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A

Adlkofer F (2018): Verdoppelung der Häufigkeit von Glioblastomen – den bösartigsten aller Hirntumorarten – in England seit der Einführung der Mobiltelefonie. Pandora-Stiftung für unabhängige Forschung, <https://stiftung-pandora.eu/2018/12/10/verdoppelungder-haeufigkeit-von-glioblastomen-den-boesartigsten-aller-hirntumorarten-in-england-seit-der-einfuehrung-der-mobiltelefonie/>
[ElektrosmogReport 1-2019](#)

Aite M, Zhadobov M, Soubere Mahamoud Y, Martin C, Le Dréan Y, Habauzit D, Sauleau R (2016): Additive Effects of Millimeter Waves and 2- Deoxyglucose Co-Exposure on the Human Keratinocyte Transcriptome. *PLoS One*, 11(8), e0160810; DOI: 10.1371/journal.pone.0160810 [ElektrosmogReport 3-2019](#)

Akakin D, Tok OE, Anil D, Akakin A, Sirvanci S, Seber G, Ercan F (2021): Electromagnetic Waves from Mobile Phones may Affect Rat Brain During Development. *Turk Neurosurg* 31 (3), 412-421; DOI: 10.5137/1019-5149.JTN.31665-20.2 [ElektrosmogReport 2-2022](#)

Alkis ME, Bilgin HM, Akpolat V, Dasdag S, Yegin K, Yavas MC, Akdag MZ (2019): Effect of 900-, 1800-, and 2100-MHz radiofrequency radiation on DNA and oxidative stress in brain. *Electromagn Biol Med.*, 00(00), 1-16.2019; DOI: 10.1080/15368378.2019.1567526 [ElektrosmogReport 1-2019](#)

Alkis M E, Akdag MZ, Dasdag S, Yegin K, Akpolat V. (2019): Single-strand DNA breaks and oxidative changes in rat testes exposed to radiofrequency radiation emitted from cellular phones. *Biotechnology & Biotechnological Equipment*; DOI: 10.1080/13102818.2019.1696702 [ElektrosmogReport 3/4-2020](#)

Alkis ME, Akdag MZ, Dasdag S (2021): Effects of Low-Intensity Microwave Radiation on Oxidant-Antioxidant Parameters and DNA Damage in the Liver of Rats. *Bioelectromagnetics*. 2021;42(1):76-85; DOI: 10.1002/bem.22315 [ElektrosmogReport 4-2022](#)

Almasiova V, Holovska K, Adraskova S, Cigankova V, Sevcikova Z, Racek A, Andrejcakova Z, Benova K, Toth S, Tvrdá E, Molnar J, Eniko R (2021): Potential influence of prenatal 2.45 GHz radiofrequency electromagnetic field exposure on Wistar albino rat testis. *Histol Histopathol.* 2021 Mar 25:18331; DOI: 10.14670/HH-18-331 [ElektrosmogReport 2-2021](#)

Altun G, Deniz ÖG, Yurt KK, Davis D, Kaplan S (2018): Effects of mobile phone exposure on metabolomics in the male and female reproductive systems. *Environ Res.*, 167 (February), 700–707; DOI: 10.1016/j.envres.2018.02.031 [ElektrosmogReport 3-2019](#)

Andrašková S, Holovská K, Zuzana Ševčíková, Zuzana Andrejčáková, Štefan Tóth, Marcela Martončíková, Račeková E, Almášiová V (2022): The potential adverse effect of 2.45 GHz microwave radiation on the testes of prenatally exposed peripubertal male rats. *Histol Histopathol.* ; DOI:10.14670/HH-18-402 [ElektrosmogReport 1-2022](#)

B

Balmori, A (2021): Electromagnetic radiation as an emerging driver factor for the decline of insects. *Science of The Total Environment*. *Sci Total Environ* 2021 May 1;767:144913; DOI: 10.1016/j.scitotenv.2020.144913 [ElektrosmogReport 1-2021](#)

Balmori A (2022): Evidence for a health risk by RF on humans living around mobile phone base stations: From radiofrequency sickness to cancer. *Environ Res.* 2022 Nov;214(Pt 2):113851; DOI: 10.1016/j.envres.2022.113851 [ElektrosmogReport 3-2022](#)

Bamdad K, Adel Z, Esmaili M (2019): Complications of nonionizing radiofrequency on divided Attention. *J Cell Biochem.* 120 (6); DOI: 10.1002/jcb.28343 [ElektrosmogReport 1-2020](#)

Barnes F, Greenebaum B (2020): Possible Mechanism for Synchronized Detection of Weak Magnetic Fields by Nerve Cells. *Bioelectromagnetics* 41 (3), 213–218; DOI: 10.1002/bem.22251 [ElektrosmogReport 2-2020](#)

Bartosova K, Neruda M, & Vojtech L (2021): Methodology of Studying Effects of Mobile Phone Radiation on Organisms: Technical Aspects. *Int J Environ Res Public Health*, 18(23), 12642. MDPI AG; DOI: 10.3390/ijerph182312642 [ElektrosmogReport 1-2022](#)

Belpomme D, Irigaray P (2020): Electrohypersensitivity as a Newly Identified and Characterized Neurologic Pathological Disorder: How to Diagnose, Treat, and Prevent It. *Int J Mol Sci.*, 2020, 21, 1915; DOI: 10.3390/ijms21061915 [ElektrosmogReport 1-2021](#)

Bertagna F, Lewis R, Silva SRP, McFadden J, Jeevaratnam K (2021): Effects of electromagnetic fields on neuronal ion channels: a systematic review. *Ann N Y Acad Sci.* 2021;1499(1):82-103; DOI: 10.1111/nyas.14597 [ElektrosmogReport 4-2021](#)

Betzalel N, Paul Ben Ishai PB, Feldman Y. The human skin as a sub-THz receiver – Does 5G pose a danger to it or not? *Erschienen in: Environ Res.* 2018; 163 (January): 208-216; DOI: 10.1016/j.envres.2018.01.032 [ElektrosmogReport 2-2019](#)

Boileau N, Margueritte F, Gauthier T, Boukeffa N, Preux PM, Labrunie A, Aubard Y (2020): Mobile phone use during pregnancy: which association with fetal growth? *J Gynecol Obstet Hum Reprod.*; DOI: 10.1016/j.jogoh.2020.101852 [ElektrosmogReport 3/4-2020](#)

Bonato M, Dossi L, Gallucci S, Benini M, Tognola G, Parazzini M (2022): Assessment of Human Exposure Levels Due to Mobile Phone Antennas in 5G Networks. *Int. J. Environ. Res. Public Health* 2022, 19, 1546; DOI: 10.3390/ijerph19031546 [ElektrosmogReport 2-2022](#)

Broom KA, Findlay R, Addison DS, Goiceanu C, Sienkiewicz Z (2019): Early-Life Exposure to Pulsed LTE Radiofrequency Fields Causes Persistent Changes in Activity and Behavior in C57BL/6J Mice. *Bioelectromagnetics* 40, 498–511; DOI: 10.1002/bem.22217 [ElektrosmogReport 1-2020](#)

Bushberg JT, Chou CK, Foster KR, Kavet R, Maxson DP, Tell RA, Ziskin MC (2020): IEEE Committee on Man and Radiation—COMAR Technical Information Statement: Health and Safety Issues Concerning Exposure of the General Public to Electromagnetic Energy from 5G Wireless Communications Networks. *Health Physics* 119 (2), 236–246; DOI: 10.1097/HP.0000000000001301 [ElektrosmogReport 3/4-2020](#)

C

Chae KS, Kim SC, Kwon HJ, Kim Y (2022): Human magnetic sense is mediated by a light and magnetic field resonance-dependent mechanism. *Scientific Reports*, 12(1), 1-11; DOI: 10.1038/s41598-022-12460-6 [ElektrosmogReport 3-2022](#)

Chen C, Ma Q, Deng P, Lin M, Gao P, He M, Lu Y, Pi H, He Z, Zhou C, Zhang Y, Yu Z, Zhang L (2021): 1800 MHz Radiofrequency Electromagnetic Field Impairs Neurite Outgrowth Through Inhibiting EPHA5 Signaling. *Front Cell Dev Biol.* 2021;9(April):1-16; DOI: 10.3389/fcell.2021.657623 [ElektrosmogReport 2-2021](#)

Choi J, Min K, Jeon S, Kim N, Pack JK, Song K (2020): Continuous Exposure to 1.7 GHz LTE Electromagnetic Fields Increases Intracellular Reactive Oxygen Species to Decrease Human Cell Proliferation and Induce Senescence. *Sci Rep.* 2020;10(1):1-15; DOI: 10.1038/s41598-020-65732-4 [ElektrosmogReport 2-2021](#)

Di Ciaula A (2018): Towards 5G communication systems: are there health implications. *Int. J. Hyg. Environ. Health* 2018; 221, 367–375; DOI: 10.1016/j.ijheh.2018.01.011 [ElektrosmogReport 2-2019](#)

D

Dasgupta S, Leong C, Simonich MT, Truong L, Liu H, Tanguay RL (2022): Transcriptomic and Long-Term Behavioral Deficits Associated with Developmental 3.5 GHz Radiofrequency Radiation Exposures in Zebrafish. *Environ Sci Technol Lett.*, 9(4), 327–332; DOI: 10.1021/acs.estlett.2c00037 [ElektrosmogReport 3-2022](#)

Delen K, Sirav B, Oruc S, Seymen CM, Kuzay D, Yeğın K, Take Kaplanođlu G (2021): Effects of 2600 MHz Radiofrequency Radiation in Brain Tissue of Male Wistar Rats and Neuroprotective Effects of Melatonin. *Bioelectromagnetics* 42 (2), 159–172; DOI: 10.1002/bem.22318 [ElektrosmogReport 2-2021](#)

Ding Z, Xiang X, Li J, Wu S (2022): Molecular Mechanism of Malignant Transformation of Balb/c-3T3 Cells Induced by Long-Term Exposure to 1800 MHz Radiofrequency Electromagnetic Radiation (RF-EMR). *Bioengineering* 9, 43; DOI: 10.3390/bioengineering9020043 [ElektrosmogReport 2-2022](#)

Doyon PR, Johansson O (2017): Electromagnetic fields may act via calcineurin inhibition to suppress immunity, thereby increasing risk for opportunistic infection: Conceivable mechanisms of action. *Medical Hypotheses*. 2017;106:71-87; DOI: 10.1016/j.mehy.2017.06.028 [ElektrosmogReport 2-2020](#)

Durdik M, Kosik P, Markova E, Somsedikova A, Gajdosechova B, Nikitina E, Horvathova E, Kozics K, Davis D, Belyaev I (2019): Microwaves from mobile phone induce reactive oxygen species but not DNA damage, preleukemic fusion genes and apoptosis in hematopoietic stem/progenitor cells. *Scientific Reports* 9, Art-Nr. 16182; DOI: 10.1038/s41598-019-52389-x [ElektrosmogReport 1-2020](#)

E

Echchgadda I, Cantu JC, Tolstykh GP, Butterworth JW, Payne JA, Ibey BL (2022): Changes in the excitability of primary hippocampal neurons following exposure to 3.0 GHz radiofrequency electromagnetic fields. *Scientific Report* 12, 350; DOI: 10.1038/s41598-022-069 [ElektrosmogReport 3-2022](#)

F

Fahmy HM, Mohammed FF (2020): Hepatic injury induced by radio frequency waves emitted from conventional Wi-Fi devices in Wistar rats. *Hum Exp Toxicol.*; DOI: 10.1177/0960327120946470 [ElektrosmogReport 3/4-2020](#)

Falcioni L, Bua L, Tibaldi E, Lauriola M, De Angelis L, Gnudi F, Mandrioli D, Manservigi M, Manservigi F, Manzoli I, Menghetti I, Montella R, Panzacchi S, Sgargi D, Strollo V, Vornoli A, Belpoggi F (2018): Report of final results regarding brain and heart tumors in Sprague-Dawley rats exposed from prenatal life until natural death to mobile phone radiofrequency field representative of a 1.8 GHz GSM base station environmental emission. *Environ Res*. 2018;(October 2017):1; DOI: 10.1016/j.envres.2018.01.037 [ElektrosmogReport 2-2019](#)

Foster KR, Garrett DC, Ziskin MC (2021): Can the Microwave Auditory Effect Be “Weaponized”? *Front Public Health*, 9; DOI: 10.3389/fpubh.2021.788613 [ElektrosmogReport 2-2022](#)

Frank JW (2021): Electromagnetic fields, 5G and health: what about the precautionary principle? *J Epidemiol Community Health*, 2021; 0:1–5; DOI: 10.1136/jech-2019-213595 [ElektrosmogReport 1-2021](#)

Friesen M, Havas m (2020): Effects of Non-Ionizing Electromagnetic Pollution on Invertebrates, Including Pollinators Such as Honey Bees: What We Know, What We Don't Know, and What We Need to Know. Pages 127-138 In *Working Landscapes. Proceedings of the 12th Prairie Conservation and Endangered Species Conference*, February 2019, Winnipeg, Manitoba. Edited by D. Danyluk. Critical Wildlife Habitat Program, Winnipeg, Manitoba. <http://pcesc.ca/media/45404/final-2019-pcesc-proceedings.pdf>. [ElektrosmogReport 3-2021](#)

G

Gao Y, Wen P, Cardé RT, Xu H, Huang Q (2021): In addition to cryptochrome 2, magnetic particles with olfactory co-receptor are important for magnetic orientation in termites. *Communications biology*, 4(1), 1-12; DOI: 10.1038/s42003-021-02661-6 [ElektrosmogReport 1-2022](#)

Georgiou CD, Margaritis LH (2021): Review: Oxidative Stress and NADPH Oxidase: Connecting Electromagnetic Fields, Cation Channels and Biological Effects. *Int J Mol Sci*. 2021 Sep; 22(18): 10041; DOI: 10.3390/ijms221810041 [ElektrosmogReport 4-2021](#)

Gökçek-Saraç Ç, Akçay G, Karakurt S, Ateş K, Özen Ş, Deri N (2021): Possible effects of different doses of 2.1 GHz electromagnetic radiation on learning, and hippocampal levels of cholinergic biomarkers in Wistar rats. *Electromagn Biol Med.*; 40 (1), 179–190; DOI: 10.1080/15368378.2020.185125 [ElektrosmogReport 2-2022](#)

Grasso R, Pellitteri R, Caravella SA, Musumeci F, Raciti G, Scordino A, Sposito G, Triglia A, Campisi A (2020): Dynamic changes in cytoskeleton proteins of olfactory ensheathing cells induced by radiofrequency electromagnetic fields. *J Exp Biol.* January 2020: jeb.217190; DOI: 10.1242/jeb.217190 [ElektrosmogReport 1-2020](#)

Gulati S, Kosik P, Durdik M, Skorvaga M, Jakl L, Markova E, Belyaev I (2020): Effects of different mobile phone UMTS signals on DNA, apoptosis and oxidative stress in human lymphocytes. *Environ Pollut.* 2020 Dec;267:115632; DOI:10.1016/j.envpol.2020.115632 [ElektrosmogReport 1-2021](#)

Guo Y, Liu Y, Wang, X (2020): Electromagnetic activity: a possible player in epilepsy. *Acta Epileptologica*, 2(1), 1-6. DOI: 10.1186/s42494-020-00019-9 [ElektrosmogReport 2-2022](#)

Guo L, Bo W, Wang K, Wang S, Gong Y (2022): Theoretical investigation on the effect of terahertz wave on Ca²⁺ transport in the calcium channel. *iScience* 25 (1); DOI: 10.1016/j.isci.2021.103561 [ElektrosmogReport 3-2022](#)

Gurhan H, Bruzon R, Kandala S, Greenebaum B, Barnes F (2021): Effects Induced by a Weak Static Magnetic Field of Different Intensities on HT-1080 Fibrosarcoma Cells. *Bioelectromagnetics* 42, 212–223; DOI: 10.1002/bem.22332 [ElektrosmogReport 4-2021](#)

H

Hansson Mild K, Johnsson A, Hardell L (2020): Robotic Lawn Mower: A New Source for Domestic Magnetic Field Exposure. *Bioelectromagnetics* 42 (1), 95–99; DOI: 10.1002/bem.22313 [ElektrosmogReport 1-2021](#)

Hansson Mild K, Bergling R, Hornsten R (2021): Heart Rate Variability and Magnetic Field Exposure Among Train Engine Drivers - A Pilot Study. *Bioelectromagnetics* 42 (3), 259–264; DOI: 10.1002/bem.22329 [ElektrosmogReport 2-2021](#)

Hao YH, Zhao L, Peng R Y (2018): Effects of electromagnetic radiation on autophagy and its regulation. *Biomed Environ Sci.*, 31(1), 57-65; DOI: 10.3967/bes2018.006 [ElektrosmogReport 3-2021](#)

Harakawa S, Hori T, Nedachi T, Suzuki H (2020): Gender and Age Differences in the Suppressive Effect of a 50 Hz Electric Field on the Immobilization- Induced Increase of Plasma Glucocorticoid in Mice. *Bioelectromagnetics* 41, 156–163; DOI: 10.1002/bem.22238 [ElektrosmogReport 2-2020](#)

Hardell L, Carlberg M (2021): Lost opportunities for cancer prevention: Historical evidence on early warnings with emphasis on radiofrequency radiation. *Rev Environ Health.* 2021; DOI:10.1515/reveh-2020-0168 [ElektrosmogReport 2-2021](#)

Hardell L (2021): Health Council of the Netherlands and evaluation of the fifth generation, 5G, for wireless communication and cancer risks. *World J Clin Oncol.* 12 (6), 393–403, DOI: 10.5306/wjco.v12.i6.39 [ElektrosmogReport 4-2021](#)

Hardell L, Carlberg M (2020): [Comment] Health risks from radiofrequency radiation, including 5G, should be assessed by experts with no conflicts of interest. *Oncol. Lett.* (2020); DOI: 10.3892/ol.2020.11876 [ElektrosmogReport 3/4-2020](#)

Hasan I, Jahan MR, Islam MN, Islam MR (2022): Effect of 2400 MHz mobile phone radiation exposure on the behavior and hippocampus morphology in Swiss mouse model. *Saudi Journal of Biological Sciences* 29 (1), 102–110; DOI: 10.1016/j.sjbs.2021.08.063 [ElektrosmogReport 1-2022](#)

Hassanzadeh-Taheri M, Khalili MA, Mohebati AH, Zardast M, Hosseini M, Palmerini MG, Doostabadi MR (2022): The detrimental effect of cell phone radiation on sperm biological characteristics in normozoospermic. *Andrologia*, 54(1), e14257; DOI: 10.1111/and.14257 [ElektrosmogReport 3-2022](#)

Hinrikus H, Lass J, Bachmann M (2021): Threshold of radiofrequency electromagnetic field effect on human brain. *Int J Radiat Biol.*, 97(11), 1505–1515; DOI: 10.1080/09553002.2021.1969055 [ElektrosmogReport 1-2022](#)

Hinrikus, H., Koppel, T., Lass, J., Orru, H., Roosipuu, P., & Bachmann, M. (2022). Possible health effects on the human brain by various generations of mobile telecommunication: a review based estimation of 5G impact. *International Journal of Radiation Biology*, 1-12; DOI: 10.1080/09553002.2022.2026516 [ElektrosmogReport 4-2022](#)

Holovská K, Almášiová V, Andrašková S, Demčíšáková Z, Račková E, Cigánková V (2021): Effect of electromagnetic radiation on the liver structure and ultrastructure of in utero irradiated rats. *Acta Veterinaria Brno* 90 (3), 315–319; DOI: 10.2754/avb202190030315 [ElektrosmogReport 1-2022](#)

Hori T, Nedachi T, Suzuki H, Harakawa S (2018): Characterization of the suppressive effects of extremely-low-frequency electric fields on a stress-induced increase in the plasma glucocorticoid level in mice. *Bioelectromagnetics* 2018, 39(7), 516–528; DOI: 10.1002/bem.22138 [ElektrosmogReport 1-2019](#)

Hu C, Zuo H, Li Y (2021): Effects of Radiofrequency Electromagnetic Radiation on Neurotransmitters in the Brain. *Front Public Heal.* 2021;9(August):1-15; DOI: 10.3389/fpubh.2021.691880 [ElektrosmogReport 4-20229](#)

I / J

Ikeya, N, & Woodward, J R (2021): Cellular autofluorescence is magnetic field sensitive. *Proceedings of the National Academy of Sciences*, 118(3), e2018043118; DOI: 10.1073/pnas.2018043118 [ElektrosmogReport 3-2022](#)

Imani M, Kazemi S, Saviz M, Farahmand L, Sadeghi B, Faraji-dana R (2019): Morphological Changes Induced By Extremely Low-Frequency Electric Fields. *Bioelectromagnetics* 40, 375-390; DOI: 10.1002/bem.22195 [ElektrosmogReport 4-2019](#)

Ioniță E, Marcu A, Temelie M, Savu D, Șerbănescu M, Ciubotaru M (2021): Radiofrequency EMF irradiation effects on pre-B lymphocytes undergoing somatic recombination. *Sci Rep.* 2021;11(1):1-12; DOI: 10.1038/s41598-021-91790-3 [ElektrosmogReport 3-2021](#)

Jaffar FHF, Osman K, Hui CK, Zulkefli AF, Ibrahim SF (2022): Long-Term Wi-Fi Exposure From Pre-Pubertal to Adult Age on the Spermatogonia Proliferation and Protective Effects of Edible Bird's Nest Supplementation. *Frontiers in Physiology*, 13; DOI: 10.3389/fphys.2022.828578 [ElektrosmogReport 3-2022](#)

Jankowska M, Klimek A, Valsecchi C, Stankiewicz M, Wyszowska J, Rogalska J (2021): Electromagnetic field and TGF- β s enhance the compensatory plasticity after sensory nerve injury in cockroach *Periplaneta americana*. *Sci Rep.* 2021, 11, 1-11; DOI: 10.1038/s41598-021-85341-z [ElektrosmogReport 2-2021](#)

K

Kacprzyk A, Kanclerz G, Rokita E, Tatoń G. (2021): Which sources of electromagnetic field are of the highest concern for electrosensitive individuals?—Questionnaire study with a literature review. *Electromagnetic Biology and Medicine*, 40(1), 33-40; DOI: 10.1080/15368378.2020.1839489 [ElektrosmogReport 4-2022](#)

Karimi N, Bayat M, Haghani M, Saadi HF, Ghazipour GR (2018): 2.45 GHz microwave radiation impairs learning, memory, and hippocampal synaptic plasticity in the rat. *Toxicol Ind Health* 2018; 34(12), 873-883; DOI: 10.1177/0748233718798976 [ElektrosmogReport 1-2019](#)

Kesari KK, Agarwal A, Henkel R (2018): Radiations and male fertility. *Reprod Biol Endocrinol.* 16 (1):118; DOI: 10.1186/s12958-018-0431-1 [ElektrosmogReport 3-2019](#)

Kim HS, Paik MJ, Seo C, Choi HD, Paik JK, Kim N, Ahn YH (2021): Influences of exposure to 915-MHz radiofrequency identification signals on serotonin metabolites in rats: A pilot study. *Int J Radiat Biol.* 97 (2), 282-287; DOI: 10.1080/09553002.2021.1844336 [ElektrosmogReport 3-2021](#)

Kim HS, Choi HD, Pack JK, Kim N, Ahn YH (2021): Biological Effects of Exposure to a Radiofrequency Electromagnetic Field on the Placental Barrier in Pregnant Rats. *Bioelectromagnetics* 42 (3), 191-199; DOI: 10.1002/bem.22322 [ElektrosmogReport 3-2021](#)

Kim JH, Yu DH, Huh YH, Lee EH, Kim HG, Kim HR (2016): Long-term exposure to 835 MHz RF-EMF induces hyperactivity, autophagy and demyelination in the cortical neurons of mice. *Sci Rep* 2017; 7: 41129; DOI: 10.1038/srep41129 [ElektrosmogReport 3-2019](#)

Kim JH, Chung KH, Hwang YR, Hwang YR, Park HR, Kim HJ, Kim H, Kim RK (2021): Exposure to RF-EMF alters postsynaptic structure and hinders neurite outgrowth in developing hippocampal neurons of early postnatal mice. *Int J Mol Sci.* 2021;22(10); DOI: 10.3390/ijms22105340 [ElektrosmogReport 3-2021](#)

Kim JH, Jeon S, Choi HD, Lee JH, Bae JS, Kim N, Kim HG, Kim KB, Kim HR (2021): Exposure to long-term evolution radiofrequency electromagnetic fields decreases neuroblastoma cell proliferation via Akt/mTOR- mediated cellular senescence. *J Toxicol Environ Health, Part A*, 84:20, 846-857; DOI: 10.1080/15287394.2021.1944944 [ElektrosmogReport 2-2022](#)

Kim S, Han D, Ryu J, Kim K, Kim YH (2021): Effects of mobile phone usage on sperm quality – No time-dependent relationship on usage: A systematic review and updated meta-analysis. In *Environ Res. (Vol. 202)*. Academic Press Inc.; DOI: 10.1016/j.envres.2021.111784 [ElektrosmogReport 3-2022](#)

Kostoff RN, Heroux P, Aschner M, Tsatsakis A (2020): Adverse Health Effects of 5G Mobile Networking Technology under Real Life Conditions. *Toxicology Letters*; DOI: 10.1016/j.toxlet.2020.01.020 [ElektrosmogReport 1-2020](#)

Koziorowska A, Depciuch J, Białek J, Woś I, Kozioł K, Sadło S, Piechowicz B (2020): Electromagnetic field of extremely low frequency has an impact on selected chemical components of the honeybee. *Pol J Vet Sci.*, 537-544; DOI: 10.24425/pjvs.2020.134703 [ElektrosmogReport 1-2021](#)

Kumar R, Deshmukh PS, Sharma S, Banerjee BD (2020): Effect of mobile phone signal radiation on epigenetic modulation in the hippocampus of Wistar rat. *Environ Res.*, 192:110297; DOI: 10.1016/j.envres.2020.110297 [ElektrosmogReport 3/4-2020](#)

Kundu A, Vangaru S, Bhattacharyya S, Mallick, Gupta B (2021): Electromagnetic Irradiation Evokes Physiological and Molecular Alterations in Rice. *Bioelectromagnetics* 42 (2), 173–185; DOI: 10.1002/bem.22319 [ElektrosmogReport 2-2021](#)

Kyriacou CP, Rosato E (2022): Genetic analysis of cryptochrome in insect magnetosensitivity. *Frontiers in Physiology*, 1522; DOI: 10.3389/fphys.2022.928416 [ElektrosmogReport 4-2022](#)

L

Lai H (2021): Review: Genetic effects of non-ionizing electromagnetic fields. *Electromagn Biol Med.*, 40(2):264-273; DOI: 10.1080/15368378.2021.1881866 [ElektrosmogReport 2-2021](#)

Lameth J, Gervais A, Colin C, Lévêque P, Jay TM, Edeline JM, Mallat M (2017): Acute Neuroinflammation Promotes Cell Responses to 1800 MHz GSM Electromagnetic Fields in the Rat Cerebral Cortex. *Neurotox Res* 32(3):444-459; DOI: 10.1007/s12640-017-9774-1 [Elektrosmog- Report 2-2019](#)

Leberecht B, Kobylkov D, Karwinkel T, Döge S, Burnus L, Wong SY, ... Mouritsen H (2022): Broadband 75–85 MHz radiofrequency fields disrupt magnetic compass orientation in night-migratory songbirds consistent with a flavin-based radical pair magnetoreceptor. *J Comp Physiol A Neuroethol Sens Neural Behav Physiol*, 208(1):97-106; DOI: 10.1007/s00359-021-01537-8 [ElektrosmogReport 2-2022](#)

Li Y, Deng P, Chen C, Ma Q, Pi H, He M, Lu Y, Gao P, Zhou C, He Z, Zhang Y, Yu Z, Zhang L. (2021): 1800 MHz Radiofrequency Electromagnetic Irradiation Impairs Neurite Outgrowth With a Decrease in Rap1-GTP in Primary Mouse Hippocampal Neurons and Neuro2a Cells. *Front Public Heal.* 2021;9 (November):1–13. DOI: 10.3389/fpubh.2021.771508 [ElektrosmogReport 1-2022](#)

Lupi D, Palamara Mesiano M, Adani A, Benocci R, Giacchini R, Parenti P, Zambon G, Lavazza A, Boniotti MB, Bassi S, Colombo M, Tremolada P (2021): Combined Effects of Pesticides and Electromagnetic-Fields on Honeybees: Multi-Stress Exposure. *Insects*, 12(8), 716; DOI: 10.3390/insects12080716 [ElektrosmogReport 4-2021](#)

M

Maluin SM, Osman K, Jaffar FHF, Ibrahim SF (2021): Effect of Radiation Emitted by Wireless Devices on Male Reproductive Hormones: A Systematic Review. *Front Physiol.* 2021;12(September):1-8; DOI: 10.3389/fphys.2021.732420 [ElektrosmogReport 4-2021](#)

Masoumi A, Karbalaeei N, Mortazavi SMJ, Shabani M (2018): Radiofrequency radiation emitted from Wi-Fi (2.4 GHz) causes impaired insulin secretion and increased oxidative stress in rat pancreatic islets. *Int J Radiat Biol.*; 94(9):850-857; DOI: 10.1080/09553002.2018.1490039 [ElektrosmogReport 4-2019](#)

McFadden J (2021): The Electromagnetic Will. *NeuroSci*, 2(3), 291–304; DOI: 10.3390/neurosci2030021 [ElektrosmogReport 1-2022](#)

Migdał P, Murawska A, Strachecka A, Bieńkowski P, Roman A (2021): Changes in the Honeybee Antioxidant System after 12 h of Exposure to Electromagnetic Field Frequency of 50 Hz and Variable Intensity. *Insects*, Multidisciplinary Digital Publishing Institute, 2020, 11, 713; DOI: 10.3390/insects11100713 [ElektrosmogReport 2-2021](#)

N

Narayanan SN, Jetty R, Kesari KK, Kumar RS, Nayak SB, Bhat PG (2019): Radiofrequency electromagnetic radiation-induced behavioral changes and their possible basis. *Environ Sci Pollut Res.* 2019;26(30):30693-30710; DOI: 10.1007/s11356-019-06278-5 [ElektrosmogReport 1-2020](#)

Nirala J, Singh KV, Murmu NN, Gautam R, Rajamani P, Meena R (2018): Oxidative stress-mediated alterations on sperm parameters in male Wistar rats exposed to 3G mobile phone radiation. *Andrologia*, 51(3):e13201; DOI: 10.1111/and.13201 [ElektrosmogReport 1-2019](#)

Nyirenda, V. R., Namukonde, N., Lungu, E. B., Mulwanda, S., Kalezu, K., Simwanda, M. et al (2022): Effects of phone mast-generated electromagnetic radiation gradient on the distribution of terrestrial birds and insects in a savanna protected area. *Biologia*, 1-13; DOI: 10.1007/s11756-022-01113-8 [ElektrosmogReport 4-2022](#)

O

Odemer R, Odemer F (2019): Effects of radiofrequency electromagnetic radiation (RFEMF) on honey bee queen development and mating success. *Sci Total Environ.*, 661 (2019) 553–562; DOI: 10.1016/j.scitotenv.2019.01.154 [ElektrosmogReport 1-2019](#)

Othman H, López-Furelos A, Leiro-Vidal JM, Mohamed A, Mohsen S, Hafedh A, Salas-Sánchez AA, Ares-Pena F, López-Martín E (2021): Exposure to 2.45 GHz radiation triggers changes in HSP-70, Glucocorticoid Receptors and GFAP biomarkers in rat brain. *Int J Mol Sci.* 2021;22(10); DOI: 10.3390/ijms22105103 [ElektrosmogReport 3-2021](#)

Özdemir E, Çömelekoglu Ü, Degirmenci E, Bayrak G, Yildirim M, Ergenoglu T, Yılmaz BC, Engiz BK, Yalin S, Koyuncu DD, Ozbay E (2021): The effect of 4.5 G (LTE Advanced-Pro network) mobile phone radiation on the optic nerve. *Cutan Ocul Toxicol.*, 40(3):198-206; DOI: 10.1080/15569527.2021.1895825 [ElektrosmogReport 2-2022](#)

Özsobacı NP, Ergün DD, Tunçdemir M, Özçelik D (2019): Protective Effects of Zinc on 2.45 GHz Electromagnetic Radiation-Induced Oxidative Stress and Apoptosis in HEK293 Cells. *Biol Trace Elem Res.*; DOI: 10.1007/s12011-019-01811-6 [ElektrosmogReport 1-2020](#)

Ozel HB, Cetin M, Sevik H, Varol T, Isik B, Yaman B (2021): The effects of base station as an electromagnetic radiation source on flower and cone yield and germination percentage in *Pinus brutia* Ten. *Biologia Futura*, 72(3), 359-365; DOI: 10.1007/s42977-021-00085-1 [ElektrosmogReport 2-2022](#)

P / Q

Pall ML (2021): Millimeter (MM) wave and microwave frequency radiation produce deeply penetrating effects: the biology and the physics. *Rev Environ Health*. 2021;(Mm); DOI: 10.1515/reveh-2021-0090

[ElektrosmogReport 2-2022](#)

Panagopoulos DJ (2018): Comparing DNA damage induced by mobile telephony and other types of man-made electromagnetic fields. *Mutat Res Rev Mutat Res*, 781, 53–62; DOI: 10.1016/j.mrrev.2019.03.003

[ElektrosmogReport 3-2019](#)

Panagopoulos DJ (2019): Chromosome damage in human cells induced by UMTS mobile telephony radiation. *Gen Physiol Biophys*, 29, 346–354; DOI: 10.4149/gpb_2019032 [ElektrosmogReport 4-2019](#)

Panagopoulos DJ, Karabarbounis A, Yakymenko I, Chrousos GP (2021): Human-made electromagnetic fields: Ion forced-oscillation and voltage-gated ion channel dysfunction, oxidative stress and DNA damage (Review). *Int J Oncol.*, 59, 92; DOI: 10.3892/ijo.2021.5272 [ElektrosmogReport 4/2021](#)

Panagopoulos, DJ (2019): Comparing DNA damage induced by mobile telephony and other types of man-made electromagnetic fields. *Mutat Res Rev Mutat Res.*, 781, 53-62; DOI: 10.1016/j.mrrev.2019.03.003

[ElektrosmogReport 2-2022](#)

Peleg M, Berry EM, Deitch M, Nativ O, Richter E (2022): On radar and radio exposure and cancer in the military setting. *Environ Res*. 2023;216(P2):114610; DOI:10.1016/j.envres.2022.114610 [ElektrosmogReport 4-2022](#)

Pooam M, Jourdan N, Aguida B, Dahon C, Baouz S, Terry C, Raad H, Ahmad M (2022): Exposure to 1.8 GHz radiofrequency field modulates ROS in human HEK293 cells as a function of signal amplitude. *Commun Integr Biol.*, 15(1): 54-66; DOI: 10.1080/19420889.2022.2027698 [ElektrosmogReport 1-2022](#)

Price C, Williams E, Elhalel G, Sentman D (2021): Natural ELF fields in the atmosphere and in living organisms. *Int J Biometeorol.*, 65(1): 85-92; DOI: 10.1007/s00484-020-01864-6 [ElektrosmogReport 3-2022](#)

Qin TZ, Wang X, Du JZ et al. (2022): Effects of radiofrequency field from 5G communications on the spatial memory and emotionality in mice. *Int J Environ Health Res*. 2022;00(00):1-12;

DOI: 10.1080/09603123.2022.2149708 [ElektrosmogReport 4-2022](#)

R

Redmayne M, Reddel S (2021): Redefining electrosensitivity: A new literature-supported model. *Electromagn Biol Med.*, 40(2), 227-235; DOI: 10.1080/15368378.2021.1874971 [ElektrosmogReport 4-2021](#)

Reuter S, Gupta SC, Chaturvedi MM, Aggarwal BB (2011): Oxidative stress, inflammation, and cancer: How are they linked? *Free Radic Biol Med*. 2011;49(11):1603-1616; DOI: 10.1016/j.freeradbiomed.2010.09.006

[ElektrosmogReport 2-2020](#)

Rodrigues NCP, Dode AC, Andrade MKDN, O'Dwyer G, Monteiro DLM, Reis INC, ... Lino VTS (2021): The Effect of Continuous Low-Intensity Exposure to Electromagnetic Fields from Radio Base Stations to Cancer Mortality in Brazil. *Int J Environ Res Public Health*, 18(3), 1229; DOI: 10.3390/ijerph18031229 [ElektrosmogReport 1-2021](#)

S

Said-Salman I, Yassine W, Rammal A, Hneino M, Yusef H, Moustafa M (2021): Effects of Wi-Fi Radiofrequency Radiation on Carbapenem-Resistant *Klebsiella pneumoniae*. *Bioelectromagnetics* 42 (7), 575-582;

DOI: 10.1002/bem.22364 [ElektrosmogReport 4-2021](#)

Saygin M, Asci H, Ozmen O, Cankara FN, Dincoglu D, Ilhan I (2016): Impact of 2.45 GHz Microwave Radiation on the Testicular Inflammatory Pathway Biomarkers in Young Rats: The Role of Gallic Acid. *Environ. Toxicol.*, 31: 1771-1784; DOI: 10.1002/tox.22179 [ElektrosmogReport 3-2019](#)

Schürmann D, Mevissen M (2021): Gibt es Hinweise auf vermehrten oxidativen Stress durch elektromagnetische Felder? BERENIS – Beratende Expertengruppe nicht-ionisierende Strahlung, Newsletter-Sonderausgabe Januar 2021 [ElektrosmogReport 1-2021](#)

Seomun GA, Lee J, Park J (2021): Exposure to extremely low-frequency magnetic fields and childhood cancer: A systematic review and meta-analysis. *PLoS One*, 16(5):e0251628; DOI: 10.1371/journal.pone.0251628 [ElektrosmogReport 3-2021](#)

Sharma S, Shukla S (2020): Effect of Electromagnetic Radiation on Redox Status, Acetylcholine Esterase Activity and Cellular Damage Contributing to the Diminution of the Brain Working Memory in Rats. *J Chem Neuroanat.* 2020;106(106):101784; DOI:10.1016/j.jchemneu.2020.101784 [ElektrosmogReport 4-2022](#)

Shih YW, O'Brien AP, Hung CS, Chen KH, Hou WH, Tsai HT (2020): Exposure to radiofrequency radiation increases the risk of breast cancer: A systematic review and meta-analysis. *Exp Ther Med* 2021 May;21(5):472 DOI: 10.3892/etm.2020.9455 [ElektrosmogReport 1-2021](#)

Sieroń K, Knapik K, Onik G, Romuk E, Birkner E, Kwiatek S, Sieron A (2021): Electromagnetic Fields Modify Redox Balance in the Rat Gastrointestinal Tract. *Front Public Heal.* 2021;9(September):1-10; DOI: 10.3389/fpubh.2021.710484 [ElektrosmogReport 4-2021](#)

Singh KV, Gautam R, Meena R, Nirala JP, Jha SK, Rajamani P (2020): Effect of mobile phone radiation on oxidative stress, inflammatory response, and contextual fear memory in Wistar rat. *Environ Sci Pollut Res Int.*, 27(16):19340-19351; DOI: 10.1007/s11356-020-07916-z [ElektrosmogReport 2-2020](#)

Singh A, Singh N, Jindal T, Rosado-Munoz A, Dutta MK (2021): A novel pilot study of automatic identification of EMF radiation effect on brain using computer vision and machine learning. *Biomedical Signal Processing and Control*, Elsevier, 2020, 57, 101821; DOI: 10.1016/j.bspc.2019.101821 [ElektrosmogReport 2-2021](#)

Smith-Roe SL, Wyde ME, Stout MD, Winters JW, Hobbs CA, Shepard KG, Green AS, Kissling GE, Shockley KR, Tice RR, Bucher JR, Kristine L, Witt KL (2019): Evaluation of the genotoxicity of cell phone radiofrequency radiation in male and female rats and mice following subchronic exposure. *Environ Mol Mutagen*; 61(2):276-290; DOI: 10.1002/em.22343 [ElektrosmogReport 4-2019](#)

Stefi AL, Mitsigiorgi K, Vassilacopoulou D, Christodoulakis NS (2020): Response of young *Nerium oleander* plants to long-term non-ionizing radiation. *Planta*, 251, 1-17; DOI: 10.1007/s00425-020-03405-2 [ElektrosmogReport 2-2021](#)

Stefi AL, Vassilacopoulou D, Margaritis LH, Christodoulakis NS (2018): Oxidative stress and an animal neurotransmitter synthesizing enzyme in the leaves of wild growing myrtle after exposure to GSM radiation. *Flora*, 243 (2), 67-76; DOI: 10.1016/j.flora.2018.04.006 [ElektrosmogReport 3-2021](#)

Stein Y, Udassin IG (2020): Electromagnetic hypersensitivity (EHS, microwave syndrome) – Review of Mechanisms. *Environ Res.*, DOI: 10.1016/j.envres.2020.109445 [ElektrosmogReport 2-2020](#)

Sueiro-Benavides RA, Leiro-Vidal JM, Salas-Sánchez AÁ, Rodríguez-Gonzalez JA, Ares-Pena FJ, Martín MEL (2020): Radiofrequency at 2.45GHz increases toxicity, pro-inflammatory and pre-apoptotic activity caused by black carbon in the RAW 264.7 macrophage cell line. *Sci Total Environ* 2021;765:142681; DOI:10.1016/j.scitotenv.2020.142681 [ElektrosmogReport 1-2021](#)

Surducu V, Surducu E, Neamtu C, Mot AC, Ciorita A (2020): Effects of Long-Term Exposure to Low-Power 915 MHz Unmodulated Radiation of *Phaseolus vulgaris* L. *Bioelectromagnetics* 41 (3), 200-212; DOI: 10.1002/bem.22253 [ElektrosmogReport 2-2020](#)

T

Thill A (2021): Desorientierung durch elektromagnetische Felder beim Vogelzug, Erstveröffentlichung [ElektrosmogReport 1/2021](#)

Todorovic D, Ilijin L, Mrdakovic M, Vlahovic M, Grcic A, Petkovic B, Peric-Mataruga V (2021): The impact of chronic exposure to a magnetic field on energy metabolism and locomotion of *Blaptica dubia*. *Int J Radiat Biol.*, 2020, 96, 1076-1083; DOI: 10.1080/09553002.2020.1770360 [ElektrosmogReport 3-2021](#)

Tohidi FZ, Sadr-Nabavi A, Haghiri H, Fardid R, Rafatpanah H, Azimian H, Bahreyni-Toossi MH (2020): Long-term exposure to electromagnetic radiation from mobile phones can cause considerable changes in the balance of Bax/Bcl2 mRNA expression in the hippocampus of mice. *Electromagn Biol Med.* 2021 Jan 2;40(1):131-137; DOI: 10.1080/15368378.2020.1830793 [ElektrosmogReport 3/4-2020](#)

Touitou Y, Selmaoui B, Lambrozo J (2022): Assessment of cortisol secretory pattern in workers chronically exposed to ELF-EMF generated by high voltage transmission lines and substations. *Environment International* 161, 107103; DOI: 10.1016/j.envint.2022.107103 [ElektrosmogReport 2-2022](#)

U

Uche UI, Naidenko OV (2021): Development of health – based exposure limits for radiofrequency radiation from wireless devices using a benchmark dose approach. *Environ Heal.* 2021:1-14; DOI: 10.1186/s12940-021-00768-1 [ElektrosmogReport 3-2021](#)

Ullrich V, Apell HJ (2021): Electromagnetic Fields and Calcium Signaling by the Voltage Dependent Anion Channel. *Open Journal of Veterinary Medicine*, 11(01), 57; DOI: 10.4236/ojvm.2021.111004 [ElektrosmogReport 4-2021](#)

V

Vornoli A, Falcioni L, Mandrioli D, Bua L, Belpoggi F (2019): The Contribution of In Vivo Mammalian Studies to the Knowledge of Adverse Effects of Radiofrequency Radiation on Human Health. *Int. J. Environ. Res. Public Health* 16, 3379; DOI: 10.3390/ijerph16183379 [ElektrosmogReport 4-2019](#)

W

Wardzinski EK, Jauch-Chara K, Haars S, Melchert UH, Scholand-Engler HG, Oltmanns KM (2022): Mobile Phone Radiation Deflects Brain Energy Homeostasis and Prompts Human Food Ingestion. *Nutrients* 14, 339; DOI: 10.3390/nu14020339 [ElektrosmogReport 1-2022](#)

Wilén J, Olsrud J, Frankel J, Hansson Mild K (2020): Valid Exposure Protocols Needed in Magnetic Resonance Imaging Genotoxic Research. *Bioelectromagnetics* 41 (3), 247-257; DOI: 10.1002/bem.22257 [ElektrosmogReport 2-2020](#)

Wilke I, Kommentar: A. Lerchls Qualität der Forschung, Irreführung inbegriffen, sein Umgang mit der Wahrheit und ein endgültiger Urteilsspruch. [ElektrosmogReport 1-2021](#)

X

Xie W, Xu R, Fan C, Yang C, Chen H, Cao Y (2021): 900 MHz Radiofrequency Field Induces Mitochondrial Unfolded Protein Response in Mouse Bone Marrow Stem Cells. *Front Public Heal.* 2021;9(August):1-8; DOI: 10.3389/fpubh.2021.724239 [ElektrosmogReport 1-2022](#)

Xu F, Bai Q, Zhou K, Ma L, Duan J, Zhuang F, Xie C, Li W, Zou P, Zhu C (2017): Age-dependent acute interference with stem and progenitor cell proliferation in the hippocampus after exposure to 1800 MHz electromagnetic radiation. *Electromagn Biol Med.*; 36 (2), 158-166; DOI: 10.1080/15368378.2016.1233886 [ElektrosmogReport 2-2019](#)

Y

Yadav H, Rai U, Singh R. (2021): Radiofrequency radiation: A possible threat to male fertility. *Reprod Toxicol.* 2021;100:90-100; DOI: 10.1016/j.reprotox.2021.01.007 [ElektrosmogReport 1-2022](#)

Yan S, Ju Y, Dong J, Lei H, Wang J, Xu Q, ... Wang X (2022): Paternal Radiofrequency Electromagnetic Radiation Exposure Causes Sex-Specific Differences in Body Weight Trajectory and Glucose Metabolism in Offspring Mice. *Frontiers in Public Health*, 10(May), 1-11; DOI: 10.3389/fpubh.2022.872198 [ElektrosmogReport 4-2022](#)

Yang H, Zhang Y, Wang Z, Zhong S, Hu G, Zuo W (2020): The Effects of Mobile Phone Radiofrequency Radiation on Cochlear Stria Marginal Cells in Sprague–Dawley Rats. *Bioelectromagnetics*, 41(3):219-229; DOI: 10.1002/bem.22255 [ElektrosmogReport 3/4-2020](#)

Yang H, Zhang Y, Wu X, Gan P, Luo X, Zhong S, Zuo W (2022): Effects of Acute Exposure to 3500 MHz (5G) Radiofrequency Electromagnetic Radiation on Anxiety-Like Behavior and the Auditory Cortex in Guinea Pigs. *Bioelectromagnetics*;43(2):106-118; DOI: 10.1002/bem.22388 [ElektrosmogReport 1-2022](#)

Yang P, Cai T, Zhang L, Yu D, Guo Z, Zhang Y. et al (2022): A rationally designed building block of the putative magnetoreceptor MagR. *Bioelectromagnetics*, 43(5), 317-326; DOI: 10.1002/bem.22413 [ElektrosmogReport 4-2022](#)

Yu G, Tang Z, Chen H, Chen Z, Wang L, Cao H, Wang G, Xing J, Shen H, Cheng Q, Li D, Wang G, Xiang Y, Guan Y, Zhu Y, Liu Z, Bai Z (2019): Long-term exposure to 4G smartphone radiofrequency electromagnetic radiation diminished male reproductive potential by directly disrupting Spock3–MMP2–BTB axis in the testes of adult rats. *Sci Total Environ*. 698, 133860; DOI: 10.1016/j.scitotenv.2019.133860 [ElektrosmogReport 4-2019](#)

Yu G, Bai Z, Song C, Cheng Q, Wang G, Tang Z, Yang S (2021): Current progress on the effect of mobile phone radiation on sperm quality: An updated systematic review and meta-analysis of human and animal studies. *Environ Pollut*. 2021;282:116952; DOI: doi:10.1016/j.envpol.2021.116952 [ElektrosmogReport 4-2021](#)