

Recent Publications:

Cornelissen G, Hirota T. Chronobiology and Chronomedicine. From Molecular and Cellular Mechanisms to Whole Body Interdigitating Networks. Royal Society of Chemistry. 2024; 668 pp. <https://books.rsc.org/books/edited-volume/2167/Chronobiology-and-ChronomedicineFrom-Molecular-and>

Gubin D, Danilenko K, Stefani O, Kolomeichuk S, Markov A, Petrov I, Voronin K, Mezhakova M, Borisenkov M, Shigabaeva A, Yuzhakova N, Lobkina S, Weinert D, Cornelissen G. Blue light and temperature actigraphy measures predicting metabolic health are linked to melatonin receptor polymorphism. *Biology* 2024, 13, 22. <https://doi.org/10.3390/biology13010022>

Otsuka K, Cornelissen G, Kubo Y, Shibata K, Mizuno K, Aiba T, Furukawa S, Ohshima H, Mukai C. Methods for assessing change in brain plasticity at night and psychological resilience during daytime between repeated long-duration space missions. *Sci Rep* 2023; 13: 10909. <https://doi.org/10.1038/s41598-023-36389-6>

Otsuka K, Murakami S, Okajima K, Shibata K, Kubo Y, Gubin DG, Beaty LA, Cornelissen G. Appropriate circadian-circasemidian coupling protects blood pressure from morning surge and promotes human resilience and wellbeing. *Clinical Interventions in Aging* 2023; 18: 755–769. <https://doi.org/10.2147/CIA.S398957>

Gubin D, Neroev V, Malishevskaya T, Kolomeichuk S, Cornelissen G, Yuzhakova N, Vlasova A, Weinert D. Depression scores are associated with retinal ganglion cells loss. *Journal of Affective Disorders* 2023; 333: 290-296. <https://doi.org/10.1016/j.jad.2023.04.039>

Gubin D, Neroev V, Malishevskaya T, Kolomeichuk S, Weinert D, Yuzhakova N, Nelaeva A, Filippova Y, Cornelissen G. Daytime lipid metabolism modulated by CLOCK gene is linked to retinal ganglion cells damage in glaucoma. *Applied Sciences* 2022; 12(13): 6374 <https://doi.org/10.3390/app12136374>

Otsuka K, Cornelissen G, Furukawa S, Shibata K, Kubo Y, Mizuno K, Aiba T, Ohshima H, Mukai C. Unconscious mind activates central cardiovascular network and promotes adaptation to microgravity possibly anti-aging during 1-year-long spaceflight. *Sci Rep* 2022; 12: 11862. <https://doi.org/10.1038/s41598-022-14858-8>

Cornelissen G. Applications of cosinor rhythmometry in pharmacology. *Journal of Pharmacokinetics and Pharmacodynamics* 2021; 48: 339–359. <https://doi.org/10.1007/s10928-021-09748-x>

Gubin D, Neroev V, Malishevskaya T, Cornelissen G, Astakhov SY, Kolomeichuk S, Yuzhakova N, Kabitskay Y, Weinert D. Melatonin mitigates disrupted circadian rhythms and improves ganglion cells function in glaucoma. *J Pineal Res* 2021; 70 (4): e12730. doi: 10.1111/jpi.12730 <https://doi.org/10.1111/jpi.12730>

Neroev V, Malishevskaya T, Weinert D, Astakhov YS, Astakhov SY, Kolomeichuk S, Cornelissen G, Kabitskaya Y, Boiko E, Nemtsova I, Bogdanova D, Gubin D. Disruption of 24-hour rhythm in intraocular pressure correlates with retinal ganglion cell loss in glaucoma. *International Journal of Molecular Sciences Int J Mol Sci* 2021; 22: 359. <https://doi.org/10.3390/ijms22010359>

Cornelissen Guillaume G, Gubin D, Beaty LA, Otsuka K. Some near- and far-environmental effects on human health and disease with a focus on the cardiovascular system. *International Journal of Environmental Research and Public Health* 2020. doi:10.3390/ijerph17093083
<https://doi.org/10.3390/ijerph17093083>

Saka F, Cornelissen G. Chronobiologic assessment of the effect of the DASH diet on blood pressure. *Journal of Human Hypertension* 2021; 35: 678–684. <https://doi.org/10.1038/s41371-020-00408-0>

Luszczek ER, Parsons LS, Elder J, Harvey SB, Skube M, Muratore S, Beilman G, Cornelissen-Guillaume G. Metabolomics pilot study identifies desynchronization of 24-hour rhythms and distinct intra-patient variability patterns in critical illness: A preliminary report. *Front Neurol* 2020; 11: 533915. <https://doi.org/10.3389/fneur.2020.533915>

Cornelissen G, Watanabe Y, Beaty LA, Turner AC, Sothorn R, Siegelova J, Breus T, Gubin D, al-Abdulgader AA, McCraty R, Otsuka K. As-one-goes blood pressure and heart rate monitoring: a chronobiologic approach with applications in clinical practice and basic science. *Cardiology & Vascular Research* 2021; 5(1): 1-10. DOI: 10.33425/2639-8486.S1-1003

Sletten J, Lund A, Ebbing C, Cornélissen G, Aßmus J, Kiserud T, Albrechtsen S, Kessler J. The fetal circadian rhythm in pregnancies complicated by pregestational diabetes is altered by maternal glycemic control and the morning cortisol concentration. *Chronobiology Int.* 2019; 36 (4): 481-492. <https://doi.org/10.1080/07420528.2018.1561460>

Singh RB, Hristova K, Fedacko J, El-Kilany G, Cornelissen G. Chronic heart failure: a disease of the brain. *Heart Failure Reviews* 2019; 24 (2): 301-307. <https://doi.org/10.1007/s10741-018-9747-3>

Otsuka K, Cornelissen G, Kubo Y, Shibata K, Hayashi M, Mizuno K, Ohshima H, Furukawa S, Mukai C. Circadian challenge of astronauts' unconscious mind adapting to microgravity in space, estimated by heart rate variability. *Scientific Reports* 2018; 8 (1): 10381. <https://doi.org/10.1038/s41598-018-28740-z>

Sletten J, Cornelissen G, Assmus J, Kiserud T, Albrechtsen S, Kessler J. Maternal exercise, season and sex modify the daily fetal heart rate rhythm. *Acta Physiologica* 2018; 224 (2): e13093. <https://doi.org/10.1111/apha.13093>

Cornelissen G. Metabolic syndrome, adiponectin, sleep, and the circadian system. *EBioMedicine* 2018; 33: 20-21. <https://doi.org/10.1016/j.ebiom.2018.06.01>

Gubin D, Nelaeva AA, Uzhakova AE, Hasanova YV, Cornélissen G, Weinert D. Disrupted circadian rhythms of body temperature, heart rate and fasting blood glucose in prediabetes and type 2 diabetes mellitus. *Chronobiology International* 2017; 34 (8):1136-1148. <https://doi.org/10.1080/07420528.2017.1347670>

Otsuka K, Cornélissen G, Halberg F. Chronomics and Continuous Ambulatory Blood Pressure Monitoring – Vascular Chronomics: From 7-Day/24-Hour to Lifelong Monitoring. Tokyo: Springer Japan, 2016, 870 + lxxv pp. 10.1007/978-4-431-54631-3. ISBN:9784431546313, 4431546316

Cornélissen G, Otsuka K. Chronobiology of aging: a mini-review. *Gerontology* 2017; 63 (2): 118-128. <https://doi.org/10.1159/000450945>

Otsuka K, Cornélissen G, Furukawa S, Kubo Y, Hayashi M, Shibata K, Mizuno K, Aiba T, Ohshima H, Mukai C. Long-term exposure to space's microgravity alters the time structure of heart rate variability of astronauts. *Heliyon* 2016; 2 (12): e00211. <http://dx.doi.org/10.1016/j.heliyon.2016.e00211>.

Lee Gierke C, Cornélissen G. Chronomics analysis toolkit (CATkit). *Biological Rhythm Research* 2016; 47: 163-181. <https://doi.org/10.1080/09291016.2015.1094965>

Otsuka K, Cornélissen G, Kubo Y, Hayashi M, Yamamoto N, Shibata K, Aiba T, Furukawa S, Ohshima H, Mukai C. Intrinsic cardiovascular autonomic regulatory system of astronauts exposed long-term to microgravity in space: observational study. *npj Microgravity* 2015; 1: 15018. <https://doi.org/10.1038/npjmgrav.2015.18>

Okajima K, Yamanaka G, Oinuma S, Kikichi T, Yamanaka T, Otsuka K, Cornélissen G. Even mild depression is associated with among-day blood pressure variability, including masked non-dipping assessed by 7-d/24-h ambulatory blood pressure monitoring. *Clin Exp Hypertens* 2015; 37 (5): 426-432. <https://doi.org/10.3109/10641963.2015.1013114>

Cornélissen G. Cosinor-based rhythmometry. *Theoretical Biology and Medical Modelling* 2014; 11: 16. <https://doi.org/10.1186/1742-4682-11-16>

Halberg F, Powell D, Otsuka K, Watanabe Y, Beaty LA, Rosch P, Czaplicki J, Hillman D, Schwartzkopff O, Cornélissen G. Diagnosing vascular variability anomalies, not only MESOR-hypertension. *Am J Physiol Heart Circ Physiol* 2013; 305: H279-H294. <https://doi.org/10.1152/ajpheart.00212.2013>

Watanabe Y, Halberg F, Otsuka K, Cornélissen G. Toward a personalized chronotherapy of high blood pressure and a circadian overswing. *Clin Exp Hypertens* 2013; 35 (4): 257-266. <https://doi.org/10.3109/10641963.2013.780073>