

**Publications of Department of Biochemistry and Molecular Biology
in 2019**

1. Budai, Z., Sarang, Z.: Étrendkiegészítők az edzésben: mítoszok és tények.
In: Sport és társadalom. Szerk.: Balogh László, Debreceni Egyetem Sporttudományi Koordinációs Intézet, Debrecen, 71-82, 2019, (ISSN 2631-0910) ISBN: 9789634901693

2. Al-Zaeed, N., Budai, Z., Gyenes, D., Szondy, Z., Sarang, Z.: Vázizom regeneráció folyamatának vizsgálata egér kísérleti modellben.
In: Sport és társadalom. Szerk.: Balogh László, Debreceni Egyetem Sporttudományi Koordinációs Intézet, Debrecen, 10-17, 2019, (ISSN 2631-0910) ISBN: 9789634901693

3. Mokánszki, A., Molnár, Z., Tóthné Varga, E., Bodnár, B., Jakab, A., **Bálint, B.**, Balogh, I.: Altered microRNAs expression levels of sperm and seminal plasma in patients with infertile ejaculates compared with normozoospermic males.
Hum. Fertil. (Camb). 2019 Jan 11: 1-10.
IF: 2.161

4. **Klusóczki, Á.**, Veréb, Z., **Vámos, A.**, Fischer-Posovszky, P., Wabitsch, M., Bacsó, Z., **Fésüs, L.**, **Kristóf, E.**: Differentiating SGBS adipocytes respond to PPAR stimulation, irisin and BMP7 by functional browning and beige characteristics.
Sci. Rep. 2019 Apr 9;9(1):5823.
IF: 3.998

5. **Ozgyin, L.**, **Horváth, A.**, Hevessy, Z., **Bálint, B.**: Extensive epigenetic and transcriptomic variability between genetically identical human B-lymphoblastoid cells with implications in pharmacogenomics research.
Sci Rep. 2019 Mar 20;9(1):4889.
IF: 3.998

6. **Fuxreiter, M.**: Fold or not to fold upon binding - does it really matter?
Curr Opin Struct Biol. 2019 Feb;54:19-25.
IF: 6.908

7. Saravanabhavan, S., Rethinasabapathy, M., **Sarang, Z.**, Kalambettu, A., Elumalai, S., Janakiraman, M., Huh, Y., Natesan, B.: Graphene oxide functionalized with chitosan based nanoparticles as a carrier of siRNA in regulating Bcl-2 expression on Saos-2 & MG-63 cancer cells and its inflammatory response on bone marrow derived cells from mice.
Mater. Sci. Eng. C-Biomimetic Supramol. Syst. 99 1459-1468, 2019.
IF: 5.88

8. **Kristóf, E.**, **Klusóczki, Á.**, Veress, R., Shaw, A., **Combi, Z.**, **Varga, K.**, Győry, F., **Balajthy, Z.**, Bai, P., Bacsó, Z., **Fésüs, L.**: Interleukin-6 released from differentiating human

beige adipocytes improves browning.
Exp. Cell Res. 2019. Apr 15; 377 (1-2), 47-55, 2019.
IF: 3.383

9. **Horváth, A.,** Dániel, B., **Széles, L., Cuaranta-Monroy, I., Czimmerer, Z., Ozgyin, L., Steiner, L., Kiss, M., Simándi, Z., Póliska, S., Giannakis, N., Raineri, E., Gut, I., Nagy, B., Nagy, L.:** Labelled regulatory elements are pervasive features of the macrophage genome and are dynamically utilized by classical and alternative polarization signals.
Nucleic Acids Res. 2019 Apr 8;47(6):2778-2792.
IF: 11.501

10. **Budai, Z.,** Ujlaky-Nagy, L., Kis, N., Antal, M., Bankó, C., Bacsó, Z., **Szondy, Z., Sarang, Z.:** Macrophages engulf apoptotic and primary necrotic thymocytes through similar phosphatidylserine-dependent mechanisms.
FEBS Open Bio. 2019 Feb 13;9(3):446-456.
IF: 2.231

11. Sivadó, É., El Alaoui, M., **Király, R., Fésüs, L.,** Delolme, F., Page, A., El Alaoui, S.: Optimised methods (SDS/PAGE and LC-MS) reveal deamidation in all examined transglutaminase-mediated reactions.
FEBS Open Bio. 2019 Jan 18;9(2):396-404.
IF: 2.231

12. Simon, Á., Gulyás, G., Mészár, Z., Bhide, M., Oláh, J., Bai, P., **Csösz, É.,** Jávor, A., Komlósi, I., Gálné Remenyik, J., Czeglédi, L.: Proteomics alterations in chicken jejunum caused by 24 h fasting.
PeerJ. 2019 Mar 26;7:e6588.
IF: 2.379

13. **Budai, Z.,** Balogh, L., **Sarang, Z.:** Short-term high-fat meal intake alters the expression of circadian clock-, inflammation-, and oxidative stress-related genes in human skeletal muscle.
Int. J. Food Sci. Nutr. 2019 Sep;70(6):749-758.
IF: 3.483

14. **Sharma, R., Demény, M., Ambrus, V.,** Király, S., Kurtán, T., Gatti-Lafranconi, P., **Fuxreiter, M.:** Specific and fuzzy interactions cooperate in modulating protein half-life.
J. Mol. Biol. 2019 Apr 5;431(8):1700-1707.
IF: 4.76

15. Töröcsik, D., Weise, C., **Gericke, J.,** Szegedi, A., Lucas, R., **Mihály, J.,** Worm, M., **Rühl, R.:** Transcriptomic and lipidomic profiling of eicosanoid/docosanoid signalling in affected and non-affected skin of human atopic dermatitis patients.
Exp. Dermatol. 28 (2), 177-189, 2019.

IF: 3.368

16. **Jambrovics, K.**, Uray, I., **Keresztessy, Z.**, Keillor, J., **Fésüs, L.**, **Balajthy, Z.**: Transglutaminase 2 programs differentiating acute promyelocytic leukemia cells in all-trans retinoic acid treatment to inflammatory stage through NF-kB activation.

Haematologica. 2019 Mar;104(3):505-515., 2019.

IF: 7.116

17. **Csósz É, Deák E**, Tóth N, Traverso CE, Csutak A, **Tózsér J.**: Comparative analysis of cytokine profiles of glaucomatous tears and aqueous humour reveals potential biomarkers for trabeculectomy complications.

FEBS Open Bio. 2019 May;9(5):1020-1028.

IF: 2.231

18. **Giannakis N**, Sansbury BE, Patsalos A, Hays TT, Riley CO, Han X, Spite M, **Nagy L.**: Publisher Correction: Dynamic changes to lipid mediators support transitions among macrophage subtypes during muscle regeneration.

Nat Immunol. 2019 Jun;20(6):765-767. doi: 10.1038/s41590-019-0401-6.

IF: 20.479

19. **Shanmugasundar S**, Kannan N, Sundaravadivel E, **Zsolt S**, Mukunthan KS, Manokaran J, Narendranath J, Kamalakannan VP, Kavitha P, Prabhu V, Balasubramanian N.: Study on the inflammatory response of PMMA/polystyrene/silica nanocomposite membranes for drug delivery and dental applications.

PLoS One. 2019 Mar 20;14(3):e0209948. doi: 10.1371/journal.pone.0209948. eCollection 2019. Erratum in: *PLoS One*. 2019 Apr 15;14(4):e0215632.

IF: 2.74

20. **Deák EA**, Szalai E, Tóth N, Malik RA, Berta A, Csutak A.: Longitudinal Changes in Corneal Cell and Nerve Fiber Morphology in Young Patients with Type 1 Diabetes with and without Diabetic Retinopathy: A 2-Year Follow-up Study.

Invest Ophthalmol Vis Sci. 2019 Feb 1;60(2):830-837. doi: 10.1167/iovs.18-24516.

IF: 3.47

21. Purton M, Michelangeli F, **Fésüs L.**: Will Plan S put learned societies in jeopardy?

FEBS Lett. 2019 Feb;593(4):383-385. doi: 10.1002/1873-3468.13333.

22. **Szatmári-Tóth M**, Ilmarinen T, Mikhailova A, Skottman H, Kauppinen A, Kaarniranta K, **Kristóf E**, Lytvynchuk L, Veréb Z, **Fésüs L**, **Petrovski G.**: Human Embryonic Stem Cell-Derived Retinal Pigment Epithelium-Role in Dead Cell Clearance and Inflammation.

Int J Mol Sci. 2019 Feb 20;20(4). pii: E926.

IF: 4.556

23. Lasher D, Szabó A, Masamune A, Chen JM, Xiao X, Whitcomb DC, Barmada MM, Ewers M, Ruffert C, Paliwal S, Issarapu P, Bhaskar S, Mani KR, Chandak GR, Laumen H, Masson E, Kume K, Hamada S, Nakano E, Seltsam K, Bugert P, Müller T, Groneberg DA, Shimosegawa T, Rosendahl J, Férec C, Lowe ME, Witt H, Sahin-Tóth M.: Protease-Sensitive Pancreatic Lipase Variants Are Associated With Early Onset Chronic Pancreatitis.

Am J Gastroenterol. 2019 Jun;114(6):974-983.

IF: 10.171

24. Karlsson I, Tingstedt JL, Sahin GÖ, Hansen M, Szojka Z, Buggert M, Biague A, Da Silva Z, Månsson F, Esbjörnsson J, Norrgren H, Medstrand P, Fomsgaard A, Jansson M; Sweden-Guinea-Bissau Cohort Research Group.: Cross-Reactive Antibodies With the Capacity to Mediate HIV-1 Envelope Glycoprotein-Targeted Antibody-Dependent Cellular Cytotoxicity Identified in HIV-2-Infected Individuals.

J Infect Dis. 2019 May 5; 219(11): 1749-1754.

IF: 5.022

25. Palm AA, Lemey P, Jansson M, Månsson F, Kvist A, Szojka Z, Biague A, da Silva ZJ, Rowland-Jones SL, Norrgren H, Esbjörnsson J, Medstrand P.: Low Postseroconversion CD4⁺ T-cell Level Is Associated with Faster Disease Progression and Higher Viral Evolutionary Rate in HIV-2 Infection.

MBio. 2019 Jan 8;10(1). pii: e01245-18.

IF: 6.784

26. Moreira TG, Horta LS, Gomes-Santos AC, Oliveira RP, Queiroz NMGP, Mangani D, Daniel B, Vieira AT, Liu S, Rodrigues AM, Gomes DA, Gabriely G, Ferreira E, Weiner HL, Rezende RM, Nagy L, Faria AMC.: CLA-supplemented diet accelerates experimental colorectal cancer by inducing TGF- β -producing macrophages and T cells.

Mucosal Immunol. 2019 Jan;12(1):188-199.

IF: 6.726

27. Póliska S, Besenyi T, Végh E, Hamar A, Pusztai A, Váncsa A, Bodnár N, Szamosi S, Csumita M, Kerekes G, Szabó Z, Nagy Z, Szűcs G, Szántó S, Zahuczky G, Nagy L, Szekanecz Z: Gene expression analysis of vascular pathophysiology related to anti-TNF treatment in rheumatoid arthritis.

Arthritis Res Ther. 2019 Apr 15;21(1):94. doi: 10.1186/s13075-019-1862-6.

IF: 4.103

28. Bojsuk D, Bálint BL.: Classification of different types of estrogen receptor alpha binding sites in MCF-7 cells.

J Biotechnol. 2019 Jun 20;299:13-20.

IF: 3.503

29. Smith DG, Martinelli R, Besra GS, Illarionov PA, **Szatmari I, Brazda P**, Allen MA, Xu W, Wang X, **Nagy L**, Dowell RD, Rook GAW, Rosa Brunet L, Lowry CA.: Identification and characterization of a novel anti-inflammatory lipid isolated from *Mycobacterium vaccae*, a soil-derived bacterium with immunoregulatory and stress resilience properties. *Psychopharmacology (Berl)*. 2019 May;236(5):1653-1670.

IF: 3.13

30. **Keresztessy Z, Erdos E, Ozgyin L**, Kádas J, **Horváth J**, Zahuczky G, **Balint BL**.: Development of an antibody control system using phage display. *J Biotechnol*. 2019 Jul 20;300:63-69. doi: 10.1016/j.jbiotec.2019.05.009.

IF: 3.503

31. **Erdős E, Bálint BL**.: COUP-TFII is a modulator of cell-type-specific genetic programs based on genomic localization maps. *J Biotechnol*. 2019 Aug 10;301:11-17.

IF: 3.503

32. **Sághy T, Köröskényi K**, Hegedűs K, Antal M, Bankó C, Bacsó Z, Papp A, Stienstra R, **Szondy Z**.: Loss of transglutaminase 2 sensitizes for diet-induced obesity-related inflammation and insulin resistance due to enhanced macrophage c-Src signaling. *Cell Death Dis*. 2019 Jun 5;10(6):439. doi: 10.1038/s41419-019-1677-z.

IF: 6.304

33. Josifovska N, Lumi X, **Szatmari-Tóth M, Kristóf E**, Russell G, Nagymihály R, Anisimova N, Malyugin B, Kolko M, Ivastinović D, Petrovski G.: Clinical and molecular markers in retinal detachment-From hyperreflective points to stem cells and inflammation. *PLoS One*. 2019 Jun 11;14(6):e0217548. doi: 10.1371/journal.pone.0217548. eCollection 2019.

IF: 2.74

34. Piaszyk-Borychowska A, **Széles L, Csermely A**, Chiang HC, Wesoly J, Lee CK, **Nagy L**, Bluysen HAR.: Signal Integration of IFN-I and IFN-II With TLR4 Involves Sequential Recruitment of STAT1-Complexes and NFκB to Enhance Pro-inflammatory Transcription. *Front Immunol*. 2019 Jun 4;10:1253. doi: 10.3389/fimmu.2019.01253. eCollection 2019.

IF: 5.085

35. Farkas Z, Petric M, Liu X, Herit F, Rajnavölgyi É, **Szondy Z, Budai Z**, Orbán TI, Sándor S, Mehta A, Bajtay Z, Kovács T, Jung SY, Afaq Shakir M, Qin J, Zhou Z, Niedergang F, Boissan M, Takács-Vellai K.: The nucleoside diphosphate kinase NDK-1/NME1 promotes phagocytosis in concert with DYN-1/Dynamamin. *FASEB J*. 2019 Oct;33(10):11606-11614.

IF: 4.966

36. Virok DP, Raffai T, Kókai D, Paróczai D, Bogdanov A, Veres G, Vécsei L, **Poliska S**, Tizlavicz L, Somogyvári F, Endrész V, Burián K.: Indoleamine 2,3-Dioxygenase Activity in Chlamydia muridarum and Chlamydia pneumoniae Infected Mouse Lung Tissues. *Front Cell Infect Microbiol.* 2019 Jun 12;9:192.

IF: 4.123

37. Nagy L, Rauch B, Balla N, Ujlaki G, Kis G, Abdul-Rahman O, **Kristóf E**, Sipos A, Antal M, Tóth A, Debreceni T, Horváth A, Maros T, Csizmadia P, Szerafin T, Bai P.: Olaparib induces browning of in vitro cultures of human primary white adipocytes. *Biochem Pharmacol.* 2019 Sep;167:76-85. doi: 10.1016/j.bcp.2019.06.022.

IF: 4.96

38. Banfai K, Ernszt D, Pap A, Bai P, Garai K, Belharazem D, Pongracz JE, Kvell K.: "Beige" Cross Talk Between the Immune System and Metabolism. *Front Endocrinol (Lausanne).* 2019 Jun 18;10:369. doi: 10.3389/fendo.2019.00369. eCollection 2019.

IF: 3.644

39. **Boros-Oláh B**, Dobos N, **Hornyák L**, Szabó Z, Karányi Z, Halmos G, Roszik J, **Székvolgyi L.**: Drugging the R-loop interactome: RNA-DNA hybrid binding proteins as targets for cancer therapy. *DNA Repair (Amst).* 2019 Dec;84:102642.

IF: 3.339

40. **Csősz É**, Tóth F, **Mahdi M**, Tsaprailis G, Emri M, **Tózsér J.**: Analysis of networks of host proteins in the early time points following HIV transduction. *BMC Bioinformatics.* 2019 Jul 17;20(1):398.

IF: 3.242

41. **Fuxreiter M**, Panchenko A.: Editorial overview: Dynamic protein interactions - from complexes to molecular machines. *Curr Opin Struct Biol.* 2019 Jun;56:vi-viii. doi: 10.1016/j.sbi.2019.06.006.

42. Diszházi G, Magyar ZÉ, **Mótyán JA**, Csernoch L, Jóna I, Nánási PP, Almássy J.: Dantrolene Requires Mg²⁺ and ATP To Inhibit the Ryanodine Receptor. *Mol Pharmacol.* 2019 Sep;96(3):401-407.

IF: 3.664

43. Zilahi E, Adamecz Z, Bodoki L, Griger Z, **Póliska S**, Nagy-Vincze M, Dankó K.: Dysregulated expression profile of myomiRs in the skeletal muscle of patients with polymyositis. *EJIFCC.* 2019 Jun 24;30(2):237-245. eCollection 2019 Jun.

44. **Patsalos A, Tzerpos P, Halasz L, Nagy G, Pap A, Giannakis N**, Lyroni K, Koliaraki V, Pintye E, Dezsó B, Kollias G, Spilianakis CG, **Nagy L.**: The BACH1-HMOX1 Regulatory Axis Is Indispensable for Proper Macrophage Subtype Specification and Skeletal Muscle Regeneration.

J Immunol. 2019 Sep 15;203(6):1532-1547. doi: 10.4049/jimmunol.1900553.

IF: 4.886

45. **Fésüs L**, Purton M.: FEBS Open Bio seeks an Editor-in-Chief.

FEBS Open Bio. 2019 Sep;9(9):1492. doi: 10.1002/2211-5463.12717.

46. Aydemir G, Domínguez M, de Lera AR, Mihaly J, Töröcsik D, **Rühl R.**: Apo-14'-Carotenoic Acid Is a Novel Endogenous and Bioactive Apo-Carotenoid.

Nutrients. 2019 Sep 4;11(9). pii: E2084. doi: 10.3390/nu11092084.

IF: 4.546

47. Penyige A, Márton É, Soltész B, Szilágyi-Bónizs M, Póka R, Lukács J, **Széles L**, Nagy B.: Circulating miRNA Profiling in Plasma Samples of Ovarian Cancer Patients.

Int J Mol Sci. 2019 Sep 13;20(18). pii: E4533. doi: 10.3390/ijms20184533.

IF: 4.556

48. **Sarang Z, Sággy T, Budai Z**, Ujlaky-Nagy L, Bedekovics J, Beke L, Méhes G, Nagy G, Rühl R, Moise AR, Palczewski K, Szondy Z.: Retinol Saturase Knock-Out Mice are Characterized by Impaired Clearance of Apoptotic Cells and Develop Mild Autoimmunity.

Biomolecules. 2019 Nov 13;9(11). pii: E737.

IF: 4.082

49. Márton IJ, **Horváth J, Lábiscsák P, Márkus B**, Dezső B, Szabó A, Tar I, Piffkó J, Jakus P, Barabás J, Barabás P, Olasz L, Kövér Z, **Tózsér J**, Sándor J, **Csósz É, Scholtz B**, Kiss C.: Salivary IL-6 mRNA is a Robust Biomarker in Oral Squamous Cell Carcinoma.

J Clin Med. 2019 Nov 13;8(11). pii: E1958.

IF: 3.303

50. Szabó K, Jakab Á, **Póliska S**, Petrényi K, Kovács K, Issa LHB, Emri T, Pócsi I, Dombrádi V.: Deletion of the fungus specific protein phosphatase Z1 exaggerates the oxidative stress response in *Candida albicans*.

BMC Genomics. 2019 Nov 19;20(1):873.

IF: 3.594

51. Aladdin A, **Király R, Boto P**, Regdon Z, Tar K.: Juvenile Huntington's Disease Skin Fibroblasts Respond with Elevated Parkin Level and Increased Proteasome Activity as a Potential Mechanism to Counterbalance the Pathological Consequences of Mutant Huntingtin Protein.

Int J Mol Sci. 2019 Oct 26;20(21). pii: E5338.
IF: 4.556

52. Gyurina K, Kárai B, Ujfalusi A, Hevessy Z, Barna G, Jáksó P, Pálfi-Mészáros G, **Póliska S, Scholtz B**, Kappelmayer J, Zahuczky G, Kiss C.: Coagulation FXIII-A Protein Expression Defines Three Novel Sub-populations in Pediatric B-Cell Progenitor Acute Lymphoblastic Leukemia Characterized by Distinct Gene Expression Signatures.
Front Oncol. 2019 Oct 25;9:1063.
IF: 4.848

53. Volkó J, Kenesei Á, Zhang M, Várnai P, Mocsár G, Petrus MN, **Jambrovics K, Balajthy Z**, Müller G, Bodnár A, Tóth K, Waldmann TA, Vámosi G.: IL-2 receptors preassemble and signal in the ER/Golgi causing resistance to antiproliferative anti-IL-2R α therapies.
Proc Natl Acad Sci U S A. 2019 Oct 15;116(42):21120-21130.
IF: 9.412

54. Tüü-Szabó B, Hoffka G, Duro N, Fuxreiter M.: Altered dynamics may drift pathological fibrillization in membraneless organelles.
Biochim Biophys Acta Proteins Proteom. 2019 Oct;1867(10):988-998.
IF: 2.371

Total IF: 231.539