

THE HEALTH IMPACT OF WIRELESS TECHNOLOGIES: A SURVEY OF CURRENT LITERATURE

DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Auditory Neuropathy	Subjective Hearing and Vision	"Mobile phone related-hazards and subjective hearing and vision symptoms in the Saudi population"	Meo SA, Al-Drees AM	2005	Human
Auditory Neuropathy	Otoacoustic Emissions	"Cellular phone effects on otoacoustic emissions"	Grisanti G, Parlapiano C, Tamburello CC, Tine G, Zanforlin L	1998	Human
Auditory Neuropathy	Hearing Loss	"Assessment of Potential Effects of Electromagnetic Fields of Mobile Phones on Hearing"	Uloziene, Uloza, Gradauskiene, Saferis	2005	Human
Auditory Neuropathy	Hearing Levels	"Hearing level and intensive use of mobile phones"	Sebastian Gil E, Marco Algarra J.	2005	Human
Auditory Neuropathy	Acoustic Neuroma	"Vestibular schwannoma, tinitus and cellular telephones"	Hardell L, Mild KH, Sandstrom M, Carlberg M, Hallquist A, Pahlson A	2003	Human

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Auditory Neuropathy	Acoustic Neuroma	"Mobile phone use and acoustic neuroma risk in Japan"	T. Takebayashi, S. Akiba, Y. Kikuchi, et al.	2007	Human
Auditory Neuropathy	Acoustic Neuroma	"Mobile Phone Use and Acoustic Neuroma Risk in Japan"	Takebayashi, Akiba, Kikuchi, Taki, et al.	2006	Human
Auditory Neuropathy	Acoustic Neuroma	"Mobile phone use and risk of acoustic neuroma: results of the Interphone case-control study in five North European countries"	Schoemaker M. J., Swerdlow A. J., Ahlbom A., et al.	2005	Human
Auditory Neuropathy	Acoustic Neuroma	"Mobile Phone Use and the Risk of Acoustic Neuroma"	Lonn S, Ahlbom A, Hall P, Feychting M	2004	Human
Auditory Neuropathy	Acoustic Neuroma	"Mobile Phone Use and the Risk of Acoustic Neuroma"	Lonn, Ahlbom, Hall, Fetching, et al.	2004	Human

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Auditory Neuropathy	Acoustic Neuroma	"Cellular Telephone Use and the Risk of Acoustic Neuroma"	Christensen,Schuz,Kosteljanetz,et al.	2004	Human
Auditory Neuropathy/Neurological	Acoustic Neuroma/Meningioma	"Case-Control Study on Cellular and Cordless Telephones and the Risk for Acoustic Neuroma or Meningioma"	Hardell L, Carlberg M, Hansson Mild K	2005	Human
Auditory System	Auditory bioeffects	"A Study of the Effects of Cellular Telephone Microwave Radiation on the Auditory System in Healthy Men"	Mora, Crippa, Mora, Dellepiane	2006	Human
Biochemistry	Bioeffects	"Experimental study and mechanism analysis on bioeffects by nanosecond electromagnetic pulses"	Wang BY, Yang JB, Guo QG, Xu RM, Liu CJ, Zhang H, Zou FD, Wang ZS	1997	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Biochemistry	Bioeffects	"Bioeffects induced by exposure to microwaves are mitigated by superposition of ELF noise"	Litovitz TA, Penafiel LM, Farrel JM, Krause D, Meister R, Mullins JM	1997	Human
Biochemistry	Biochemical Processes	"The modification of the effect of microwave radiation on the biochemical processes in anaphylactic shock by using exposure to a weak and perturbed geomagnetic field"	Podkovkin VG	1993	Human
Bioeffect	Thermal effects from non-thermal signals	"Development and form of shortwave thermal zones in an agar body"	ALBRECHT, W.	1935	In Vitro
Bioeffect	TBD	"Repeated exposure to low-level extremely low frequency-modulated microwaves"	Vorobyov V, Pesic V, Janac B, Prolic Z.	2004	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
bioeffect	TBD	"Working with Visual Display Units"	Robinette et al.	1980	Human
Bioeffect	TBD	"Children's Health and Environment: A Review of Evidence: A Joint Report from the European Environmental Agency and The World Health Organization"	World Health Organization	2002	Human
Bioeffect	TBD	"Agar-Bridge System for Exposing Cell Cultures to Electric Fields"	Theriault	1994	In Vivo
Bioeffect	Radiation Injury	"Modification of lethal radiation injury in mice by postradiation exposure to low-intensity centimeter-band radio frequency waves"	Akoev IG, Mel'nikov VM, Usachev AV, Kozhokaru AF	1994	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Bioeffect	Pending	"Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300 GHz)"	International Commission on Non-ionizing Radiation Protection	0	Human
Bioeffect	Pending	"The Impulse UHF Field in Experimental and Clinical Practice"	ABRIKOSOV, I. A.	1954	
Bioeffect	Pending	"The Action of a Pulsed Electric UHF Field on the Organism"	ABRIKOSOV, I. A.	1955	
Bioeffect	Ornithine Decarboxylase Activity	"The role of coherence time in the effect of microwaves on ornithine decarboxylase activity"	Litovitz TA, Krause D, Penafiel M, Elson EC, Mullins JM	1993	Human
Bioeffect	Opioid Receptor Decrease	"Opioid receptor subtypes that mediate a microwave-	inNL, Pal'tsev luP, Iasnetsov VV	1994	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		induced decrease"			
Bioeffect	N/A	"Effect of a magnetic field on carboxydismutase"	AKOYUNOGLU, G.	1964	
Bioeffect	Mortality	"Mortality of chicken embryos exposed to EMFs from mobile phones"	Youbicier-Simo BJ, Lebecq JC, Bastide M	1998	In Vitro
Bioeffect	Microucleus Induction	"Micronucleus induction after whole-body microwave irradiation of rats"	Trosic I, Busljeta I, Kasuba V, Rozgaj R	2002	In Vitro
Bioeffect	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	"Study on health effects of the shortwave transmitter station of Schwarzenburg, Bern, Switzerland"	E.S. Altpeter, T.H. Krebs	1995	
Bioeffect	microwave sickness, nausea, headaches, sleep, concentration,	"The microwave syndrome—further aspects of a Spanish study, in: Proceedings of the	G. Oberfeld, et al	2004	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
	memory, tumors, joint pain	Third International Workshop on Bioelectromagnetic Effects of Electromagnetic Fields, Kos, Greece"			
Bioeffect	Human absorbtion of radiation	"Electromagnetic absorption in the human head and neck for mobile telephones at 835 and 1900 MHz, IEE Trans"	O.P. Gandhi, G. Lazzi, C.M. Furse	1996	
Bioeffect	genetic	"Amplitude Windows and Transiently Augmented Transcription from Exposure to Electromagnetic Fields"	Litovitz et al.	1997	In Vivo
Bioeffect	Fetal & Neonatal Resonances	"Fetal and neonatal responses following maternal exposure to mobile phones"	Rezk A. Y., Abdulqawi K., Mustafa R. M., Abo El-Azm T. M. and Al-Inany H.	2008	In Vivo
Bioeffect	Enhanced Kinetics in Protein	"Microwave enhanced kinetics observed in ORD studies of a protein"	Bohr H, Bohr J	2000	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Bioeffect	Ecological Impacts - plants	"Perturbations of plant leaflet rhythms caused by electromagnetic radiofrequency radiation"	Ellingsrud S, Johnsson A	1993	Human
Bioeffect	Ecological Impacts - plants	"Does The Skrunda Radio Location Station Diminish the Radial Growth of Pine Trees?"	Balodis et al	1996	In Vivo
Bioeffect	Ecological Impacts - plants	"Environmental-health aspects of pulse-modulated microwaves"	Neshev NN, Kirilova EI	1996	Human
Bioeffect	Bioeffects - SAR - levels	"Some present problems and a proposed experimental phantom for SAR compliance testing of cellular telephones at 835 and 1900 MHz"	O.P. Gandhi, G. Kang	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Bioeffect	Bioeffects - ornithine decarboxylase	"Effects of mobile phone radiation on UV-induced skin tumourigenesis in ornithine decarboxylase transgenic and non-transgenic mice"	Heikkinen P, Kosma VM, Alhonen L, Huuskonen H, Komulainen H, Kumlin T, Laitinen JT, Lang S, Puranen L, Juutilainen J	2003	In Vitro
Bioeffect	Bioeffects - ornithine decarboxylase	"Role of modulation on the effect of microwaves on ornithine decarboxylase activity in L929 cells"	Penafiel LM, Litovitz T, Krause D, Desta A, Mullins JM	1997	In Vitro
Bioeffect	Bioeffects - head tissue	"Analysis of RF exposure in the head tissues of children and adults"	J. Wiart, A. Hadjem, M.F. Wong	2008	Human
Bioeffect	Bioeffects - metastudy	"Biological effect from electromagnetic field exposure and public exposure standards"	L. Hardell, C. Sage	2008	Human
Bioeffect	Bioeffects - growth	"The effect of electromagnetic waves on	Aksoy U, Sahin S, Ozkoc S, Ergor G	2005	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		the growth of Entamoeba histolytica and Entamoeba dispar."			
Bioeffect	Bioeffects - calcium levels	"SIMS study of the calcium-deprivation step related to epidermal meristem production induced in flax by cold shock or radiation from a GSM telephone"	Tafforeau M, Verdus M-C, Norris V, White G, Demarty M, Thellier M, Ripoll C.	2002	Human
Bioeffect	Bioeffects	"Risk evaluation of potential environmental hazards from low frequency electromagnetic field exposure using sensitive in vitro methods"	A project funded by the European Union under the programme Quality of Life and Management of Living	2004	
Bioeffect	Bioeffects - Activity of SOD-1/Levels of MDA	"Effect of EMF on the activity of superoxide dismutase (SOD-1) and the level of malonyldialdehyde (MDA)"	Stopczyk D, Gnitecki W, Buczynski A, Markuszewski L, Buczynski J	2002	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Bioeffect	Bioeffects	"Interactions of RF radiation-induced hyperthermia and 2-methoxyethanol teratogenicity in rats"	Nelson BK, Conover DL, Krieg EF Jr, Snyder DL, Edwards RM	1997	In Vitro
Bioeffect	Bioeffect - SCE frequencies	"SCE-Frequencies Following Exposure to Magnetic Fields"	Tornqvist, S. et al.	1986	In Vivo
Bioeffect	Bioeffect - Sodium, Potassium, ATPase	"Interaction of low level modulated RF radiation with Na ⁺ K ⁺ -ATPase"	Behari J, Kunjilwar KK, and Pyne S	1998	In Vitro
Bioeffect	bioeffect - metastudy	"Extremely Low Frequency Fields Environmental Health Criteria Monograph 238"	World Health Organization	2007	Human
Bioeffect	Bioeffect - mitochondria, cellular, energy, growth	"Effects of Pulse Microwave Exposure on Mitochondrial Marker Enzyme and Energy Metabolism in Mouse Brain (1)"	Chiang H	1999	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Bioeffect	bioeffect - growth	"The Effects of Low-Energy 60-Hz EMF Upon the Growth Related Enzyme ODC"	Takashima, S. et al.	1979	In Vivo
Bioeffect	Bioeffect - chemical - EMF interactions	"Effects of co-exposure to ELF magnetic fields and benzene or benzene metabolites determined in vitro by the alkaline comet assay"	Morettia M, Villarinia, Simonuccib S, Fatigonia C, Scassellati-Sforzolinia G, Monarcaa S, Pasquinia R, Angeluccic M, Strappinic M	2005	Human
Bioeffect	Bioeffect	"Effect of Isothermal Radiofrequency Barrier Induced by 915 MHz Electromagnetic Radiation, Continuous Wave and Modulated at 8, 16, 50, and 200 Hz"	Cleary, Du, Cao, Liu, McCrady	1994	In Vivo
Bioeffect	Alterations in Enolase Activity in Escherichia Coli	"Frequency-dependent alterations in enolase activity in Escherichia coli caused by exposure to	Dutta SK, Verma M, Blackman CF	1994	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		electric and magnetic fields"			
Bioeffects	Thermal effects from non-thermal signals	"Thermal effects of 200 megacycles (cw) irradiation as related to shape, location, and orientation in the field"	ADDINGTON, C. H., OSBORN, C., SWARTZ, G., FISCHER, F. P., & SARKEES, Y.T.	1959	Human
Bioeffects	TBD	"Public Exposure levels from WiFi systems, 10/12/2007"	Philips, A.	2007	Human
Bioeffects	Spirodela Polyrhiza Schleiden Cultures	"The Effect of Electromagnetic Radiation from the Skrunda Radio Location Station on Spirodela Polyrhiza Schleiden Cultures"	Magone	1996	Human
Bioeffects	Permeability of Unilamellar Liposomes	"Effect of 2.45 GHz microwave radiation on permeability of unilamellar liposomes to 5(6)-carboxyfluorescein"	Saalman E, Norden B, Arvidsson L, Hamnerius Y, Hojevnik P, Connell KE, Kurucsev T,	1991	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Bioeffects	Nanoscale Biogenic Magnetite-Based Ferromagnetic Transduction Mechanisms	"Preliminary evaluation of nanoscale biogenic magnetite-based ferromagnetic transduction mechanisms for mobile phone bioeffects"	Cranfield C, Wieser HG, Al Madan J, Dobson J	2003	Human
Bioeffects	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	"Comparison of symptoms experienced by users of analogue and digital mobile phones: a Swedish-Norwegian epidemiological study"	Haugsdal B, Hauger E, Mild KH, Oftedal G, Sandstrom M, Wilen J, Tynes T	1998	Human
Bioeffects	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	"Epidemiological Studies of Radiofrequency Radiation: Current Status and Areas of Concern"	Goldsmith	1996	In Vivo
Bioeffects	Erythropoietic Changes	"Erythropoietic changes in rats after 2.45 GJz nonthermal irradiation"	Busljeta I, Trosic I, Milkovic-Kraus S.	2004	In Vitro

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Bioeffects	Erythropoietic Dynamic Equilibrium	"Erythropoietic dynamic equilibrium in rats maintained after microwave irradiation"	Trosic I, Busljeta I.	2006	In Vitro
Bioeffects	Changes in Ultrastructural Distribution of Calcium/Calcium-Activated ATPases	"Qualitative enzyme histochemistry and microanalysis reveals changes in ultrastructural distribution of calcium and calcium-activated ATPases after microwave irradiation of the medial habenula"	Kittel A, Siklos L, Thuroczy G, Somosy Z	1996	Human
Bioeffects	Changes in Serum Alkaline Phosphatase Activity	"Changes in serum alkaline phosphatase activity during in vitro exposure to AM EMF of ultrahigh frequency (2375 MHz) in guinea pigs	Pashovkina MS, Akoev IG	2000	In Vivo
Bioeffects	Calcium Efflux	"Effects of Weak Amplitude Modified Microwave Fields on Calcium Efflux"	Seegal, R.F.	1989	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Bioeffects	Calcium Efflux	"Exposure of frog hearts to CW or amplitude-modulated VHF fields: selective efflux of calcium ions at 16 Hz"	Schwartz JL, House DE, Mealing GA	1990	In Vivo
Bioeffects	Bioeffects - enzyme	"Reverse-micelle model: pH, electromagnetic field and inhibitor enzyme interaction"	Chattopadhyay SK, Toews KA, Butt S, Barlett R, Brown HD	1997	In Vivo
Bioeffects	Bioeffects	"Influence of 400, 900, and 1900 MHz electromagnetic fields on Lemna minor growth and peroxidase activity"	Tkalec M, Malaric K, Pevalek-Kozlina B.	2005	Human
Bioeffects	Bioeffect - c Function	"Effect of a 915-MHz simulated mobile phone signal on c function in man"	A. Preece, et al.	1999	
Brain	Ultramicrostructure Hypothalamus	"Study on the effects of microwave irradiation on ultramicrostructure of	Yao GD, Chiang H	1985	In Vitro

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		hypothalamus in mice"			
Brain	Tumor Mortality	"Cellular Telephone Use and Time Trends in Brain Tumor Mortality from 1969 to 2002"	Roosli, Michel, Keuhni, Spoerri	2007	Human
Brain	Thermoelastic Pressure Wave Propagation	"Microwave-induced thermoelastic pressure wave propagation in the cat brain"	Lin JC, Su JL, Wang Y	1988	
Brain	Temperatures	"Calculation of Change in Brain Temperatures Due to Exposure to a Mobile Phone"	Van Leeuwen, Lagendijk, Van Leersum	1999	Human
Brain	Temporal Bisection	"Temporal bisection in rats: the effects of high-peak-power pulsed microwave irradiation"	Raslear TG, Akyel Y, Bates F, Belt M, Lu ST	1993	In Vitro
Brain	Suppression of Evoked and	"Suppression of evoked and spontaneous field potentials	Tattersell JEH, Nettell JJ, Wood SJ	1998	

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	Spontaneous Field Potentials	by radiofrequency radiation in rat hippocampal slices"			
Brain	Spatial Learning	"Interaction of microwaves and a temporally incoherent magnetic field on spatial learning in the rat"	Lai H.	2004	In Vitro
Brain	SAR Distribution	"Radio frequency electromagnetic field exposure in humans: Estimation of SAR distribution in the brain, effects on sleep and heart rate"	Huber R, Schuderer J, Graf T, Jutz K, Borbely AA, Kuster N, Achermann P	2003	Human
Brain	Pending	"Effects of exposure to a 900MHz electromagnetic field on the dentate gyrus: a stereological and histopathological study"	Odaci E., Bas O. and Kaplan S.	2008	In Vitro

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Brain	Oxidative Stress	"Ginkgo biloba prevents mobile phone-induced oxidative stress in rat brain"	A. Ilhan, A. Gurel, F. Armutcu, S. Kamisli, M. Iraz, O. Akyol, S. Ozen	2004	In Vivo
Brain	ODC and Polyamine Levels Altered	"Digital cellphone field exposures, in utero, alter ODC and polyamine levels in fetal rat brains"	Cain CD, Ghaffari M, Jones RA, Byus CV, Adey WR	1999	Human
Brain	ODC Activity and Polyamine Levels	"Fetal rat brain ornithine decarboxylase (ODC) activity and polyamine levels following exposures to Iridium cell phone fields in late pregnancy"	Adey WR	2000	In Vitro
Brain	ODC Activity	"06-methylguanini E-DNA-methyltransferase activity and ODC activity in brains"	Cain CD, Ghaffari M, Jones RA, Archambeau J, Adey WR	1998	In Vitro
Brain	Nerve Cell Damage	"Nerve cell damage in mammalian brain after	Salford L. G., Brun A. E., Eberhardt J.	2003	In Vitro

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		exposure to microwaves from GSM mobile phones"	L., Malmgren L. and Persson B. R. R.		
Brain	Mitochondrial Enzymes	"Effects of microwave exposure at various power densities on mitochondrial enzymes in mouse brain"	Chiang H, Yao GD, Zhou SY	1984	In Vitro
Brain	Lipid Peroxidation Changes	"Melatonin modulates 900 Mhz microwave-induced lipid peroxidation changes in rat brain"	H.Koylu, H. Mollaoglu, F.N. Ozguner	2006	Human
Brain	Isolated Pineal Glands	"1800 MHz electromagnetic field effects on melatonin release from isolated pineal glands"	Sukhotina I, Streckert JR, Bitz AK, Hansen VW, Lerchl A	2006	Human
Brain	Hippocampal	"The effects of radiofrequency radiation on long term potentiation in rat hippocampal slices"	Scott IR, Tattersall JEH	1999	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Brain	Frontal Cortical Choline Uptake	"Effects of low-level microwave irradiation on hippocampal and frontal cortical choline uptake are classically conditionable"	Lai H, Horita A, Chou CK, Guy AW	1987	In Vitro
Brain	Enzymes	"The effect of low level continuous 2.45 GHz waves on enzymes of developing rat brain"	Paulraj R, Behari J	2002	Human
Brain	Electrocephalic Energy/Energy Metabolism	"The effects of 3000 MHz microwave irradiation on electroencephalic energy and energy metabolism in mouse brain"	Pu JS, Chen J, Yang YH, Bai YQ	1997	In Vitro
Brain	Electrical Activity	"Effects of low intensity radiofrequency electromagnetic fields on electrical activity in rat hippocampal slices"	Tattersall JE, Scott IR, Wood SJ, Nettell JJ, Bevir MK, Wang Z, Somasiri NP, Chen X.	2001	In Vitro/In Vivo

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Brain	Efflux of Calcium Ions	"A Role for the Magnetic Field in the Radiation-Induced Efflux of Calcium Ions from Brain Tissue in Vitro"	Szmigielski, S. et al.	1987	In Vitro
Brain	EEG Activity of the Brain	"Effects of Modulated RF Energy on the EEGs of Mammalian Brains"	Sienkiewicz, Saunders and Kowalczyk	1991	In Vitro
Brain	Deep Brain Stimulator	"Electromagnetic interference of GSM mobile phones with the implantable deep brain stimulator, ITREL-III"	Kainz W, Alesch F, Chan DD	2003	Human
Brain	Decreases in High-Affinity Choline Uptake	"Corticotropin-releasing factor antagonist blocks microwave- induced decreases in high-affinity choline uptake in the rat brain"	Lai H, Carino MA, Horita A, Guy AW	1990	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Brain	Decreases in Cholinergic Activity	"Intracerebroventricular injection of mu- and delta-opiate receptor antagonists block 60 Hz magnetic field-induced decreases in cholinergic activity in the frontal cortex and hippocampus of the rat"	Lai H, Carino MA	1998	In Vit
Disease/ System	Bioeffect/ Symptom	title	authors	date	type
Brain	Decreased calcium efflux	"Effects of Weak Amplitude Modulated Microwave Fields on Calcium Eflux on Awake Cat Cerebral Cortex	Bawin, S.M. and W.R. Adey	1976	In Vitro
Brain	Decrease of Hippocampal Cholinergic Activity	"Intraseptal microinjection of beta-funaltrexamine blocked a microwave induced decrease of hippocampal cholinergic activity in the rat"	Lai H, Carino MA, Horita A, Guy AW	1994	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Brain	Decrease in Central Cholinergic Activity	"Opioid receptor subtypes that mediate a microwave-induced decrease in central cholinergic activity in the rat"	Lai H, Carino MA, Horita A, Guy AW	1992	In Vitro
Brain	Cholinergic System	"Effect of amplitude-modulated radio frequency radiation on cholinergic system of developing rats"	Kunjilwar KK, Behari J	1993	In Vitro
Brain	Cholinergic Activity	"Low-level microwave irradiations affect central cholinergic activity in the rat"	Lai H, Horita A, Chou CK, Guy AW	1987	In Vitro
Brain	Change in ionic and transmitter fluxes in cortex	"Weak Electric Gradients Change the Ionic and Transmitter Fluxes in Cortex"	Kaczmarek and Adey	1974	In Vivo
Brain	C-Fos Expression/Tissue Heating	"IRIDIUM exposure increases c-fos expression in the	Morrissey JJ, Raney S, Heasley E,	1999	In Vivo

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		mouse brain only at levels which likely result in tissue heating"	Rathinavelu P, Dauphinee M, Fallon JH		
Brain	c-fos Expression Increase	"Iridium exposure increase c-fos expression in the mouse brain"	Morrissey JJ, Rauey S, Heasley E, Rathinavelua P, Dauphinee M, Fallon JH	1999	In Vitro
Brain	Cerebral Giomas	"The Anatomical Distribution of Cerebral Giomas in Mobile Phone Users"	Ali Khan, O'Brien, Kelly, Phillips, et al.	2003	Human
Brain	Cerebellum and Hippocampus	"Electron Microscope Observation on Rat Cerebellum and Hippocampus After Exposure to 60-Hz Electric Fields"	Schwartz et al.	1990	In Vitro
Brain	Central Cholinergic Activity	"60 Hz Magnetic fields and Central Cholinergic Activity: Effects of Exposure Intensity and Duration"	Lai H, Carino MA	1998	In Vitro

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Brain	Central Cholinergic Activity	"Low-level microwave irradiation and central cholinergic activity: a doseresponse study"	Lai H, Carino MA, Horita A, Guy AW	1989	In Vivo
Brain	Central Cholinergic	"Low-level microwave irradiation and central cholinergic systems"	Lai H, Carino MA, Horita A, Guy AW	1989	In Vitro
Brain	Cellular changes	"Astrocytoma Risk Related to Job Exposure to Electric and Magnetic Fields"	Reuter	1987	Human
Brain	Calcium ion eflux/influx	"The Efflux of $^{45}\text{Ca}^{2+}$ and ^3H -Gamma-Aminobutyric Acid Fron Cat Cerebral Cortex"	Kaczmarek and Adey	1973	In Vitro
Brain	Calcium ion eflux/influx	"In Vitro Study of Microwave Effects on Calcium Efflux in Rat Brain Tissue"	Bawin and Adey	1976	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Brain	Calcium ion efflux	"Possible Mechanisms of Weak Electromagnetic Field Coupling with Brain Tissue"	Bawin, Sheppard and Adey	1978	In Vivo
Brain	Calcium ion efflux	"Induction of Calcium-ion Efflux From Brain Tissue by Radiofrequency Radiation: Effects of Modulated Frequency and Field Strength"	Blackman et al.	1979	In Vivo
Brain	Calcium Ion Efflux	"Effect of Amplitude Modulated 147 MHz Radiofrequency on Calcium Ion Efflux from Avian Brain Tissue"	Albert, Bray, Lewis, Raff, Roberts, Watson	1987	In Vitro
Brain	Calcium Ion Efflux and ODC Activity	"Effect of amplitude modulated RF radiation on calcium ion efflux and ODC activity in chronically exposed rat brain"	Paulraj R, Behari J, Rao AR	1999	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Brain	Calcium ion Efflux	"The Influence of Temperature During Electric and Magnetic Field Induced Alteration of Calcium Ion Release from In Vitro Brain Tissue"	Blackman et al.	1991	In Vitro
Brain	Calcium ion Efflux	"Effects of ELF fields on calcium-ion efflux from brain tissues"	Blackman et al.	1982	In Vivo
Brain	Calcium ion Efflux	"Influence of Electromagnetic Fields on the Efflux of Calcium Ions from Brain Tissue In Vitro"	Blackman et al.	1988	In Vitro
Brain	Calcium Ion Efflux	"Power Density, Field Density and Carrier Frequency Determinants of RF Energy-Induced Calcium Ion Efflux from Brain Tissue"	Joines, W.T, and Blackman, C.F.	1980	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Brain	Calcium Binding	"Sensitivity in Calcium Binding in Cerbral Tissue to Weak Electric Fields Oscillating at Low Frequency"	Bawin, S.M. and W.R. Adey	1976	In Vivo
Brain	Ca2+ Efflux and ODC Activity	"Effects of low level 2.45 GHz microwave radiation on Ca2+ efflux and ODC activity in chronically exposed developing rat brain"	Paul Raj R, Behari J. Rao AR	1999	In Vitro
Brain	Brainstem	"Microwave-evoked brainstem potentials in cats"	Lin JC, Meltzer RJ, Redding FK	1979	In Vitro
Brain	Blood-Brain Barrier Permiability	"Blood-brain Barrier Permeability in Rats Exposed to Electromagnetic Fields Used in Wireless Communication"	Persson, Salford, Brun	1997	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Brain	Blood-Brain Barrier Permiability	"Radiofrequency and extremely low-frequency electromagnetic field effects on the blood-brain barrier"	Nittby, H., Grafstrom G., Eberhardt J. L., Malmgren L., Brun A., Persson B. R. R. and Salford L. G.	2008	In Vivo
Brain	Blood Brain Barrier Permiability	"Permeability of the blood-brain barrier induced by 915 MHz electromagnetic radiation, continuous wave and modulated at 8, 16, 50, and 200 Hz"	Salford LG, Brun A, Sturesson K, Eberhardt JL, Persson BR	1994	Human
Brain	Biogenic Amines	"Diurnal Patterns in Brain Biogenic Amines of Rats Exposed to 60-Hz Electric Fields"	Stodolnik-Baranska, W. et al.	1973	In Vitro
Brain	Bioelectric Activity	"Cellular phone electromagnetic field effects on bioelectric activity of human brain"	Lebedeva NN, Sulimov AV, Sulimova OP, Kotrovskaya TI, Gailus T,	2000	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Brain	Benzodiazepine Receptors	"Single vs. repeated microwave exposure: effects on benzodiazepine receptors in the brain of the rat"	Lai H, Carino MA, Horita A, Guy AW	1992	In Vitro
Brain	Auditory Functions of Cochlea or Brain Stem	"Can Mobile Phone Emissions Affect Auditory Functions of Cochlea or Brain Stem?"	Sievert, U., Eggert, S., Pau, H.W.	2005	Human
Brain	Acetylcholine Release in Hippocampus	"Effects of exposure to low level radiofrequency fields on acetylcholine release in hippocampus of freely moving rats"	Bioelectromagnetics 23:249-255	2002	In Vitro
Cancer	Uveal Melanoma	"The Possible Role of Radiofrequency Radiation in the Development of Uveal Melanoma"	Stang et al.	2001	In Vivo
Cancer	Uveal Melanoma	"The possible role of radiofrequency radiation in	Stang A, Anastassiou G, Ahrens W,	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		the development of uveal melanoma"	Bromen K, Bornfeld N, Jockel KH		
Cancer	Tumors	"Potential Hazards of Hertizan Radiation and Tumors"	Zaret, M	1977	Human
Cancer	Tumors	"Effect of low-energy and high-peak-power nanosecond pulses of microwave radiation on malignant tumors"	Devyatkov ND, Pletnyov SD, Betskii OV, Faikin VV	2001	In Vivo
Cancer	Tumor Necrosis Factor	"The Production of Tumor Necrosis Factor in Cells of Tumor-Bearing Mice After Total-Body Microwave Irradiation and Antioxidant Diet"	Novoselova EG, Ogay VB, Sorokina OV, Glushkova OV, Sinotova OA, Fesenko EE.	2004	In Vitro
Cancer	Tumor Necrosis Factor Production	"Effect of centimeter microwaves and the combined magnetic field on	Novoselova EG, Ogai VB, Sorokina OV, Novikov VV, Fesenko EE	2001	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		the tumor necrosis factor production in cells of mice with experimental tumors"			
Cancer	Tumor Necrosis Factor	"Stimulation of production of tumor necrosis factor by murine macrophages when exposed in vivo and in vitro to weak EMF in the centimeter range"	Novoselova ET, Fesenko EE	1998	Human
Cancer	Tumor Necrosis Factor	"Spontaneous and nitrosourea-induced primary tumors of the CNS in rats chronically exposed to 836 MHz modulated microwaves"	Adey WR, Byus CV, Cain CD, Higgins RJ, Jones RA, Kean CJ, Kuster N, MacMurray A, Stagg RB, Zimmerman G, Phillips JL, Haggren W	1999	In Vitro/In Vivo
Cancer	Tumor Cell Properties	"In Vitro Exposure to EMFs: Changes in Tumor Cell Properties"	Verschave et al.	1994	In Vitro
Cancer	Tumor Growth	"Effect of Pulsed EMF on	Veldhuis et al.	1984	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Tumor Growth in Mice"			
Cancer	Testicular Cancer	"Testicular Cancer and Electromagnetic Fields in the Workplace: results of a population based case-control study in Germany"	Zurawska and Nowak	1992	Human
Cancer	Testicular	"Use of Cellular and Cordless Telephones and Risk of Testicular Cancer"	Hardell, Carlberg, Ohlson, Westberg et al	2006	Human
Cancer	Testicular	"Testicular Cancer and Electromagnetic Fields in the Workplace: Results of a Population Based Case-Control Study in Germany"	Baumgart-Elms, Ahrens, Broman, Boikat	2002	Human
Cancer	Testicular	"Cluster of Testicular Cancer in Police Officers Exposed to Hand-held Radar"	Davis, R.L. , and Mostoff, F.K.	1993	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Testicular	"Case-control study on risk factors for testicular cancer"	Hardell L, Nasman A, Ohlson CG, Fredrikson M	1998	Human
Cancer	Testicular	"Cluster of testicular cancer in police officers exposed to hand-held radar"	Davis RL, Mostofi FK	1993	Human
Cancer	Testicular	"Occupational and Risk for Testicular Cancer: A Case Control Study"	Hayes, R., Brown, L., Pottern, L., et al.	1990	Human
Cancer	Stomach	"Effect of a Strong Magnetostatic Field on Proliferation of Duodenal Epithelial Cells in Mice"	Szmiegielski	1996	In Vitro
Cancer	Sentinel Episodes	"Cancer in Radar Technicians Exposed to RF/Microwave Radiation: Sentinal Episodes"	Richter E, Berman T, Ben-Michael E, Laster R, Westin JB	2000	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Proto-Oncogene mRNA Levels and Activities	"Proto-oncogene mRNA levels and activities of multiple transcription factors in C3H 10T 1/2 murine embryonic fibroblasts exposed to 835.62 and 847.74 MHz cellular phone"communication frequency radiation.	Goswami PC, Albee LD, Parsian AJ, Baty JD, Moros EG, Pickard WF, Roti Roti JL, Hunt CR	1999	In Vivo
Cancer	Preneoplastic Liver Lesions	"Inhibitory effects of melatonin on preneoplastic liver lesions in in F344 rats: relation to the influence of EM near field exposure"	Imaida K, Hagiwara A, Yoshino H, Tamano S, Sano M, Futakuchi M, Ogawa K, Asamoto M, Shirai T,	2000	In Vitro
Cancer	Pituitary Adenomas	"Actions of Calcium Ions and Calcium Influx Blocker on Basal TRH- and GnRH-stimulated Hormone Release In Patients With Pituitary Adenomas"	Davis et al.	1987	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Pending	"Cancer in the Electric Power Industry"	Reiter	1994	Human
Cancer	Pending	"Magnetic Fields of High Power Voltage Lines and Risk of Cancer in Finnish Adults"	Verkasalo P, Pukkala E, Kapiro J, et al.	1996	Human
Cancer	Pending	"Cancer incidence near radio and television transmitters in Great Britain. I. Sutton Coldfield Transmitter"	Dolk H, Shaddick G, Walls P, Grundy C, Thakrar B, Kleinschmidt I, Elliott P	1997	Human
Cancer	Pending	"Airport Radar and Incidence of Cancer in Wichita"	Wei et al.	1990	In Vivo
Cancer	Pending	"Electrical Workers: An Analysis of Cancer Registration in England"	Robinette	1980	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Parotid Gland Tumors	"Cellular phone use and risk of benign and malignant parotid gland tumors—a nationwide case-control study"	S. Sadetzki, A. Chetrit, A. Jarus-Hakak, E. Cardis, Y. Deutch, S. Dvenderani, A. Zultan, I. Novikov, L. Freedman, M. Wolf	2008	
Cancer	Parotid Gland Tumor	"Mobile Phone Use and Risk of Parotid Gland Tumor"	Lonn, Ahlbom, Christensen, Johansen, et al.	2006	Human
Cancer	Oncogene Induction	"Ets1 oncogene induction by ELF-modulated 50 MHz RF electromagnetic field"	Romano-Spica V, Mucci N, Ursini CL, Ianni A, Bhat NK	2000	In Vivo
Cancer	non-Hodgkin's Lymphoma and Chronic Lymphocytic Leukemia	"Non-Hodgkin's Lymphomas and occupation in Sweden"	Cano MI, Pollan M	2001	Human
Cancer	Non-Hodgkins Lymphoma and Leukemia	"Occupation and Risk of Non-Hodgkin's Lymphoma and Chronic Lymphocytic Leukemia"	Zheng T, Blair A, Zhang Y, Weisenburger DD, Zahm SH	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Non-Hodgkin Lymphoma	"Cellular Telephones and non-Hodgkin Lymphoma"	Linet, Taggart, Severson, Cerham, et al.	2006	In Vivo
Cancer	Non-Hodgkins	"Use of cellular or cordless telephones and the risk for non-Hodgkin's lymphoma"	Hardell L, Eriksson M, Carlberg M, Sundstrom C, Mild KH	2005	Human
Cancer	Neoplastic Transformation of C3H/10T1/2 Cells	"Neoplastic transformation of C3H/10T1/2 cells following exposure to 120-Hz modulated 2.45-GHz microwaves and phorbol ester tumor promoter"	Balcer-Kubiczek EK, Harrison GH	1991	Human
Cancer	Mortality	"Cancer Incidence and Mortality and Proximity to TV Towers"	Hocking, Gordon, Grain, Hatfield	1996	Human
Cancer	Mortality	"Higher Mortality Rates for All Cancers and Leukemia in Some Age Groups in the Area Near the AM Radio"	Park, et al.	2004	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Broadcasting Towers"			
Cancer	Mortality	"Cause-Specific Mortality in Cellular Telephone Users"	Dreyer, Loughlin, Rothman	1999	Human
Cancer	Mortality	"Cancer incidence and mortality and proximity to TV towers"	Hocking B, Gordon IR, Grain HL, Hatfield GE	1996	Human
Cancer	Mortality	"Occupational Exposures and Brain Cancer Mortality"	Peters	1991	Human
Cancer	Mortality	"Cancer Mortality and Residence Near Electricity Transmission Equipment: A Retrospective Cohort Study"	Schreiber, Swaen, Geijers, et al.	1993	Human
Cancer	Mortality	"Occupational Cancer Mortality Among Women Employed in the Telephone	Dosemeci, M. and Blair, A.	1994	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Industry"			
Cancer	Mortality	"Cancer Mortality in Males"	Nordstrom et al.	1988	Human
Cancer	Mortality	"Cancer Mortality in Males"	Nahas, El	1989	Human
Cancer	Mortality	"Cancer Mortality in Males"	Nordstrom et al.	1983	Human
Cancer	Mortality	"Cancer Mortality in Males"	Nordstrom, S. et al.	1983	Human
Cancer	Mortality	"Cancer Mortality in Males"	Nordenson, I. et al.	1984	Human
Cancer	Morphology and Inhibition Proliferaton of Astrocytoma Cells	"Electromagnetic radiation at 835 MHz changes the morphology and inhibits proliferation of a human astrocytoma cell line"	French PW, Donnellan M, McKenzie DR	1997	N/A

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Morbidity	"Cancer morbidity in subjects occupationally exposed to high frequency (radiofrequency and microwave) electromagnetic radiation"	Szmigielski S	1996	Human
Cancer	Morbidity	"Cancer Morbidity Among Workers in the Telecommunications Industry"	Reiter	1994	Human
Cancer	MF-Sensitive MCF-7 Cells	"Magnetic fields (MF) of 50 Hz at 1.2_T as well as 100_T cause uncoupling of inhibitory pathways of adenylyl cyclase mediated by melatonin 1a receptor in MF-sensitive MCF-7 cells"	Ishido, et al.	2001	In Vitro
Cancer	Meningioma	"Meningioma and mobile phone use—a collaborative case-control study in five] A. Lahkola, T. Salminen, J. Raitanen, S. Heinavaara, M.J. Schoemaker, H.C. Christensen, M. Feychting, C. Johansen, L. Klæboe, S. Lonn, A.J. Swerdlow, T.	2008	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		North European countries"	Tynes, A. Auvinen		
Cancer	Melatonin Responses in MCF-7 Breast Cells	" Replication of 12mG EMF effects on melatonin responses of MCF-7 breast cancer cells in vitro"	Luben, et al.	1996	In Vitro
Cancer	Melanoma of the skin	"Increased Incidence of Malignant Melanoma of the Skin in Workers in a Telecommunications Industry"	De Guire, L. et al.	1988	Human
Cancer	Melanoma	"Melanoma Incidence and Frequency Modulation (FM) Broadcasting"	Hallberg, Orjan, and Johansson, Olle	2002	Human
Cancer	Melanoma	"Intraocular melanoma linked to occupations and chemical exposures"	Holly EA, Aston DA, Ahn DK, Smith AH	1996	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Melanoma	"Melanoma incidence and frequency modulation (FM) broadcasting"	Hallberg O, Johansson O.	2002	Human
Cancer	Mammary Tumors	Effects of Electric Fields on Rat Mammary Tumor Development Induced by 7,12-dimethylbenze(a)anthracene	Leung, F.C. et al.	1988	In Vitro
Cancer	MCF-7 Breast Cells	"In vitro exposure of MCF-7 human breast cancer cells to 60- Hz magnetic fields"	Morris	1998	Human
Cancer	Malignant Melanoma	"FM Broadcasting Exposure Time and Malignant Melanoma Incidence"	Hallberg, Orjan, and Johansson, Olle	2005	Human
Cancer	Malignant Melanoma of the Eye	"Mobile Phones and Malignant Melanoma of the Eye"	Johansen, Boice, McLaughlin, Olsen	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Mammary Gland Tumors	"Effects of GSM-900 Microwaves on DMBA-Induced Mammary Gland Tumors in Female Sprague-Dawley Rats"	Anane R, Dulou P-E, Taxile M, Geffard M, Crespeau F, Veyret B	2003	In Vitro
Cancer	Lymphomas	"Lymphomas in Transgenic Mice Exposed to Pulsed 900-mHz EMFs"	Wilkins et al.	1988	In Vivo
Cancer	Malignant Brain Tumors	"Case-Control Study on the Use of Cellular and Cordless Phones and the Risk for Malignant Brain Tumors"	Hardell et al.	2002	Human
Cancer	Lymphoma	"Lymphomas in E mu-Pim1 Transgenic Mice Exposed to Pulsed 900 MHz Electromagnetic Fields"	Repacholi, M.H., et al.	1997	In Vitro
Disease/ System	Bioeffect/ Symptom	title	authors	date	type

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Lymphoma	"Lymphomas in E mu-Pim1 transgenic mice exposed to pulsed 900 MHZ electromagnetic fields"	Repacholi MH, Basten A, GebSKI V, Noonan D, Finnie J, Harris AW	1997	In Vitro
Cancer	Lymphatic and Hemotopoietic	"Increased Mortality in Amateur Radio Operators Due to Lymphatic and Hematopoietic Malignancies"	Milham, S.	1988	Human
Cancer	Leukemia Mortality	"Leukemia Mortality in Electrical Workers in England and Wales"	Moscovici et al.	1974	Human
Cancer	Leukemia Mortality	"Silent Keys: Leukemia Mortality in Amateur Radio Operators"	Vijayalaxmi et al.	1997	In Vivo
Cancer	Leukemia, Brain Tumors, etc.	"Exposure to Electri Field and Incidence of Leukemia, Brain Tumors, and Other Cancers Among French	Guenel, et al.	1996	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Leukemia and Lymphoma	Electric Utility Workers" "Magnetic Fields, Leukemia, and Central Nervous System Tumors in Swedish Adults"	Ahlbom and Feychting	1995	Human
Cancer	Leukemia / Acute Myeloid	"Association Between Exposure to Pulsed Electromagnetic Fields and Cancer in Electrical Workers in Quebec, Canada, and France"	Wright et al.	1982	In Vivo
Cancer	Leukemia and Brain Tumors	"Incidence of Leukemia and Brain Tumors in Finnish Workers Exposed to ELF Magnetic Fields"	Juutilainen, J. et al.	1990	Human
Cancer	Leukemia and Brain Tumors	"Occupational Exposure to Electromagnetic Fields in Relation to Leukemia and Brain Tumors: A Case-	Floderus, Tornqvist, Stenlund	1994	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Control Study in Sweden"			
Cancer	Leukemia	"Acute Myelogenous Leukemia Following Exposure to Microwaves"	Archimbaud et al.	1989	Human
Cancer	Leukemia	"Risk of leukemia and residence near a radio transmitter in Italy"	Michelozzi P, Ancona C, Fusco D, Forastiere F, Perucci CA	1998	Human
Cancer	Leukemia	"Leukemia and Occupational Exposure to EMF's"	Oraevskii et al.	1998	In Vivo
Cancer	Leukemia	"Risks of leukaemia among residents close to high voltage transmission electric lines"	Li, C-Y. and Theriault, G.	1997	Human
Cancer	Leukemia	"Paternal Occupation and Brain Cancer of Offspring: A Mortality-Based Case-Control	McKenzie, Yin and Morrell	1998	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Study"			
Cancer	Leukemia	"Risk of Leukemia and Residence Near a Radio Transmitter in Italy"	Michelozzi et al.	1998	Human
Cancer	Leukemia	"Leukemia Following Occupational Exposure to 60-Hz Electric and Magnetic Fields Among Ontario Electric Utility Workers"	Miller, A., et al.	1996	Human
Cancer	Leukemia	"Leukemia in Telephone Company Employees"	Pfluger et al.	1996	Human
Cancer	Leukemia	"Occupational and Residential Magnetic Field Exposure and Leukemia and Central Nervous System Tumors"	Feychting, Floderus and Forssen	1997	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Leukemia	"The Influence of 50-Hz Magnetic Fields on Cytoplasmic Ca ²⁺ Oscillations in Human Leukemia T-cells"	Galvanovskis, J. et al.	1996	Human
Cancer	Leukemia	"Leukemia Risk Among U.S. White Male Coal Miners"	Ouellet-Hellstrom and Stewart	1993	Human
Cancer	Leukemia	"Inhibition of DNA Synthesis by Microwave Radiation in L1210 Leukemia Cells"	Valjus et al.	1993	In Vivo
Cancer	Leukemia	"Cohort Study of Air Canada Pilots: Mortality Incidence and Leukemia Risk"	Band et al.	1996	Human
Cancer	Leukemia	"Leukemia and Occupation in Sweden"	Peters and Bowan	1991	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Leukemia	"Incidence of Leukemia in Occupations with Potential Electromagnetic Field Exposure in United States Navy Personnel"	Garland, E., et al.	1990	Human
Cancer	Leukemia	"Leukemia in Workers Exposed to Electric and Magnetic Fields"	Montminy et al.	1990	Human
Cancer	Leukemia	"Background Radiation, Electrical Work, and Some Other Exposures Associated with Acute Myeloid Leukemia"	Paullson, B.	1989	Human
Cancer	Leukemia	"A Case-Control Study of Leukemia at a Naval Shipyard"	Pearce, N.E., et al.	1985	Human
Cancer	Leukemia	"Leukemia in Electrical	Parola, A.H. et al.	1988	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Workers in New Zealand"			
Cancer	Leukemia	"Mortality From Leukemia in Workers Exposed to Electric and Magnetic Fields"	Milham, S.	1982	Human
Cancer	Leukemia	"Incidence of Leukemia in Occupations with Potential EMF Exposure in U.S. Navy Personnel"	Rillema	1980	Human
Cancer	Increase in Oncogenic Activity in Rat's Livers	Residential Study	Barabiroli	0	In Vivo
Cancer	Immune System	"Immunological and Cancer-Related Effects of Exposure to Low-Level Microwave and RF Fields"	Reif, J.S., et al.	1989	In Vivo
Cancer	Hematopoietic Neoplasia	"Hematopoietic neoplasia in C57BL/6 mice exposed to	Babbitt JT, Kharazi AI, Taylor JM, Bonds CB, Mirell SG, Frumkin E, Zhuang D,	2000	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		split-dose ionizing radiation and circularly polarized 60 Hz magnetic fields"	Hahn TJ		
Cancer	Frequency of Micronuclei	"Frequency of micronuclei in the peripheral blood and bone marrow of cancer-prone mice chronically exposed to 2450 MHz radiofrequency radiation"	Vijayalaxmi, Frei MR, Dusch SJ, Gue V, Melt ML, Jauchem JR	1997	In Vitro
Cancer	Free Radical Release and HSP70 Expression/Immune Cells	"Free Radical Release and HSP70 Expression in Two Human Immune- Relevant Cell Lines after Exposure to 1800 MHz RFR"	Lantow M, Schuderer J, Hartwig C, Simko M	2006	In Vivo
Cancer	Expression of Proto-Oncogene Cells	"Expression of proto-oncogene and activities of multiple transcription factors in RF exposed cells, using C3H10T1/2 mouse embryo fibroblast cells exposed to 835.62 and 847.74 MHz cellphone	Goswami PC, Albee LD, Parsian AJ, Baty JD, Moros EG, Pickard WF, Roti-Roti JL, Hunt CR,	1999	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		radiations"			
Cancer	Excretion of Urinary Melatonin Metabolite	"Cellular telephone use and excretion of a urinary melatonin metabolite"	Burch JB, Reif JS, Pitrat CA, Keele TJ, Yost MG	1997	Human
Cancer	Erythroleukemia Cells	"Effect of EMF exposure on chemically induced differentiation of Friend erythroleukemia cells"	Chen G, Upham BL, Sun W, Chang CC, Rothwell EJ, Chen KM, Yamasaki H, Trosko JE	2000	In Vivo
Cancer	Erythroleukemia Cells	"Effect of electromagnetic field exposure on chemically induced differentiation of friend erythroleukemia cells"	Chen G, Upham BL, Sun W, Chang CC, Rothwell EJ, Chen KM, Yamasaki H, Trosko JE	2000	In Vitro
Cancer	Erythroleukemia Cells	"Effect of electromagnetic field exposure on chemically induced differentiation of friend erythroleukemia cells"	Chen G, Upham BL, Sun W, Chang CC, Rothwell EJ, Chen KM, Yamasaki H, Trosko JE	2000	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Epidermoid Cells	"Electromagnetic fields at mobile phone frequency induce apoptosis and inactivation of the multi-chaperone complex in human epidermoid cancer cells"	Caraglia M, Marra M, Mancinelli F, D'Ambrosio G, Massa R, Giordano A, Budillon A, Abbruzzese A, Bismuto E.	2005	Human
Cancer	Epidermoid	"Electromagnetic fields at mobile phone frequency induce apoptosis and inactivation of the multi-chaperone complex in human epidermoid cancer cells"	Caraglia M, Marra M, Mancinelli F, D'ambrosio G, Massa R, Giordano A, Budillon A, Abbruzzese A, Bismuto E.	2005	In Vitro
Cancer	Epidermis	"Epidemiological Studies of Cellular Telephones and Cancer Risk-a Review"	Boice, J.D., McLaughlin, J.K.	2002	Human
Cancer	Epidemiological	"Accelerated Development of Skin Cancer in Mice Exposed to Microwave Radiation"	Werlen et al.	1993	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Epidemiological	"The Scientific Basis of Skin Cancer"	Leffell	2000	In Vivo
Cancer	Epidemiological	"Mobile Telephones and Cancer: A Review of Epidemiological Evidence"	Kundi, Mild, Hardell, Mattson	2004	Human
Cancer	Epidemiological	"Results of an Epidemiological Cancer Study Among Electrical Workers in Finland"	Phillips, R.D., L. Anderson, and Kaune	1987	Human
Cancer	Enhanced Action of aLT	"A Modulated Microwave Field and Tumor Promoters Similarly Enhance the Action of Alpha-Lymphotoxin (aLT)"	Fletcher, W. et al.	1986	In Vivo
Cancer	Colon	"Transferrin Binding to Two Human Colon Carcinoma Cell Lines"	Thompson et al.	1995	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Colon	"Transferrin Binding to Two Human Colon Carcinoma Cell Lines: Characteristics and Effect of 60-Hz Electromagnetic Fields	Phillips, J.L. and W.D. Winters	1986	Human
Cancer	Cognitive Impairment	"Effects of Global Communication System Radio-Frequency Fields on Well Being and Cognitive Functions of Human Subjects With and Without Subjective Complaints"	Zwamborn, Vossen, vanLeersum, Ouwens, Makel	2003	Human
Cancer	Chromosome aberrations in corneal cells	"Brain Tumors and Salivary Gland Cancers Among Cellular Telephone Users"	Yao, K.T.S.	1978	In Vitro
Cancer	Childhood Leukemia	"Adult and childhood leukemia near a high-power radio station in Rome, Italy"	Michelozzi P, Capon A, Kirchmayer U, Forastiere F, Biggeri A, Barca A, Perucci CA	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Childhood Tumors	"50 Hz Electromagnetic Environment and the Incidence of Childhood Tumors in Stockholm County"	Tomenius	1986	Human
Cancer	Childhood Leukemia	"Historical evidence that residential electrification caused the emergence of the childhood leukemia peak"	Milham S, Ossiander EM	2001	Human
Cancer	Childhood Leukemia	"Historical evidence that residential electrification caused the emergence of the childhood leukemia peak"	Milham S, Ossiander EM	2001	In Vitro
Cancer	Childhood Leukemia	"Risk of Childhood Leukemia Associated with Diagnostic Irradiation and Polymorphisms in DNA Repair Gene"	Infante-Rivard, C.	2000	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Childhood Leukemia	"A pooled analysis of magnetic fields, wire codes and childhood leukemia"	Greenland S, Sheppard AR, Kaune WT, Poole C, Kelsh MA	2000	In Vivo
Cancer	Childhood Leukemia	"A pooled analysis of magnetic fields, wire codes and childhood leukemia"	Greenland S, Sheppard AR, Kaune WT, Poole C, Kelsh MA	2000	In Vivo
Cancer	Childhood Leukemia	"Decreased survival for childhood leukaemia in proximity to TV towers"	Hocking B, Gordon I	2000	Human
Cancer	Childhood Leukemia	"Childhood Leukemia and Residential Exposure to Weak, Extremely-Low Frequency Magnetic Fields"	Wood et al.	1998	Human
Cancer	Childhood Leukemia	"Investigations of a Childhood Leukemia Cluster Near Low-Frequency Radio Towers in Hawaii"	Maskarinec et al.	1994	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Childhood Leukemia	"Residential Exposure to Magnetic Fields and Acute Lymphoblastic Leukemia in Children"	Linnet, M.S., et al.	1997	Human
Cancer	Childhood Leukemia	"Childhood Leukemia in Relation to Residential Magnetic Fields"	Matanowski, G. et al.	1988	Human
Cancer	Childhood Leukemia	"Residential Exposure to Magnetic Fields and Acute Lymphoblastic Leukemia in Children"	Tarone et al.	1991	Human
Cancer	Childhood Leukemia	"Childhood Leukemia and Exposure to Electricity"	Marino, A.A., and R.O. Becker	1980	Human
Cancer	Childhood Leukemia	"The Risk of Childhood Leukemia from Home Exposure to Resonance from Static and Power Frequency"	Martin, A.H.	1988	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Magnetic Fields.			
Cancer	Childhood Leukemia	"Childhood Leukemia and Exposure to Electricity"	Marino, A.A., and R.O. Becker	1976	Human
Cancer	Childhood	"Electical Wiring Configurations and Childhood Cancer"	Luben	1995	Human
Cancer	Childhood	"Childhood Cancer Incidence in the Vacinity of the Sutro Tower, San Francisco"	Cherry, Neil	2000	Human
Cancer	Childhood	"Environmental Exposures and Childhood Cancer: Our Best May Not Be Good Enough"	Savitz, D.A.	2001	Human
Cancer	Childhood	"Magnetic Field Exposure from Electrical Appliances	Savitz D, John E, Kleckner R	1990	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Childhood	and Childhood Cancer"			
Cancer	Childhood	"Electromagnetic Field Exposures and Childhood Cancers in New Zealand"	Dockerty et al.	1998	Human
Cancer	Childhood	"Magnetic Field Exposure from Electrical Appliances and Childhood Cancer"	Magras and Xenos	1997	Human
Cancer	Childhood	"Case Caontrol Study of Childhood Cancer and Exposure to 60-Hz Magnetic Fields	Maes, et al.	1996	Human
Cancer	Childhood	"50-Hz Electromagnetic Environment and the Incidence of Childhood Cancers in Stockholm County"	Mack, C. et al	1991	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Childhood	"Magnetic Fields and Cancer in Children Residing Near Swedish High-Voltage Power Lines"	Feychting and Ahlbom	1993	Human
Cancer	Childhood	"Residential Electric Consumption and Childhood Cancer in Canada"	Kraut, A., et al.	1994	Human
Cancer	Childhood	"Magnetic Fields and Childhood Cancer - Pooled Analysis of Two Scandinavian Studies"	Feychting et al.	1995	Human
Cancer	Childhood	"Cancer in the Offspring of Radiation Workers: A Record Linkage Study"	Howe and Lindsay	1983	Human
Cancer	Childhood	"Electrical Wiring Configurations and Childhood Cancer"	Wertheimer and Leeper	1979	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Childhood	"Electical Wiring Configurations and Childhood Cancer"	Luben, R.A. et al.	1982	Human
Cancer	Changes in Tumor Cells	"In Vitro Exposure to EMFs: Changes in Tumor Cell Properties"	Phillips, J.L. and W.D. Winters	1986	In Vitro
Cancer	Central Nervous System	"Spontaneous and nitrosourea-induced primary tumors of the central nervous system in Fischer 344 rats exposed to frequency-modulated microwave fields"	Adey WR, Byus CV, Cain CD, Higgins RJ, Jones RA, Kean CJ, Kuster N, MacMurray A, Stagg RB, Zimmerman G,	2000	In Vitro
Cancer	Central Nervous System	"Spontaneous and nitrosourea-induced primary tumors in the central nervous system of rats exposed to 836MHz"	Adey WR, Byus CV, Cain CD, Higgins RJ, Keau CJ, Kuster N, MacMurray A, Stagg RB, Zimmerman G, Phillips JL, Haggren W	1999	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Central Nervous System	"Occupational Risk Factors for Cancer of the Central Nervous System (CNS) Among US Women"	Cocco et al.	1999	Human
Cancer	Cellular Calcium Homeostasis	"Radiofrequency-induced carcinogenesis: cellular calcium homeostasis changes as a triggering factor"	Anghileri LJ, Mayayo E, Domingo JL, Thouvenot P.	2005	Human
Cancer	Carcinogenesis	"Increased incidence of cancer near a cell-phone transmitter station"	Wolf R, Wolf D.	2004	Human
Cancer	Carcinogenesis	"Adverse Health Indicators Correlating with Sparsely Populated Areas in Sweden"	Hallberg, O.	2007	Human
Cancer	Carcinogenesis	"The controversy about a possible relationship between mobile phone use	M. Kundi	2008	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		and cancer"			
Cancer	Carcinogenesis	"Incidence of cancer in the vicinity of Korean AM radio transmitters"	Ha M, Lim HJ, Cho SH, Choi HD, Cho KY	2003	Human
Cancer	Carcinogenesis	"Mobile Handset Output Power and Health"	Hallberg, O., Johansson, O.	2004	Human
Cancer	Carcinogenesis	"Long-term Sickness and Mobile Phone Use"	Hallberg, Orjan, and Johansson, Olle	2004	Human
Cancer	Carcinogenesis	"Cancer in Korean War Navy Technicians: Mortality Survey After Forty Years"	Groves, Page, Gridley, Lisimaque, et al.	2002	Human
Cancer	Carcinogenesis	"Cellular Telephones and Cancer - A Nationwide Cohort Study in Denmark"	Johansen, Boice, McLaughlin, Olsen	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Carcinogenesis	"Cancer Incidence Near Radio and Television Transmitters in Great Britain"	Cherry, N.	2001	Human
Cancer	Carcinogenesis	"Cancer Incidence Near Radio and Television Transmitters in Great Britain"	Cooper, Hemmings, Saunders	2001	Human
Cancer	Carcinogenesis	"Review of the Epidemiological Literature on EMF and Health"	Ahlbom, Cardis, Green, et al.	2001	Human
Cancer	Carcinogenesis	"Risk of Cancer Among Danish Utility Workers-A Nationwide Cohort Study"	Johanson, C., and Olsen, J.H.	1998	Human
Cancer	Carcinogenesis	"Short Term Exposure to Cellular Phone RFR of Very Low SAR (26mW/kg) Affected a Gene Related to	Ivaschuk, et al.	1999	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Disease/ System	Bioeffect/ Symptom	title	authors	date	type
Cancer	Carcinogenesis	"Mortality of Plastic-Ware Workers Exposed to Radiofrequencies"	Lagorio, Rossi, Vecchia, DeSantis, et al.	1997	Human
Cancer	Carcinogenesis	"Cancer Incidence Among Ontario Police Officers"	Finklestein, M., et al.	1998	Human
Cancer	Carcinogenesis	"TV Broadcast Towers and Cancer: The End of Innocence for Radiofrequency Exposures"	Goldsmith	1997	Human
Cancer	Carcinogenesis	"Radio Frequency Radiation (RFR): The Nature of Exposure and Carcinogenic Potential"	Valberg, P.A.	1996	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Carcinogenesis	"Cancer Incidence Near Radio and Television Transmitters in Great Britain"	Dolk, H., Shaddick, et al. et al.	1997	Human
Cancer	Carcinogenesis	"Cancer Incidence in the United States Air Force"	Grayson, J.K., and Lyons, T.J.	1996	Human
Cancer	Carcinogenesis	"Cancer in Electrical Workers: An Analysis of Cancer Registrations in England, 1981-1987"	Fear, et al.	1996	Human
Cancer	Carcinogenesis	"Utility of Telephone Company Records for Epidemiological Studies of Cellular Telephones"	Funch, Rothman, Loughlin, Dreyer	1996	Human
Cancer	Carcinogenesis	"Animal Studies on the Role of 50/60-Hertz Magnetic Fields in Carcinogenesis"	Savitz	1995	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Carcinogenesis	"Exposure to Extremely Low Frequency Electromagnetic Fields and the Risk of Malignant Diseases-an evaluation of epidemiological and experimental findings"	Hardell, Holmberg, Malaker, Paulsson	1995	Human
Cancer	Carcinogenesis	"An Integration of the Data on Mechanisms with Particular Reference to Cancer"	Frey, A.H.	1995	Human
Cancer	Carcinogenesis	"Epidemiological Evidence of Radiofrequency Radiation (Microwave) Effects on Health in Military, Broadcasting, and Occupational Studies"	Goldsmith	1995	Human
Cancer	Carcinogenesis	"Incidence of Selected Cancers in Swedish Railway Workers, 1961-1979"	Floderus, Tornqvist, Stenlund	1994	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Carcinogenesis	"Carcinogenesis"	Baxter	1995	Human
Cancer	Carcinogenesis	"Important Advances in Oncology"	DeVita, Hellman and Rosenberg	1993	Human
Cancer	Carcinogenesis	"Association Between Exposure to Pulsed Electromagnetic Fields and Cancer in Electrical Workers in Quebec, Canada, and France"	Armstrong, Theriault, Guenel et al.	1994	Human
Cancer	Carcinogenesis	"Magnetic Fields and Cancer in People Residing Near Swedish High Voltage Power Lines"	Feychting, M. and A. Ahlbom	1994	Human
Cancer	Carcinogenesis	"Residential Exposure to 60-Hz Magnetic Fields from Appliances"	Mader D, Peralta S.	1992	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Carcinogenesis	"Power-Frequency Magnetics Fields from Electric Blankets"	Florig H, Hoburg J.	1990	Human
Cancer	Carcinogenesis	"Incorporation of Epidemiological Findings into Radiation Protection Standards Public"	Goldsmith	1992	Human
Cancer	Carcinogenesis	"Mortality and Cancer Incidence in a Cohort of Commercial Airline Pilots"	Band et al.	1990	Human
Cancer	Carcinogenesis	"Reply to: Cancer Mortality and Air Force Bases"	Lester, J. R.	1985	Human
Cancer	Carcinogenesis	"Exposure of Workers to Intense RF Electric Fields That Leak From Plastic Sealers"	Bini et al.	1986	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Carcinogenesis	"Cancer Incidence and Electromagnetic Radiation"	Lester, J.R. and D.F. Moore	1982	In Vivo
Cancer	Carcinogenesis	"Cancer-Diagnosis, Treatment and Prognosis"	Del Regato, Spjut and Cox	1985	Human
Cancer	Carcinogenesis	"Evidence for Microwave Carcinogenesis"	Balcer-Kubiczek and Harrison	1985	In Vivo
Cancer	Breast Cancer in Men	"Occupational Exposure to Electromagnetic Fields and Breast Cancer in Men"	Demers et al.	1991	Human
Cancer	Breast	"Electric Blanket Use and Breast Cancer Among Younger Women"	Gammon, M. et al.	1998	Human
Cancer	Breast	"Industrialization, Electromagnetic Fields and	Kheifets, Dr. Leeka, and Matkin, C	1999	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Breast Cancer Risk"			
Cancer	Breast	"Induction of tamoxifen resistance in breast cancer cells by ELF electromagnetic fields"	Girgert, et al.	2005	Human
Cancer	Breast	"Magnetic Fields and Breast Cancer in Swedish Adults Residing Near High-Voltage Power Lines"	Feychting, Forssen, Rutqvist, Ahlbom	1998	Human
Cancer	Breast	"Magnetic Fields, melatonin, tamoxifen and human breast cancer cell growth"	Liburdy, et al.	1997	Human
Cancer	Breast	"Incidence of Breast Cancer in Norewegian Female Radio Telegraph Operators"	Tynes et al.	1996	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Breast	"Incidence of breast cancer in Norwegian female radio and telegraph operators"	Tynes T, Hannevik M, Andersen A, Vistnes AI, Haldorsen T	1996	Human
Cancer	Breast	"Electric Power Use and Breast "Cancer: A Hypothesis"	Timchenko and Ianchevskaia	1995	Human
Cancer	Breast	"Occupational Exposures to 60-Hz Magnetic Fields and Risk of Breast Cancer in Women"	Coogan, Dr. Patricia, et al.	1995	Human
Cancer	Breast	"Occupational Exposures and Female Breast Cancer Mortality in the United States"	Cantor et al.	1995	Human
Cancer	Breast	"Breast Cancer Mortality Among Female Electrical Workers in the United States"	Loomis, D.P., et al.	1994	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		States.			
Cancer	Breast	" ELF magnetic fields, breast cancer, and melatonin: 60 Hz fields block melatonin's oncostatic action on ER+ breast cancer cell proliferation"	R.P. Liburdy, T.R. Sloma, et al.,	1993	Human
Cancer	Breast	"Effects of melatonin on cancer: studies on MCF-7 human breast cancer"	D.E. Blask, S.M. Hill	1986	Human
Cancer	Breast	"ELF Magnetic Fields, Breast Cancer, and Melatonin: 60Hz Fields Block Melatonin's Oncostatic Action on ER+ Breast Cancer Cell Proliferation"	Liburdy, R.P., et al.	1993	Human
Cancer	Brain, Head, and Neck Tumors	"Cellular Telephone Use and Time Trend for Brain, Head,	Cook, Woodward, Pearce, Marshall	2003	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		and Neck Tumors"			
Cancer	Brain, Head, and Neck Tumors	"International Case-Control Study of Adult Brain, Head, and Neck Tumors: Results of the Feasibility Study"	Cardis, E., Kilkenny, M.	1999	Human
Cancer	Brain Tumors in Childhood	"Childhood Brain Tumor Occurrence in Relation to Residential Power Line Configurations, electric Heating Sources, and Electric Appliance Use"	Gurney J, Mueller B, Davis S, et al.	1996	Human
Cancer	Brain Tumors	"Primary brain tumor incidence in mice exposed to split-dose ionizing radiation and circularly polarized 60 Hz magnetic fields"	Kharazi AI, Babbitt JT, Hahn TJ	0	Human
Cancer	Brain Tumors and Salivary Gland Cancers	"Brain Tumors and Salivary Gland Cancers Among	Auvinen, Hietanen, Luukkonen, Koskela	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Celular Telephone Users"			
Cancer	Brain Tumors	"Use of Mobile Phones in Norway and Risk of Intracranial Tumors"	Klaeboe, Blaasaas, Tynes	2007	Human
Cancer	Brain Tumors	"Metaanalysis of long-term mobile phone use and the association with brain tumours"	L. Hardell, M. Carlberg, F. Söderqvist, K. Hansson Mild	2008	Human
Cancer	Brain Tumors	"Cellular phone use and brain tumor: a meta-analysis"	Kan, S.E. Simonsen, J.L. Lyon, J.R.W. Kestle	2007	
Cancer	Brain Tumors	"Pooled analysis of two case-control studies on use of cellular and cordless telephones and the risk for malignant brain tumours diagnosed in 1997-2003"	L. Hardell, M. Carlberg, K. Hansson Mild	2006	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Brain Tumors	"Occupational Exposure to Radio Frequency/Microwave Radiation and the Risk of Brain Tumors"	Berg, Spallek, Schuz, Schlefor, et al.	2006	In Vivo
Cancer	Brain Tumors	"Long-term Mobile Phone Use and Brain Tumor Risk"	Lonn, Ahlbom, Hall, Fetching, et al.	2005	Human
Cancer	Brain Tumors	"Selection Bias Due to Differential Participation in a Case-control Study of Mobile Phone Use and Brain Tumors"	Lahkola, Salminen, Auvinen	2005	Human
Cancer	Brain Tumors	"Case-control study of the association between the use of cellular and cordless telephones and malignant brain tumors diagnosed during 2000-2003"	Hardell L, Carlberg M, Mild K.	2005	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Brain Tumors	"Use of cellular telephones and brain tumour risk in urban and rural areas"	Hardell L, Carlberg M, Hansson Mild K.	2005	Human
Cancer	Brain Tumors	"Cellular Telephones and Risk for Brain Tumors: A Population-based, Incident Case-control Study"	Christensen, Schuz, Kosteljanetz, et al.	2005	Human
Cancer	Brain Tumors	"Further aspects on cellular and cordless telephones and brain tumours"	Hardell L, Mild KH, Carlberg M	2003	Human
Cancer	Brain Tumors	"Cellular Telephone Use and Brain Tumors"	Inskip, P.D., et al.	2001	Human
Cancer	Brain Tumors	"Cellular Telephones and Brain Tumors"	Kane, R.C.	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Brain Tumors	"Cellular Telephone Use and Brain Tumors"	Trichopoulos, D. and Adami, H.	2001	Human
Cancer	Brain Tumors	"Cellular and cordless telephones and the risk for brain tumours"	Hardell L, Hallquist A, Hansson Mild K, Carlberg M, Pahlson A, Lilja A.	2002	Human
Cancer	Brain Tumors	"Ionizing radiation, cellular telephones and the risk of brain tumours"	Hardell L, Hansson Mild K, Pahlson A, Hallquist A	2001	Human
Cancer	Brain Tumors	"Case-control Study on Radiology Work, Medical X-ray Investigations, and Use of Cellular Telephones as Risk Factors for Brain Tumors"	Hardell, Nasman Pahlson, Hallquist	2000	Human
Cancer	Brain Tumors	"Cellular Telephones and Brain Tumors"	Erman, M, et al.	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Brain Tumors	"Environmental Carcinogens - Cellular Phones and Risk of Brain Tumors"	Frumkin H, Jacobson A, Gansler T, Thun M	2001	Human
Cancer	Brain Tumors	"Case-control study on radiology work, medical X-ray investigations, and use of cellular telephones as risk factors for brain tumors"	Hardell L, Nasman A, Pahlson A, Hallquist A	2000	Human
Cancer	Brain Tumors	"A Case- Control Investigation of Cellular Telephones and Other Risk Factors for Brain Tumors in Adults"	Inskip, P.D., et al.	1999	Human
Cancer	Brain Tumors	"Cellular Telephones, Magnetic Field Exposure, Risk of Brain Tumors and Cancer at Other Sites: A Cohort Study"	Johansen C., Olsen, J.H.	1999	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Brain Tumors	"Primary brain tumor incidence in mice exposed to split-dose ionizing radiation and circularly polarized 60 Hz magnetic fields"	Kharazi AI, Babbitt JT, Hahn TJ	1999	In Vitro
Cancer	Brain Tumors	"Use of Cellular Phones and the Risk of Brain Tumours: A Case Control Study"	Hardell, Nasman, Pahlson, et al.	1999	Human
Cancer	Brain Tumors	"Use of Cell Phones and the Risk of Brain Tumors: A Case Control Study"	Ahlbom, A. and M. Feychting	1999	Human
Cancer	Brain Tumors	"Use of cellular telephones and the risk for brain tumours: A casecontrol study"	Hardell L, Nasman A, Pahlson A, Hallquist A, Mild KH	1999	Human
Cancer	Brain Tumors	"Occupational Risks for the Development of Brain	Kaplan, S. et al.	1997	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Tumors"			
Cancer	Brain tumors	"Radiation Exposure, Socioeconomic Status, and Brain Tumor Risk in the US Air Force"	Grayson, J.K.	1996	Human
Cancer	Brain Tumors	"Radiation exposure, socioeconomic status, and brain tumor risk in the US Air Force: a nested case-control study"	Grayson JK	1996	Human
Cancer	Brain tumors	"Brain Tumors Among Electronics Industry Workers"	Beall, Delzell, Cole, and Brill	1996	Human
Cancer	Brain Tumors	"Brain Tumor Mortality Risk Among Men with Electrical and Electronic Jobs: A Case-control Study"	Thomas, Stolley, Stemhagan, et al.	1987	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Brain Tumor	"Brain Tumor Incidence in Rats Chronically Exposed to Digital Cellular Telephone Fields in an Initiation-promotion Model"	Adey, Byus, Cain, Haggren, Higgins, Jones, Kean, Kuster, MacMurray, Phillips, Stagg, Zimmerman	1996	In Vitro
Cancer	Brain Tumors	"Occupational Exposure to Electromagnetic Fields and the Occurance of Brain Tumors"	Lin et al.	1985	Human
Cancer	Brain Cancer Mortality	"Magnetic Field Exposure in Relation to Leukemia and Brain Cancer Mortality Among Electrical Utility Workers"	Phillips et al.	1992	Human
Cancer	Brain cancer	Interphone Study Memo	E. Cardis	2008	Human
Cancer	Brain Cancer and Leukemia	"Mortality From Brain Cancer and Leukemia Among	Loomis, D.P. and D.A. Savitz	1990	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Electrical Workers"			
Cancer	Brain and Meninges	"Risk Factors for Tumors of the Brain and Meninges: Results from the Adelaide Adult Brain Tumor Study"	Ryan P, Lee M, North J, et al.	1992	Human
Cancer	Brain and Lymphatic/Hematopoietic	"Radiofrequency Exposure and Mortality from Cancer of the Brain and Lymphatic/Hematopoietic Systems"	Morgan, Kelsh, Zhao, et al.	2000	In Vivo
Cancer	Brain	"Occupational Risk Factors for Brain Cancer: A Population-based Case-Control Study in Loaw"	Zheng, T., et al.	2001	Human
Cancer	Brain	"A Clinical Study of the Pineal Gland Activity in Oncologic Patients"	Lissonin, P., et al.	1986	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Brain	"Assesment of Radiofrequency Exposure from Cellular Telephone Daily Use in an Epidemiological Study: German Validation Study of the International Case-Control Study of Cancers of the Brain-Interphone-Study"	Berg, Schuz, Samkange-Zeeb, Blettner	2004	Human
Cancer	Brain	"Handheld Cellular Telephones and Brain Cancer Risk"	Zimmerman, S.M., Zimmerman, R.W.	2001	Human
Cancer	Brain	"Brain cancer with induction periods of less than 10 years in young military radar workers"	Richter ED, Berman T, Levy O	2002	Human
Cancer	Brain	"Brain Cancer and Occupational Exposure to Magnetic Fields Among Men: Results from a Canadian Population-based Case-	Villeneuve P, Agnew D, Johnson K, et al.	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		control Study"			
Cancer	Brain	"Handheld Cellular Telephones and Brain Cancer Risk"	Muscat, Stellman, Malkin, Thompson, et al.	2001	Human
Cancer	Brain	"Electric and Magnetic Field Exposure and Brain Cancer: A Review"	Kheifets, L.	2001	Human
Cancer	Brain	"Occupational Risks for Brain Cancer"	Repacholi et al.	1997	Human
Cancer	Brain	"Extremely Low Frequency Electromagnetic Fields (EMF) and Brain Cancer in Adults and Children: Review and Comment"	Gurney J., Van Wijngaarden, E.	1999	Human
Cancer	Brain	"Handheld Cellular Telephone Use and the Risk	Muscat, Malkin, Thompson, Shore, et al.	2000	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Brain	of Brain Cancer"			
Cancer	Brain	"Brain Cancer and Leukemia Mortality Among Electrical Workers"	Phelan et al.	1992	Human
Cancer	Brain	"Occupational Exposure to EMF's and the Occurrence of Brain Tumors"	O'Connor and Persinger	1997	Human
Cancer	Brain	"Brain Tumor Mortality Risk Among Men with Electrical and Electronic Jobs"	Peters	1991	Human
Cancer	Brain	"Use of Cellular Phones and the Risk of Brain Tumours: A Case Control Study"	Wilson, B.W. et al	1981	In Vivo
Cancer	Brain	"Brain Cancer Mortality at a Manufacture of Aerospace	Park, R.M., et al.	1990	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Disease/ System	Bioeffect/ Symptom	title	authors	date	type
Cancer	B16F10 Melanoma	"Electrochemical Systems" "Millimeter wave-induced suppression of B16 F10 melanoma growth in mice: involvement of endogenous opioids"	Radziewsky AA, Gordiienko OV, Szabo I, Alekseev SI, Ziskin MC	2004	Human
Cancer	Angiosarcoma	"Angiosarcoma of the scalp and use of a cordless (portable) telephone"	Hardell L, Reizenstein J, Johansson B, Gertzen H, Mild KH	1999	Human
Cancer	Alteration of Gene Expression, Proliferation and Morphology of Human Skin Fibroblasts	"Exposure to GSM alters gene expression, proliferation, and morphology of human skin fibroblasts"	Pacini S, Ruggiero M, Sardi I, Aterini S, Gulisano F, Gulisano M.	2002	In Vitro
Cancer	Adult	"Adult Cancer Related to Electrical Wire Near the	Lyle, V.V. et al.	1986	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cancer	Adult	"Home" "Adult Cancer Related to Electrical Wire Near the Home"	Wertheimer and Leeper	1982	Human
Cardiovascular	Vasodilator Response	"Local Vasodilator Response to Mobile Phones"	Paraedi, Kharitonov, Hanazawa, Barnes	2001	Pending
Cardiovascular	Thermophysiological Effects	"Cardiovascular and thermal effects of microwave irradiation at 1 and/or 10 GHz in anesthetized rats"	Jauchem JR, Ryan KL, Freidagger MR	2000	In Vitro
Cardiovascular	Responses of Pulmonary Intravascular Macrophages	"Responses of pulmonary intravascular macrophages to 915-MHz microwave radiation: ultrastructural and cytochemical study"	Singh B, Bate LA	1996	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cardiovascular	Regional Blood Flow	"Exposure to Pulse-Modulated Radio Frequency Electromagnetic Fields Affects Regional Blood Flow"	Huber, Treyer, Schuderer, Berthold et al.	2005	Human
Cardiovascular	Oxidative Stress	"Mobile phone-induced myocardial oxidative stress: protection by a novel antioxidant agent caffeic acid phenethyl ester"	F. Ozguner, A. Altinbas, M. Ozaydin, A. Dogan, H. Vural, A.N. Kisioglu, G. Cesur, N.G. Yildirim	2005	
Cardiovascular	Myocardial Oxidative Stress	"Mobile phone-induced myocardial oxidative stress"	Ozguner F, Altinbas A, Ozaydin M, Dogan A, Vural H, Kisioglu AN, Cesur G, Yildirim NG.	2005	In Vitro
Cardiovascular	Modification of Cutaneous Blood Flow	"Non-ionizing electromagnetic radiations, emitted by a cellular phone, modify cutaneous blood flow"	Monfrecola G, Moffa G, Procaccini EM	2003	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cardiovascular	Leukemia	"Electromagnetic Fields Produced by GSM Cellular Phones and Heart Rate Variability"	Parazzini, Parazzini, Tognola, Thuroczy, et al.	2007	Human
Cardiovascular	Isolated Heart Function	"Microwave influence on the isolated heart function: II. Combined effect of radiation and some drugs"	Pakhomov AG, Dubovick BV, Degtyariov IG, Pronkevich AN	1995	Human
Cardiovascular	Isolated Heart Function	"Microwave influence on the isolated heart function: I. Effect of modulation"	Pakhomov AG, Dubovick BV, Degtyariov IG, Pronkevich AN	1995	Human
Cardiovascular	Inter-beat Intervals of Cardiac-Cell Aggregates	"Inter-beat intervals of cardiac-cell aggregates during exposure to 2.45 GHz CW, pulsed, and square-wave-modulated microwaves"	Seaman RL, DeHaan R	1993	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cardiovascular	Increased Heart Rates	"Heart Rate in Workers Exposed to Medium-Frequency Electromagnetic Fields"	Bortkeiwicz et al.	1996	Human
Cardiovascular	Increase in resting Blood Pressure	"Resting blood pressure increase during exposure to a radio-frequency electromagnetic field"	Braune S, Wrocklage C, Raczek J, Gailus T, Lucking CH	1998	Human
Cardiovascular	Increase in Blood Pressure	"Resting Blood Pressure Increase During Exposure to a Radio-frequency Electromagnetic Field"	Braune et al.	1998	Human
Cardiovascular	Hypotension	"Ultrawide-band electromagnetic pulses induced hypotension in rats"	Lu ST, Mathur SP, Akyel Y, Lee JC	1999	In Vitro
Cardiovascular	Heart Disease	"Ambulatory ECG Monitoring in Workers Exposed to	Bortkeiwicz et al.	1997	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Electromagnetic Fields"			
Cardiovascular	Heart Rate Variability	"Heart rate variability in workers exposed to medium-frequency electromagnetic fields"	Bortkiewicz A, Gadzicka E, Zmyslony M	1996	Human
Cardiovascular	Heart Disease	"Occupational Exposure to Non-ionizing Radiation and an Association With Heart Disease"	Hamburger, Logue and Silverman	1983	Human
Cardiovascular	Functional Circulation Parameters	"Evaluation of selected functional circulation parameters of workers from various occupational groups exposed to electromagnetic fields of high frequency"	Gadzicka E, Bortkiewicz A, Zmyslony M, Palczynski C	1997	Human
Cardiovascular	Functional Circulation Parameters	"Evaluation of selected parameters of circulatory system function in various occupational groups exposed	Bortkiewicz A, Zmyslony M, Gadzicka E, Szymczak W	1996	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		to high frequency electromagnetic fields. II. Electrocardiographic changes"			
Cardiovascular	ECG Monitoring	"Ambulatory ECG monitoring in workers exposed to electromagnetic fields"	Bortkiewicz A, Zmyslony M, Gadzicka E, Palczynski C, Szmigielski S	1997	Human
Cardiovascular	Dysregulation of cardiac function	"Dysregulation of Autonomic Control of Cardiac Function in Workers at AM Broadcasting Stations"	Bortkeiwicz et al.	1995	Human
Cardiovascular	Changes in peripheral blood	"Hematological Changes in Peripheral Blood of Workers in Occupationally Exposed to Microwave Radiation"	Goldini, J.	1990	Human
Cardiovascular	Changes in Peripheral Blood Flow	"Changes In peripheral blood flow produced by shortwave diathermy"	ABRAMSON, D. I., HARRIS, A. J., BEACONSFIELD, F. & SCHROEDER. J. M.	1957	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cardiovascular	Changes in Peripheral Blood Flow	"Changes in peripheral blood flow produced by shortwave diatherapy"	ABRAMSON, D. I., HARRIS, A. J., BEACONFIELD, P., & SCHROEDER, J. M.	1959	
Cardiovascular	Cardiovascular Effects	"Exposure to extremely-low-frequency electromagnetic fields and radiofrequency radiation: cardiovascular effects in humans"	Jauchem JR	1997	Human
Cardiovascular	Brain: Cerebral Blood Flow	"Mobile Phone Affects Cerebral Blood Flow in Humans"	Aalto, Haarala, Bruck, Sipila, et al.	2006	Human
Cardiovascular	Blood Pressure and Heart Rate	"Alteration of diurnal rhythms of blood pressure and heart rate to workers exposed to radiofrequency electromagnetic fields"	Szmigielski S, Bortkiewicz A, Gadzicka E, Zmyslony M, Kubacki R	1998	Human
Cell Membranes	Small Intestine Epithelial Cells	"Effects of modulated microwave and X-ray	Somogyi Z, Thuroczy G, Koteles GJ,	1994	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		irradiation on the activity and distribution of Ca ⁺⁺ -ATPase in small intestine epithelial cells"	Kovacs J		
Cell Membranes	Retina Pigment Epithelial Cells	"The microarray study on the stress gene transcription profile in human retina pigment epithelial cells exposed to microwave radiation"	iu X, Shen H, Shi Y, Chen J, Chen Y, Ji A	2002	In Vivo
Cell Membranes	Proliferation of Lens Epithelial Cells	"Low power microwave radiation inhibits the proliferation of rabbit lens epithelial cells by upregulating P27Kip1 expression"	Yao K, Wang KJ, Sun ZH, Tan J, Xu W, Zhu LJ, Lu de Q.	2004	In Vivo
Cell Membranes	Modification of Membrane Fluidity in Melanin-containing Cells	"Modification of membrane fluidity in melanin-containing cells by lowlevel microwave radiation"	Phelan AM, Lange DG, Kues HA, Luttu GA	1992	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cell Membranes	Membrane Electroporation	"Membrane electroporation due to weak transient electromagnetic pulses"	Wang BY, Liu CJ, Zhang H, Wang ZS	1999	In Vivo
Cell Membranes	Gene Expression	"Gene expression in human breast epithelial cells exposed to 60 Hz magnetic fields"	L.I. Loberg	1999	In Vitro
Cell Membranes	DNA Damage/Expression of Heat Shock Protein 70	"Effects of 1.8 GHz radiofrequency field on DNA damage and expression of heat shock protein 70 in human lens epithelial cells"	S. Lixia, K. Yao, W. Kaijun, I. Deglang, H. Huajun, G. Xiangwei, W. Baohong, Z. Wei, L. Jianling, W. Wei	2006	In Vitro
Cell Membranes	Damage	"Cell Membranes: The Electromagnetic Environment and Cancer Promotion"	Adey	1988	Human
Cell Membranes	Damage	"Nonlinear Electrodynamics in Cell Membranes"	Adey, W.F.	1990	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Transductive Coupling"			
Cell Membranes	Changes In Intercellular Communication	"Changes in gap junctional intercellular communication in rabbits lens epithelial cells induced by low power density microwave radiation"	Ye J, Yao K, Zeng Q, Lu D	2002	In Vitro
Cell Membranes	Changes In Intercellular Communication	"Low power density microwave radiation induced early changes in rabbit lens epithelial cells"	Ye J, Yao K, Lu D, Wu R, Jiang H	2001	In Vivo
Cell Metabolism/Genetics	Bioeffects - cellular level	"Assessment of radio-frequency electromagnetic radiation by the micronucleus test in bovine peripheral erythrocytes"	Balode Z	1996	In Vivo
Cellular	Vitamin E on Morphological Variation of Retinal Ganglion Cells	"Effect of vitamin E on morphological variation of retinal ganglion cells after	Yang R, Chen J, Deng Z, Liu X	2001	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		microwave radiation"			
Cellular	Transformation in C3H10T 1/2 Cells	"Effects of 2450 MHz EMF with a wide range of SARs on methylcholanthrene-induced transformation in C3H10T1/2 cells"	Wang J, Sakurai T, Koyama S, Komatubara Y, Suzuki Y, Taki M, Miyakoshi J.	2005	In Vitro
Cellular	Transcription	"Pulsing EMFs Induce Cellular Transcription"	Vacher et al.	1994	Human
Cellular	T1 Relaxation Times and Trace Elements	"The Effects of Whole Body Cell Phone Exposure on the T1 Relaxation Times and Trace Elements in the Serum of Rats"	Aksen F, Dasdag S, Akdag MZ, Askin M, Dasdag MM.	2004	Human
Cellular	Soft Tissue Wounds	"Experimental study of the effects of radiofrequency electromagnetic fields on animals with soft tissue wounds"	Detlavs I, Dombrovska L, Turauska A, Shkirmante B, Slutskii L	1996	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cellular	Rate of protein synthesis dependent	"Effect of Extremely Low Frequency Pulsed Magnetic Fields on the Mitogenic Response of Peripheral Blood Mononuclear Cells"	Aarholt, E. et al.	1982	In Vivo
Cellular	Non-Thermal Activation of the hsp27/p38MAPK Stress Pathways	"Non-thermal Activation of the hsp27/p38MAPK Stress Pathway by Mobile Phone Radiation in Human Endothelial Cells"	Leszczynski, Joenvaara, Reivinen, Kuokka	2002	Human
Cellular	Micronuclei increase in somatic cells	"Micronuclei Formation in Somaatic Cells of Mice Exposed to 50-Hz Electric Fields"	El Nahas and Oraby	1989	In Vivo
Cellular	Intercellular Communication	"Microwave and ELF electromagnetic field effects on intercellular communication"	Chiang H	1998	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cellular	Inhibition of MCF-7 Cell Growth	"The influence of 1.2_T, 60 Hz magnetic fields on melatonin and tamoxifen-induced inhibition of MCF-7 cell growth"	C. Blackman, et al.	2001	Human
Cellular	Immunotropic Effects in Blood Mononuclear Cells	"Immunotropic Effects in Cultured Human Blood Mononuclear Cells"	Dabrowski MP, Stankiewicz W, Kubacki R, Sobiczewska E, Szmigielski S.	2003	Human
Cellular	Hematopoietic Cells	"Effects of microwaves on membranes of hematopoietic cells in their structural and functional organization"	Rotkowska D, Bartonickova A, Kautska J	1993	In Vitro
Cellular	Genotoxic Effects in Marrow Cells	"Investigation of the genotoxic effect of microwave irradiation in rat bone marrow cells: in vivo exposure"	Trosic I, Busljeta I, Modlic B	2004	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cellular	Free Radical Generation in Brain, Spleen and Liver	"In Vivo Spin Trapping of Free Radicals Generated in Brain, Spleen, and Liver During Irradiation of Mice"	Lai, E.K., et al.	1986	In Vitro
Cellular	Fibroblastoid Cells	"Effect of EMF on Growth Pattern and Mitotic Activity of Cultured Human Fibroblastoid Cells"	Szmiegielski	1996	Human
Cellular	E. Coli Cells	"Resonance effect of millimeter waves in the power range from 10(-19) to 3 x 10(-3) W/cm2 on E-coli cells at different concentrations"	Belyaev IY, Shcheglov VS, Alipov YD, Polunin VA	1996	In Vivo
Cellular	Disturbances in Glucose Tolerance	"Disturbances of glucose tolerance in workers exposed to electromagnetic radiation"	Bielski J, Sikorski M	1996	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cellular	Damage to Blood System Cells	"The effect of ultrahigh-frequency radiation on adaptation thresholds and the damages to blood system cells"	Obukhan KI	1998	In Vivo
Cellular	Cutaneous Mast Cells	"Cutaneous Mast Cells are Altered in Normal Healthy Voluteers Sitting in Front of Ordinary TVs/PCs"	Johansson, Olle, et al.	2001	Human
Cellular	c-jon and c-fos Oncoproteins	"Influences of 50-Hz Magnetic Fields and Ionizing Radiation on c-jon and c-fos Oncoproteins"	Lagroye, I., and Poncy, J.	1998	In Vivo
Cellular	Changes in Dielectric Properties of Tissue	"Changes in the dielectric properties of rat tissue as a function of age at microwave frequencies"	Peyman A, Rezazadeh AA, Gabriel C	2001	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cellular	Cell Proliferation	"Decrease in Cell Proliferation After Exposure to RFR of 0.000021-0.0021W/kg"	Velizarov, et al.	1999	In Vivo
Cellular	Cell Proliferation	"The effects of radiofrequency fields on cell proliferation are nonthermal"	Velizarov S, Raskmark P, Kwee S	1999	In Vitro
Cellular	Cell Damage	"Electromagnetic Radiation Acts Like Chemicals"	Blackman, C.F.	1998	In Vivo
Cellular	Calcium-Dependent Binding of F-actin	"Wild Type p53 Protein Shows Calcium-dependent Binding of F-actin"	Metcalf et al.	1999	In Vivo
Cellular	Ca ²⁺ Influx	"Magnetic Fields Increase Cell Survival by Inhibiting Apoptosis via Modulation of Ca ²⁺ influx"	Fanelli et al.	1999	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Cellular	Breast	"Evidence for a slow time-scale of interaction for magnetic fields inhibiting tamoxifen's antiproliferative action in human breast cancer cells"	Harland, et al.	1999	In Vitro
Cellular	Breast	"Environmental magnetic fields inhibit the antiproliferative action of tamoxifen and melatonin in a human breast cancer cell line"	Harland, et al.	1997	Human
Cellular	Blood Aspartate Aminotransferase Activity	"Effect of low-intensity pulse-modulated microwave on human blood aspartate aminotransferase activity"	Pashovkina MS, Akoev IG	2001	In Vivo
Cellular	Bioeffect - cellular	"Exposure of Human Cells to Low-Frequency Electromagnetic Fields Results in Quantitative	Goodman et al.	1989	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Changes in Transcripts"			
Cellular	Biochemical Indexes	"Some biochemical indexes in white rabbit's blood affected by acute high intensity microwave"	Li C, Zhan C, Long Y, Gu H, Deng Y, Jiang Y, Tang M, Tang C, Luo S	1995	In Vitro
Cellular	Apoptosis in Cells	"Effects of 50 Hz EMF exposure on micronucleus formation and apoptosis in transformed and nontransformed human cell lines"	Scarfi, Lioi, d'Ambrosio et al.	1996	Human
Cellular	Alterations in Ornithine Decarbox Activity	"Alterations in Ornithine Decarbox Activity: a cellular response to Low-Energy Electromagnetic Field Exposure"	Byus	1994	In Vivo
Cellular Communication	Tumor Necrosis Factor Production	"Resistance to the Cytolytic Action of Lymphotoxin and Tumor Necrosis Factor	Fletcher, W. et al.	1987	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Coincides With the Presence of Gap Junctions Uniting Target Cells"			
Cellular Membrane	Stability and Formation of Gramicidin-A Channels in Lipid Bilayer Membranes	"The effect of microwave radiation on the stability and formation of gramicidin-A channels in lipid bilayer membranes"	Sandblom J, Theander S	1991	In Vitro
Cellular Membrane	Ouabain Inhibition of Kidney ATPase	"Ouabain inhibition of kidney ATPase is altered by 9.14 GHz radiation"	Brown HD, Chattopadhyay SK	1991	In Vlvo
Ecological impacts	Ecological impacts	"Plant sensitivity to low intensity 105 GHz electromagnetic radiation"	Tafforeau M, Verdus MC, Norris V, White GJ, Cole M, Demarty M, Thellier M, Ripoll C.	2004	In Vivo
Ecological impacts	Ecological impacts	"Ecological study on residences in the vicinity of AM radio broadcasting"	Sue Kyung Park, Mina Ha and Hyung-Jun Im	2004	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Electrophysiology	Bioelectric Activity	"Total bioelectric activity of various structures of the brain in lowintensity microwave irradiation"	Grigor'ev luG, Luk'ianova SN, Makarov VP, Rynskov VV	1995	Human
Endocrine	Variations of Melatonin and Stress Hormones	"Variations of melatonin and stress hormones under extended shifts and radiofrequency electromagnetic radiation"	Vangelova KK, Israel MS	2005	Human
Endocrine	Thyroid Dysfunctions	"Are thyroid dysfunctions related to stress or microwave exposure (900 MHz)?"	Bergamaschi A, Magrini A, Ales G, Coppetta L, Somma G.	2004	Human
Endocrine	Pituitary Cortical Adrenal System	"Experiments on the relation between shortwave irradiation and the pituitary cortical adrenal system" (M1)"	ADLER, E., & MAGORA, A.	1955	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Endocrine	Nerve Growth Factor/Phenochromocytoma Cells	"Exposure of nerve growth factor-treated PC12 rat pheochromocytoma cells to a modulated radiofrequency field at 836.55 MHz: effects on c-jun and c-fos expression"	Ivaschuk OI, Jones RA, Ishida-Jones T, Haggren W, Adey WR, Phillips JL	1997	In Vitro
Endocrine	Nerve Growth Factor/Phenochromocytoma Cells	"Exposure of nerve growth factor treated PC12 rat pheochromocytoma cells to a modulated RF field at 836.55 MHz"	Ivaschuk OI, Ishida-Jones T, Adey WR, Phillips JL	1997	In Vivo
Endocrine	Excretion Rates of Stress Hormones	"The effect of low level radiofrequency electromagnetic radiation on the excretion rates of stress hormones in operators during 24-hour shifts"	Vangelova K, Israel M, Mihaylov S	2002	Human
Endocrine	Adrenal Cortex	"The functional condition of the adrenal cortex in ship specialists who are	AFANAS'YEV, B. G.	1968	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		subjected to the action of a super-high frequency EM field"			
Epidemiological	Bioeffects - epidemiological	"Assesment of Cellular Telephone and Other Radio Frequency Exposure for Epidemiological Research"	Rothman, Chou, et al.	1996	Human
Epidemiological	Warmth Sensations in Skin	"Thresholds of microwave-evoked warmth sensations in human skin"	Blick DW, Adair ER, Hurt WD, Sherry CJ, Walters TJ, Merritt JH	1997	Human
Epidemiological	TBD	"Epidemiological Safety Surveillance of Cellular Telephones in the US"	Dreyer, Loughlin, Rothman	1999	Human
Epidemiological	TBD	Epidemiological Study	McLean and Stuchly	1991	In Vivo
Epidemiological	Skin Tissue Changes by Melatonin	"Prevention of mobile phone induced skin tissue changes	F. Ozguner, G. Aydin, H. Mollaoglu, O.	2004	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		by melatonin in rat: an experimental study"	Gokalp, A. Koyu, G. Cesur		
Epidemiological	Skin Tissue Changes	"Prevention of mobile phone induced skin tissue changes by melatonin in rat"	Ozguner F, Aydin G, Mollaoglu H, Gokalp O, Koyu A, Cesur G.	2004	In Vitro
Epidemiological	Pending	"Epidemiological Evidence Relevant to Radar (Microwave) Effects"	Goldsmith	1997	Human
Epidemiological	Oxidative Stress-Mediated Skin Damage	"Oxidative stress-mediated skin damage in an experimental mobile phone model can be prevented by melatonin"	Ayata A, Mollaoglu H, Yilmaz HR, Akturk O, Ozguner F, Altuntas I.	2004	Human
Epidemiological	Melanin Free Radicals in Skin	"EPR Persistence Measurements if UV-induced Melanin Free Radicals in Whole Skin"	Collins, Poehler and Bryden	1995	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Disease/ System	Bioeffect/ Symptom	title	authors	date	type
Epidemiological	Free Radical Formation in Skin	"Ultraviolet Light-induced Free Radical Formation in Skin: An Electron Paramagnetic Resonance Study"	Jurkiewicz and Buettner	1994	In Vivo
Epidemiological	Free Radical Formation in Skin	"EPR Detection of Free Radicals in UV-irradiated Skin: Mouse Verses Human"	Jurkiewicz and Buettner	1996	Human
Epidemiological	Dermatitis	"Dermatitis caused by radio-frequency electromagnetic radiation"	Strobos MA, Coenraads PJ, De Jongste MJ, Ubels FL	2001	Human
Epidemiological	Brain Tumors	"Epidemiological study of cellular telephone use and malignant brain tumors"	Muscat J.	1999	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Epidermiological	Health Effects	"Review of Epidemiological Studies of the Health Effects of Living Near or Working with Electricity Generation or Transmission Equipment"	Ossenkopp, K.P. et al.	1983	Human
Gastrointestinal	Pyroantimonate Precipitable Calcium in Small Intestine	"Effects of modulated and continuous microwave irradiation on pyroantimonate precipitable calcium content in junctional complex of mouse small intestine"	Somosy Z, Thuroczy G, Kovacs J	1993	In Vivo
Gender	Differences on EEG	"Gender Related Differences on the EEG During a Simulated Mobile Phone Signal"	Papageorgiou, Nanou, Tsiafakis, Capsalis, et al.	2004	Human
Genetics	Transgenic Nematodes	"Transgenic nematodes as biomonitors of microwave-induced stress"	Daniells C, Duce I, Thomas D, Sewell P, Tattersall J, de Pomerai D	1998	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	Transcriptional Patterns in X Chromosome of Sciara	"Transcriptional Patterns in X Chromosome of Sciara Following Exposure to Magnetic Fields"	Vagero, D. et al.	1985	In Vivo
Genetics	Single Strand DNA Breaks	"Single strand DNA breaks in rat brain cells exposed to microwave radiation"	R. Paulraj, J. Behari	2006	Human
Genetics	Single and Double-Strand DNA Breaks	"Single- and double-strand DNA breaks in rat brain cells after acute exposure to radiofrequency electromagnetic radiation"	Lai H, Singh NP	1996	In Vivo
Genetics	Simultaneous detection of Proto-oncogene and Quantitation of Proto-oncogene and GAPD mRNAs	"A polymerase chain reaction assay for simultaneous detection and quantitation of proto-oncogene and GAPD mRNAs"	Albee LD, Goswami PC	1998	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	Oxidation Homeostasis	"On the mechanism of cytogenetic effect of electromagnetic radiation: a role of oxidation homeostasis"	Brezitskaia HV, Timchenko OI	2000	Human
Genetics	Non-Thermal DNA Breakage	"Non-thermal DNA breakage by mobile-phone radiation (1800MHz) in human fibroblasts"	Diem E, Schwarz C, Adlkofer F, Jahn O, Rudiger H.	2005	Human
Genetics	NF-B DNA Binding Activity	"NF- B DNA-binding activity after high peak power pulsed microwave (8.2 GHz) exposure of normal human monocytes"	Natarajan M, Vijayalaxmi , Szilagyi M, Roldan FN, Meltz ML	2002	In Vitro
Genetics	Lymphoma B Cells	"The effect of 50 Hz magnetic field on GCSmRNA expression in lymphoma B cell by mRNA differential display"	Wu RY, Chiang H, Hu GL, Zeng QL, Bao JL	2000	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	Lymphocyte DNA	"Studying the synergistic damage effects induced by 1.8GHz RFR with four chemical mutagens on human lymphocyte DNA"	Baohong W, Jiliang H, Lifen J, Deqiang L, Wei Z, Jianlin L, Hongping D.	2005	In Vivo
Genetics	Lambdaphage DNA	"Altered restriction patterns of microwave irradiated lambdaphage DNA"	Narasimhan V, Huh WK	1991	In Vivo
Genetics	Intrachromosomal Recombination	"Effect of exposure to 900 MHz radiofrequency radiation on intrachromosomal recombination in pKZ1 mice"	Sykes PJ, McCallum BD, Bangay MJ, Hooker AM, Morley AA	2002	In Vitro
Genetics	Intrachromosomal Recombination	"Effect of Exposure to 900 MHz Radiofrequency Radiation on Intrachromosomal Recombination in pKZ1 Mice"	Sykes PJ, McCallum BD, Bangay MJ, Hooker AM, Morley AA	2001	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	HSP70 Levels and Cytoprotection	"Chronic electromagnetic field exposure decreases HSP70 levels and lowers cytoprotection"	Di Carlo A, White N, Guo F, Garrett P, Litovitz T.	2002	In Vitro
Genetics	Heat-shock Gene Expression	"A small temperature rise may contribute towards the apparent induction by microwaves of heat-shock gene expression in the nematode <i>Caenorhabditis Elegans</i> "	Dawe AS, Smith B, Thomas DW, Greedy S, Vasic N, Gregory A, Loader B, de Pomerai DI	2005	In Vitro
Genetics	Genotoxicity	"Biological Effects Versus Health Effects: An Investigation of the Genotoxicity of Microwave Radiation"	Meltz	1995	In Vivo
Genetics	Genotoxicity	"Evaluation of potential genotoxicity of RF fields In Vivo, using the single cell gell (SCG) electrophoresis	Tice RR, Vasquez M, McDougal J, Chou CK, Hook GJ, McRee D	1999	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		assay"			
Genetics	Genotoxic Effects	"Cell typespecific genotoxic effects of intermittent extremely-low frequency electromagnetic fields"	S. Ivancsits, A. Pilger, E. Diem, O. Jahn, H.W. Rudinger	2005	In Vitro
Genetics	Genomic Response	"Effect of GSM microwave exposure on the genomic response of the rat brain"	Fritze K, Wiessner C, Kuster N, Sommer C, Gass P, Hermann DM, Klessing M, Hossmann KA	1997	In Vivo
Genetics	Genetic Damage in Lymphocytes	"Cytogenetic Damage in Human Lymphocytes Following GSMK Phase Modulated Microwave Exposure"	d'Ambrosio et al.	1995	Human
Genetics	Genomic Response	"Effect of global system for mobile communication microwave exposure on the genomic response of the rat brain"	Fritze K, Wiessner C, Kuster N, Sommer C, Gass P, Hermann DM, Kiessling M, Hossmann KA,	1997	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	Genetic Damage	"Genetic Damage From Cell Phone Radiation"	Tice, Hook and McRee	1999	Human
Genetics	Gene Expression/Embryonic Stem Cells	"High frequency electromagnetic fields (GSM signals) affect gene expression levels in tumor suppressor p53-deficient embryonic stem cells"	Czyz J , Guan K, Zeng Q, Nikolova T, Meister A, Schönborn F, Schuderer J, Kuster N, Wobus AM	2004	Human
Genetics	Gene Expression	"Effects of 1.6 GHz microwaves (CW and pulsed wave) on c-fos, EGFR and NSCL-1 gene expression in the mouse brain"	Morrissey JJ, Raney S, Heasley E, Rathinavelu P, Dauphinee M, Fallon JH	1997	In Vitro
Genetics	Gene Expression	"2.45GHz radiofrequency fields alter gene expression in cultured human cells"	Lee S, Johnson D, Dunbar K, Dong H, Ge X, Kim YC, Wing C, Jayathilaka N, Emmanuel N, Zhou CQ, Gerber HL, Tseng CC, Wang SM IN, Dukhanin AS, Il'in AB, Kuznetsova Elu, Balaeva NV, Shimanovskii	1996	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	Gene Expression	"Microwave-specific heating affects gene expression"	Saffer JD, Profenno LA	1992	In Vitro
Genetics	GCSm RNA Expression in Lymphoma B Cells	"The effect of 50 Hz magnetic field on GCSmRNA expression in lymphoma B cell by mRNA differential display"	Wu RY, Chiang H, Hu GL, Zeng QL, Bao JL	2000	In Vitro
Genetics	Expression/2-5A-Dependent Rnase	"Microwave exposure alters the expression of 2-5A-dependent Rnase"	Krause D, Mullins JM, Penafiel LM, Meister R, Nardone RM	1991	In Vitro
Genetics	Effects on Protein Kinase/Gene Expression	"Effects on protein kinase C and gene expression in a human mast cell line, HMC-1, following microwave exposure"	Harvey C, French PW	2000	In Vivo
Genetics	E. Coli Cells	Resonance effect of microwaves on the genome conformational state of E.	Belyaev IYa, Alipov YD, Shcheglov VS, Lystsov VN	1992	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		coli cells.			
Genetics	Double-strand DNA Breaks	"Single- and double-strand DNA breaks in rat brain cells after acute exposure to radiofrequency electromagnetic radiation"	Lai H, Singh NP	1996	In Vitro
Genetics	DNA Strand Damage	"Comet Essay to Evaluate DNA Damage Caused By Magnetic Fields"	Ahuja et al.	1997	Human
Genetics	DNA Synthesis	"Time-Varying Magnetic Fields: Effect on DNA Synthesis"	Vasquez, Anderson, Lowery, Adey	1988	In Vivo
Genetics	DNA Synthesis and Cell Proliferation	"DNA synthesis and cell proliferation in C6 glioma and primary glial cells exposed to a 836.55 MHz modulated radiofrequency field"	Stagg RB, Thomas WJ, Jones RA, Adey WR	1994	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	DNA Strand Breaks	"Melatonin and a spin-trap compound block radiofrequency electromagnetic radiation-induced DNA strand breaks in rat brain cells"	Lai H, Singh NP	1997	In Vitro
Genetics	DNA Strand Breaks	"Interaction of Microwaves and a Temporally Incoherent Magnetic Field on Single and Double DNA Strand Breaks in Rat Brain Cells"	Lai H, Singh NP	2005	In Vitro
Genetics	DNA Strand Breaks	"Acute exposure to a 60 Hz magnetic field increases DNA strand breaks in rat brain cells"	Lai H, Singh NP	1997	In Vitro
Genetics	DNA Single and Double Strand Breaks	"Melatonin and N-tert-butyl-alpha-phenylnitron block 60-Hz magnetic field-induced DNA single and double strand breaks in rat	Lai H, Singh NP	1997	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	DNA Single Strand Breaks	brain cells" "Acute Low-Intensity Microwave Exposure Increases DNA Single Strand Breaks in Rat Brain Cells"	Lai and Singh	1995	In Vitro
Genetics	DNA Single Strand Breaks	"Acute low-intensity microwave exposure increases DNA single- strand breaks in rat brain cells"	Lai H, Singh NP	1995	In Vitro
Genetics	DNA Single Strand Breaks	"Acute low-intensity microwave exposure increases DNA single-strand breaks in rat brain cells"	Lai H, Singh NP	1995	In Vivo
Genetics	DNA Single and Double Strand Breaks	"Melatonin and N-tert-butyl-a-phenylnitron Block 60 Hz Magnetic Field Induced DNA Single and Double Strand Breaks in Rat Brain Cells"	Lai and Singh	1997	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	DNA Single and Double Strand Breaks	"Single and Double Strand DNA Breaks in Rat Brain Cells After Acute Exposure to Radiofrequency Electromagnetic Radiation"	Lai and Singh	1996	In Vitro
Genetics	DNA Lesions	"The effect of electromagnetic field exposure on the formation of DNA lesions"	Lourencini da Silva R , Albano F, Lopes dos Santos LR , Tavares AD, Felzenszwalb I,	2000	In Vivo
Genetics	DNA Integrity	"Impact of radio frequency electromagnetic radiation on DNA integrity in the male germline"	Aitken RJ, Bennetts LE, Sawyer D, Wiklendt AM, King BV	2005	In Vitro
Genetics	DNA Integrity	"Impact of radio frequency electromagnetic radiation on DNA integrity in the male germline"	R.J. Aitken, L.E. Bennetts, D. Sawyer, A.M. Wiklendt, B.V. King	2005	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	DNA Double Strand Breaks	"Naltrexone blocks RFR-induced DNA double strand breaks in rat brain cells"	Lai H, Carino MA, Singh NP	1997	Human
Genetics	DNA Damage and Micronuclei Induction in Blood Cells	"Genotoxicity of radiofrequency signals. I. Investigation of DNA damage and micronuclei induction in cultured human blood cells"	Tice RR , Hook GG , Donner M , McRee DI, Guy AW	2002	In Vivo
Genetics	DNA damage	"DNA Damage in Human Leukocytes After Acute In Vitro Exposure to 1.9 GHz Pulse-Modulated Radiofrequency Field"	McNamee, J.P., et al.	2002	Human
Genetics	DNA Damage	"Effects of 2,450 MHz microwave on DNA damage induced by three chemical mutagens in vitro"	Zhang MB, Jin LF, He JL, Hu J, Zheng W	2003	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	DNA Damage	"Further (Final?) studies to find DNA damage due to exposure to RF and microwave radiation"	Roti-Roti J, LaGroye I, Li L, Zhang P, Sisht K, Straube WL, Moros EG, Pickard WF	1999	In Vivo
Genetics	DNA Damage	"DNA damage in Molt-4 T-lymphoblastoid cells exposed to cellular telephone RFs In Vitro"	Phillips JL, Ivaschuk O, Oshida-Jones T, Jones RA, Campbell-Beaclar M, Haggren W	1998	In Vivo
Genetics	DNA Damage	"DNA damage in Molt-4 T-lymphoblastoid cells exposed to cellular telephone radiofrequency fields in vitro"	Phillips JL, Ivaschuk O, Ishida-Jones T, Jones RA, Campbell-Beachler M, Haggren W	1998	In Vitro
Genetics	DNA Damage	"DNA Damage in molt-4 Lymphoblastoid Cells Exposed to Cellular Telephone Radiofrequency Fields In Vitro"	Phillips et al.	1998	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	DNA damage	"Measurement of DNA Damage After Exposure to Electromagnetic Radiation in the Cellular Phone Communication Frequency Band"	Malyapa, Ahem, Bi, Straube, LaRegina, Pickard, RotiRoti	1997	In Vivo
Genetics	DNA damage	"DNA Damage in Rat Brain Cells After In Vivo Exposure to 2450 MHz Electromagnetic Radiation and Various Methods of Euthanasia"	Malyapa, Ahem, Bi, Straube, LaRegina, Pickard, RotiRoti	1988	In Vivo
Genetics	DNA Damage	"Damage in DNA Irradiated with 1.2 MHz Ultrasound and its Effect on Template Activity of DNA for RNA Synthesis"	Kondo, T. et al.	1985	Human
Genetics	DNA Analysis	"Effect of Low Power Microwave on the Mouse Genome: A Direct DNA Analysis"	Sarkar S, Ali S, Behari J	1994	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	DNA Analysis of Retroposon-like Genetic LINE Elements in Blood Plasma	"DNA analysis of retroposon-like genetic LINE elements in blood plasma of rats exposed to radio-diapason electromagnetic waves"	Belokhvostov AS, Osipovich VK, Veselova OM, Kolodiazhnaia VA	1995	In Vitro
Genetics	DNA Crosslinks	"60 Hz magnetic field exposure induces DNA crosslinks in rat brain cells"	Singh NP, Lai H	1998	In Vivo
Genetics	DNA Analysis	"Effect of Low-Power Microwave on the Mouse Genome: a Direct DNA Analysis"	Wilson et al.	1990	In Vivo
Genetics	Cytogenic Effects	"Cytogenetic effects of 50 Hz magnetic fields of different magnetic flux densities"	Maes A, Collier M, Vandoninck S, Scarpa P, Verschaeve L	2000	In Vivo
Genetics	Cytogenic Changes	"Cytogenetic changes induced by low-intensity microwaves in the species"	Pavel A, Ungureanu CE, Bara II, Gassner P, Creanga DE	1998	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Triticum aestivum"			
Genetics	Cytogenetic Effects on Lymphocytes	"In Virto Cytogenetic Effects of 2450 MHz waves on Human Peripheral Blood Lymphocytes"	Maes, Verschaaeve, Arroyo, DeWagter	1993	Human
Genetics	Cytogenetic Effects	"Cytogenetic effects of 50 Hz magnetic fields of different magnetic flux densities"	Maes A, Collier M, Vandoninck S, Scarpa P, Verschaeve L	2000	In Vivo
Genetics	Cytogenetic Effects	"Cytogenetic effects of 935.2-MHz (GSM) microwaves alone and in combination with mitomycin"	Maes A, Collier M, Van Gorp U, Vandoninck S, Verschaeve L	1997	Human
Genetics	Cytogenetic Damage in Lymphocytes	"Cytogenetic damage in human lymphocytes following GMSK phase modulated microwave exposure"	d'Ambrosio G, Massa R, Scarfi MR, Zeni O	2002	In Vivo

THE HEALTH IMPACT OF WIRELESS TECHNOLOGIES: A SURVEY OF CURRENT LITERATURE

DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	Clastogenicity	"In vitro assessment of clastogenicity of mobile-phone radiation (835 MHz) using the alkaline comet assay and chromosomal aberration test"	J.Y. Kim, S.Y. Hong, Y.M. Lee, S.A. Yu, W.S. Koh, J.R. Hong, T. Son, S.K. Chang, M. Lee	2008	Human
Genetics	c-myc Promoter	"Specific Region of the c-myc Promoter is Responsible for Electric and Magnetic Fields"	Lin et al.	1994	In Vivo
Genetics	Clastogenic Effects	"Clastogenic effects of radiofrequency radiations on chromosomes of Tradescantia"	Haider T, Knasmueller S, Kundi M, Haider M	1994	In Vitro
Genetics	Chromosome Instability	"Exposure of human peripheral blood lymphocytes to electromagnetic fields associated with cellular phones leads to chromosomal instability"	Mashevich M, Folkman D, Kesar A, Barbul A, Korenstein R, Jerby E, Avivi L	2003	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	Chromosome Aberrations/Micronuclei	"The relationship between colony-forming ability, chromosome aberrations and incidence of micronuclei in V79 Chinese hamster cells exposed to microwave radiation"	Garaj-Vrhovac V, Horvat D, Koren Z,	1991	In Vitro
Genetics	Chromosome Aberrations in Peripheral Blood Lymphocytes	"Comparison of chromosome aberrations in peripheral blood lymphocytes from people occupationally exposed to ionizing and radiofrequency radiation"	Lalic H, Lekic A, Radosevic-Stasic B	2001	Human
Genetics	Chromosome Aberrations	"Clastogenic Effects of Radiofrequency Radiation on Chromosomes of Tradescantia"	Haider et al.	1994	In Vivo
Genetics	Chromosome aberrations in human lymphocytes	"Cytogenetic Effects of Pulsing Electromagnetic Field on Human Lymphocytes In Vitro: Chromosome	Khaili and Qassem	1991	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Aberrations, Sister-chromatid Exchanges and Cell Kinetics"			
Genetics	Chromosome Aberrations	"The Correlation Between the Frequency of Micronuclei and Specific Aberrations in Human Lymphocytes Exposed to Microwave Radiation In Vitro"	Garaj-Vrhovac et al.	1992	In Vitro
Genetics	Chromosome Aberrations	"The Rate of Elimination of Chromosomal Aberrations after Accidental Exposure to Microwave Radiation"	Garaj-Vrhovac et al.	1993	In Vivo
Genetics	Chromosome Aberrations	"Effect of Low-Level Pulsed Electromagnetic Fields on Human Chromosomes In Vitro: Analysis of Chromosome Aberrations"	Garcia-Sagredo and Monteagudo	1991	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	Chromosome Abberations	"Microwave Radiation Induced Chromosome Aberrations in Corneal Epithelium of Chinese Hamsters"	Szmiegielski	1996	In Vitro
Genetics	Chromosome Aberrations	"The Relationship Between Colony-forming Ability, Chromosome Aberrations and Incidence of Micronuclei in V79 Chinese Hamster Cells Exposed to Microwave Radiation"	Garaj-Vrhovac et al.	1991	In Vitro
Genetics	Chromosomal Instability	"Exposure of human peripheral blood lymphocytes to electromagnetic fields associated with cellular phones leads to chromosomal instability"	M. Mashevich, D. Folkman, A. Kesar, A. Barbul, R. Korenstein, E. Jerby, L. Avivi	2003	Human/In Vitro
Genetics	Chromosomal Damage	"A Preliminary Study to Assess Possible Chromosomal	Gadhia PK, Shah T, Mistry A, Pithawala	2003	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Damage Among Users of Digital Mobile Phones"	M, Tamakuwala D.		
Genetics	Changes in Secondary Structure of DNA	"Changes in the secondary structure of DNA under the influence of external low-intensity electromagnetic field"	Semin luA, Shvartsburg LK, Dubovik BV	1995	Human
Genetics	Changes in cells ability to synthesize DNA	"Biological Effects of Magnetic Fields"	Barnothy, M.F. et al.	1969	In Vivo
Genetics	Cellular changes	"Effects of Magnetic Fields on Chromosome Set and Cell Division"	Ugarte et al.	1998	In Vivo
Genetics	Canalicular Membrane and ATPase Activity	"Athermal alterations in the structure of the canalicular membrane and ATPase activity induced by thermal levels of microwave radiation"	Phelan AM, Neubauer CF, Timm R, Neirenberg J, Lange DG	1994	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Genetics	Calcium ion efflux/influx and c-MYC mRNA Induction	"Experimental Evidence for 60 Hz Magnetic Fields Operating Athrough the Signal Transduction Cascade-effects on calcium ion influx and c-MYC mRNA Induction"	Liburdy, R.P., et al.	1993	Human
Genetics	Bone Morphogenetic Protein Expression	"Bone morphogenetic protein expression in newborn rat kidneys after prenatal exposure to radiofrequency radiation"	Pyrapasopoulou A, Kotoula V, Cheva A, Hytiroglou P, Nikolakaki E, Magras IN, Xenos TD, Tsiboukis TD, Karkavelas G	2004	In Vivo
Genotoxic	Lymphocytes	"X-rays, microwaves and vinyl chloride monomer: their clastogenic and aneugenic activity, using the micronucleus assay on human lymphocytes"	Fucic A, Garaj-Vrhovac V, Skara M, Dimitrovic B	1992	In Vitro
Head	Energy Absorption	"Differences in energy absorption between heads of adults and children in the	Schonborn F, Burkhardt M, Kuster N	1998	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		near field of sources "			
Hormonal	Thyroid Hormones	"Effects of 900MHz electromagnetic field on TSH and thyroid hormones in rats"	Koyu A, Cesur G, Ozguner F, Akdogan M, Mollaoglu H, Ozen S.	2005	Human
Hormonal	Secretion of Antepituitary Hormones	"GSM radiocellular telephones do not disturb the secretion of antepituitary hormones in humans"	de Seze R, Fabbro-Peray P, Miro L	1998	Human
Hormonal	Salivary Melatonin Concentrations	"Absence of chronic effect of exposure to short-wave radio broadcast signal on salivary melatonin concentrations in dairy cattle"	Stark KD, Krebs T, Altpeter E, Manz B, Griot C, Abelin T	1997	In Vitro
Disease/ System	Bioeffect/ Symptom	title	authors	date	type

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Hormonal	Reduction of melatonin	"Evaluation of Humans of the Effects of Radiocellular Phones on the Circadian Patterns of Melatonin Secretion, a Chronological Rhythm Marker"	de Seze, Ayoub, Peray, Miro, et al.	1999	Human
Hormonal	Reduction in Melatonin	"Weak Residential Magnetic Fields Affect Melatonin in Humans"	Davis, S.	1997	Human
Hormonal	Reduction in Melatonin Concentrations	"Chronic Exposure to 2.9mT, 40 Hz Magnetic Field Reduces Melatonin Concentrations in Humans"	Karasek et al.	1998	Human
Hormonal	Melatonin Reduction	"EMR Reduces Melatonin in Animals and People"	Cherry, Neil	2000	Human
Hormonal	Melatonin Production	"Does Evening Exposure to Mobile Phone Radiation Affect Subsequent Melatonin	Wood A. W., Loughran S. P. and Stough C.	2006	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Production?"			
Hormonal	Melatonin Effects	"Melatonin reduces oxidative stress induced by chronic exposure to microwave radiation from mobile phones in rat brain"	Sokolovic D., Djindjic B., Nikolic J., Bielakovic G., Pavlovic D., Kocic G., Krstic D., Cvetkovic T. and Pavlovic V.	2008	In Vitro
Hormonal	Melatonin Effects	"Evidence for breast cancer promotion (melatonin studies in cells and animals)"	Sage C. L.	2007	InVivo/In Vitro
Hormonal	Excretion of Stress Hormones	"Operators of Satellite Station Exposed to Low Dose RF Radiation Over a 24-Hour Shift Showed an Increase Excretion of Stress Hormones"	Vangelova, et al.	2002	Human
Hormonal	Effects on Melatonin and Enzymatic Metabolites	"Multi-night Exposure to 60-Hz Magnetic Fields: Effects on Melatonin and its	Graham et al.	2000	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Enzymatic Metabolite"			
Hormonal	Decreased Melatonin Secretion	"Effects of the 1900 MHz Electromagnetic Field Emitted from Cellular Phone on Nocturnal Melatonin Secretion"	Jarupat, Kawabata, Tokura, Borkiewicz	2003	Human
Hormonal/Genotoxic	Negative changes in melatonin and other hormones	"Melatonin and Andrenocorticotropic Hormone Levels in Video Display Unit Workers During Work and Leisure"	Arnetz et al.	1996	Human
Hormonal/Genotoxic	Melatonin Effects	"Physiological effects of melatonin: role of melatonin receptors and signal transduction pathways"	Pandi-Perumal S. R., Trakht I., Srinivasan V., Spence D. W., Maestroni G. J. M., Zisapel N. and Cardinali D. P.	2008	Pending
Hormonal/Genotoxic	Genetic Damage	"Carcinogenesis"	Baxter	1995	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Hormonal/Genotoxic	Excretion of 6-Hydroxymelatonin	"The Excretion of 6-Hydroxymelatonin Sulfate in Healthy Young Men Exposed to Electromagnetic Fields Emitted by Cellular Phones"	Bortkeiwicz, Pilacik, Gadzicka, Szymczak	2002	Human
Hormonal/Urinary	Nocturnal 6-Hydroxymelatonin Sulphate Excretion	"Nocturnal 6-Hydroxymelatonin Sulphate Excretion in Female Workers Exposed to Magnetic Fields"	Juutilainen, J. et al.	2000	Human
Immune Diseases	Mediation of hormones- luteinizing, testosterone, prolactin, growth	"Human Growth Hormone Releases Cytosolic Free Calcium in Cultured Human IM-9 Lymphocytes: a novel mechanism of growth hormone transmembrane signalling"	Ilondo et al.	1994	Human
Immune Diseases	Calcium channels in cells	"Calcium Homeostasis and the Activation of Calcium Channels in Cells of the Immune System"	Grinstein, S. and Klip, A.	1989	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Immune System	Suppression of T-Lymphocytes	"Suppression of T-Lymphocyte Cytotoxicity Following Exposure to 60-Hz Sinusoidal Electric Fields"	Vijayalaxmi et al.	1997	Human
Immune System	Suppressed Immune Factors	"Microwave Heating of Human Breast Milk Significantly Suppressed the Specific Immune System Factors for E. Coli Compared to Conventional Heating"	Quan et al.	1992	Human
Immune System	Stimulation of Murine Natural Killer Cells	"Stimulation of murine natural killer cells by weak electromagnetic waves in the centimeter range"	Fesenko EE, Novoselova EG, Semiletova NV, Agafonova TA, Sadovnikov VB	1999	Human
Immune System	Spontaneous Lymphoblastoid Transformation of Lymphocytes	"Effects of continuous and pulsed 2450-MHz radiation on spontaneous lymphoblastoid transformation of human lymphocytes in vitro"	Czerska EM, Elson EC, Davis CC, Swicord ML, Czerski P	1992	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Immune System	Self-Defense Responses	"Exposure to 900-MHz RFR Affected Cell's Self-Defense Responses"	Marinelli, et al.	2004	In Vivo
Immune System	Reduction in Natural Killer Cell Activity	"Natural killer cell activity reduced by microwave exposure during pregnancy is mediated by opioid systems"	Nakamura H, Seto T, Hatta K, Matsuzaki I, Nagase H, Yoshida M, Ogino K	1998	In Vitro
Immune System	Reduced Mitogenic Stimulation of Lymphocytes	"Reduced Mitogenic Stimulation of Human Lymphocytes by Extremely-Low Frequency Electromagnetic Fields"	Conti, P. et al.	1983	Human
Immune System	Neutrophil Respiratory Burst	"Millemetre waves inhibit the synergistic effect of calcium ionophore A23187 and phorbol ester in neutrophil respiratory burst"	Safronova VG, Gapeev AB, Alovskaja AA, Gabdulkhakova AG, Chemeris NK, Fesenko EE	1997	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Immune System	Neutrophil Respiratory Burst	"Modulated extremely high frequency EMR of low intensity activates or inhibits respiratory burst in neutrophils depending on modulation frequency"	Gapeev AB, Iakushina VS, Chemeris NK, Fesenko EE	1997	In Vivo
Immune System	Neutrophil Precursor Cells	"In vitro microwave effects on human neutrophil precursor cells (CFU-C)"	Ottenbreit MJ, Lin JC, Inoue S, Peterson WD Jr	1981	Human
Immune System	Modification of Cutaneous Blood Flow	"Nonthermal GSM microwaves affect chromatin conformation in human lymphocytes similar to heat shock"	Sarimov R, Malmgren L.O.G., Markova, E., Persson, B.R.R., Belyaev, I.Y.	2004	Human
Immune System	Modification of Activity of Murine Neutrophils	"Modification of the activity of murine peritoneal neutrophils upon exposure to millimeter waves at close and far distances from the emitter"	Gapeev AB, Safronova VG, Chemeris NK, Fesenko EE	1996	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Immune System	Lymphoid Cells	"Effects of low-intensity extremely high frequency electromagnetic radiation on chromatin structure of lymphoid cells in vivo and in vitro"	Gapeev AB, Lushnikov KV, Shumilina IuV, Sirota NP, Sadovnikov VB, Chemeris NK.	2003	In Vivo
Immune System	Lymphocytes	"Individual responsiveness to induction of micronuclei in human lymphocytes after exposure in vitro to 1800-MHz microwave radiation"	Zotti-Martelli L, Peccatori M, Maggini V, Ballardini M, Barale R.	2005	Human
Immune System	Lymphocytes	"Microwaves from GSM Mobile Telephones Affect 53BP1 and gamma- H2AX Foci in Human Lymphocytes from Hypersensitive and Healthy Persons"	Markova E, Hillert L, Malmgren L, Persson BR, Belyaev IY	2005	In Vivo
Immune System	Lymphocytes	"Blood-forming system in rats after whole-body microwave exposure; reference to the	Trosic I, Busljeta I, Pavicic I.	2004	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		lymphocytes"			
Immune System	Lymphocytes	"Acute exposure to 930 MHz CW EMR in vitro affects reactive oxygen species level in rat lymphocytes treated by iron ions"	Zmyslony M, Politsanski P, Rajkowska E, Szymczak W, Jajte J	2004	In Vitro
Immune System	Lymphocytes	"In vitro exposure of human lymphocytes to 900 MHz CW and GSM"	Bersani F, Franceschi C	2004	Human
Immune System	Lymphocytes	"Effects of Microwaves on Human Lymphocyte Cultures"	Williams	1996	Human
Immune System	Lymphocytes	"Induction of micronuclei in human lymphocytes exposed in vitro to microwave radiation"	Zotti-Martelli L, Peccatori M, Scarpato R, Migliore L,	2000	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Immune System	Lymphocytes	"Effects in Human Lymphocytes of Power Frequency Electric Fields"	Preston-Martin et al.	1993	Human
Immune System	Lymphocytes	"Calcium-45 Cyclotron Resonance in Human Lymphocytes"	Liboff, A.R. et al.	1987	Human
Immune System	Lymphocytes	"Comparison of Chromosome Aberration and Micronucleus Induction in Human Lymphocytes After Occupational Exposure to Vinyl Chloride Monomer and Microwave Radiation"	Garaj-Vrhovac et al.	1990	Human
Immune System	Immunostimulating Effects	"Microwaves and cellular immunity. II. Immunostimulating effects of microwaves and naturally occurring antioxidant nutrients"		1999	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Immune System	Immunoglobulin, Subpopulations of T Lymphocytes and NK Cell Levels	"Levels of immunoglobulin and subpopulations of T lymphocytes and NK cells in men occupationally exposed to microwave radiation in frequencies of 6-12 GHz"	Dmoch A, Moszczynski P	1998	Human
Immune System	Immunoglobulin and sub-populations of T Lymphocytes and NK Cells	"Levels of Immunoglobulin and sub-populations of T Lymphocytes and NK Cells in Men Occupationally Exposed to Microwave Radiation in Frequencies of 6-12GHz"	Dmoch and Moszczynski	1998	Human
Immune System	Immunity	"Effects of electromagnetic fields produced by radiotelevision broadcasting stations on the immune system of women"	Boscol P, Di Sciascio MB, D'Ostilio S, Del Signore A, Reale M, Conti P, Bavazzano P, Paganelli R, Di Gioacchino M.	2001	Human
Immune System	Immune System diseases	"RFR From Radio Transmission Stations Affects Immune System in Women"	Boscol, et al.	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Immune System	Immunity	"Effect on the immune system of mice exposed chronically to 50 Hz amplitude-modulated 2.45 GHz microwaves"	Elekes E, Thuroczy G, Szabo LD	1996	In Vitro
Immune System	Humoral Immunity	"Effect of extremely high frequency electromagnetic radiation of low intensity on parameters of humoral immunity in healthy mice"	Lushnikov KV, Gapeev AB, Sadovnikov VB, Cheremis NK	2001	Human
Immune System	Functionality	"Low Intensity RFR Affects Functions of the Immune System"	Novoselova, et al.	1999	Human
Immune System	Functionality	"Several Immune System Functions of the Residents From Territories Exposed to Pulsed Radio-Frequency Radiation"	Bruvere et al.	1998	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Immune System	Functionality	"Low Intensity RFR at SAR pf 0.015 W/kg Affects Functions of the Immune System"	Veyret, et al.	1991	Human
Immune System	Fasinduced Apoptosis in Jurkat T Cells	"Non-thermal effects of continuous 2.45 GHz microwaves on Fasinduced apoptosis in human Jurkat T-cell line"	Peinnequin A, Piriou A, Mathieu J, Dabouis V, Sebbah C, Malabiau R, Debouzy JC	2000	In Vivo
Immune System	Enhancement of Allergic Skin Wheal Responses	"Enhancement of allergic skin wheal responses by microwave radiation from mobile phones in patients with atopic eczema/dermatitis syndrome"	Kimata H	2002	Human
Immune System	Cytolytic T Lymphocytes	"Effect of isothermal radiofrequency radiation on cytolytic T lymphocytes"	Cleary SF, Du Z, Cao G, Liu LM, McCrady C	1996	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Immune System	Change in Immunological Functionality	"Change in Immunological Functions in Mice After Exposure to RFR at a Power Density of 0.001 mW/cm ² "	Fesenko, et al.	1999	In Vitro
Immune System	Cancer Effects	"Immunological and Cancer-Related Effects of Exposure to Low-Level Microwave and RF Fields"	Vijayalaxmi et al.	1997	In Vivo
Immune System	Cancer Effects	"Immunological and Cancer-Related Effects of Exposure to Low-Level Microwave and RF Fields"	Vijayalaxmi et al.	1998	Human
Immune System	Bioeffect - immunoglobins	"The effect of various occupational exposures to microwave radiation on the concentrations of immunoglobulins and T lymphocyte subsets"	Moszczynski P, Lisiewicz J, Dmoch A, Zabinski Z, Bergier L, Rucinska M, Sasiadek U	1999	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Immune System	Anitbody Response	"Antibody responses of mice exposed to low-power microwaves under combined, pulse-and-amplitude modulation"	Veyret B, Bouthet C, Deschaux P, de Seze R, Geffard M, Jousot-Dubien J, leDiraison M, Moreau JM, Caristan A	1991	In Vitro
Immune System	Allergies	"Microwave Radiation from Cellular Phones Increases Allergen-Specific IgE Production"	Kimata, H.	2005	Human
Immune System	Allergic Skin Wheal Responses/Plasma Neurotrophin Levels	"Laughter counteracts enhancement of plasma neurotrophin levels and allergic skin wheal responses by mobile phone-mediated stress"	Kimata H.	2004	Human
Immunity	Immune System	"Combined effects of traffic and electromagnetic fields on the immune system of fertile atopic women"	Del Signore A, Boscolo P, Kouri S, Di Martino G, Giuliano G	2000	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Intercellular Communication	Cell to Cell Communication	"Cell-to-cell communication in response of E. coli cells at different phases of growth to low-intensity microwaves"	Shcheglov VS, Alipov ED, Belyaev IY	2002	In Vivo
Intracellular	Structrual Changes in Cells of Embryos	"RFR at 0.024 W/kg Caused Molecular and Structural Changes in Cells of Mouse Embryos"	Somosy, et al.	1991	In Vitro
Intracellular	Proteomics Analysis of Endothelial Cells	"Proteomics analysis of human endothelial cell line EA.hy926 after exposure to GSM 900 radiation"	Nylund R, Leszczynski D	2004	In Vivo
Intracellular	Neoplastic Transformation of C3H/10T1/2 Cells	"Neoplastic Transformation of C3H/10T1/2 Cells Following Exposure to 120Hz Modulated 2.45GHz Microwaves and Phorbol Ester Tumor Promoter"	Balcer-Kubiczek and Harrison	1991	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Intracellular	Morphology and Cell Surface	"Effects of modulated and continuous microwave irradiation on the morphology and cell surface negative charge of 3T3 fibroblasts"	Somosy Z, Thuroczy G, Kubasova T, Kovacs J, Szabo LD	1991	In Vivo
Intracellular	Molecular Stress Response	"Increase in a Molecular Stress Response in Cells after Exposure to a RFR at a SAR of 0.001W/kg"	de Pomerai, et al.	2000	In Vivo
Intracellular	Micronucleus Assay and Lymphocyte Mitotic Activity	"Micronucleus assay and lymphocyte mitotic activity in risk assessment of occupational exposure to microwave radiation"	Garaj-Vrhovac V	1999	Human
Intracellular	Micronucleus Formation in CHO-K1 Cells	"Effects of 2.45-GHz electromagnetic fields with a wide range of SARs on micronucleus formation in CHO-K1 cells"	Koyama S, Isozumi Y, Suzuki Y, Taki M, Miyakoshi J.	2004	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Intracellular	Micronuclei increase in somatic cells	"Micronuclei Formation in Somatic Cells of Mice Exposed to 50-Hz Electric Fields"	Tsoneva, M.G. et al.	1985	In Vitro
Intracellular	Kinetics	"Microwave enhanced kinetics observed in ORD studies of a protein"	Henrik Bohr, Jakob Bohr	2000	
Intracellular	Increased interleukin in blood cells	"Exposure to Low-Frequency Pulsed Electromagnetic Fields Increases Interleukin-1 and Interleukin-6 Production by Human Peripheral Blood Mononuclear Cells"	Cossarizza, A. et al.	1993	In Vivo
Intracellular	Increase of Stress Protein in Human Cells	"Twenty Minutes of Cell Phone RFR Exposure at 0.0021W/kg Increased Stress Protein In Human Cells"	Kwee, et al.	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Intracellular	Genotoxicity	"Genotoxicity of RF fields generated from analog, TDMA, CDMA and PCS technology evaluated using a single-cell gell electrophoresis and the Cytochalasin B micronucleus (CB-MN) assay"	Hook GJ, Vasquez M, Blackwell DM, Clancy JJ, Donner EM, Tice RR, McRee D	1999	In Vivo
Intracellular	Frequency of Micronuclei and Chromosome Abberations in Lymphocytes	"The correlation between the frequency of micronuclei and specific chromosome aberrations in human lymphocytes exposed to microwave radiation in vitro"	Garaj-Vrhovac V, Fucic A, Horvat D	1992	In Vitro
Intracellular	Erythrocytes	"Effects of acute exposure to the radiofrequency fields of cellular phones on plasma lipid peroxide and antioxidase activities in human erythrocytes"	Moustafa YM, Moustafa RM, Belacy A, Abou-EI-Ela SH, Ali FM	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Intracellular	Effects on Melatonin and Tamoxifen in MCF-7 Cells	"Independent replication of 60-Hz 1.2_T EMF effects on melatonin and tamoxifen responses of MCF-7 cells in vitro"	Luben, et al.	1998	In Vitro
Intracellular	DNA Damage	"DNA damage in molt-4 lymphoblastoid cells exposed to cellular telephone radiofrequency fields in vitro"	J. Phillips, et al.	1998	In Vitro
Intracellular	Dielectric Properties of Red Blood Cells in Suspension	"Dielectric properties of human red blood cells in suspension at radio frequencies"	Lu Y, Yu J, Ren Y	1994	Human
Intracellular	Cultured Kidney Cells	"Dual effects of microwaves on single Ca(2+)-activated K ⁺ channels in cultured kidney cells"	Geletyuk VI, Kazachenko VN, Chemeris NK, Fesenko EE	1995	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Intracellular	Communications	"Cell Phones: Invisible Hazards in the Wireless Age"	Carlo and Schram	2001	Human
Intracellular	Changes in Cell Proliferation	"Changes in cell proliferation due to environmental non-ionizing radiation"	Kwee S, Raskmark P	1998	In Vivo
Intracellular	Changes in Cellular Proteins	"Changes in cellular Proteins due to environmental Non-ionising radiation"	Kwee S, Raskmark P, Velizarov P.	2001	In Vitro
Intracellular	c-fos Expression Increase	"Effect pf 60-Hz Magnetic Field Exposure on c-fos Expression in Stimulated PC12 Cells"	Campbell-Beachler et al.	1998	In Vivo
Intracellular	Cell Transformations	"Time Varying Magnetic Fields Cause Cell Transformations"	Salzinger	0	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Intracellular	Cell Proliferation	"Radiofrequency electromagnetic fields and cell proliferation"	Kwee S, Raskmark P	1997	In Vivo
Intracellular	Cell Nuclei	"Microwave irradiation influences on the state of human cell nuclei"	Shckorbatov YG, Grigoryeva NN, Shakhbazov VG, Grabina VA, Bogoslavsky AM	1998	In Vivo
Intracellular	Cell damage	"The Molecular Basis of Communication Within The Cell"	Berridge, M.	1985	In Vivo
Intracellular	Cell Cycle Alterations	"Cell cycle alterations induced by isothermal 27 MHz radio-frequency radiation exposure"	Cao G, Liu LM, Cleary SF	1995	In Vivo
Intracellular	Caudate-Putamen	"Acute effects of pulsed microwaves and 3-nitropropionic acid on neuronal ultrastructure in	Seaman RL, Phelix CF	2005	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		the rat caudate-putamen"			
Intracellular	Calcium Homeostasis of Isolated Heart Muscle Cells	"Calcium homeostasis of isolated heart muscle cells exposed to pulsed high-frequency electromagnetic fields"	Wolke S, Neibig U, Elsner R, Gollnick F, Meyer R	1996	In Vivo
Intracellular	Bovine Peripheral Erythrocytes	"Assessment of Radio-frequency Electromagnetic Radiation by the Micronucleus Test in Bovine Peripheral Erythrocytes"	Balode	1996	In Vivo
Intracellular	Blood Serum	"Effect of low intensity pulse-modulated electromagnetic radiation on activity of alkaline phosphatase in blood serum"	Pashovkina MS, Akoev IG	2001	Human
Intracellular	Altered Protein Synthesis	"Altered Protein Synthesis in a Cell-free System Exposed to a Sinusoidal Magnetic	Goodman, E.E., et al.	1993	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Intracellular	Alteration of Protein Conformation	Field" "Microwave radiation can alter protein conformation without bulk heating"	de Pomerai DI, Smith B, Dawe A, North K, Smith T, Archer DB, Duce IR, Jones D, Candido EP	2003	In Vivo
Intracellular	Acetylcholine-Related Ion-Channels in Cells	"Very Low Intensity (0.002-0.004 mW/cm ²) Affects the Operation of Acetylcholine-Related Ion-Channels in Cells"	D'Inzeo, et al.	1988	Human
Intracellular Communication	Gap Junctions	"Effects of 50 Hz Magnetic Fields on Gap Junction Intercellular Communication"	Li et al.	1999	In Vivo
Liver	Gamma-Glutamyl Transpeptidase Activity	"Inhibitory action of microwave radiation on gamma-glutamyl transpeptidase activity in liver of rats treated with hydrocortisone"	Olchowik G, Maj JG	2000	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Longevity	Life Span	"Alteration of life span of mice chronically exposed to 2.45 GHz CW microwaves"	Liddle CG, Putnam JP, Huey OP	1999	In Vitro
Metastudy	Metastudy	"A Rationale for a Biologically-based Public Exposure Standard for Electromagnetic Fields (ELF and RF)"	C. Sage, D.O. Carpenter (Eds.)	2007	In Vitro
Disease/ System	Bioeffect/ Symptom	title	authors	date	type
MicroBiological	Resonance Interactions	"Resonance interactions of surface charged lipid vesicles with the microwave electromagnetic field"	Krasil'nikov PM	1999	Human
MicroBiological	Biological Macromolecules	"F absorption involving biological macromolecules"	Prohofsky EW	2004	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Musculoskeletal	Osteoporosis	Effects of low level pulsed radio frequency fields on induced osteoporosis in rat bone"	Jayanand, Behari J, Lochan R.	2003	In Vitro
Musculoskeletal	Muscle Actomyosin	"Effects of 2375 MHz pulse-modulated microwave radiation on ATPase activity of the rat muscle actomyosin"	Pashovskina MS, Akoev IG	1996	In Vivo
Musculoskeletal	Muscle Function	"A UNF field evoked changes in muscle function of frogs"	ALEKSEYENKO, N. YU.	1956	In Vitro
Musculoskeletal	Mechanical Characteristics of Bone Tissue	"Influence of hydrocortisone and microwave radiation on the mechanical characteristics of rat bone tissue"	Olchowik G.	2001	In Vitro
Musculoskeletal	Fatiguing Activity of Isolated Muscle	"Long-lasting (fatiguing) activity of isolated muscle	Radicheva N, Mileva K, Georgieva B,	2001	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
	Fibres	fibres influenced by microwave electromagnetic field"	Kristev I		
Musculoskeletal	ELF Effects on Calcium Homeostasis	"ELF Effects on Calcium Homeostasis"	Blackman	1990	In Vivo
Musculoskeletal	Electrical potentials in bone	"Generation of Electric Potentials by Bone in Response to Mechanical Stress"	Becker, Robert O, M.D.	1962	Human
Musculoskeletal	Bone Density	"Evaluation of bone density in rats after hydrocortisone and microwave radiation"	Olchowik G	1999	In Vivo
N/A	N/A	"Effect of a WHF-HF field on the course of experimental echinococcus"	Aleyez, A. M., YELANTSEVA, Y.R., G DZHUMAGALIYEV, M	1961	

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neuroendocrine	Bioeffects - neurological, endocrine	"Effects of Pulsed High-Frequency Electromagnetic Fields on the Neuroendocrine System"	Mann, Wagner, Brunn, Hassan, Hiemke, Roschke	1998	Human
Neurological	Working Memory	"The effects of electromagnetic field emitted by GSM phones on working memory"	M. Koivisto, et al.	2002	Human
Neurological	Water Maze Learning	"Acute exposure to pulsed 2450-MHz microwaves affects water maze learning in the rat"	Wang BM, Lai H	2000	In Vitro
Neurological	Working Memory	"The Effects of Electromagnetic Field Emitted by GSM Phones on Working Memory"	Koivisto et al.	2000	Human
Neurological	Water Maze Learning	"Acute Exposure to Pulsed 2450-MHz Microwaves"	Wang B, Lai H	1998	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Affects Water-Maze Performance of Rats"			
Neurological	Visual Working Memory Task/EEG	"Effects of electromagnetic fields emitted by cellular phones on the electroencephalogram during a visual working memory task"	C.M. Krause, L. Sillanmaki, M. Koivisto, A. Haggqvist, C. Saarela, A. Revonsuo, M. Laine, H. Hamalainen	2000	Human
Neurological	Visual Attention	"Cell phone use and visual attention"	Golden C, Golden CJ, Schneider B	2003	Human
Neurological	Visual MemoryTasks	"Effects of 7 Hz-modulated 450MHz electromagnetic radiation on human performance in visual memory tasks"	J. Lass, et al.	2002	Human
Neurological	Visual	"Electromagnetic Field of Mobile Phones Affects Visual Event Related Potential in	Jech, Sonka, Ruzicka, Nebuzelsky, et al.	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Visual Abnormalities	Patients with Narcolepsy" "Visual abnormalities associated with high-energy microwave exposure"		0	Human
Neurological	Various Illnesses	"The Body-Electric-Electromagnetism and the Foundation of Life"	Becker and Seldon	1985	Human
Neurological	Ultrastructure of Neurons	"The effect of 2450 MHz microwave radiation on the ultrastructure of snail neurons"	Arber SL, Neilly JP, Lin JC, Kriho V.	1986	In Vitro
Neurological	Tumors	"Pathology and Genetics of Tumors of the Nervous System"	Kleihues P. Cavence W.	2000	Human
Neurological	Thermophysiological effects	"Thermophysiological Responses of Human	Adair, Kelleher, Mack, Morocco	1998	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Volunteers During Controlled Whole-body Radio Frequency Exposure at 450 MHz"			
Neurological	Survey of human electrical capacity	"Cross Currents: The Perils of Electropollution/The Promise of Electromedicine"	Becker, Robert O, M.D.	1990	In Vivo
Neurological	Suicide	"Exposure to Electromagnetic Fields and Suicide Among Electric Utility Workers: A nested case-control study"	Van Wijngaarden et al.	2000	Human
Neurological	Stress	"Evidence of Stress in Rats Exposed to 60-Hz Electric Fields"	Sagripanti and Swicord	1986	In Vitro
Neurological	Stress	"Effects of stress-inducing microwave radiation on life-cycle parameters in the nematode Caenorhabditis	De Pomerai DI, Daniells C, Barker SL, Scott S, Duce IR, Thomas DW, Sewell PD, Tattersall JEH	1999	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Spatial Learning	"Spatial learning deficit in the rat after exposure to a 60 Hz magnetic field"	Lai H	1996	In Vivo
Neurological	Slow Brain Potentials	"Microwaves emitted by cellular telephones affect human slow brain potentials"	Freude G, Ullsperger P, Eggert S, Ruppel I	2000	Human
Neurological	Sleeping and Cognitive Performance	"Subjective Symptoms, Sleeping Problems, and Cognitive Performance in Subjects Living Near Mobile Phone Base Stations"	Hutter, Moshammer, Wallner, Kundi	2006	Human
Neurological	Slow Brain Potentials	"Effects of microwaves emitted by cellular phones on human slow brain potentials"	Freude G, Ullsperger P, Eggert S, Ruppel I	1998	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Slow Brain Potentials	"Effects of Microwaves Emitted by Cellular Phones on Human Slow Brain Potentials"	Freude et al.	1998	Human
Neurological	Sleep/EEG	"Pulsed high-frequency electromagnetic field affects human sleep and sleep electroencephalogram"	A.A. Borbely, et al.	1999	Human
Neurological	Sleep/EEG	"Pulsed high-frequency electromagnetic field affects human sleep and sleep electroencephalogram"	Borbely AA, Huber R, Graf T, Fuchs B, Gallmann E, Achermann P	1999	Human
Neurological	Sleep/EEG	"Exposure to pulsed high-frequency electromagnetic field during waking affects human sleep EEG"	P. Acherman	2000	Human
Neurological	Sleep/EEG	"Exposure to pulsed high-frequency electromagnetic	R. Huber, T. Graf, K.A. Cote, L. Wittmann, E. Gallmann, D. Matter, J.	2000	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		field during waking affects human sleep EEG"	Schuderer, N. Kuster, A.A. Borbely, P. Achermann		
Neurological	Sleep Interference	"Effects of Pulsed High-Frequency Electromagnetic Fields on Human Sleep"	Mann and Roschkle	1996	Human
Neurological	Sleep/Cognitive Performance	"Subjective symptoms, sleeping problems and cognitive performance in subjects living near mobile phone base stations"	H.P. Hutter, H. Moshammer, P.Wallner, M. Kundi	2006	Human
Neurological	Sleep/EEG	"Effects of pulsed high-frequency electromagnetic fields on human sleep"	K. Mann	1996	
Neurological	Sleep Inducing Effect	"Sleep Inducing Effect of Low Energy Emission Therapy"	Reite M, Higgs L, Lebet J, Barbault A, et al.	1994	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Sleep EEG	"Exposure to pulsed high-frequency electromagnetic field during waking affects human sleep EEG"	Huber R, Graf T, Cote KA, Wittmann L, Gallmann E, Matter D, Schuderer J, Kuster N, Borbely AA, Achermann P,	2000	Human
Neurological	Sleep Disorders/Sleep EEG	"Pulsed High-Frequency Electromagnetic Field Effects Human Sleep and Sleep Encephalogram"	Borbely A.A., et al.	1999	Human
Neurological	Sleep	"Human Sleep Under the Influence of Pulsed Radiofrequency Electromagnetic Fields: A Polysomnographic Study Using Standardized Conditions"	Wagner, Roschke, Mann, et al.	1998	Human
Neurological	Sleep and Heart Rate Disturbances	"Radio Frequency Electromagnetic Field Exposure in Humans: Estimation of SAR Distribution in the Brain, Effects on Sleep and Heart	Huber, Schuderer, Graf, Jutz, et al.	2003	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Rate"			
Neurological	Single and Double Strand DNA Breaks	"Single and double strand DNA breaks in rat brain cells after acute exposure to radiofrequency electromagnetic radiation"	H. Lai, N.P. Singh	1996	
Neurological	Significant Sleep Disturbance	"Study of Health Effects of Shortwave Transmitter Station of Schwarzenburg, Berne, Switzerland"	Altpeter et al.	1995	Human
Neurological	Sequential Changes in Cerebral Blood Flow/Early Neuropathological Consequences/BBB Disruption	"Sequential changes in cerebral blood flow, early neuropathological consequences and BBB disruption, following RF-induced localized hyperthermia in the rat"	Ohmoto Y, Fujisawa H, Ishikawa T, Koizumi H, Matsuda T, Ito H	1996	In Vitro
Neurological	Sensitivity of Calcium Binding in	"Sensitivity of Calcium Binding in Cerebral Tissue to	Szmiegielski	1998	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
	Cerebral Tissue	Weak Environmental Electric Fields"			
Neurological	Sensory System	"Effect of extremely high-frequency electromagnetic radiation on the function of skin sensory endings"	Enin LD, Akoev GN, Potekhina IL, Oleiner VD	1992	In Vitro
Neurological	Sensitivity of Calcium Binding in Cerebral Tissue	"Sensitivity of Calcium Binding in Cerebral Tissue to Weak Environmental Electric Fields"	Szmigielski, S. et al.	1986	In Vivo
Neurological	Sensitivity of Calcium Binding in Cerebral Tissue	"Sensitivity of Calcium Binding in Cerebral Tissue to Weak Environmental Electric Fields"	Szmigielski, S. et al.	1987	In Vivo
Neurological	Scalp Localization of Auditory Cortical Activity	"Scalp Localization of Human Auditory Cortical Activity Modified by GSM Electromagnetic Fields"	Maby, LeBouquin, Jeannes, Faucon	2006	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Response Times	"Effects of 902MHz electromagnetic field emitted by cellular telephones on response times in humans"	M. Koivisto, et al.	2000	Human
Neurological	Responses of Neurons	"Responses of neurons to an amplitude modulated microwave stimulus"	Beason RC, Semm P	2002	Human
Neurological	Response Patterns of Brain Activity	"Mobile phones modulate response patterns of human brain activity"	Eulitz C, Ullsperger P, Freude G, Elbert T	1998	Human
Neurological	Response Time	"Effects of 902 MHz Electromagnetic Field Emitted by Cellular Telephones on Response Time in Humans"	Koivisto, Revonsuo, Krause, et al.	1999	Human
Neurological	Regeneration of Sciatic Nerve	"Effect of low-intensity millimeter wave	Kolosova LI, Akoev GN, Avelev VD,	1996	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		electromagnetic radiation on regeneration of the sciatic nerve in rats"	Riabchikova OV, Babu KS		
Neurological	Reduced Nocturnal Morphine Analgesia	"Reduced Nocturnal Morphine Analgesia in Mice Following a Magnetic Disturbance"	Stark et al.	1997	In Vitro
Neurological	Receptors/Role of Peroxidation of Lipids on Receptor-Protein Shedding	"Influence of microwaves on different types of receptors and the role of peroxidation of lipids on receptor-protein shedding"	Philippova TM, Novoselov VI, Alekseev SI	1994	In Vivo
Neurological	Radial-Arm Maze Performance	"Microwave irradiation affects radial-arm maze performance in the rat"	Lai H, Horita A, Guy AW	1994	Human
Neurological	Psychophysiological Insomnia	"Effects of Low Energy Emission Therapy in Chronic Psychophysiological	Pasche, Erman, Hayduk, Mitler, et al.	1996	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Purkinje Nerve Cell Changes	Insomnia" "Purkinje Nerve Cell Changes Caused by Electric Fields	Schuz and Michaelis	1997	In Vivo
Neurological	Psychological problems	"Psychological Effects of Chronic Exposure to 50-Hz Magnetic Fields in Humans Living Near Extra- High Voltage Transmission Lines"	Beale et al.	1997	Human
Neurological	Psychophysiological	"Psychophysiological tests and provocation of subjects with mobile phone related symptoms"	Wilen J, Johansson A, Kalezic N, Lyskov E, Sandstrom M	2005	Human
Neurological	Psychoactive-Drug Response	"Psychoactive-drug response is affected by acute low-level microwave irradiation"	Lai H, Horita A, Chou CK, Guy AW	1983	

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Pre-Attentive Operations	"Acute Mobile Phone Effects on Pre-Attentive Operation"	Papageorgiou, Nanou, Tsiafakis, Kapareliotis, et al.	2006	Human
Neurological	Pre-Attentive Operation	"Acute mobile phone effects on pre-attentive operation"	Papageorgiou CC, Nanou ED, Tsiafakis VG, Kapareliotis E, Kontoangelos KA, Capsalis CN, Rabavilas AD, Soldatos CR.	2006	Human
Neurological	Pineal Gland	"Chronic Exposure to 60-Hz Electric Field Effects in Pineal Functioning in Rats"	Stevens, R.G.	1987	In Vitro
Neurological	Pineal Gland	"Effects of Artificial Magnetic Fields on the Rat Pineal Gland"	Stern, F.B.	1986	In Vitro
Neurological	Physiological and Behavior changes	"Physiological and Behavioral Effects of Prolonged Exposure to 915 MHz Microwaves"	D'Andrea, Gandhi, Lords, Durney, Astle, Stensaas, Schoenberg	1980	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Physiological and Behavior changes	"Physiological and Behavioral Effects of Chronic Exposure to 2450-MHz Microwaves"	D'Andrea, Gandhi, Lords, Durney, Astle, Stensaas, Schoenberg	1979	Human
Neurological	Performance and Tympanic Temperature	"Time-course of electromagnetic field effects on human performance and tympanic temperature"	Curcio G, Ferrara M, De Gennaro L, Cristiani R, D'Inzeo G, Bertini M.	2004	Human
Neurological	Performance and Tympanic Temperature	"Time-Course of Electromagnetic Field Effects on Human Performance and Tympanic Temperature"	Curcio, Ferrara, deGennaro, Cristiani, et al.	2004	Human
Neurological	Performance	"The Effect of ELF Magnetic Fields on Human Performance: A Preliminary Study"	Skyberg et al.	1993	Human
Neurological	Penobarbital-induced Hypothermia	"Effects of acute low-level microwaves on	Lai H, Horita A, Chou CK, Guy AW	1984	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		pentobarbital-induced hypothermia depend on exposure orientation"			
Neurological	Ophthalmological	"Studies of the biological effects of 200 megacycles: I. Electrical facilities and instrumentation, II Ophthalmological Studies"	ADDINGTON, C. H. FISCHER, F. P., NEUBAUER, R. A., OSBORN, C., SARKEES, Y.T. & SWARTZ G.	1958	In Vitro
Neurological	ODC Activity	"837 MHz digital cellular telephone RF fields and induced ODC activity in C3H10T1/2 cells"	Cain CD, Thomas DL, Ghaffari M, Adey WR	1996	In Vivo
Neurological	Ocular Symptoms and Sensations	"Some ocular symptoms and sensations experienced by long term users of mobile phones"	Balik HH, Turgut-Balik D, Balikci K, Ozcan IC	2005	Human
Neurological	Ocular Effects and Temperature	"Influence of anesthesia on ocular effects and temperature in rabbit eyes"	Kojima M, Hata I, Wake K, Watanabe S, Yamanaka Y, Kamimura Y, Taki M	2004	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Nonlinear Changes in Brain Electrical Activity	exposed to microwaves" "Nonlinear changes in brain electrical activity due to cell phone radiation"	A.A. Marino, E. Nilsen, C. Frilot	2003	
Neurological	Nonlinear Effects and Modifications of Emotional Behavior	"Enzymatic activity of some tissues and blood serum from animals and humans exposed to microwaves and hypothesis on the possible role of free radical processes in the nonlinear effects and modification of emotional behavior of animals"	I.G. Akoev, M.S. Pashovkina, L.P. Dolgacheva, T.P. Semenova, V.L. Kalmykov	2002	
Neurological	Nocturnal Melatonin Secretion	"Effects of the 1900 MHz Electromagnetic Field Emitted from Cellular Phone on Nocturnal Melatonin Secretion"	OJarupat S, Kawabata A, Tokura H, Borkiewicz A	2003	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Neuropsychological Performance	"Neuropsychological Performance of Healthy Subjects Under Low Frequency Pulsed RF Fields"	Calabrese, Spittler, Gehlen	1997	Human
Neurological	Neurological-mediation of sodium ion activity in the brain	"Induction of Na ⁺ Channel Voltage Sensitivity in Xenopus Oocytes Depends on Ca ²⁺ Mobilization"	Charpentier and Kado	1999	In Vivo
Neurological	Neurons	"Noise-modulated-microwave-induced response in snail neurons"	Lin JC, Arber SL	1983	Human
Neurological	Neurons	"Microwave effects on input resistance and action potential firing of snail neurons"	Ginsburg KS, Lin JC, O'Neill WD	1992	In Vivo
Neurological	Neurons	"The effect of pulsed microwaves on passive electrical properties and	Field AS, Ginsburg K, Lin JC	1993	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		interspike intervals of snail neurons"			
Neurological	Neurodegenerative Disease Mortality	"Magnetic Field Exposure and Neurodegenerative Disease Mortality Among Electric Utility Workers"	Savitz D, Checkoway H, Loomis D.	1998	Human
Neurological	Neurological Effects	"Neurological Effects of Microwave Exposure Related to Mobile Communication"	Hermann, D., Hossmann, K.	1997	Human
Neurological	Neurological Symptoms and Sensations	"A survey study on some neurological symptoms and sensations experienced by long term users of mobile phones"	Balikci K, Cem Ozcan I, Turgut-Balik D, Balik HH	2005	Human
Neurological	Neuroblastoma	"Neuroblastoma and Paternal Occupation"	McDowell et al.	1983	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Neuroblastoma	"Parental Occupation Exposures to Electromagnetic Fields and Radiation and the Incidence of Neuroblastoma in Offspring"	DeRoos, Teschke, Savitz, Poole, et al.	2001	Human
Neurological	Neurobehavioral Functionality	"Observations of changes in neurobehavioral functions in workers exposed to high-frequency radiation"	Duan L, Shan Y, Yu X	1998	Human
Neurological	Neurobehavioral Effects	"Neurobehavioral effects among inhabitants around mobile phone base stations"	J G. Abdel-Rassoul, O.A. El-Fateh, M.A. Salem, A. Michael, F. Farahat, M. El-Batanouny, E. Salem	2007	Human
Neurological	Neurobehavioral Effects	"Neurobehavioral effects among inhabitants around mobile phone base stations"	G. Abdel-Rassoul, O.A. El-Fateh, M.A. Salem, A. Michael, F. Farahat, M. El-Batanouny, E. Salem	2007	Human
Neurological	Neurites	"Neurites Grow Faster Toward the Cathode Than	Steneck et al.	1980	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		the Anode in a Steady Field"			
Neurological	Neural Functionality	"Acute mobile phone operation affects neural function in humans"	Croft R, Chandler J, Burgess A, Barry R, Williams J, Clarke A.	2002	Human
Neurological	Nervous System and Development	"Possible Effects of Electromagnetic Fields on the Nervous System and Development"	Carpenter, David O.	1997	Human
Disease/ System	Bioeffect/ Symptom	title	authors	date	type
Neurological	Neural Function	"Acute Mobile Phone Operation Affects Neural Function in Humans"	Croft, Chandler, Burgess, Barry, et al.	2002	Human
Neurological	Neural Function and Behavior	"Neural Function and Behavior: Defining the Relationship"	Frey, A.H. et al.	1975	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Nervous System	"Influence of EMP on the nervous system of rats"	Wu Y, Jia Y, Guo Y, Zheng Z	1999	In Vitro
Neurological	Nerve Fiber Function	"Non-thermal microwave effect on nerve fiber function"	Pakhomov AG	1993	In Vivo
Neurological	Narcolepsy	"Electromagnetic field of mobile phones affects visual event related potential in patients with narcolepsy"	Jech R, Sonka K, Růžická E, Nebuzelský A, Bohm J, Juklický M, Nevsimálová S.	2001	Human
Neurological	Multiple Sclerosis	"Multiple Sclerosis Among Utility Workers"	Johanson, C. et al.	1999	Human
Neurological	Motor and Psychological Functions	"Motor and psychological functions of school children living in the area of the Skrunda radio location station in Latvia"	A.A. Kolodynski, V.V. Kolodynska	1996	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Motor and Psychological Functionality	"Motor and psychological functions of school children living in the area of the Skrunda Radio Location Station in Latvia"	Kolodynski AA, Kolodynska VV	1996	Human
Neurological	Motor Activity	"Motor activity of rabbits in conditions of chronic low-intensity pulse microwave irradiation"	Grigor'ev luG, Luk'ianova SN, Makarov VP, Rynskov VV, Moiseeva NV	1995	In Vitro
Neurological	Memory Task/EEG	Effects of electromagnetic field emitted by cellular phones on the EEG during a memory task	C.M. Krause, L. Sillanmaki, M. Koivisto, A. Haggqvist, C. Saarela, A. Revonsuo, M. Laine, H. Hamalainen	2000	Human
Neurological	Memory	"Mobile phone use facilitates memory in male, but not female, subjects"	Smythe J. W. and Costall B.	2003	Human
Neurological	Memory	"Spatial memory performance of wistar rats	Narayanan S. N., Kumar R. S., Potu B.	2009	

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		exposed to mobile phone"	K., Nayak S. and Mailankot M.		
Neurological	Memory Imprinting	"Forming of memory (imprinting) in chicks after prior low-level exposure to electromagnetic fields]"	Grigor'ev luG, Stepanov VS	1998	In Vitro
Neurological	Membrane Conductance in Neurons	"Extracellular calcium and microwave enhancement of membrane conductance in snail neurons"	Arber SL, Lin JC	1985	In Vivo
Neurological	Membrane Conductance	"Microwave enhancement of membrane conductance: effects of EDTA, caffeine and tetracaine"		0	In Vivo
Neurological	Membrane Conductance in Neurons	"Microwave enhancement of membrane conductance in snail neurons: role of temperature"	Arber SL, Lin JC	1983	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	MEG Effects	"Effects of GSM Electromagnetic Field on the MEG During an Encoding-Retrieval Task"	Hinrichs, H., Heinze, H.	2004	Human
Neurological	Learning and Memory Disorders	"Pharmacologic correction of learning and memory disorders induced by exposure to high-frequency electromagnetic radiation"	Krylov IN, Iasnetsov VV, Dukhanin AS, Pal'tsev IuP	1993	In Vitro
Neurological	Increased skin temperature	"Skin Temperature Increase Caused by a Mobile Phone: A Methodological Infrared Camera Study"	Straume, Oftedal, Johnsson	2005	In Vivo
Neurological	Increased Sensitivity	"Increased sensitivity of the non-human primate eye to microwave radiation following ophthalmic drug pretreatment"	Kues HA, Monahan JC, D'Anna SA, McLeod DS, Luttly GA, Koslov S	1992	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Increased excitability in the neurons in the brain	"Relations between ameboid movement and membrane-controlled electrical currents"	Jaffe, L.F. and M. Poo	1979	In Vivo
Neurological	Increase in ATF3 in Small Neurons	"Pulsed radiofrequency applied to dorsal root ganglia causes a selective increase in ATF3 in small neurons"	Hamann W, Abou-Sherif S, Thompson S, Hall S.	2006	In Vivo
Neurological	Hypersensitivity	"Prevalence of Self-Reported Hypersensitivity to Electric or Magnetic Fields in a Population-Based Questionnaire Survey"	Hillert, Berglind, Arnetz, Bellander	2002	Human
Neurological	Hypertension	"Phsyiological Symtoms and Interittent Hypertension Following Acute Microwave Exposure"	Forman et al.	1982	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Hyperthermia	"Enhancement of anticancer drug delivery to the brain by microwave induced hyperthermia"	Lin JC, Yuan PMK, Jung DT	1998	In Vitro
Neurological	Hyperactivity and Disruption of Operant Behaviors	"Hyperactivity and Disruption of Operant Behavior in Rats after Multiple Exposure to Microwave Radiation"	Mitchell D, Switzer W, Bronaugh, E.	1977	In Vitro
Neurological	Hypersensitivity	"Electrohypersensitivity and Sensitivity to Mobile Telephones: Results from a double-blind Provocation Study of Pilot Character"	Johansson, Olle	1995	Human
Neurological	Hyperactivity	"Hyperactivity caused by a nitric oxide synthase inhibitor is countered by ultra-wideband pulses"	Seaman RL, Belt ML, Doyle JM, Mathur SP	1999	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Human Sleep EEG	"Exposure to Pulsed High-Frequency Electromagnetic Field During Waking Affects Human Sleep EEG"	Huber,R.,Graf.T.,Cote,K.,Wittman,L.,et al.	2000	Human
Neurological	Human Performance	"The Sensitivity of Human Event-Related Potentials and Reaction Time to Mobile Phone Emitted Electromagnetic Fields"	Hamblin, Wood, Croft, Stough, et al.	2006	Human
Neurological	Human Performance	"Examining the Effects of Electromagnetic Fields Emitted by GSM Phones on Human Event-Related Potentials and Performance During and Auditory Task"	Hamblin, Wood, Croft, Stough	2004	Human
Neurological	Human Heads	"Mobile Phones and Human Heads"	Preece, A.W.	2000	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Hearing Functionality	"Effects of Intensive and Moderate Cellular Telephone Use on Hearing Function"	Oktaý, M., Dasdog, S.	2006	Human
Neurological	Headaches	"Prevalence of headache among handheld cellular telephone users in Singapore"	Chia SE, Chia HP, Tan JS	2000	Human
Neurological	Headaches	"Prevalence of Headaches Among Handheld Cellular Telephone Users in Singapore: A Community Study"	Chia, S.E., Chia, H.P., Tan, J.S.	2000	Human
Neurological	Headaches	"Prevalence of headache among handheld cellular telephone users in Singapore: a community study"	S.E. Chia	2000	

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Headaches	"Headaches from cellular telephones: are they real and what are the implications?"	Frey AH	1998	Human
Neurological	Headaches	"Headaches From Cellular Telephones: Are They Real and What Are The Impacts?"	Frey, A.H.	1998	Human
Neurological	Glioma and Meningioma	"Cellular Phones, Cordless Phones, and the Risks of Glioma and Meningioma (Interphone study group, Germany)"	Schuz J., Bohler E., Berg G., et al.	2006	Human
Neurological	Gliomas	"The Anatomical Distribution of Cerebral Gliomas in Mobile Phone Users"	Wolpaw, J.R. et al.	1987	Human
Neurological	Glioma	"Mobile Phone Use and Risk of Glioma in Adults"	Hepworth, Schoemaker, Muir, Swerdlow, et al	2006	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Glioma	"Adult Glioma in Relation to Residential Power Frequency Electromagnetic Field Exposures in the San Francisco Bay area"	Wrench M, Yost M, Miike, R, et al.	1999	Human
Neurological	Genetic changes	"Regulation of the Prepromsomatostatin Gene by Cyclic-AMP in Cerebrocortical Neurons"	Capone et al.	1998	In Vivo
Neurological	Functionality of the Hippocampus	"Low Intensity RFR Can Modulate the Function of the Hippocampus, Which is Involved with Learning and Memory"	Tattersall, et al	2001	Human
Neurological	Function and Behavior	"Natural Function and Behavior"	Szmiegielski	1996	Human
Neurological	Fatigue, Headaches, Dizziness,	"Association of mobile phone radiation with fatigue,	Al-Khlaiwi T, Meo SA	2004	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
	Tension and Sleep Disturbance	headache, dizziness, tension and sleep disturbance in Saudi population"			
Neurological	Facial Nerve Tumors	"Cellular Telephone Use and the Risk of Intratemporal Facial Nerve Tumor"	Warren, H.G., et al.	2003	Human
Neurological	Eyes	"Biological effects of the microwave energy at 200 megacycles upon the eyes of selected mammals"	ADDINGTON, C. H., NEUBAUER, R. A., OSBORN, C., SWARTZ, G., FISHER, F. P., & SARKEES, Y. T.	1959	
Neurological	Eyes	"Biological effects of microwave energy at 200 megacycles upon the eyes of selected mammals"	ADDINGTON. C. H., NEUBAUER, R. A., OSBORN, C., SWARZA, G., FISCHER, F. P., & SARKEES, Y. T.	1959	
Neurological	Eye Function	"Frequent Radiation Exposure and Frequency-Dependent Effects: The Eyes Have It"	Inskip, P.D.	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Ethanol-induced Hypothermia and Ethanol Consumption	"Ethanol-induced hypothermia and ethanol consumption in the rat are affected by low-level microwave irradiation"	Lai H, Horita A, Chou CK, Guy AW	1984	In Vitro
Neurological	Epileptic Seizures	"Effect of Heliogeophysical Factors on the Course of Epilepsy"	Ilipaev	1978	Human
Neurological	Electroencephalographic Frequency	"Electroencephalographic Frequency Mapping in Healthy Subjects During Cellular Head Telephone Stimulation"	Dec, S., Cieslak, E., Miszczak, J.	1997	Human
Neurological	Electric Activity on Stretch Receptors	"Millimeter-wave effects on electric activity of crayfish stretch receptors"	Khramov RN, Sosunov EA, Koltun SV, Ilyasova EN, Lednev VV	1991	In Vivo
Neurological	Effects on Sleep	"The effect of electromagnetic fields	Loughran SP, Wood AW, Barton JM,	2005	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		emitted by mobile phones on human sleep"	Croft RJ, Thompson B, Stough C.		
Neurological	Effects of Hyperthermia on Brain Development	"Effects of hyperthermia induced by microwave irradiation on brain development in mice"	Fukui Y, Hoshino K, Inouye M, Kameyama Y	1992	In Vitro
Neurological	EEG/Cognitive Function	"Effects of electromagnetic field emitted by cellular phones on the EEG during a memory task"	Krause CM, Sillanmaki L, Koivisto M, Haggqvist A, Saarela C, Revonsuo A, Laine M,	2000	Human
Neurological	EEG Study/Resting Wakefulness	"Is the brain influenced by a phone call? An EEG study of resting wakefulness"	Curcio G, Ferrara M, Moroni F, D'Inzeo G, Bertini M, De Gennaro L.	2005	Human
Neurological	EEG and REG	"Simultaneous response of brain electrical activity (EEG) and cerebral circulation (REG) to microwave exposure in rats"	Thuroczy G, Kubinyi G, Bodo M, Bakos J, Szabo LD	1994	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	EEG Stimuli Inhibition of Responses	"Effects of Electromagnetic Stimuli Inhibition of Responses to PTH by Low-Energy Low-Frequency Fields"	Szmiegielski	1996	In Vivo
Neurological	EEG Activity of the Brain	"Effects of High-Frequency Electromagnetic Fields on Human EEG: a Brain-Mapping Study"	Kramarenko, A., Ran, U.	2003	Human
Neurological	EEG Activity of the Brain	"Effects of Electromagnetic Fields Emitted by Cellular Phones on the EEG During A Memory Task"	Krause et al.	2000	Human
Neurological	EEG Activity of the Brain	"Effects of the Electromagnetic Field of Mobile Telephones On Hearing"	Ozturan, Erdem, Miman, Kalcioglu, et al.	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	EEG Activity of the Brain	"EEG Activity of the Human Brain During Exposure to Cellular Phones"	Hietanen, D, Kovala, T., Hamalainen, A., et al.	1997	Human
Neurological	EEG	"Low Frequency Pulsed Electromagnetic Fields Influence EEG of Men"	Von Kiltzing	1995	Human
Neurological	EEG	"Effects of weak microwave fields amplitude modulated at ELF on EEG of symmetric brain areas in rats"	Vorobyov VV, Galchenko AA, Kukushkin NI, Akoev IG	1997	Human
Neurological	Dual-Task Studies	"Driven to distraction: dual-Task studies of simulated driving and conversing on a cellular telephone"	Strayer DL, Johnston WA	2001	Human
Neurological	Duration of Anaesthesia	"Electromagnetic millimeter waves increase the duration of anaesthesia caused by ketamine and chloral"	Rojavin MA, Ziskin MC	1997	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Dopamine Inhibition	hydrate in mice" "Involvement of Calcium Ions in Dopamine Inhibition of Protactin From Sheep Pituitary Cells"	Ray and Wallis	1982	In Vitro
Neurological	Distraction	"Profiles in driver distraction: effects of cell phone conversations on younger and older drivers"	Strayer DL, Drews FA	2004	Human
Neurological	Disruption of Memory Task	"Disruption of a putative working memory task and selective expression of brain c-fos following microwave-induced hyperthermia"	Mickley GA, Cobb BL, Mason PA, Farrell S	1994	In Vivo
Neurological	Depression and Suicide	"Suicide Among Electric Utility Workers in England and Wales"	Baris and Armstrong	1990	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Deficits in short-term memory	"People Who Live and Work Near Radio Antennae and Radar Installations Showed Deficits in Psychological and Short-term Memory Tests"	Chiang, et al.	1989	Human
Neurological	Decreased Performance in Visual Memory Tasks	"Effects of 7Hz-Modulated 450 MHz Electromagnetic Radiation on Human Performance in Visual Memory Tasks"	Lass, Tuulik, Ferenets, Riisalo, et al.	2002	Human
Neurological	Damaged Brain Cells	"Molecular Biology of the Cell"	Albert, E.N. et al.	1994	In Vivo
Neurological	Cortical Oscillations and Thalamic Phase	"Decoding Temporally Encoded Sensory Input by Cortical Oscillations and Thalamic Phase Comparators"	Ahissar, Haidarliu, Zacksenhouse	1997	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Cognitive Performance	"UMTS Base Station-Like Exposure, Well-being, and Cognitive Performance"	Regel, Negovetic, Roosli, Berdinas, et al.	2006	In Vivo
Neurological	Cognitive Impairment	"TNO Physics and Electronics Laboratory, The Netherlands, Effects of Global Communication System Radio-frequency Fields on Wellbeing and Cognitive Functions of Human Beings With and Without Subjective Complaints"	TNO Physics and Electronics Laboratory, The Netherlands	2003	
Neurological	Cognitive Impairment	"Effect of 902 MHz Electromagnetic Field Emitted by Mobile Phones on Human Cognitive Function"	Haarala, Bjornberg, Ek, Laine, et al.	2003	Human
Neurological	Cognitive Functionality	"Effects of pulsed electromagnetic fields on cognitive processes - a pilot study on pulsed field"	Maier R., Greter S.-E., Maier N	2004	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		interference with cognitive regeneration"			
Neurological	Cognitive Function	"Cognitive impairment in rats after long-term exposure to GSM-900 mobile phone radiation"	Nittby H., Grafstrom G., Tian D. P., Malmgren L., Brun A., Persson B. R. R., Salford L. G. and Eberhardt J.	2008	In Vivo
Neurological	Cognitive Functionality	"Effect of a 915-MHz Simulated Mobile Phone Signal on Cognitive Function in Man"	Preece et al.	1999	Human
Neurological	Cognitive Function	"Effects of fexofenadine and hydroxyzine on brake reaction time during car-driving with cellular phone use"	Tashiro M, Horikawa E, Mochizuki H, Sakurada Y, Kato M, Inokuchi T, Ridout F, Hindmarch I, Yanai K.	2005	Human
Neurological	Cognitive Function	"Effect of 902 MHz mobile phone transmission on cognitive function in	Preece AW, Goodfellow S, Wright MG, Butler SR, Dunn EJ, Johnson Y, Manktelow TC, Wesnes K.	2005	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		children"			
Neurological	Cognitive Function	"Effects of radiofrequency radiation emitted by cellular telephones on the cognitive functions of humans"	Eliyahu I, Luria R, Hareuveny R, Margaliot M, Meiran N, Shani G	2005	Human
Neurological	Cognitive Function	"Perceptual and attentional effects on drivers' speed selection at curves"	Charlton SG	2004	Human
Neurological	Cognitive Function	"Effects of GSM electromagnetic field on the MEG during an encoding retrieval task"	Hinrichs H, Heinze HJ	2004	Human
Neurological	Cognitive Function	"Visual field attention is reduced by concomitant hands-free conversation on a cellular telephone"	Barkana Y, Zadok D, Morad Y, Avni I.	2004	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Cognitive Function	"Effect of cellular telephone conversations and other potential interference on reaction time in a braking response"	Consiglio W, Driscoll P, Witte M, Berg WP	2003	Human
Neurological	Cognitive Function	"Turning gap acceptance decision-making: the impact of driver distraction"	Cooper PJ, Zheng Y	2002	Human
Neurological	Cognitive Function	"The acute effects of exposure to the electromagnetic field emitted by mobile phones on human attention"	Edelstyn N, Oldershaw A	2002	In Vitro
Neurological	Cognitive Function	"Distractions and the risk of car crash injury: the effect of drivers' age"	Lam LT	2002	Human
Neurological	Cognitive Function	"Effects of 7 Hz-modulated 450 MHz electromagnetic	Lass L, Tuulik V, Ferenets CR, Riisalo R,	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		radiation on human performance in visual memory tasks"	Hinrikus H		
Neurological	Cognitive Function	"Effects of electromagnetic fields emitted by cellular phones on the electroencephalogram during a visual working memory task"	Krause CM, Sillanmaki L, Koivisto M, Haggqvist A, Saarela C, Revonsuo A, Laine M, Hamalainen H,	2000	Human
Neurological	Cognitive Function	"Effect on human attention of exposure to the electromagnetic field emitted by mobile phones"	Lee TMC, Ho SMY, Tsang LYH, Yang SYC, Li LSW, Chan CCH	2001	Human
Neurological	Cognitive Function	"Effects of 902 MHz electromagnetic field emitted by cellular telephones on response times in humans"	Koivisto M, Revonsuo A, Krause C, Haarala C, Sillanmaki L, Laine M, Hamalainen H	2000	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Cognitive Function	"The effects of electromagnetic field emitted by GSM phones on working memory"	Koivisto M, Krause CM, Revonsuo A, Laine M, Hamalainen H	2000	Human
Neurological	Cognitive Function	"Effects of electromagnetic field emitted by cellular phones on the EEG during a memory task"	Krause CM, Sillanmaki L, Koivisto M, Haggqvist A, Saarela C, Revonsuo A, Laine M, Hamalainen H	2000	Human
Neurological	Cognitive Function	"Effect of a 915-MHz simulated mobile phone signal on cognitive function in man"	Preece AW, Iwi G, Davies-Smith A, Wesnes K, Butler S, Lim E, Varey A	1999	Human
Neurological	CNS Tumors	"Childhood Nervous System Tumors: An Assessment of Risk Associated with Parental Operations Involving Use, Repair or Manufacture of Electrical and Electronic Equipment"	Johnson, C.C., and Spitz, C.C.	1989	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Disease/ System	Bioeffect/ Symptom	title	authors	date	type
Neurological	Cognitive Function	"Effects of electromagnetic field emitted by cellular phones on the EEG during a memory task"	Krause CM, Sillanmaki L, Koivisto M, Haggqvist A, Saarela C, Revonsuo A, Laine M, Hamalainen H	1999	Human
Neurological	CNS and Behavior Reactions	"Study of Non-ionizing Microwave Radiation Effects on the Central Nervous System and Behavior Reactions"	Shandala, M.G., et al.	1979	Human
Neurological	CNS Functionality	"Chronic Effects of 60-Hz Electric and Magnetic Fields on Primate Central Nervous System Function"	Stollery, B.T.	1974	In Vitro
Neurological	Cholinergic Activity in the Frontal Cortex and Hippocampus	"Intracerebroventricular injection of mu- and delta-opiate receptor antagonists block 60 Hz magnetic field-	Lai H, Carino MA	1998	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		induced decreases in cholinergic activity in the frontal cortex and hippocampus of the rat"			
Neurological	Chlordiazepoxide Effects	"Influence of microwave exposure on chlordiazepoxide effects in the mouse staircase test"	Quock RM, Klauenberg BJ, Hurt WD, Merritt JH	1994	In Vitro
Neurological	Changes in Nitric Oxide Synthase	"Changes of nitric oxide synthase in hippocampus and cerebellum of the rat following exposure to electromagnetic pulses"	Ding GR, Xie XJ, Zhang ZX, Zhou Y, Guo Y	1998	In Vitro
Neurological	Changes in Nerve Cells	"Microwave-induced changes in nerve cells: effects of modulation and temperature"	Arber SL, Lin JC	1985	Human
Neurological	Changes in Neurocytes	"Changes of neurocytes in CNS under general exposure"	Leshin VV	2000	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		to UHF field"			
Neurological	Changes in Nitric Oxide Synthase	"Changes of nitric oxide synthase in hippocampus and cerebellum of the rat following exposure to electromagnetic pulse"	Ding G, Xie X, Zhang L	1998	In Vitro
Neurological	Changes in firing rate of brain cells, Changes in EEG's, Changes in behavior	"Frequency and Power Windowing in Tissue Interaction with Weak Electromagnetic Fields"	Adey, W.F. et al.	1980	In Vivo
Neurological	Changes in EEG's	"Changes in Human EEG caused by Low Level Modulated Microwave Stimulation"	Hinrikus, Parts, Lass, Tuulik	2004	Human
Neurological	Changes in EEG	"Changes in human EEG caused by low level modulated microwave stimulation"	Hinrikus H, Parts M, Lass J, Tuulik V.	2004	

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Changes in Cerebral Blood Flow and EEG	"Electromagnetic Fields, Such as those from Mobile Phones, Alter Regional Cerebral Blood Flow and Sleep and Waking EEG"	Huber, Treyer, Borbely, Schuderer, et al.	2002	Human
Neurological	Changes in behavior	"Psychological Tests and Provocation of Subjects with Mobile Phone Related Symptoms"	Wilen, Johannson, Kalezic, Lyskov et al.	2006	Human
Neurological	Cerebral Symptoms	"Cerebral symptoms from mobile telephones"	Cox RA, Luxton LM	2000	Human
Neurological	Cerebral Tissue	"Ionic Factors in Release of $^{45}\text{Ca}^{2+}$ from Chicken Cerebral Tissue by Electromagnetic Fields"	Bawin et al.	1978	In Vitro
Neurological	Cerebral Blood Flow	"Exposure to pulse-modulated radio frequency electromagnetic fields"	Huber R, Treyer V, Schuderer J, Berthold T, Buck A, Kuster N, Landolt	2005	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		affects regional cerebral blood flow"	HP, Achermann P		
Neurological	Cerebral Blood Flow	"Effects of a 902 MHz Mobile Phone on Cerebral Blood Flow in Humans"	Haarala, Aalto, Hautzel, Julkunen, et al.	2003	Human
Neurological	Cerebral Blood Flow	"Human Studies on Potential Influence of RF Exposure Emitted by GSM Cellular Phones on Cerebral Circulation and EEG"	Thuroczy, Kuninyi, Sinay, Bakos, et al.	1997	Human
Neurological	Cerebral Biopotentials	"Effects of microwave radiation and strychnine on cerebral biopotentials in narcotized rats"	Sidorenko A, Tsaryuk V	2000	In Vitro
Neurological	Central Nervous System	"Effects of Modulated VHF Fields on the Central Nervous System"	Bawin, Kaczmarek, Adey	1975	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Central Nervous System	"The effect of microwave emission from mobile phones on neuron survival in rat central nervous system"	Zhu Y., Gao F., Yang X., Shen H. and Liu W.	2008	In Vitro
Neurological	Central Nervous System	"Biological Effects and Health Hazards of Microwave Radiation: Proceedings of an International Symposium"	Baranski S, Edelwejn Z.	1974	In Vivo
Neurological	Central Cholinergic Receptors	"Naltrexone pretreatment blocks microwave-induced changes in central cholinergic receptors"	Lai H, Carino MA, Wen YF, Horita A, Guy AW	1991	Human
Neurological	Central Cholinergic Activity	"60 Hz Magnetic fields and Central Cholinergic Activity: Effects of Exposure Intensity and Duration"	Lai H, Carino MA	1998	Human
Neurological	Calcium ion eflux/influx	"Low Frequency Amplitude Modulated Microwave Fields"	Lin-Liu, S. and Adey, W.R.	1982	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Change Calcium Efflux Rates from Synaptomes"			
Neurological	Calcium Ion Efflux from Neuroblastoma Cells	"Radiation-Induced Calcium Ion Efflux from Human Neuroblastoma Cells in Culture"	Takahashi et al.	1992	Human
Neurological	Calcium Ion Efflux	"Microwave Radiation - Induced Calcium Ion Efflux from Human Neuroblastoma Cells in Culture"	Dutta, S.K. et al.	1984	In Vivo
Neurological	Brain Wave Activity	"Human brain wave activity during exposure to radiofrequency field emissions from mobile phones"	H. D'Costa, et al.	2003	Human
Neurological	Brain Potentials during Sleep	"Investigation of brain potentials in sleeping humans exposed to the electromagnetic field of	Lebedeva NN, Sulimov AV, Sulimova OP, Korotkovskaya TI, Gailus T	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		mobile phones"			
Neurological	Brain Potentials during Sleep	"Investigation of Brain Potentials in Sleeping Humans Exposed to the Electromagnetic Field of Mobile Phones"	Lebedeva et al.	2001	Human
Neurological	Brain Excitability	"Mobile Phone Emissions and Human Brain Excitability"	Ferreri, Curcio, Pasqualetti, DeGennaro, Et. Al.	2006	Human
Neurological	Brain Function Interference	"Monitoring the Effect of Mobile Phone Use on the Brain by Proton Magnetic Resonance Spectroscopy"	Khiat, Boulanger, Breton	2006	Human
Neurological	Brain Activity and Sleep Variables	"Effects of Mobile Phone Emissions on Human Brain Activity and Sleep Variables"	Hamblin, D., Wood, A.	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Brain Activity	"The influence of electromagnetic fields on human brain activity"	Reiser H, Dimpfel W, Schober F	1995	In Vivo
Neurological	Brain Activity	"Effects of mobile phone emissions on human brain activity and sleep variables"	Hamblin DL, Wood AW	2002	In Vivo
Neurological	Brain Activity	"Mobile Phones Modulated Response Patterns of Human Brain Activity"	Eulitz et al.	1998	Human
Neurological	Brain Activity	"Human Brain Activity During Exposure to Radiofrequency Fields Emitted by Cellular Phones"	Hietanen, D, Kovala, T., Hamalainen, A.	2000	Human
Neurological	Brain Activity	"The influence of electromagnetic fields on human brain activity"	Reiser H, Dimpfel W, Schober F	1995	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Brain Activity	"The Influence of Electromagnetic Fields on Human Brain Activity"	Reiser H., Dimpfel, W., Schober, F.	1995	Human
Neurological	Brain	"Exposure to Electromagnetic Fields by Using Cellular Telephones and Its Influence on the Brain"	Petrides, M.	2000	Human
Neurological	Brain	"Brains and Mobile Phones"	Maier, M.	2006	Human
Neurological	Blood Brain Permiability	"Electromagnetic fields (1.8 GHz) increase the permeability to sucrose of The blood-brain barrier in vitro"	Schirmacher A, Winters S, Fischer S, Goeke J, Galla H, Kullnick U, Ringelstein EB, Stogbauer F,	2000	Human
Neurological	Blood Brain Permiability	"Permeability of the Blood Brain Radiation on Cytolytic T Lymphocytes"	Salford et al.	1996	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Blood Brain Permiability	"Electromagnetic fields (1.75 GHz) influence the permeability of the blood-brain barrier in cell culture model"	Schirmacher A, Bahr A, Kullnick U, Stoegbauer F	1998	In Vitro
Neurological	Blood Brain Barrier Permiability	"Effect of global system for mobile communication (gsm)-like radiofrequency fields on vascular permeability in mouse brain"	Finnie JW, Blumbergs PC, Manavis J, Utteridge TD, Gebski V, Swift JG, Vernon-Roberts B, Kuchel TR	2001	In Vitro
Neurological	Blood Brain Barrier Permiability	"Blood-brain barrier permeability in rats exposed to electromagnetic fields used in wireless communication"	Persson BRR, Salford LG, Brun A	1997	In Vitro
Neurological	Blood Brain Barrier Permiability	"Effect of GSM microwave exposure on blood-brain barrier permeability in rat"	Fritze K, Sommer C, Schmitz B, Mies G, Klessing M, Hossmann KA, Weissner C	1997	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Blood Brain Barrier Permiability	"Effect of global system for mobile communication (GSM) microwave exposure on BBB permeability in rat"	Fritze K, Sommer C, Schmitz B, Mies G, Hossmann KA, Kiessling M, WiessnerC	1997	In Vitro
Neurological	Blood Brain Barrier Permiability	"Interaction of ethanol and microwaves on the blood-brain barrier of rats"	Neilly JP, Lin JC	1986	In Vitro
Neurological	Blood Brain Barrier Permiability	"Cerebrovascular permeability to ⁸⁶ Rb in the rat after exposure to pulsed microwaves"	Goldman H, Lin JC, Murphy S, Lin MF	1984	In Vitro
Neurological	Blood Brain Barrier	"The Effect of Microwave Radiation (1.0 GHz) on the Blood-Brain-Barrier"	Chang, B.K. et al.	1982	In Vivo
Neurological	Blood Brain Barrier	"Light and Electrom Microscopic Observations on the Blood-Brain-Barrier after	Albert, E. N.	1985	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Biological and Behavior Changes	Microwave Irradiation" "Biological and Behavioral Effects of Prenatal and Postnatal Exposure to 2450 MHz Electromagnetic Radiation in the Squirrel Monkey"	Kaplan, Polson, Rebert, Lunan, Gage	1982	In Vitro
Neurological	bioeffects brain waves	"Short-term effects of GSM mobile phones on spectral components of the human electroencephalogram"	Maby E., Le Bouquin R. and Faucon G.	2006	Human
Neurological	Bioeffects - GABA	"Effects of radiofrequency exposure on the GABAergic system in the rat cerebellum: clues from semi-quantitative immunohistochemistry"	Mausset A, de Seze R, Montpeyroux F, Privat A	2001	In Vitro
Neurological	Bioeffects	"Research on the neurological effects of	Lai H	1992	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		nonionizing radiation at the University of Washington"			
Neurological	Behavioral Thermoregulation	"Ibuprofen effects on behavioral thermoregulation with microwave radiation in albino rats"	Vitulli WF, Nemeth YM, Conte CT	2001	In Vitro
Neurological	Behavioral Teratologic	"Behavioral teratologic studies using microwave radiation: is there an increased risk from exposure to cellular phones and microwave ovens?"	Jensh RP	1997	In Vitro
Neurological	Behavioral Changes	"Behavioural Changes in Human Subjects Associated with ELF Electric Fields"	Konig, H.L.	1974	Human
Neurological	Behavioral and Endocrine Changes	"RFR at Low Intensities (0.01-0.1mW/cm ² ; 0.0027-0.027W/kg) Induced Behavioral and Endocrine	Navakatikian and Tomashevskaya	1994	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Changes in Rats"			
Neurological	Behavioral	"Rhesus monkey behavior during exposure to high-peak-power 5.62-GHz microwave pulses"	D'Andrea JA, Thomas A, Hatcher DJ	1994	In Vitro
Neurological	Behavior Disorders	"Extraordinary behavior disorders in cows in proximity to transmission stations"	Loscher W, Kas G	1998	In Vitro
Neurological	Autism	"A Possible Association Between Fetal/Neonatal Exposure to Radiofrequency Electromagnetic Radiation and the Increased Incidence of Autism Spectrum Disorders"	Kane, Robert C.	2006	Human
Neurological	Autism	"Pervasive Developmental Disorders in Preschool	Chakrabarti, S., and Fombonne, E.	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Children"			
Neurological	Autism	"Report to the Legislature on the Principal Findings From The Epidemiology of Autism in California: A Comprehensive Pilot Study"	Byrd, R, Sigman, M, Bono, M, et al.	2002	Human
Neurological	Autism	"Prevalence of Autism in a United States Population: The Brick Township, New Jersey Investigation"	Bertrand, J, Mars, A, Boyle, C, et al.	2001	Human
Neurological	Auditory System Damage	"Investigation of Potential Effects of Cellular Phones on Human Auditory Function by Means of Distortion Product Otoacoustic Emissions"	Janssen, Boege, vonMikusch-Buchberg, Raczek	2005	Human
Neurological	Auditory System Damage	"Effects of the Acute Exposure to the Electromagnetic Field of Mobile Phones on Human	Oysu, Topak, Celik, Yilmaz, et al.	2005	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Auditory Brainstem Responses.			
Neurological	Auditory Responses	"Effects of GSM signals on auditory evoked responses"	Maby E, Jeannes RL, Faucon G, Liegeois-Chauvel C, De Seze R.	2005	Human
Neurological	Auditory Brainstem Response	"Effects of Mobile GSM Radiotelephone Exposure on the Auditory BrainStem Response"	Kellenyi, Thuroczy, Faludy, Lenard	1999	Human
Neurological	Auditory Evoked Responses	"Effects of GSM Signals on Auditory Evoked Responses"	Maby, LeBouquin, Jeannes, Faucon, Liegeois-Chauvel, et al.	2005	In Vivo
Neurological	Auditory Brainstem Response	"Effects of mobile GSM radiotelephone exposure on the auditory brainstem response (ABR)"	Kellenyi L, Thuroczy G, Faludy B, Lenard L	1999	Human
Neurological	Attention Deficit (ADD)	"The Acute Effects of Exposure to the	Edelstyn, N., Oldershaw, A.	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Electromagnetic Field Emitted by Mobile Phones on Human Attention"			
Neurological	Attention Deficit - (ADD)	"The Effect of the Duration of Exposure to the Electromagnetic Field Emitted by Mobile Phones on Human Attention"	Lee, T, Lam, P., Lee, L., Chan, C.	2003	Human
Neurological	Attention Deficit (ADD)	"Effect on Human Attention of Exposure to the Electromagnetic Field Emitted by Mobile Phones"	Lee, T, Ho, S., Tsang, L., Yanf, S. et al.	2001	Human
Neurological	Attention	"Use of Cellular Telephones and Performance on Tests of Attention"	Petrides, M.	2001	Human
Neurological	Amphetamine Hyperthermia	"Effects of low-level microwave irradiation on amphetamine hyperthermia are blockable by naloxone	Lai H, Horita A, Chou CK, Guy AW	1986	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		and classically conditionable"			
Neurological	Analysis of Bioelectric Brain Activity	"The analysis of animal bioelectric brain activity influenced by microwaves or by the introduction of strychnine"	Sidorenko AV	1999	Human
Neurological	Alzheimers	"Elevated Risk of Alzheimer's Disease Among Workers with Likely Electromagnetic Field Exposure"	Sobel E, Dunn M, et al.	1996	Human
Neurological	Alzheimers	"Electromagnetic Field Exposure May Cause Increased Production of Amyloid Beta and Eventually Lead to Alzheimer's Disease"	Sobel E, Davanipour, Z.	1996	Human
Neurological	Alzheimers	"Occupations with Exposure to Electromagnetic Fields: A Possible Risk Factor for	Sobel E, Davanipour, Z.	1995	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Altered Performance of Biological Systems	Alzheimer's Disease" Occupational Study	Anderson, L.E. et al	1987	Human
Neurological	Altered circadian rhythms	"Effects of Electromagnetic Radiation on the Nervous System"	Adey	1975	Human
Neurological	Altered Behavior	"Conspicuous Behavioral Abnormalities in a Dairy Cow Herd near a TV and Radio Transmitting Antenna"	Loscher and Kas	1998	In Vitro
Neurological	Alteration of Regional Cerebral Blood Flow/Sleep and Waking EEG	"Electromagnetic fields, such as those from mobile phones, alter regional cerebral blood flow and sleep and waking EEG"	Huber R, Treyer V, Borbély AA, Schuderer J, Gottselig JM, Landolt H-P, Werth E, Berthold T, Kuster N, Buck A, Achermann P	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	ALS	"A Case-control Study of Amyotrophic Lateral Sclerosis	Deapen, D. and Henderson, B.	1986	Human
Neurological	Alteration of Blood/Brain Barrier System	"Microwave Alteration of the Blood-Brain Barrier System of Rats"	Oscar and Hawkins	1977	In Vitro
Neurological	Adrenergic Nerve Plexuses	"Adrenergic nerve plexuses of heart and adrenal and myocardial catecholamines of spontaneously hypertensive rats under the influence of EMR in the millimeter range"	Belousova TE, Kargina-Terent'eva RA	1999	In Vitro
Neurological	Activated Dorsal Horn Lamina I and II Neurons	"Exposure of the Dorsal Root Ganglion in Rats to Pulsed Radiofrequency Currents Activates Dorsal Horn Lamina I and II Neurons"	Higuchi Y, Nashold BS Jr, Sluijter M, Cosman E, Pearlstein RD	2002	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological	Acoustic Neuroma and Meningioma	"Case-Control Study in Cellular and Cordless Telephones and the Risk for Acoustic Neuroma or Meningioma in Patients"	Hardell et al.	2005	Human
Neurological	Acetylcholinesterase Activity	"Structural and kinetic effects of mobile phone microwaves on acetylcholinesterase activity"	Barteri M, Pala A, Rotella S.	2005	In Vitro
Neurological	Abnormalities	"Neurological abnormalities associated with Mobile phone use"	Hocking B, Westerman R	2000	In Vivo
Neurological	Motor and Psychological functions	"Motor and Psychological Functions of School Children Living in the Area of the Skrunda Radio Location Station in Latvia"	Kolodynski, A., and Kolodynska, V.	1996	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological/Cellular	Calciuming Signaling in Neurons	"Calciuming Signaling in Neurons: Molecular Mechanisms and Cellular Consequences"	Ghosh and Greenburg	1995	In Vivo
Neurological/Endocrine	Phasic Behaviors and Endocrine Effects	"Phasic behavioral and endocrine effects of microwaves of nonthermal intensity"	Navakatikian MA, Tomashevskaya LA	1994	In Vivo
Neurological/Immune System	Tumor Necrosis	"Microwaves and cellular immunity. I. Effect of whole body microwave irradiation on tumor necrosis factor production in mouse cells"	Fesenko EE, Makar VR, Novoselova EG, Sadovnikov VB	1999	Human
Neurological/Physiological	Gender Related Differences/EEG	"Gender related differences on the EEG during a simulated mobile phone signal"	Papageorgiou CC, Nanou ED, Tsiafakis VG, Capsalis CN, Rabavilas AD	2004	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Neurological/Reproductive	Neural and Behavioral Teratological	"Neural and behavioral teratological evaluation of rats exposed to ultrawideband electromagnetic fields"	Cobb BL, Jauchem JR, Mason PA, Dooley MP, Miller SA, Ziriox JM, Murphy MR	2000	In Vitro
Neurophysiologic	Calcium ion eflux	"Neurophysiologic Effects of Radiofrequency and Microwave Radiation"	Adey	1979	In Vivo
Disease/ System	Bioeffect/ Symptom	title	authors	date	type
Neuropsychobiology	Sleep	"Effects of pulsed high-frequency electromagnetic fields on human sleep"	Mann K, Roschke J	1996	Human
Ophthalmology	Eye Lens	"Localized effects of microwave radiation on the intact eye lens in culture conditions"	Dovrat A, Berenson R, Bormusov E, Lahav A, Lustman T, Sharon N, Schachter L	2005	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Optical	Retina	"Effects of high peak power microwaves on the retina of the rhesus monkey"	Lu ST, Mathur SP, Stuck B, Zwick H, D'Andrea JA, Ziriaux JM, Merritt JH, Luttly G, McLeod DS, Johnson M,	2000	In Vitro
Oral and Genital	Yeast Infections	"Effect of microwave radiation on Candida albicans"	Rosaspina S, Salvatorelli G, Anzanel D, Bovolenta R	1994	In Vivo
Pending	TBD	"Conference Report; Radio and microwave radiations, applications and potential hazards"	ALLAM, D. S.	1969	Human
Pending	TBD	"Archives of Environmental Health"	Mastryvkova, V.M. et al.	1978	Pending
Physiological	Teratogenic, Biochemical and Histological	"Teratogenic, Biochemical, and Histological Studies with Mice Prenatally Exposed to 2.45 GHz Microwave Radiation"	Nawrot, McRee and Galvin	1985	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	TBD	"Health effects of environmental electromagnetic fields"	H. Chiang, et al.	1989	Human
Physiological	TBD	"Symptoms experienced by users of digital cellular phones: a pilot study in a French engineering school"	R. Santini, M. Seigne, L. Bonhomme-Faivre, S. Bouffet, E. Defrasne, M. Sage	2001	Human
Physiological	Symptoms	"Preliminary report: symptoms associated with mobile phone use"	Hocking B	1998	Human
Physiological	Suppression of Nonspecific Resistance	"Suppression of nonspecific resistance of the body under the effect of extremely high frequency electromagnetic radiation of low intensity"	Kolomytseva MP, Gapeev AB, Sadovnikov VB, Chemeris NK	0	In Vitro
Physiological	Subjective Symptoms	"Symptoms experienced by users of digital cellular	Santini R, Seigne M, Bonhomme-Faivre L, Bouffet S, Defrasne E, Sage M.	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		phones"			
Physiological	Subjective Symptoms	"Subjective symptoms reported by people living in the vicinity of cellular phone base stations"	Bortkiewicz A, Zmyslony M, Szyjkowska A, Gadzicka E	2004	
Physiological	Subjective Symptoms	"Subjective symptoms related to mobile phone use"	Szyjkowska A, Bortkiewicz A, Szymczak W, Makowiec-Dabrowska T.	2005	Human
Physiological	Subjective	"Subjective symptoms among mobile phone users-A consequence of absorption of radiofrequency fields?"	Wilén J, Sandström M, Hansson Mild K.	2003	Human
Physiological	Subjective	"Subjective Symptoms Among Mobile Phone Users-A Consequence of Absorption of Radiofrequency Fields?"	Wilén, Sandström, Mild	2003	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	Subjective	"Mobile phone use and subjective symptoms. Comparison of symptoms experienced by users of analogue and digital mobile phones"	Sandstrom M, Wilen J, Oftedal G, Hansson-Mild K	2001	Human
Physiological	Species Specificity, Age Factors, Neurochemical	"Species specificity, age factors, and various neurochemical correlates of the animal spontaneous behavior after exposure to WMF of the ultra-low intensity"	Shtemberg AS, Uzbekov MG, Shikhov SN, Bazian AS, Cherniakov GM	2000	In Vitro
Physiological	Receptor-ligand binding, vibration modes in cell membrane/ enzyme action	"Biological Effects of Electromagnetic Fields	Adey, W.F.	1993	In Vivo
Physiological	Performance, Physiology and Subjective States	"A Double-Blind Evaluation of 60-Hz Field Effects on Human Performance, Physiology, and Subjective	Speers, M.A., et al.	1988	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		States"			
Physiological	Pending	"Emerging and Newly Identified Health Risks— Possible Effects of Electromagnetic Fields (EMF) on Human Health"		2007	
Physiological	Pending	"Validation of Short-term Recall of Mobile Phone Use for the Interphone Study"	Vrijheid, Cardis, Armstrong, Auvinen, et al.	2006	Human
Physiological	Pending	"Recall of Past Use of Mobile Phone Handsets"	Parslow, Hepworth, McKinney	2003	Human
Physiological	Pending	"Children's Health and the Environment: A Global Perspective"	J. Pronczuk-Garbino (Ed.)	2005	Human
Physiological	Pending	"Effects of RF Exposure of Teenagers and Adults by	Nam, K, Kim, SW, Kim, SC, Kim, DW	2006	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		CDMA Cellular Phones"			
Physiological	Pending	"Symptoms Experienced in Connection with Mobile Phone Use"	Oftedal, Wilen, Sandstrom, Mild	2000	Human
Physiological	Pending	"Cellular Telephones and Cancer: How Should Science Respond?"	Park, R.L.	2001	Human
Physiological	Pending	"A Dose Response Study of Human Exposure to 60-Hz Electric and Magnetic Fields"	Graham et al.	1994	Human
Physiological	Pending	"Effects of Chronic Microwave Irradiation on Mice"	Szmiegielski	1996	In Vitro
Physiological	Pending	"Preliminary Report: Systems Associated with Mobile	Hocking, B.	1998	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Phone Use"			
Physiological	Pending	"Symptoms experienced in connection with mobile phone use"	Oftedal G, Wilen J, Sandstrom M, Mild KH	2000	Human
Physiological	Pending	"The Effect of on-ionizing Electromagnetic Radiation on RAAF Personnel During World War II"	Flaherty	1994	Human
Physiological	Pending	Occupational Study	Bowman et al.	1988	Human
Physiological	Pending	"The Effect of Continuous Exposure of Low Frequency Electric Fields on Three Generations of Mice"	Selvin et al.	1992	In Vitro
Physiological	Pending	"Report: Environmental Epidemiology Program, State of Hawaii Department of	Walleczek	1992	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		Health"			
Physiological	Pending	Occupational Study	Hadden	1987	Human
Physiological	Pending	"Human Exposure to 50-Hz Electric Currents"	Smith, S.	1985	Human
Physiological	Pending	"Chronic Exposure of Primates to 60-Hz Electric and Magnetic Fields"	Spitz and Johnson	1985	In Vitro
Physiological	Pending	Occupational Study	Hansson, H.A.	1981	Human
Physiological	Pending	Review of the work at University of Buffalo- Studies of the biological effects of 200 megacycles: I. Electrical facilities and instrumentation"	ADDINGTON, C. H., FISCHER, F. P., NEUBAUER, R. A., OSBORN, C., SARKEES, Y. T., & SWARTZ, G.	1958	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	Oxidative Damage	"Protective effects of melatonin and caffeic acid phenethyl ester against retinal oxidative stress in long-term use of mobile phone: a comparative study"	Ozguner F, Bardak Y, Comlekci S.	2006	Human
Physiological	Nonthermal EMF bioeffects in central nervous tissue	"Electromagnetics in Biology and Medicine"	Adey, W.F.	1993	In Vivo
Physiological	Naloxone-Induced Withdrawal Syndrome	"Low-level microwave irradiation attenuates naloxone-induced withdrawal syndrome in morphine-dependent rats"	Lai H, Horita A, Chou CK, Guy AW	1986	In Vitro
Physiological	Multiple systems and bioeffects explained	"Biological Effects of Microwaves" - book	Baranski and Czerski	1976	In Vivo
Physiological	Mortality	"Overall mortality of cellular telephone customers"	Rothman K, Loughlin J, Funch D, Dreyer N	1996	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	Mortality	"Mortality of plastic-ware workers exposed to radiofrequencies"	Lagorio S, Rossi S, Vecchia P, De Santis M, Bastianini L, Fusilli M, Ferrucci E, Comba P	1997	Human
Physiological	Mortality	"Mortality in Workers Exposed to Electromagnetic Fields"	Milham, S.	1985	Human
Physiological	Mortality	"Mortality Investigation of Workers in an Electromagnetic Pulse Test Program"	Muhm, J.M.	1992	Human
Physiological	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	"Survey Study of People Living in the Vacinity of Cellular Phone Base Stations"	Santini, R, Santini, P, LeRuz, P, Danze, J	2003	Human
Physiological	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	"Survey study of people living in the vicinity of cellular phone base stations"	Santini R, Santini P, Le Ruz P, Danze JM, Seigne M	2003	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	"The Microwave Syndrome: A Preliminary Study in Spain"	Navarro, Segura, Portoles, de Mateo	2003	In Vivo
Physiological	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	"The Microwave Syndrome: A Preliminary Study in Spain"	Navarro EA, Segura J, Portolés M, Gómez-Perretta de Mateo C	2003	Human
Physiological	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	"Radiofrequency (RF) Sickness in the Lilienfeld Study: An Effect of Modulated Microwaves	Johnson-Liakouris	1998	Human
Physiological	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	"Study of the health of people living in the vicinity of mobile phone base stations: I. Influence of distance and sex"	Santini R, Santini P, Danze JM, Le Ruz P, Seigne M	2002	Human
Physiological	microwave sickness, nausea, headaches, sleep, concentration,	"Exposure of Man to Magnetic Fields Alternating at	Szmiegielski	1996	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
	memory, tumors, joint pain	Extremely Low Frequencies"			
Physiological	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	Moscow Embassy Study	Cognill	1996	Human
Physiological	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	Moscow Embassy Study	Cleary and Pasternack	1966	Human
Physiological	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	"Foreign Service Health Status Study-Evaluation of Health Status of Foreign Service and Other Employees from Selected Eastern European Posts"	Lilienfeld et al.	1978	Human
Physiological	microwave sickness, nausea, headaches, sleep, concentration, memory, tumors, joint pain	Moscow Embassy Study	Coleman, M. and V. Berel	1988	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	Long-term Effects	"Effects of long-term low-level radiofrequency radiation exposure on rats."	A.W. Guy, C.K. Chou, L.L. Kunz, J. Crowley, J. Krupp	1985	In Vivo
Physiological	Lenticular changes	"Lenticular Changes in Microwave Workers	Cleary and Pasternack	1966	Human
Physiological	Heat-Shock Response	"Non-thermal heat-shock response to microwaves"	de Pomerai D, Daniells C, David H, Allan J, Duce I, Mutwakil M, Thomas D, Sewell P, Tattersall J, Jones D, Candido P	2000	Human
Physiological	Health Status	"Health status of personnel occupationally exposed to radiowaves"	Goldoni J, Durek M, Koren Z	1993	Human
Physiological	Health Risks	"Cell Phone Radiation Poses a Serious Biological and Health Risk"	Cherry, Neil	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	Health Risks	"Possible Health Risks of Radiofrequency Exposure from Mobile Telephones"	Owen, R.D.	2000	Human
Physiological	Health Hazards	"The Health Hazards of Mobile Phones"	Maier, Blakemore, Koivisto	2000	Human
Physiological	Health Risks	"The Electromagnetic Radiation Health Threat"	Cherry, Neil	1997	Human
Physiological	Health Risks	"Health Effects Associated with Mobile Base Stations in Communities: The Need for Health Studies"	Cherry, Neil	2000	Human
Physiological	Health Hazards	"A Survey of Possible Health Hazards from Exposure to Microwave Radiation"	McLaughlin, J.R.	1953	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	Health Hazards	"Health Hazards of Mobile Phones"	Chia, S.E., Chia, H.P., Tan, J.S.	2000	Human
Physiological	Health Effects	"Effects Upon Health of Occupational Exposure to Microwave Radiation"	Robinette, Siverman, Jablon	1980	Human
Physiological	Health Effects	"Overview of Health Effects of Extremely Low Frequency Electromagnetic Fields"	Dyshlovoi, V.D. et al.	1981	In Vivo
Physiological	Health Effects	"Study on health effects of the shortwave transmitter station of Schwarzenburg, Bern, Switzerland"	E.S. Altpeter, T.H. Krebs	1995	Human
Physiological	Headaches, fatigue, concentration, sleep	"Survey study of people living in the vicinity of cellular phone base stations"	R. Santini, P. Santini, P. Le Ruz, J.M. Danze, M. Seigne	2003	Human

THE HEALTH IMPACT OF WIRELESS TECHNOLOGIES: A SURVEY OF CURRENT LITERATURE

DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	Growth, Morphology and Secretory Characteristics	"Effects of exposure to EMR at 835 MHz on growth, morphology and secretory characteristics of a mast cell analogue, RBL-2H3"	Donnellan M, McKenzie DR, French PW	1997	In Vitro
Physiological	Circadian Rhythms	"Studies of Human Circadian Rhythms Under the Influence of Weak Electric Fields"	Wever	1974	Human
Physiological	Changes in Drug Pharmacokinetics/Pharmacodynamics	"Changes in drug pharmacokinetics and pharmacodynamics under the influence of microwaves of different ranges"	Ulashchik VS	1993	In Vitro
Physiological	Changes in Blood Flow, Oxygen, Uptake and Tissue Temperatures	"Changes in blood flow, oxygen, uptake, and tissue temperatures produced by therapeutic physical agents, 11. Effect of shortwave diatherapy"	ABRAMSON, E. I., BELL, Y., REJAL, M., TUCK, S., BURNETT, C., & FLEISCHER, C, J.	1960	

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	Changes	"Physiological changes in rats after exposure to low levels of microwaves"	Ray S, Behari J	1990	In Vitro
Physiological	Change in Blood Flow, Oxygen, Uptake and Tissue Temperatures	"Change, in blood flow. oxygen, uptake, and tissue temperatures produced by therapeutic physical agent"	ABRAMSON, E. I., BELL, Y., REJAL, H. TUCK, S., BURNETT, C., & FLEISCHER, C. J.	1960	Human
Physiological	Biological Systems	"Interaction with Biological Systems with Static and ELF Electric and Magnetic Fields"	Soma-Sakar	1992	In Vivo
Physiological	Biological Potency	"Animal study on electromagnetic field biological potency"	Trosic I, Matausicpisl M, Radalj Z, Prlic I	1999	In Vitro
Physiological	Biological Functionality	"Electromagnetic Field Interactions with Biological Systems"	Frey, A.H.	1993	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	Biological Effects	"Role of modulation in biological effects of electromagnetic radiation"	Grigor'ev luG	1996	In Vivo
Physiological	Biological Functionality	"Biological Function as Influenced by Low Power Modulated RF Energy"	Frey, A.H.	1971	In Vivo
Physiological	Biological Functionality	"Evolution and Results of Biological Research with Low Intensity Nonionizing Radiation"	Frey, A.H.	1988	In Vivo
Physiological	Biological Effects	"Problems of Industrial Hygiene and the Biological Effects of Electromagnetic Super-High Frequency Fields"	Gordon	1966	Human
Physiological	Biological Effects	"Biological Effects of High-Strength Electric Fields on Small Laboratory Animals"	Steneck et al.	1980	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	Biological Effects	"Biological Effects of Electric Fields on Miniature Pigs"	Savitz et al.	1990	In Vitro
Physiological	Biological Changes	"Power Frequency Electric Field Induced Biological Changes in Successive Generations of Mice"	Savitz et al.	1988	In Vitro
Physiological	Biological and Morphological Effects	"Biological and morphological effects on the reproductive organ of rats after exposure to electromagnetic field"	Ozguner M, Koyu A, Cesur G, Ural M, Ozguner F, Gokcimen A, Delibas N.	2005	In Vitro
Physiological	Bioeffects	"Cell Phones and Cancer: What is the evidence for a connection?"	Moulder, Erdreich, Malyapa, et al.	1999	Human
Physiological	Bioeffects	"Effects of electromagnetic radiation on embryos of sea-urchins"	Koldayev VM, Shchepin YV	1997	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Physiological	Bioeffects	"Observing Responses of Rats Exposed to 1.28- and 5.62-GHz Microwaves"	de Lorge J, Ezell C.	1980	In Vitro
Physiological	Bioeffects	"Long Term, Low-Level Microwave Irradiation of Rats"	Chou et al.	1992	In Vitro
Physiological	Bioeffects	"Effects of Long Term Low-Level RF Radiation Exposure on Rats"	Wertheimer and Leeper	1979	Human
Physiological	Bioeffects	"Biological effects of microwave energy at 200 mc"	ADDINGTON, C. H., OSBORN, C., SWARTZ, G., FISCHER, F. P., NEUBAUER, R. A., & SARKEES, Y. T.	1961	Human
Physiological	Abnormalities in Organs	"Abnormalities in Organs of Mice Induced by Magnetic Fields"	Svedenstal et al.	1998	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Renal	Oxidative Damage	"Oxidative Damage in the Kidney Induced by 900-MHz-Emitted Mobile Phone: Protection by Melatonin"	Oktem F, Ozguner F, Mollaoglu H, Koyu A, Uz E.	2005	Human
Renal	Oxidative Damage in Kidney	Oxidative damage in the kidney induced by 900-MHz-emitted mobile phone: protection by melatonin"	F. Oktem, F. Ozguner, H. Mollaoglu, A. Koyu, E. Uz	2005	In Vitro
Disease/ System	Bioeffect/ Symptom	title	authors	date	type
Renal	Impairment	"A novel antioxidant agent caffeic acid phenethyl ester prevents longterm mobile phone exposure-induced renal impairment in rat"	Ozguner F, Oktem F, Ayata A, Koyu A, Yilmaz HR	2005	In Vitro
Renal	Impairment	"Comparative analysis of the protective effects of melatonin and caffeic acid phenethyl ester (CAPE) on	Ozguner F, Oktem F, Armagan A, Yilmaz R, Koyu A, Demirel R, Vural H, Uz E	2005	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		mobile phone-induced renal impairment in rat"			
Reproductive	Uteroplacental Functions	"Nonthermal effects of mobile-phone frequency microwaves on uteroplacental functions in pregnant rats"	Nakamura H., Matsuzaki I., Hatta K., Nobukuni Y., Kambayashi Y. and Ogino K.	2003	In Vivo
Reproductive	Uterine Wall	"Microwave Heating of Uterine Wall During Parturition"	Daels, J	1976	In Vivo
Reproductive	Uteroplacental Circulatory Disturbance	"Uteroplacental circulatory disturbance mediated by prostaglandin f(2alpha) in rats exposed to microwaves"	Nakamura H, Nagase H, Ogino K, Hatta K, Matsuzaki I	2005	Human
Reproductive	Testicular Effects	"Effects of exposure to a mobile phone on testicular function and structure in adult rabbit"	Salama N., Kishimoto T. and Kanayama H.	2008	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Reproductive	Testicular Function	"Whole-body microwave exposure emitted by cellular phones and testicular function of rats"	Dasdag S, Ketani MA, Akdag Z, Ersay AR, Sari I, Demirtas OC, Celik MS	1999	In Vitro
Reproductive	Spontaneous Abortion	"Magnetic Fields of Video Display Terminals and Spontaneous Abortion"	Lindbohm, M. et al.	1992	Human
Reproductive	Sperm Abnormalities	"Preliminary study on the induction of sperm head abnormalities in mice, Mus musculus, exposed to radiofrequency radiations from Global System for Mobile Communication Base Stations"	Otitoloju A. A., Obe I. A., Adewale O. A., Otubanjo O. A. and Osunkalu V. O.	2010	In Vivo
Reproductive	Semen Quality/Hormone Levels	"Semen quality and hormone levels among radiofrequency heater operators"	Grajewski B, Cox C, Schrader SM, Murray WE, Edwards RM, Turner TW, Smith JM, Shekar SS, Evenson DP, Simon SD, Conover DL	2000	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Reproductive	Semen Affected	"Mobile phone decreases fructose but not citrate in rabbit semen: a longitudinal study, "	Salama N., Kishimoto T., Kanayama H. and Kagawa S.	2009	In Vitro
Reproductive	Semen Analysis	"Semen Analysis of Military Personnel Associated with Military Duty Assignments"	Weyandt et al.	1996	Human
Reproductive	Semen Analysis	"Semen analysis of military personnel associated with military duty assignments"	Weyandt TB, Schrader SM, Turner TW, Simon SD	1996	Human
Reproductive	Semen Quality	"Semen analysis of personnel operating military radar equipment"	Hjollund NH, Bonde JP, Skotte J	1997	Human
Reproductive	Semen Quality	Is there a relationship between cell phone use and semen quality?	Fejes I, Za Vaczki Z, Szollosi J, Kolosza R S, Daru J, Kova Cs L, Pa LA	2005	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Reproductive	Reduced weight in newborns	"Reduced Weight in Mice Offspring After in Utero Exposure to 2450 MHz (CW) Microwaves"	Berman et al.	1982	In Vitro
Reproductive	Pregnancy Outcome	Effects of ultrasound, shortwaves, and physical exertion on pregnancy outcome in physiotherapists	Taskinen H, Kyyronen P, Hemminki K	1990	Human
Reproductive	Pregnancy Outcome	"Miscarriages among female physical therapists who report using radio- and microwave-frequency electromagnetic radiation"	Ouellet-Hellstrom R. and Stewart W. F.	1993	Human
Reproductive	Paternal Effects	"Effects of Paternal EMF Exposure on Offspring"	Prausnitz, S. and C. Susskind	1962	Human
Reproductive	Parental Exposure	"Parental occupational exposures to electromagnetic fields and	De Roos AJ, Teschke K, Savitz DA, Poole C, Grufferman S, Pollock BH, Olshan AF	2001	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		radiation and the incidence of neuroblastoma in offspring"			
Reproductive	Outcomes	"Nested Case-control Study in US Cohort of Female Physiotherapists Reproductive Outcomes"	Kallen et al.	1982	Human
Reproductive	Miscarriages	"Early Pregnancy Loss and Exposure to 50-Hz Magnetic Fields"	Juutilainen, J. et al.	1993	Human
Reproductive	Miscarriages	"Miscarriages Among Physical Therapists Who Report Using Radio and Microwave Frequency Electromagnetic Radiation"	Hocking, B., and Joyner, K.	1995	Human
Reproductive	Miscarriages and Increased Birth Defects	"The Risk of Miscarriage and Birth Defects Among Who Use Visual Display Terminals	Goldhaber	1988	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Reproductive	Lowered Sperm counts	"Sperm Counts of Danish Military Personnel, Who Operated Mobile Ground-to-Air Missile Units the use Several RFR Emitting Radar Systems, Were Significantly Lower Compared to References"	Hjollund, et al.	1997	Human
Reproductive	Liver and Brain Aminoacytl-Transfer RNA Synthetases	"Effect of continuous-wave and amplitude-modulated 2.45 GHz microwave radiation on the liver and brain aminoacyl-transfer RNA synthetases of in utero exposed mice"	Kubinyi G, Thuroczy G, Bakos J, Boloni E, Sinay H, Szabo LD	1996	In Vitro
Reproductive	Lactate Dehydrogenase Isoenzyme Levels	"Change in the percent of lactate dehydrogenase isoenzyme level in testes of animals exposed to superhigh frequency	Afromeev VI, Tkachenko VN	1999	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		radiation"			
Reproductive	Intrauterine Effects	"Intrauterine Effects of Electromagnetic Fields - Low Frequency, Mid-Frequency RF, and Microwave"	Robert, E.	1999	Human
Reproductive	Infertility and Pregnancy Outcome	"Infertility and Pregnancy Outcome Among Magnetic Resonance Imaging Workers"	Evans, Savitz, Kanal, and Gillen	1993	Human
Reproductive	Infertility	"The effect of male occupational exposure in infertile couples in Norway"	J Occup Environ Med 41(12):1116-1120	1999	Human
Reproductive	Increase in Teratogenicity	"Marked increase in the teratogenicity of the combined administration of the industrial solvent 2-methoxyethanol and radiofrequency radiation in rats"	Nelson BK, Conover DL, Brightwell WS, Shaw PB, Werren D, Edwards RM, Lary JM,	1991	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Reproductive	Hypoxia in Embryos	"Microwave exposure induces Hsp70 and confers protection against hypoxia in chick embryos"	Shallom JM, Di Carlo AL, Ko D, Penafiel LM, Nakai A, Litovitz TA	2002	Human
Reproductive	Gender Outcome	"Gender specific reproductive outcome and exposure to high frequency electromagnetic radiation among physiotherapists"	Larsen et al.	1991	Human
Reproductive	Functionality	"Evaluation of Reproductive Function of Female Rats Exposed to Radiofrequency Fields (27.12MHz) Near a Short Wave Diathermy Device"	Brown-Woodman et al.	1989	In Vivo
Reproductive	Fetal Development	"Possible Effects of Electric Blankets and Heated Waterbeds on Fetal Development"	Mild et al.	1998	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Reproductive	Fetal Deformities	"Embryonic Changes Induced by Weak Extremely Low Frequency Electromagnetic Fields"	Delgado, J.N., and J. Leal et al.	1982	In Vivo
Reproductive	Fertility, Male	"Evaluation of the effect of using mobile phones on male fertility"	Wdowiak A., Wdowiak L. and Wiktor H.	2007	Human
Reproductive	Embryonic Changes	"Embryonic Changes Induced by Weak Extra-Low Frequency EMF's"	Robinette et al.	1980	Human
Reproductive	Endocrine Mechanism of Placental Circulatory Disturbances	"Endocrine mechanism of placental circulatory disturbances induced by microwave in pregnant rats"	Yoshida Y, Seto T, Ohsu W, Hayashi S, Okazawa T, Nagase H, Yoshida M, Nakamura H	1995	Human
Reproductive	Early Development/Embryo	"Effect of millimeter waves on the early development of the mouse and sea urchin"	Galat VV, Mezhevikina LM, Zubin MN, Lepikhov KA, Khramov RN, Chailakhian LM,	1999	In Vivo

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		embryo"			
Reproductive	Dysfunctional gonads	"Gonadic Function of Workmen with Long-term Exposure to Microwaves"	Lancranjan, I. et al.	1975	Human
Reproductive	Down's Syndrome	"Parental Factors in Down's Syndrome: results of the second Baltimore case control study"	Cohen et al.	1977	Human
Reproductive	Developmental Toxicity	"Developmental toxicity interactions of methanol and radiofrequency radiation or 2-methoxyethanol in rats"	Nelson BK, Snyder DL, Shaw PB	2001	In Vitro
Reproductive	Developmental Toxicity	"Developmental toxicity interactions of salicylic acid and radiofrequency radiation or 2-methoxyethanol in rats"	Nelson BK, Snyder DL, Shaw PB	1999	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Reproductive	Developmental Toxicity	"Interactive developmental toxicity of radiofrequency radiation and 2-methoxyethanol in rats"	Nelson BK, Conover DL, Krieg EF Jr, Snyder DL, Edwards RM	1994	In Vitro
Reproductive	Developmental Toxicity	"Effect of environmental temperature on the interactive developmental toxicity of radiofrequency radiation and 2-methoxyethanol in rats"	Nelson BK, Conover DL, Krieg EF Jr, Snyder DL, Edwards RM	1998	In Vitro
Reproductive	Development	"Effects of mobile phone radiation on reproduction and development in <i>Drosophila melanogaster</i> "	Weisbrot D, Lin H, Ye L, Blank M, Goodman R	1999	In Vivo
Reproductive	Development	"Effects of pulse microwave radiation pre-and post-natally on developing mice (2)"	Chaing H	1999	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Reproductive	Development	"Possible Effects of Electric Blankets and Heated Water Beds on Fetal Development"	Wertheimer and Leeper	1986	Human
Reproductive	Development	"Magnetic Fields and Time Dependent Effects on Development"	Savitz, D.A. and E.E. Calle	1987	In Vivo
Reproductive	Development	"Effects of pre-and post-natal pulse microwave irradiation on developing mice"	Chiang H, Wang XH, Yao GD, Cheng GZ, Yang QE, Zhou SY, Lou Y	1998	In Vitro
Reproductive	Deformities in embryos and fetuses	"Development of Murine Embryos and Fetuses After Irradiation with 2450 MHz Microwaves"	Chazan et al.	1983	In Vivo
Reproductive	Changes in Prenatal Development	"RF radiation-induced changes in the prenatal development of mice"	Magras IN, Xenos TD	1997	In Vitro

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Reproductive	Cellular Immunity/Placental Steroids	"Effects of exposure to microwaves on cellular immunity and placental steroids in pregnant rats"	Nakamura H, Seto T, Yoshida M, Dan S, Ogino K, Nagase H	1997	In Vitro
Reproductive	Cellular Immunity/Placental Steroids	"Effects of exposure to microwaves on cellular immunity and placental steroids in pregnant rats"	Nakamura H, Seto T, Nagase H, Yoshida M, Dan S, Ogino K	1997	In Vitro
Reproductive	Capacity	"Effects of GSM 900 MHz Mobile Phone Radiation on the Reproductive Capacity of <i>Drosophila melanogaster</i> "	Panagopoulos DJ, Karabarbounis A, Margaritis LH	2004	In Vitro
Reproductive	Bioeffects - reproductive	"Reproductive Hazards Among Workers at High-Voltage Substations"	Szmiegielski	1996	Human
Reproductive/Neurological	Perinatal and Early Postnatal Risks/Brain Tumors	"Perinatal and Early Postnatal Risk Factors for Malignant Brain Tumors in	McCredie M, Maisonneuve P, Boyle, P	1994	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
		New South Wales"			
Respiratory	Tuberculosis	"Multinucleated giant cell appearance after whole body microwave irradiation of rats"	Trosic I	2001	In Vitro
Sensory System	Vestibular Organ	"Can Electromagnetic Fields Emitted by Mobile Phones Stimulate the Vestibular Organ?"	Pau, Sievert, Eggert, Wild	2005	In Vivo
Thyroid	Hormonal	"The participation of thyroid hormones in modifying the mutagenic effect of microwaves"	Koveshnikova IV, Antipenko EN	1991	In Vitro
Upper Respiratory	Nitric Oxide Levels	"Nitric oxide level in the nasal and sinus mucosa after exposure to electromagnetic field"	Yariktas M, Doner F, Ozguner F, Gokalp O, Dogru H, Delibas N	2005	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Urinary	Reduced Excretion of Melatonin Metabolites	"Reduced Excretion of a Melatonin Metabolite Among Workers Exposed to 60-Hz Magnetic Fields"	Burch et al.	1999	Human
Urinary	Melatonin Metabolite Excretion	"Melatonin metabolite excretion among cellular telephone users"	Burch JB, Reif JS, Noonan CW, Ichinose T, Bachand AM, Koleber TL, Yost MG	2002	Human
Urinary	Melatonin Metabolite Excretion	"Melatonin metabolite excretion among cellular telephone users"	J.B. Burch, J.S. Reif, C.W. Noonan, T. Ichinose, A.M. Bachand, T.L. Koleber, M.G. Yost	2002	Human
Urinary	Melatonin Metabolite Levels	"Melatonin Metabolite Levels in Workers Exposed to 60-Hz Magnetic Fields: Work in Substations and with 3-phase Conductors"	Burch et al.	2000	Human
Urinary	Excretion of Urinary Melatonin Metabolites	"Nocturnal Excretion of Urinary Melatonin Metabolite	Burch et al.	1998	Human

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DISEASE/ SYSTEM	BIOEFFECT/ SYMPTOM	TITLE	AUTHORS	DATE	TYPE
Urinary	Excretion of Urinary Melatonin Metabolites	Among Utility Workers "Cellular Telephone Use and Excretion of a Urinary Melatonin Metabolite"	Burch et al.	1997	Human