

Annual selection of best publications with authors from IPHYS (2019)

The selection was done by the Board of IPHYS. The results were announced at the meeting of Laboratory Heads on December 15, 2020.

Authors from IPHYS are in bold font. Number of citations as on July 10, 2020.

Category A (publications in prestigious journals with impact factor, the first or the corresponding author is affiliated with IPHYS)

Neckář, Jan - Md. Hye Khan, A. – Gross, G.J. – **Cyprová, M.** – **Hrdlička, J.** – Kvasilová, A. – Falck, J.R. - Campbell, W.B. – **Sedláková, L.** – **Škutová, Š.** – **Olejníčková, V.** – **Gregorovičová, M.** – **Sedmera, D.** – **Kolář, F.** – Imig, J.D.

Epoxyeicosatrienoic acid analog EET-B attenuates post-myocardial infarction remodeling in spontaneously hypertensive rats.

Clinical Science. 2019, vol. 133, p. 936-951.

Impact factor: **5,223 (2019)**

Category B (publications in prestigious journals with impact factor, the corresponding author is affiliated with IPHYS and is younger than 35 years):

Bačáková, Markéta* - **Pajorová, Julia*** - **Brož, Antonín** - **Hadraba, Daniel** - Lopot, F. - Zavaďáková, A. - Vištejnová, L. - Beňo, M. - Kostič, I. - Jenčová, V. - **Báčáková, Lucie.**

A two-layer skin construct consisting of a collagen hydrogel reinforced by a fibrin-coated polylactide nanofibrous membrane.

International Journal of Nanomedicine, 2019, vol. 14, p. 5033-5050.

Impact factor: **5,115 (2019)**

**Shared first authorship*

Category C (publications in last 10 years with the highest number of citations (WoS) – the first or the corresponding author is affiliated with IPHYS):

I. Review articles

1. Bačáková, Lucie - Filová, Elena - Pařízek, Martin - Ruml, T. - Švorčík, V.

Modulation of cell adhesion, proliferation and differentiation on materials designed for body implants.

Biotechnology Advances. 2011, vol. 29, no. 6, p. 739-767.

Impact factor: **10.744(2019)**

425 citations

2. Jiruška, Přemysl - de Curtis, M. - Jefferys, J. G. R. - Schevon, C.A. - Schiff, S.J. - Schindler, K. Synchronization and desynchronization in epilepsy: controversies and hypotheses.

Journal of Physiology. vol. 591, no. 4 (2013), p. 787-797 ISSN 0022-3751

Impact factor: **4.547(2019)**

202 citations

3. Obšil, Tomáš - Obšilová, Veronika

Structural basis of 14-3-3 protein functions.

Seminars in Cell & Developmental Biology. vol. 22, no. 7 (2011), p. 663-672 ISSN 1084-9521

Impact factor: **6.691(2019)**

129 citations

4. Mráček, Tomáš - Drahota, Zdeněk - Houštěk, Josef

The function and the role of the mitochondrial glycerol-3-phosphate dehydrogenase in mammalian tissues.

Biochimica Et Biophysica Acta-Bioenergetics. vol. 1827, no. 3 (2013), p. 401-410. ISSN 0005-2728

Impact factor: **3.465(2019)**

126 citations

5. Smolková, Katarína - Plecítá-Hlavatá, Lydie - Bellance, N. - Benard, G. - Rossignol, R. - Ježek, Petr

Waves of gene regulation suppress and then restore oxidative phosphorylation in cancer cells.

International Journal of Biochemistry and Cell Biology. vol. 43, no. 7 (2011), p. 950-968. ISSN 1357-2725

Impact factor: **3.673(2019)**

114 citations

II. Research articles

1. Ježek, Karel - Henriksen, E. J. - Treves, A. - Moser, E. I. - Moser, M.B.

Theta-paced flickering between place-cell maps in the hippocampus.

Nature. vol. 478, no. 7368 (2011), p. 246-249 ISSN 0028-0836

Impact factor: **42.778(2019)**

150 citations

2. Rossmeisl, Martin - Macek Jílková, Zuzana - Kuda, Ondřej - Jeleník, Tomáš - Medříková,

Daša - Staňková, B. - Kristinsson, B. - Haraldsson, G.G. - Svensen, H. - Stoknes, I. - Sjövall, P. -

Magnusson, Y. - Balvers, M.G.J. - Verhoeckx, K.C.M. - Tvrzická, E. - Bryhn, M. - **Kopecký, Jan**

Metabolic Effects of n-3 PUFA as Phospholipids Are Superior to Triglycerides in Mice Fed a High-Fat Diet: Possible Role of Endocannabinoids.

PLoS ONE. vol. 7, no. 6 (2012), e38834. E-ISSN 1932-6203

Impact factor: **2.74(2019)**

118 citations

3. Fenton, André Antonio - Lytton, W.W. - Barry, J.M. - Lenck-Santini, P. P. - **Zinyuk, Larissa -**

Kubík, Štěpán - Bureš, Jan - Poucet, B. - Muller, R. U. - **Olypher, Andrej Vadimovich**

Attention-Like Modulation of Hippocampus Place Cell Discharge.

Journal of Neuroscience. vol. 30, no. 13 (2010), p. 4613-4625. ISSN 0270-6474

Impact factor: **5.673(2019)**

78 citations

4. Medříková, Daša - Jílková, Zuzana - Bardová, Kristina - Janovská, Petra - Rossmeisl, Martin -

Kopecký, Jan

Sex differences during the course of diet-induced obesity in mice: adipose tissue expandability and glycemic control.

International Journal of Obesity. vol. 36, no. 2 (2012), p. 262-272. ISSN 0307-0565

Impact factor: **4.419(2019)**

68 citations

5. Nedelská, Z. - Andel, R. - Laczó, J. - Vlček, Kamil - Hořínek, D. - Lisý, J. - Sheardová, K. - **Bureš, Jan** - Hort, J.

Spatial navigation impairment is proportional to right hippocampal volume.

Proceedings of the National Academy of Sciences of the United States of America. vol. 109, no. 7 (2012), p. 2590-2594. ISSN 0027-8424

Impact factor: **9.412(2019)**

65 citations

Category D (publications with the highest number of citations (WoS) in the IPHYS history – the first or the corresponding author is affiliated with IPHYS)

I. Review articles

1. **Ježek, P., Hlavatá, L.**

Mitochondria in homeostasis of reactive oxygen species in cell, tissues, and organism.
International Journal of Biochemistry and Cell Biology (2005) vol. 37, no. 12, p. 2478-2503.
494 citations

2. **Bačáková, Lucie - Filová, Elena - Pařízek, Martin - Ruml, T. - Švorčík, V.**

Modulation of cell adhesion, proliferation and differentiation on materials designed for body implants.
Biotechnology Advances. vol. 29, no. 6 (2011), p. 739-767
476 citations

3. **Vaněček, J.**

Cellular mechanisms of melatonin action.
Physiological Reviews (1998) vol. 78, no. 3, p. 687-721.
453 citations

4. **Vaněček, J., Pavlík, A., Illnerová H.**

Hypothalamic melatonin receptor sites revealed by autoradiography.
Brain Research (1987) vol. 435, no. 1-2, p. 359-62.
385 citations

5. **Pařízek J., Ošťádalová I.**

Protective effect of small amounts of selenite in sublimate intoxication.
Experientia (1967) vol. 23, no. 2, s. 142-&.
368 citations

6. **Vyskočil F., Bureš J., Kříž N.**

Potassium-selective microelectrodes used for measuring extracellular brain potassium during spreading depression and anoxic depolarization in rats.
Brain Research. (1972) vol. 39, no. 1, p. 255-&
362 citations

7. **Gutmann, E.**

Neurotrophic Relations.
Annual Review of Physiology (1976) vol. 38, p. 177-216.
313 citations

8. Tuček, S.

Regulation of Acetylcholine Synthesis in the brain.

Journal of Neurochemistry (1985) vol. 44, no. 1, p. 11-24.

258 citations

9. Syková, E.

Extracellular K⁺ Accumulation in the Central Nervous-system.

Progres in Biophysics & Molecular Biology (1983) vol. 42, no. 2-3, p. 135-189.

257 citations

10. Pácha, Jiří

Development of intestinal transport function in mammals.

Physiological Reviews. vol. 80, no. 4 (2000), p. 1633-1667. ISSN 0031-9333

256 citations

II. Research articles

1. Dobiášová, M. - Frohlich, J.

The plasma parameter log (TG/HDL-C) as an atherogenic index: correlation with lipoprotein particle size and esterification rate in apoB-lipoprotein-depleted plasma (FER(HDL)).

Clinical Biochemistry. vol. 34, no. 7 (2001), p. 583-588.

467 citations

2. Hubner, N., Wallace, C. A., Zimdahl, H., Petretto, E., Schulz, H., Maciver, F., Mueller, M., Hummel, O., Monti, J., **Zídek, V., Musilová, A., Křen, V.**, Causton, H., Game, L., Born, G., Schmidt, S., Muller, A., Cook, S. A., Kurtz, T.W., Whittaker, J., **Pravenec, M.**, Aitman, T. J. Integrated transcriptional profiling and linkage analysis for identification of genes underlying disease.

Nature Genetics (2005) vol. 37, p. 243 – 253.

396 citations

3.-4. **Flachs, Pavel** - Mohamed-Ali, V. - **Horáková, Olga** - **Rossmeisl, Martin** - Hosseinzadeh-Attar, M. J. - **Hensler, Michal** - **Růžičková, Jana** - **Kopecký, Jan**

Polyunsaturated fatty acids of marine origin induce adiponectin in mice fed a high-fat diet.

Diabetologia. vol. 49, no. 2 (2006), p. 394-397.

249 citations

3.-4. **Folbergrová J.** - Passonneau J.V. - Lowry O.H. - Schulz D.W.

Glycogen ammonia and related metabolites in the brain during seizures evoked by methionine sulphoximine.

Journal of Neurochemistry. vol. 16, no. 2 (1969), s. 191-203 Published: 1969

249 citations

5. **Flachs, Pavel - Horáková, Olga - Brauner, Petr - Rossmeisl, Martin - Pecina, Petr - Franssen-van Hal, N. - Růžičková, Jana - Šponarová, Jana - Drahoťa, Zdeněk - Vlček, Čestmír - Keijer, J. - Houšťek, Josef - Kopecký, Jan**

Polyunsaturated fatty acids of marine origin upregulate mitochondrial biogenesis and induce beta - oxidation in white fat.

Diabetologia. vol. 48, no. 11 (2005), p. 2365-2375.

241 citations

6. **Folbergrová, Jaroslava - Zhao, Q. - Katsura, K. - Siesjö, B. K.**

N-tert-Butyl-alfa-phenylnitron improves recovery of brain energy state in rats following transient focal ischemia.

Proceedings of the National Academy of Sciences of the United States of America. vol. 92, no. 11 (1995), p. 5057-5061.

214 citations

7. **Růžičková, Jana - Rossmeisl, Martin - Pražák, Tomáš - Flachs, Pavel - Šponarová, Jana - Vecka, M. - Tvrzická, E. - Bryhn, M. - Kopecký, Jan**

Omega-3 PUFA of marine origin limit diet-induced obesity in mice by reducing cellularity of adipose tissue.

Lipids. vol. 39, no. 12 (2004), p. 1177-1185.

203 citations

8. **Pravenec, Michal – Klír, Pavel – Křen, Vladimír – Zicha, Josef – Kuneš, Jaroslav**

An analysis of spontaneous hypertension in spontaneously hypertensive rats by means of new recombinant inbred strains.

Journal of Hypertension. vol.7, no.3 (1989), p.217-221.

180 citations

9. **Vaněček, J.**

Melatonin binding-sites.

Journal of Neurochemistry. vol.51, no.5 (1988), p.1436-1440.

173 citations

10. **Ježek, Petr - Engstová, Hana - Žáčková, Markéta - Verseci, A. E. - Costa, A. D. T. - Arruda, P. - Garlid, K. D.**

Fatty acid cycling mechanism and mitochondrial uncoupling proteins.

Biochimica et biophysica acta. vol. 1365, - (1998), p. 319-327.

171 citations