

**Lista de lucrări în domeniul de știință definit de disciplinele din postul scos la
concurs universitare de licență**

NUMELE ȘI PRENUMELE: Dr. RADÁK Zsolt

I. LISTA PUBLICAȚIILOR RELEVANTE

- [1] Y. Seki, D. Aczel, F. Torma, M. Jokai, A. Boros, K. Suzuki, M. Higuchi, K. Tanisawa, I. Boldogh, S. Horvath, and Z. Radák, "No strong association among epigenetic modifications by DNA methylation, telomere length, and physical fitness in biological aging," *BIOGERONTOLOGY*, vol. 24, no. 2, pp. 245–255, 2023. IF 4.284
- [2] Z. Radak, K. Suzuki, A. Posa, Z. Petrovszky, E. Koltai, and I. Boldogh, "The systemic role of SIRT1 in exercise mediated adaptation," *REDOX BIOLOGY*, vol. 35, 2020. IF 11.799
- [3] Abraham, J. Feher, G. L. Scuderi, D. Szabo, Á. Dobolyi, M. Cservenak, J. Juhasz, B. Ligeti, S. Pongor, M. C. Gomez-Cabrera, J. Vina, M. Higuchi, K. Suzuki, I. Boldogh, and Z. Radak, "Exercise and probiotics attenuate the development of Alzheimer's disease in transgenic mice: Role of microbiome," *EXPERIMENTAL GERONTOLOGY*, vol. 115, pp. 122–131, 2019. IF 3.376
- [4] Z. Radak, F. Torma, I. Berkes, S. Goto, T. Mimura, A. Posa, L. Balogh, I. Boldogh, K. Suzuki, M. Higuchi, and E. Koltai, "Exercise effects on physiological function during aging," *FREE RADICAL BIOLOGY AND MEDICINE*, vol. 132, pp. 33–41, 2019. IF 6.17
- [5] E. Koltai, Z. Bori, P. Osvath, F. Ihasz, S. Peter, G. Toth, H. Degens, J. Rittweger, I. Boldogh, and Z. Radak, "Master athletes have higher miR-7, SIRT3 and SOD2 expression in skeletal muscle than age-matched sedentary controls," *REDOX BIOLOGY*, vol. 19, no. October, pp. 46–51, 2018. IF 7.793
- [6] Z. Radak, K. Ishihara, E. Tekus, C. Varga, A. Posa, L. Balogh, I. Boldogh, and E. Koltai, "Exercise, oxidants, and antioxidants change the shape of the bell-shaped hormesis curve," *REDOX BIOLOGY*, vol. 12, pp. 285–290, 2017. IF 7.126
- [7] Z. Radak, H. Y. Chung, and S. Goto, "Systemic adaptation to oxidative challenge induced by regular exercise," *FREE RADICAL BIOLOGY AND MEDICINE*, vol. 44, no. 2, pp. 153–159, 2008. IF 5.18
- [8] Z. Radak, H. Y. Chung, E. Koltai, A. W. Taylor, and S. Goto, "Exercise, oxidative stress and hormesis," *AGEING RESEARCH REVIEWS*, vol. 7, no. 1, pp. 34–42, 2008. IF 5.9
- [9] Z. Radak, M. Sasvari, C. Nyakas, T. Kaneko, S. Tahara, H. Ohno, and S. Goto, "Single bout of exercise eliminates the immobilization-induced oxidative stress in rat brain," *NEUROCHEMISTRY INTERNATIONAL*, vol. 39, no. 1, pp. 33–38, 2001. IF 3.921
- [10] Z. Radák, T. Kaneko, S. Tahara, H. Nakamoto, H. Ohno, M. Sasvári, C. Nyakas, and S. Goto, "The effect of exercise training on oxidative damage of lipids, proteins, and DNA in rat skeletal muscle: evidence for beneficial outcomes," *FREE RADICAL BIOLOGY AND MEDICINE*, vol. 27, no. 1–2, pp. 69–74, 1999. IF 4.682

II. LISTA COMPLETĂ DE PUBLICAȚII, CREAȚII, INVENȚII

A. Teza de doctorat

Investigarea efectelor moleculare ale stresului oxidativ, a îmbătrânirii și a exercițiului fizic. Universitatea din Tsukuba, Japonia, 1996.

B. Cărți și capitole de cărți

B1. Cărți publicate la edituri recunoscute

- [1]Z. Radák, *The Physiology of Physical Training*. London: Academic Press, 2018.
- [2]Z. Radák, *Edzésélettan*. Budapest: Magánkiadás (nemzetközi), 2016.
- [3]Z. Radák, *Exercise and Disease*. Oxford: Meyer und Meyer Sport Ltd., 2005.
- [4]Z. Radak, *Free Radicals in Exercise and Aging*. Champaign: Human Kinetics, 2000.

B5. Capitole de cărți

- [1]I. Boldogh, L. Pan, S. Vlahopoulos, X. Zheng, K. Wang, T. K. Hazra, M. L. Hegde, A. Bacsı, Z. Radak, A. R. Brasier, and X. Ba, "OGG1 at the Crossroads of Inflammation and DNA Base Excision Repair," in *DNA Damage, DNA Repair and Disease*, 2020, pp. 75–103.
- [2]Z. Radak and A. W. Taylor, "Exercise and hormesis," in *The Science of Hormesis in Health and Longevity*, 2019, pp. 63–73.
- [3]Z. Radák, "Chapter 3 - Adaptation, Phenotypic Adaptation, Fatigue, and Overtraining," in *The Physiology of Physical Training*, 2018, pp. 33–54.
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- [5]Z. Radak, "Posttranslational modification of proteins," in *Physical Activity, Exercise, Sedentary Behavior and Health*, 2015, pp. 165–169.
- [6]Z. Radak, N. Hart, O. Marton, and E. Koltai, "Regular exercise results in systemic adaptation against oxidative stress," in *Systems Biology of Free Radicals and Antioxidants*, 2014, pp. 3855–3869.
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- [10]S. Goto and Z. Radak, "Proteins and Exercise," in *Molecular and Cellular Exercise Physiology*, 2005, pp. 55–70.
- [11]Y. C. Hae, J. K. Hyun, H. B. Young, H. S. Seung, and Z. Radak, "Exercise and Inflammatory Disease," in *Exercise and Disease*, 2005, pp. 17–50.
- [12]Z. Radak, D. Tolvaj, H. Ogonovszky, A. Toldy, and A. W. Taylor, "Exercise and cancer," in *Exercise and Disease*, 2005, pp. 168–190.
- [13]Z. Radak, "DNA damage and repair," in *Molecular biology for Exercise Science*, 2004, pp. 150–165.

- [14]S. Goto, Z. Radak, and R. Takahashi, "Biological implications of protein oxidation," in *Critical Review of Oxidative Stress and Aging. Advances in Basic Science, Diagnostics and Intervention*, 2003, pp. 350–365.
- [15]H. Ohno, K. Suzuki, Y. Hitomi, T. Kizaki, M. Nukita, S. Haga, I. Noguchi, Z. Radak, K. Kobayashi, Y. Ohnuki, S. Mori, and M. Miyamura, "Gene expression at high altitude," in *Human Adaptation in Antarctica and Extreme Environments*, 2002, pp. 8–17.
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- [19]K. Suzuki, H. Ohno, S. Oh-Ishi, T. Ookawara, J. Fujii, Z. Radak, and N. Taniguchi, "Superoxide dismutases in exercise and disease," in *Handbook of Oxidants and Antioxidants in Exercise*, 2000, pp. 243–295.
- [20]Z. Radak and S. Goto, "The effects of exercise, aging and caloric restriction on protein oxidation and DNA damage in skeletal muscle," in *Oxidative stress and skeletal muscle*, 1998, pp. 89–104.
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C. Lucrări științifice publicate

C1. Lucrări științifice publicate în reviste cotate ISI

- [1]P. Bakonyi, A. Kolonics, D. Aczel, L. Zhou, S. Mozaffaritarab, K. Molnár, L. László, B. Kutasi, K. Tanisawa, J. Park, Y. Gu, R. A. Pinho, and Z. Radak, "Voluntary exercise does not increase gastrointestinal motility but increases spatial memory, intestinal eNOS, Akt levels, and Bifidobacteria abundance in the microbiome," *FRONTIERS IN PHYSIOLOGY*, vol. 14, 2023.
- [2]D. Cikes, K. Elsayad, E. Sezin, E. Koltai, T. Ferenc, M. Orthofer, R. Yarwood, L. X. Heinz, V. Sedlyarov, N. D. Miranda, A. Taylor, S. Grapentine, F. al-Murshedi, A. Abot, A. Weidinger, C. Kutchukian, C. Sanchez, S. J. F. Cronin, M. Novatchkova, A. Kavirayani, T. Schuetz, B. Haubner, L. Haas, A. Hagelkruys, S. Jackowski, A. Kozlov, V. Jacquemond, C. Knauf, G. Superti-Furga, E. Rullman, T. Gustafsson, J. McDermot, M. Lowe, Z. Radak, J. S. Chamberlain, M. Bakovic, S. Banka, and J. M. Penninger, "PCYT2-regulated lipid biosynthesis is critical to muscle health and ageing," *NATURE METABOLISM*, vol. 5, no. 3, pp. 495–515, 2023.
- [3]A. Dora, T. Ferenc, J. Matyas, M. Kristen, B. Anita, S. Yasuhiro, B. Istvan, H. Steve, and R. Zsolt, "The Circulating Level of Klotho Is Not Dependent upon Physical Fitness and Age-Associated Methylation Increases at the Promoter Region of the Klotho Gene," *GENES*, vol. 14, no. 2, 2023.
- [4]L. Gao, J. Ye, K. Bálint, Z. Radak, Z. Mao, and Y. Gu, "Biomechanical effects of exercise fatigue on the lower limbs of men during the forward lunge," *FRONTIERS IN PHYSIOLOGY*, vol. 14, 2023.
- [5]M. Jokai, F. Torma, K. M. McGreevy, E. Koltai, Z. Bori, G. Babszki, P. Bakonyi, Z. Gombos, B. Gyorgy, D. Aczel, L. Toth, P. Osvath, M. Fridvalszky, T. Teglas, A. Posa, S. Kujach, R. Olek, T. Kawamura, Y. Seki, K. Suzuki, K. Tanisawa, S. Goto, C. Kerepesi, I. Boldogh, X. Ba, K. J. A. Davies, S. Horvath, and Z. Radak, "DNA methylation clock DNAmFitAge shows regular exercise

is associated with slower aging and systemic adaptation,” *GEROSCIENCE: OFFICIAL JOURNAL OF THE AMERICAN AGING ASSOCIATION (AGE)*, vol. 45, no. 5, pp. 2805–2817, 2023.

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[12] Z. Radak, L. Pan, L. Zhou, S. Mozaffaritabar, Y. Gu, R. Pinho, X. Zheng, X. Ba, and I. Boldogh, “Epigenetic and ‘redoxogenetic’ adaptation to physical exercise,” *FREE RADICAL BIOLOGY AND MEDICINE*, vol. 210, pp. 65–74, 2023.

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8-oxoguanine base promotes myoblast differentiation,” REDOX BIOLOGY, vol. 61, no. May, 2023.

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[25]G. PAVLIK, T. KOVÁTS, Z. KNEFFEL, Z. KOMKA, Z. RADÁK, M. TÓTH, and J. NEMCSIK, “Characteristics of the athlete’s heart in aged hypertensive and normotensive subjects,” JOURNAL OF SPORTS MEDICINE AND PHYSICAL FITNESS, vol. 62, no. 7, pp. 990–996, 2022.

[26]Z. Radak and A. W. Taylor, “Issues on Trainability,” FRONTIERS IN PHYSIOLOGY, vol. 12, 2022.

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F. Invenții:

G. Contracte de cercetare (menționați calitatea de director sau membru)

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Buget: 36 000 000 000 HUF

2022-2024: Post-Covid. Academia Maghiară de Științe,

Titlu: "Studii de cercetare în domeniul cercetării științifice": Impactul COVID-19 asupra metilării ADN: Cheia pentru prezicerea consecințelor potențiale pe termen lung

Rol: Director

Buget: 36 000 000 HUF

2018-2023: Programul național de excelență (126823), Ministerul Inovării și Tehnologiei, Ungaria

Titlul: "Unitatea de cercetare în domeniul cercetării și dezvoltării în Ungaria": Enigma din spatele efectelor sistemice ale exercițiilor fizice regulate: Este legată de VO2max sau de căile de adaptare moleculară?

Rol: Director

Buget: 222 278 000 HUF

2015-2019: Fundația Națională pentru Cercetare Științifică (Ungaria)

Titlu: "Încearcă să te concentrezi pe o perioadă mai lungă de timp: Rolul exercițiilor fizice, restricția calorică asupra stabilității proteinelor și epigeneticii: rolul sirtuinelor

Rol: Director

Buget: 29 760 000 HUF

2009-2012: Fundația Națională pentru Cercetare Științifică (Ungaria)

Titlu: "Programul de cercetare în domeniul sănătății": Rolul sirtuinelor în îmbătrânirea mușchilor scheletici și a creierului cu adaptarea moleculară la exerciții fizice

Rol: Director

Buget: 12 938 000 HUF

K. Participări la conferințe naționale și internaționale

[1]A. Fulop, A. Budai, Z. Radak, Z. Bori, E. Koltai, L. Tretter, G. Horvath, A. Lukats, and A. Szijarto, "Analyses of mitochondrial biogenesis and function after Associating Liver Partition and Portal vein Ligation for Staged hepatectomy (ALPPS)," *HPB*, vol. 21, pp. S668–S669, 2019.

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[9]E. Koltai, Z. Lacza, A. Cselenyak, G. Vacz, and Z. Radak, "Exercise Training Improves Function and Alters Sirtuin Protein Level in Rat Brain," in *15th Annual Congress of the European College of Sport Science*, 2010, p. 389.

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III. RECUNOAȘTEREA

I. Premii, distincții.

2023 Profesor onorific la Universitatea Ningbo, China
 2020 Conducător de doctorat distins (Universitatea de Educație Fizică și Știința Sportului, Budapesta, Ungaria)
 2013 Conducător de doctorat distins (Universitatea de Educație Fizică și Știința Sportului, Budapesta, Ungaria)
 2012 Profesor TDK distins
 2008 Medalia memorială Ferenc Hepp
 2005 Medalia de aur (Asociația Maghiară pentru Știința Sportului)
 2001-2003 Bursa Széchenyi István (Academia Maghiară de Științe)
 2000 Premiul Richter Gedeon (Universitatea Semmelweis)
 2001 Bursă de studii superioare, JSPS, Japonia
 1999-2001 Bursă Bolyai János (Academia Maghiară de Științe)

J. Citări

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