysis of a Novel BCOR-CLGN Gene Fusion in Intrathoracic BCOR-Rearranged Sarcoma.  
*Cancers (Basel)*. 15 (3), 1-17, 2023.

**IF: 4.5**

32. Bedics, G., Szőke, P., Bártai, B., **Nagy, T.**, Papp, G., Kránitz, N., Rajnai, H., Reiniger, L., Bődör, C., Scheich, B.: Novel, clinically relevant genomic patterns identified by comprehensive genomic profiling in ATRX-deficient IDH-wildtype adult high-grade gliomas.  
*Sci. Rep.* 13 (1), 1-12, 2023.

**IF: 3.8**

33. Cereijo, R., **Kristóf, E.**: Novel regulatory mechanisms behind thermogenesis of brown and beige adipocytes.  
*Frontiers Media, Lausanne*, 139 p., 2023. ISBN: 9782832534007

34. Garabuczi, É., Tarban, N., Vincze-Fige, É., Patsalos, A., Halász, L., Szendi-Szatmári, T., **Sarang, Z.**, **Király, R.**, **Szondy, Z.**: Nur77 and PPAR $\gamma$  regulate transcription and polarization in distinct subsets of M2-like reparative macrophages during regenerative inflammation.  
*Front. Immunol.* 14 1-14, 2023.

**IF: 5.7**

35. Bodnár, V., Pákozdi, K., Király, A., **Póliska, S.**, Antal, K., Leiter, É., Pócsi, I., Emri, T.: Osmotic stress elicited gene expression changes in *aspergillus wentii* wildtype and 'c gfdb and *aspergillus nidulans* wild-type and gfdb mutant strains.  
*Acta Microbiol. Immunol. Hung.* 70 (Supplement-1), 58, 2023.

**IF: 1.3**

36. Jankó, L., Tóth, E., **Laczik, M.**, Rauch, B., Janka, E., **Bálint, B.**, Bai, P.: PARP2 poly(ADP-ribosyl)ates nuclear factor erythroid 2-related factor 2 (NRF2) affecting NRF2 subcellular localization.

*Sci. Rep.* 13 (7869), 1-13, 2023.

**IF: 3.8**

37. Antal, D., Pór, Á., Kovács, I., Dull, K., **Póliska, S.**, Ujlaki, G., Demény, M., Szöllősi, A., Kiss, B., Szegedi, A., Bai, P., Szántó, M.: PARP2 promotes inflammation in psoriasis by modulating estradiol biosynthesis in keratinocytes.

*J. Mol. Med. (Berl).* 101 (8), 987-999, 2023.

**IF: 4.8**

38. Antal, D., Pór, Á., Kovács, I., Dull, K., **Póliska, S.**, Ujlaki, G., Demény, M., Szöllősi, A., Kiss, B., Szegedi, A., Bai, P., Szántó, M.: PARP2 promotes inflammation in psoriasis by modulating estradiol biosynthesis in keratinocytes.

In: FEBS Advanced Lecture Course: PARP 2023: Research on the family of poly(ADP-ribose) polymerases; Book of Abstracts. Ed.: Andreja Mikoc, Ivan Matic, Ruder Boskovic Institute, Hvar, 60, 2023. ISBN: 9789537941468

39. Imre, G., Takács, B., **Czipa, E.**, Drubi, A., Jaksa, G., Latinovics, D., Nagy, A., Karkas, R., Hudoba, L., Vásárhelyi, B., Pankotai-Bodó, G., Blastyák, A., Hegedűs, Z., Germán, P., Bálint, B., Ahmed Abdullah, K., Kopasz, A., Kovács, A., Nagy, L., Sükösd, F., Pintér, L., Rüllicke, T., Barta, E., Nagy, I., Haracska, L., Mátés, L.: Prolonged activity of the transposase helper may raise safety concerns during DNA transposon-based gene therapy.

*Molecular Therapy - Methods & Clinical Development.* 29 145-159, 2023.

**IF: 4.6**

40. Ghaffarinia, A., Ayaydin, F., **Póliska, S.**, Manczinger, M., Bolla, B., Flink, L., Balogh, F., Veréb, Z., Bozó, R., Szabó, K., Bata-Csörgő, Z., Kemény, L.: Psoriatic Resolved Skin Epidermal Keratinocytes Retain Disease-Residual Transcriptomic and Epigenomic Profiles.

*Int. J. Mol. Sci.* 24 (5), 1-20, 2023.

**IF: 4.9**

41. **Kalló, G., Bertalan, P., Márton, I., Kiss, C., Csósz, É.**: Salivary Chemical Barrier Proteins in Oral Squamous Cell Carcinoma-Alterations in the Defense Mechanism of the Oral Cavity.

*Int. J. Mol. Sci.* 24 (17), 1-20, 2023.

**IF: 4.9**

42. **Hoffka, G., Lountos, G., Needle, D., Wlodawer, A., Waugh, D., Tózsér, J., Mótyán, J.**: Self-inhibited state of Venezuelan equine encephalitis virus (VEEV) nsP2 cysteine protease: a crystallographic and molecular dynamics analysis.

*J. Mol. Biol.* 435 (6), 1-20, 2023.

**IF: 4.7**

43. Fehér, E., Kaszab, E., **Mótyán, J.**, Máté, D., Bali, K., Hoitsy, M., Sós, E., Jakab, F., Bányai, K.: Structural similarity of human papillomavirus E4 and polyomaviral VP4 exhibited by genomic analysis of the common kestrel (*Falco tinnunculus*) polyomavirus.

*Vet. Res. Commun.* 2023 Sep 9.

**IF: 1.8**

44. Huang, Z., Gu, C., Zhang, Z., Arianti, R., Swaminathan, A., Tran, K., Battist, A., **Kristóf, E.**, Ruan, H.: Supraclavicular brown adipocytes originate from *Tbx1*+ myoprogenitors.

*PLoS. Biol.* 21 (12), 1-19, 2023.

**IF: 7.8**

45. Bodnár, M., Fazekas, E., Nagy, T., **Miltner, N.**, **Kalló, G.**, Kerekes, K., Prépost, E., **Mótyán, J.**: Synthesis of Galacto-oligosaccharides in Milk by Using *Bifidobacterium bifidum*  $\beta$ -galactosidases (Saphera 2600L and Nola Fit 5500) Immobilized on Chitosan Beads.

*Food Bioprocess Technol.* [Epub ahead of print]2023.

**IF: 5.3**

46. Safithri, M., Andrianto, D., **Gaisani Arda, A.**, Hawa Syaifie, P., Mardia Ningsih Kaswati, N., Mardliyati, E., Ramadhan, D., Miftah Jauhar, M., Wahyu Nugroho, D., Anggraini Septaningsih, D., Tria Melati, L., Hudayanti, M., Sarah, E., Alifibi Putera Irsal, R., Taufiqu Rochman, N.: The effect of red betel (*Piper crocatum*) water fraction as tyrosinase inhibitors: In vitro, molecular docking, and molecular dynamics studies.

*J. King Saud Uni. - Science.* 35 (10), 1-10, 2023.

**IF: 3.7**

47. Takács, R., Vágó, J., **Póliska, S.**, Pushparaj, P., Ducza, L., Kovács, P., Jin, E., Barrett-Jolley, R., Zákány, R., Matta, C.: The temporal transcriptomic signature of cartilage formation.

*Nucleic Acids Res.* 51 (8), 3590-3617, 2023.

**IF: 16.6**

48. **Domokos, A.**, **Varga, Z.**, **Jambrovics, K.**, **Caballero-Sánchez, N.**, Szabó, E., **Nagy, G.**, **Scholtz, B.**, Halász, L., Váradi, E., **Bene, K.**, Türk-Mázló, A., Bácsi, A., Jeney, V., Szebeni, G., **Nagy, L.**, **Czimmerer, Z.**: The transcriptional control of the VEGFA-VEGFR1 (FLT1) axis in alternatively polarized murine and human macrophages.

*Front. Immunol.* 14 1-20, 2023.

**IF: 5.7**

49. **Jambrovics, K.**, **Botó, P.**, **Pap, A.**, **Sarang, Z.**, **Kolostyák, Z.**, **Czimmerer, Z.**, **Szatmári, I.**, **Fésüs, L.**, Uray, I., **Balajthy, Z.**: Transglutaminase 2 associated with PI3K and PTEN in a membrane-bound signalosome platform blunts cell death.

*Cell Death Dis.* 14 (3), 1-10, 2023.

**IF: 8.1**

50. Linkner TR, Ambrus V, Kunkli B, Szojka ZI, Kalló G, Csósz É, Kumar A, Emri M, Tózsér J, Mahdi M.: Comparative Analysis of Differential Cellular Transcriptome and Proteome Regulation by HIV-1 and HIV-2 Pseudovirions in the Early Phase of Infection. *Int J Mol Sci.* 2023 Dec 27;25(1):380.

**IF: 4.9**

51. Ghaffarinia A, Póliska S, Ayaydin F, Goblos A, Parvaneh S, Manczinger M, Balogh F, Erdei L, Veréb Z, Szabó K, Bata-Csörgő Z, Kemény L.: Unraveling Transcriptome Profile, Epigenetic Dynamics, and Morphological Changes in Psoriasis-like Keratinocytes: "Insights into Similarity with Psoriatic Lesional Epidermis".

*Cells.* 2023 Dec 12;12(24):2825.

**IF: 5.1**

**Total IF: 306.2**