

To: His Excellency Antonio Guterres, Secretary-General of the United Nations; Honorable Dr. Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization; Honorable Inger Andersen, Executive Director of the U.N. Environment Programme; U.N. Member Nations

International Appeal: Scientists call for Protection from Non-ionizing Electromagnetic Field Exposure

We are scientists engaged in the study of biological and health effects of non-ionizing electromagnetic fields (EMF). Based upon peer-reviewed, published research, we have serious concerns regarding the ubiquitous and increasing exposure to EMF generated by electric and wireless devices. These include—but are not limited to—radiofrequency radiation (RFR) emitting devices, such as cellular and cordless phones and their base stations, Wi-Fi, broadcast antennas, smart meters, and baby monitors as well as electric devices and infra-structures used in the delivery of electricity that generate extremely-low frequency electromagnetic field (ELF EMF).

Scientific basis for our common concerns

Numerous recent scientific publications have shown that EMF affects living organisms at levels well below most international and national guidelines. Effects include increased cancer risk, cellular stress, increase in harmful free radicals, genetic damages, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on general well-being in humans. Damage goes well beyond the human race, as there is growing evidence of harmful effects to both plant and animal life.

These findings justify our appeal to the United Nations (UN) and, all member States in the world, to encourage the World Health Organization (WHO) to exert strong leadership in fostering the development of more protective EMF guidelines, encouraging precautionary measures, and educating the public about health risks, particularly risk to children and fetal development. By not taking action, the WHO is failing to fulfill its role as the preeminent international public health agency.

Inadequate non-ionizing EMF international guidelines

The various agencies setting safety standards have failed to impose sufficient guidelines to protect the general public, particularly children who are more vulnerable to the effects of EMF. The International Commission on Non-Ionizing Radiation Protection (ICNIRP) established in 1998 the "Guidelines For Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz)". These guidelines are accepted by the WHO and numerous countries around the world. The WHO is calling for all nations to adopt the ICNIRP guidelines to encourage international harmonization of standards. In 2009, the ICNIRP released a statement saying that it was reaffirming its 1998 guidelines, as in their opinion, the scientific literature published since that time "has provided no evidence of any adverse effects below the basic restrictions and does not necessitate an immediate revision of its guidance on limiting exposure to high frequency electromagnetic fields². ICNIRP continues to the present day to make these assertions, in spite of growing scientific evidence to the contrary. It is our opinion that, because the ICNIRP guidelines do not cover long-term exposure and low-intensity effects, they are insufficient to protect public health.

The WHO adopted the International Agency for Research on Cancer (IARC) classification of extremely low frequency magnetic fields (ELF MF) in 2002³ and radiofrequency radiation (RFR) in 2011⁴. This classification states that EMF is a *possible human carcinogen (Group 2B)*. Despite both IARC findings, the WHO continues to maintain that there is insufficient evidence to justify lowering these quantitative exposure limits.

Since there is controversy about a rationale for setting standards to avoid adverse health effects, we recommend that the United Nations Environmental Programme (UNEP) convene and fund an independent multidisciplinary committee to explore the pros and cons of alternatives to current practices that could substantially lower human exposures to RF and ELF fields. The deliberations of this group should be conducted in a transparent and impartial way. Although it is essential that industry be involved and cooperate in this process, industry should not be allowed to bias its processes or conclusions. This group should provide their analysis to the UN and the WHO to guide precautionary action.

Collectively we also request that:

- 1. children and pregnant women be protected;
- 2. guidelines and regulatory standards be strengthened;
- 3. manufacturers be encouraged to develop safer technology;
- 4. utilities responsible for the generation, transmission, distribution, and monitoring of electricity maintain adequate power quality and ensure proper electrical wiring to minimize harmful ground current;

¹ http://www.icnirp.org/cms/upload/publications/ICNIRPemfgdl.pdf

² http://www.icnirp.org/cms/upload/publications/ICNIRPStatementEMF.pdf

³ https://monographs.iarc.fr/wp-content/uploads/2018/06/mono80.pdf

⁴ https://monographs.iarc.fr/wp-content/uploads/2018/06/mono102.pdf

- 5. the public be fully informed about the potential health risks from electromagnetic energy and taught harm reduction strategies;
- 6. medical professionals be educated about the biological effects of electromagnetic energy and be provided training on treatment of patients with electromagnetic sensitivity;
- 7. governments fund training and research on electromagnetic fields and health that is independent of industry and mandate industry cooperation with researchers;
- 8. media disclose experts' financial relationships with industry when citing their opinions regarding health and safety aspects of EMF-emitting technologies; and
- 9. white-zones (radiation-free areas) be established.

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Inquiries, including those from qualified scientists who request that their name be added to the Appeal, may be made by contacting Elizabeth Kelley, M.A., Director, EMFscientist.org, at info@EMFscientist.org.

<u>Note</u>: the signatories to this appeal have signed as individuals, giving their professional affiliations, but this does not necessarily mean that this represents the views of their employers or the professional organizations they are affiliated with.

Signatories

Armenia

Prof. Sinerik Ayrapetyan, Ph.D., UNESCO Chair - Life Sciences International Postgraduate Educational Center, Armenia

Australia

Dr. Priyanka Bandara, Ph.D., Independent Env. Health Educator/Researcher, Advisor, Environmental Health Trust; Doctors for Safer Schools, Australia

Dr. Peter French BSc, MSc, MBA, PhD, FRSM, Conjoint Senior Lecturer, University of New South Wales, Australia

Dr. Bruce Hocking, MD, MBBS, FAFOEM (RACP), FRACGP, FARPS, specialist in occupational medicine; Victoria, Australia

Dr. Gautam (Vini) Khurana, Ph.D., F.R.A.C.S., Director, C.N.S. Neurosurgery, Australia Dr. Don Maisch, Ph.D., Australia

Dr. Mary Redmayne, Ph.D., Department of Epidemiology & Preventive Medicine, Monash University, Australia

Dr. Charles Teo, BM, BS, MBBS, Member of the Order of Australia, Director, Centre for Minimally Invasive Neurosurgery at Prince of Wales Hospital, NSW, Australia

<u>Austria</u>

Dr. Michael Kundi, MD, University of Vienna, Austria

Dr. Gerd Oberfeld, MD, Public Health Department, Salzburg Government, Austria

Dr. Bernhard Pollner, MD, Pollner Research, Austria

Prof. Dr. Hugo W. Rüdiger, MD, Austria

Bahrain

Dr. Amer Kamal, MD, Physiology Department, College of Medicine, Arabian Gulf University, Bahrain

Belgium

Prof. Marie-Claire Cammaerts, Ph.D., Free University of Brussels, Faculty of Science, Brussels, Belgium

Dr. Andre Vander Vorst, PhD, professor emeritus, University Louvain-la-Neuve, Belgium

Brazil

Vânia Araújo Condessa, MSc., Electrical Engineer, Belo Horizonte, Brazil

Prof. Dr. João Eduardo de Araujo, MD, University of Sao Paulo, Brazil

Dr. Francisco de Assis Ferreira Tejo, D. Sc., Universidade Federal de Campina Grande, Campina Grande, State of Paraíba, Brazil

Prof. Alvaro deSalles, Ph.D., Federal University of Rio Grande Del Sol, Brazil

Prof. Adilza Dode, Ph.D., MSc. Engineering Sciences, Minas Methodist University, Brazil

Dr. Daiana Condessa Dode, MD, Federal University of Medicine, Brazil

Michael Condessa Dode, Systems Analyst, MRE Engenharia Ltda, Belo Horizonte, Brazil

Prof. Orlando Furtado Vieira Filho, PhD, Cellular & Molecular Biology, Federal University of Rio Grande do Sul, Brazil

Canada

Dr. Magda Havas, Ph.D., Environmental and Resource Studies, Centre for Health Studies, Trent University, Canada **Dr. Paul Héroux, Ph.D.**, Director, Occupational Health Program, McGill University; InvitroPlus Labs, Royal Victoria Hospital McGill University, Canada

Dr. Tom Hutchinson, Ph.D., Professor Emeritus, Environmental and Resource Studies, Trent University, Canada

Prof. Ying Li, Ph.D., InVitroPlus Labs, Dept. of Surgery, Royal Victoria Hospital, McGill University, Canada

James McKay M.Sc, Ecologist, City of London; Planning Services, Environmental and Parks Planning, London, Canada

Prof. Anthony B. Miller, MD, FRCP, University of Toronto, Canada

Prof. Klaus-Peter Ossenkopp, Ph.D., Department of Psychology (Neuroscience), University of Western Ontario, Canada **Dr. Malcolm Paterson, PhD.** Molecular Oncologist (ret.), British Columbia, Canada

Prof. Michael A. Persinger, Ph.D., Behavioural Neuroscience and Biomolecular Sciences, Laurentian University, Canada **Sheena Symington, B.Sc., M.A.,** Director, Electrosensitive Society, Peterborough, Canada

China

Prof. Huai Chiang, Bioelectromagnetics Key Laboratory, Zhejiang University School of Medicine, China

Prof. Yuqing Duan, Ph.D., Food & Bioengineering, Jiangsu University, China

Dr. Kaijun Liu, Ph.D., Third Military Medical University, Chongqing, China

Prof. Xiaodong Liu, Director, Key Lab of Radiation Biology, Ministry of Health of China; Associate Dean, School of Public Health Jilin University, China

Prof. Wenjun Sun, Ph.D., Bioelectromagnetics Key Lab, Zhejiang University School of Medicine, China

Prof. Minglian Wang, Ph.D., College of Life Science & Bioengineering, Beijing University of Technology, China

Prof. Qun Wang, Ph.D., College of Materials Science & Engineering, Beijing University of Technology, China

Prof. Haihiu Zhang, Ph.D., School of Food & BioEngineering, Jiangsu University, China

Prof. Jianbao Zhang, Associate Dean, Life Science and Technology School, Xi'an Jiaotong University, China

Prof. Hui-yan Zhao, Director of STSCRW, College of Plant Protection, Northwest A & F University, Yangling Shaanxi, China

Prof. J. Zhao, Department of Chest Surgery, Cancer Center of Guangzhou Medical University, Guangzhou, China

Croatia

Ivancica Trosic, Ph.D., Institute for Medical Research and Occupational Health, Croatia

Egypt

Prof. Dr. Abu Bakr Abdel Fatth El-Bediwi, Ph.D., Physics Dept., Faculty of Science, Mansoura University, Egypt

Prof. Dr. Emad Fawzy Eskander, Ph.D., Medical Division, Hormones Department, National Research Center, Egypt

Prof. Dr. Heba Salah El Din Aboul Ezz, Ph.D., Physiology, Zoology Department, Faculty of Science, Cairo University, Egypt

Prof. Dr. Nasr Radwan, Ph.D., Neurophysiology, Faculty of Science, Cairo University, Egypt

Estonia

Dr. Hiie Hinrikus, Ph.D., D.Sc, Tallinn University of Technology, Estonia

Mr. Tarmo Koppel, Tallinn University of Technology, Estonia

<u>Finland</u>

Dr. Mikko Ahonen, Ph.D, University of Tampere, Finland

Dr. Marjukka Hagström, LL.M., M.Soc.Sc, Principal Researcher, Radio and EMC Laboratory, Finland

Prof. Dr. Osmo Hänninen, Ph.D., Dept. of Physiology, Faculty of Medicine, University of Eastern Finland, Finland; Editor-In-Chief, Pathophysiology, Finland

Dr. Dariusz Leszczynski, Ph.D., Adjunct Professor of Biochemistry, University of Helsinki, Finland;

Member of the IARC Working Group that classified cell phone radiation as possible carcinogen. Dr.

Georgiy Ostroumov, Ph.D. (in the field of RF EMF), independent researcher, Finland

France

Prof. Dr. Dominique Belpomme, MD, MPH, Professor in Oncology, Paris V Descartes University, ECERI Executive Director **Dr. Pierre Le Ruz, Ph.D.**, Criirem, Le Mans, France

Dr Annie J Sasco, MD, MPH, MS, DrPH, Fmr. Research Dir., French NIH (INSERM); Fmr. Chief, Unit of Epidemiology for Cancer Prevention, International Agency for Research on Cancer; Former Acting Head, Programme for Cancer Control, World Health Organization; France.

Georgia

Prof. Besarion Partsvania, Ph.D., Head of Bio-cybernetics Department of Georgian Technical University, Georgia

Germany

Prof. Dr. Franz Adlkofer, MD, Chairman, Pandora Foundation, Germany

Prof. Dr. Hynek Burda, Ph.D., University of Duisburg-Essen, Germany

Dr. Horst Eger, MD, Electromagnetic Fields in Medicine, Association of Statutory Health Insurance Physicians, Bavaria, Germany

Prof. Dr. Karl Hecht, MD, former Director, Institute of Pathophysiology, Charité, Humboldt University, Berlin, Germany

Dr.Sc. Florian M. König, Ph.D., Florian König Enterprises (FKE) GmbH, Munich, Germany

Dr. rer. nat. Lebrecht von Klitzing, Ph.D., Dr. rer. nat. Lebrecht von Klitzing, Ph.D., Head, Institute of Environ. Physics; Ex-Head, Dept. Clinical Research, Medical University, Lubeck, Germany

Dr. Cornelia Waldmann-Selsam, MD, Member, Competence Initiative for the Protection of Humanity, Environment and Democracy e.V, Bamberg, Germany

Dr. Ulrich Warnke, Ph.D., Bionik-Institut, University of Saarlandes, Germany

Greece

Dr. Adamantia F. Fragopoulou, M.Sc., Ph.D., Department of Cell Biology & Biophysics, Biology Faculty, University of Athens, Greece **Dr. Christos Georgiou, Ph.D.,** Biology Department, University of Patras, Greece

Prof. Emeritus Lukas H. Margaritis, Ph.D., Depts. Cell Biology, Radiobiology & Biophysics, Biology Faculty, Univ. of Athens, Greece Dr. Aikaterini Skouroliakou, M.Sc., Ph.D., Department of Energy Technology Engineering, Technological Educational Institute of Athens, Greece

Dr. Stelios A Zinelis, MD, Hellenic Cancer Society-Kefalonia, Greece

Iceland

Dr. Ceon Ramon, Ph.D., Affiliate Professor, University of Washington, USA; Professor, Reykjavik University, Iceland

India

Prof. Dr. B. D. Banerjee, Ph.D., Former Head, Environmental Biochemistry & Molecular Biology Laboratory, Department of Biochemistry University College of Medical Sciences, University of Delhi, India

Prof. Jitendra Behari, Ph.D., Ex-Dean, Jawaharlal Nehru University; presently, Emeritus Professor, Amity University, India

Prof. Dr. Madhukar Shivajirao Dama, Institute of Wildlife Veterinary Research, India

Associate Prof. Dr Amarjot Dhami, PhD., Lovely Professional University, Phagwara, Punjab, India

Dr. Kavindra K. Kesari, MBA, Ph.D., Resident Environmental Scientist, University of Eastern Finland, Finland; Assistant Professor, Jaipur National University, India

Er. Piyush A. Kokate, MTECH, Scientist C, Analytical Instrumentation Division (AID), CSIR-National Environmental Engineering Research Institute (NEERI), India

Prof. Girish Kumar, Ph.D., Electrical Engineering Department, Indian Institute of Technology, Bombay, India

Dr. Pabrita Mandal PhD. Department of Physics, Indian Institute of Technology, Kanpur, India

Prof. Rashmi Mathur, Ph.D., Head, Department of Physiology, All India Institute of Medical Sciences, New Delhi, India

Prof. Dr. Kameshwar Prasad MD, Head, Dept of Neurology, Director, Clinical Epidemiology, All India Institute of Medical Sciences, India

Dr. Sivani Saravanamuttu, PhD., Dept. Advanced Zoology and Biotechnology, Loyola College, Chennai, India

Dr. N.N. Shareesh, PhD., Melaka Manipal Medical College, India

Dr. R.S. Sharma, MD, Sr. Deputy Director General, Scientist - G & Chief Coordinator - EMF Project, Indian Council of Medical Research, Dept. of Health Research, Ministry/Health and Family Welfare, Government of India, New Delhi, India

Prof. Dr. Dorairaj Sudarsanam, M.Sc., M.Ed., **Ph.D.**, Fellow - National Academy of Biological Sciences, Prof. of Zoology, Biotechnology and Bioinformatics, Dept. Advanced Zoology & Biotechnology, Loyola College, Chennai, South India

Iran (Islamic Republic of)

Prof. Dr. Soheila Abdi, Ph.D., Physics, Islamic Azad University of Safadasht, Tehran, Iran

Prof. G.A. Jelodar, D.V.M., Ph.D., Physiology, School of Veterinary Medicine, Shiraz University, Iran

Prof. Hamid Mobasheri, Ph.D., Head BRC; Head, Membrane Biophysics & Macromolecules

Lab;Instit.Biochemistry&Biophysics,University,Tehran,Iran

Prof. Seyed Mohammad Mahdavi, PhD., Dept of Biology, Science and Research, Islamic Azad University, Tehran, Iran

Prof. S.M.J. Mortazavi, Ph.D., Head, Medical Physics & Engineering; Chair, NIER Protection Research Center, Shiraz University of Medical Sciences, Iran

Prof. Amirnader Emami Razavi, Ph.D., Clinical Biochem., National Tumor Bank, Cancer Institute, Tehran Univ. Medical Sciences, Iran Dr. Masood Sepehrimanesh, Ph.D., Gastroenterohepatology Research Center, Shiraz University of Medical Sciences, Iran Prof. Dr. Mohammad Shabani, Ph.D., Neurophysiology, Kerman Neuroscience Research Center, Iran

Israel

Michael Peleg, M.Sc., radio communications engineer and researcher, Technion - Israel Institute of Technology, Israel Prof. Elihu D. Richter, MD, MPH, Occupational & Environmental Medicine, Hebrew University-Hadassah School of Public Health & Community Medicine, Israel

Dr. Yael Stein, MD, Hebrew University of Jerusalem, Hadassah Medical Center, Israel

Dr. Danny Wolf, MD, Pediatrician and General Practitioner, Sherutey Briut Clalit, Shron Shomron district, Israel

Dr. Ronni Wolf, MD, Assoc. Clinical Professor, Head of Dermatology Unit, Kaplan Medical Center, Rehovot, Israel

Italy

Prof. Sergio Adamo, Ph.D., La Sapienza University, Rome, Italy

Prof. Fernanda Amicarelli, Ph.D., Applied Biology, Dept. of Health, Life and Environmental Sciences, University of L'Aquila, Italy

Dr. Pasquale Avino, Ph.D., INAIL Research Section, Rome, Italy

Dr. Fiorella Belpoggi, Ph.D., FIATP, Director, Cesare Maltoni Cancer Research Center, Ramazzini Institute, Italy

Prof. Giovanni Di Bonaventura, PhD, School of Medicine, "G. d'Annunzio" University of Chieti-Pescara, Italia

Prof. Emanuele Calabro, Department of Physics and Earth Sciences, University of Messina, Italy

Prof. Franco Cervellati, Ph.D., Department of Life Science and Biotechnology, Section of General Physiology, University of Ferrara, Italy

Vale Crocetta, Ph.D. Candidate, Biomolecular and Pharmaceutical Sciences, "G. d'Annunzio" University of Chieti, Italy

Prof. Stefano Falone, Ph.D., Researcher in Applied Biology, Dept. of Health, Life & Environmental Sciences, University of L'Aquila, Italy

Prof. Dr. Speridione Garbisa, ret. Senior Scholar, Dept. Biomedical Sciences, University of Padova, Italy

Dr. Settimio Grimaldi, Ph.D., Associate Scientist, National Research Council, Italy

Prof. Livio Giuliani, Ph.D., Director of Research, Italian Health National Service, Rome-Florence-Bozen;

Spokesman, ICEMS-International Commission for Electromagnetic Safety, Italy

Prof. Dr. Angelo Levis, MD, Dept. Medical Sciences, Padua University, Italy

Prof. Salvatore Magazù, Ph.D., Department of Physics and Science, Messina University, Italy

Dr. Fiorenzo Marinelli, Ph.D., Researcher, Molecular Genetics Institute of the National Research Council, Italy

Dr. Arianna Pompilio, PhD, Dept. Medical, Oral & Biotechnological Sciences. G. d'Annunzio University of Chieti-Pescara, Italy

Prof. Dr. Raoul Saggini, MD, School of Medicine, University G. D'Annunzio, Chieti, Italy

Dr. Morando Soffritti, MD, Honorary President, National Institute for the Study and Control of Cancer and Environmental Diseases, B.Ramazzini, Bologna. Italy

Prof. Massimo Sperini, Ph.D., Center for Inter-University Research on Sustainable Development, Rome, Italy

<u>Japan</u>

Prof. Tsuyoshi Hondou, Ph.D., Graduate School of Science, Tohoku University, Japan

Prof. Hidetake Miyata, Ph.D., Department of Physics, Tohoku University, Japan

<u>Jordan</u>

Prof. Mohammed S.H. Al Salameh, Jordan University of Science & Technology, Jordan

Kazakhstan

Prof. Dr, Timur Saliev, MD, Ph.D., Life Sciences, Nazarbayev University, Kazakhstan; Institute Medical Science/Technology, University of Dundee, UK

New Zealand

Dr. Bruce Rapley, BSc, MPhil, Ph.D., Principal Consulting Scientist, Atkinson & Rapley Consulting Ltd., New Zealand

Nigeria

Dr. Obajuluwa Adejoke PhD, Cell Biology and Genetics Unit, Dept of Zoology, University of Ilorin; Lecturer, Biological Sciences Department, Bio-technology Unit, Afe Babalola University, Nigeria

Dr. Idowu Ayisat Obe, Department of Zoology, Faculty of Science, University of Lagos, Akoka, Lagos, Nigeria

Prof. Olatunde Michael Oni, Ph.D, Radiation & Health Physics, Ladoke Akintola University of Technology, Ogbomoso, Nigeria

Oman

Prof. Najam Siddiqi, MBBS, Ph.D., Human Structure, Oman Medical College, Oman

Poland

Dr. Pawel Bodera, Pharm. D., Department of Microwave Safety, Military Institute of Hygiene and Epidemiology, Poland **Prof. Dr. Stanislaw Szmigielski, MD, Ph.D.,** Military Institute of Hygiene and Epidemiology, Poland

Romania

Alina Cobzaru, Engineer, National Institutes Research & Development and Institute of Construction & Sustainability, Romania

Russian Federation

Prof. Vladimir N. Binhi, Ph.D., A.M. Prokhorov General Physics Institute of the Russian Academy of Sciences; M.V. Lomonosov Moscow State University

Dr. Oleg Grigoyev, DSc., Ph.D., Deputy Chairman, Russian National Committee on Non-Ionizing Radiation Protection, Russian Federation Prof. Yury Grigoryev, MD, Chairman, Russian National Committee on Non-Ionizing Radiation Protection, Russian Federation Dr. Anton Merkulov, Ph.D., Russian National Committee on Non-Ionizing Radiation Protection, Moscow, Russian Federation Dr. Maxim Trushin, PhD., Kazan Federal University, Russia

<u>Serbia</u>

Dr. Snezana Raus Balind, Ph.D., Research Associate, Institute for Biological Research "Sinisa Stankovic", Belgrade, Serbia **Prof. Danica Dimitrijevic, Ph.D.**, Vinca Institute of Nuclear Sciences, University of Belgrade, Serbia **Dr. Sladjana Spasic, Ph.D.**, Institute for Multidisciplinary Research, University of Belgrade, Serbia

Slovak Republic

Dr. Igor Belyaev, Ph.D., Dr.Sc., Cancer Research Institute, Slovak Academy of Science, Bratislava, Slovak Republic

South Korea (Republic of Korea)

Prof. Young Hwan Ahn, MD, Ph.D, Ajou University Medical School, South Korea

Prof. Kwon-Seok Chae, Ph.D., Molecular-ElectroMagnetic Biology Lab, Kyungpook National University, South Korea

Prof. Dr. Yoon-Myoung Gimm, Ph.D., School of Electronics and Electrical Engineering, Dankook University, South Korea

Prof. Dr. Myung Chan Gye, Ph.D., Hanyang University, South Korea

Prof. Dr. Mina Ha, MD, Dankook University, South Korea

Prof. Seung-Cheol Hong, MD, Inje University, South Korea

Prof. Dong Hyun Kim, Ph.D., Dept. of Otorhinolaryngology-Head and Neck Surgery, Incheon St. Mary's Hospital, Catholic University of Korea, South Korea

Prof. Hak-Rim Kim, Department of Pharmacology, College of Medicine, Dankook University, South Korea

Prof. Myeung Ju Kim, MD, Ph.D., Department of Anatomy, Dankook University College of Medicine, South Korea

Prof. Jae Seon Lee, MD, Department of Molecular Medicine, NHA University College of Medicine, Incheon 22212, South Korea

Prof. Yun-Sil Lee, Ph.D., Ewha Woman's University, South Korea

Prof. Dr. Yoon-Won Kim, MD, Ph.D., Hallym University School of Medicine, South Korea

Prof. Jung Keog Park, Ph.D., Life Science & Biotech; Dir., Research Instit.of Biotechnology, Dongguk University, South Korea

Prof. Sungman Park, Ph.D., Institute of Medical Sciences, School of Medicine, Hallym University, South Korea Prof.

Kiwon Song, Ph.D., Dept. of Chemistry, Yonsei University, South Korea

<u>Spain</u>

Prof. Dr. Miguel Alcaraz, MD, Ph.D., Radiology and Physical Medicine, Faculty of Medicine, University of Murcia, Spain Dr. Alfonso Balmori, Ph.D., Biologist, Consejería de Medio Ambiente, Junta de Castilla y León, Spain

Prof. J.L. Bardasano, D.Sc, University of Alcalá, Department of Medical Specialties, Madrid, Spain

Dr. Claudio Gómez-Perretta, MD, Ph.D., La Fe University Hospital, Valencia, Spain

Prof. Dr. Miguel López-Lázaro, PhD., Associate Professor, Department of Pharmacology, University of Seville, Spain

Prof. Dr. Elena Lopez Martin, Ph.D., Human Anatomy, Facultad de Medicina, Universidad de Santiago de Compostela, Spain

Prof. Dr. Emilio Mayayo, MD, Pathology Unit, School of Medicine, University Rovira I Virgili (URV), Tarragona, Spain

Prof Enrique A. Navarro, Ph.D., Department of Applied Physics and Electromagnetics, University of Valencia, Spain

Sudar

Mosab Nouraldein Mohammed Hamad, MA, Head, Dept. of Medical Parasitology, Health Sciences, Elsheikh Abdallah Elbadri University, Sudan

Sweden

Dr. Michael Carlberg, MSc, Örebro University Hospital, Sweden

Dr. Lennart Hardell, MD, Ph.D., University Hospital, Örebro, Sweden

Dr. Lena Hedendahl, MD, Independent Environment and Health Research, Luleå, Sweden

Prof. Olle Johansson, Ph.D., Experimental Dermatology Unit, Dept. of Neuroscience, Karolinska Institute, Sweden

Dr. Bertil R. Persson, Ph.D., MD, Lund University, Sweden

Senior Prof. Dr. Leif Salford, MD. Department of Neurosurgery, Director, Rausing Laboratory, Lund University, Sweden

Dr. Fredrik Söderqvist, Ph.D., Ctr. for Clinical Research, Uppsala University, Västerås, Sweden

Switzerland

Dr. phil. nat. Daniel Favre, A.R.A. (Association Romande Alerte, Switzerland

Taiwan (Republic of China)

Prof. Dr. Tsun-Jen Cheng, MD, Sc.D., National Taiwan University, Republic of China

Turkey

Prof. Dr. Mehmet Zülküf Akdağ, Ph.D., Department of Biophysics, Medical School of Dicle University, Diyarbakir, Turkey

Associate Prof.Dr. Halil Abraham Atasoy, MD, Pediatrics, Abant Izzet Baysal University, Faculty of Medicine, Turkey

Prof. Ayse G. Canseven (Kursun), Ph.D., Gazi University, Faculty of Medicine, Dept. of Biophysics, Turkey

Prof. Dr. Mustafa Salih Celik, Ph.D., Former Head, Turkish Biophysical Society; Head, Biophysics Dept; Medical Faculty, Dicle Univ., Turkey

Prof. Dr. Osman Cerezci, Electrical-Electronics Engineering Department, Sakarya University, Turkey

Prof. Dr. Suleyman Dasdag, Ph.D., Dept. of Biophysics, Medical School of Dicle University, Turkey

Prof. Omar Elmas, MD, Ph.D., Mugla Sitki Kocman University, Faculty of Medicine, Department of Physiology, Turkey

Prof. Dr. Ali H. Eris, MD, faculty, Radiation Oncology Department, BAV University Medical School, Turkey

Prof. Dr. Arzu Firlarer, M.Sc. Ph.D., Occupational Health & Safety Department, Baskent University, Turkey

Associate Prof. Ayse Inhan Garip, PdH., Marmara Univ. School of Medicine, Biophysics Department, Turkey

Prof. Suleyman Kaplan, Ph.D., Head, Department of Histology and Embryology, Medical School, Ondokuz Mayıs University, Samsun, Turkey.

Prof. Dr. Mustafa Nazıroğlu, Ph.D., Biophysics Dept, Medical Faculty, Süleyman Demirel University, Isparta, Turkey

Prof. Dr. Ersan Odacı, MD, Ph.D., Karadeniz Technical University, Medical Faculty, Trabzon, Turkey

Prof. Dr. Elcin Ozgur, Ph.D., Biophysics Department, Faculty of Medicine, Gazi University, Turkey

Prof. Dr. Selim Seker, Electrical Engineering Department, Bogazici University, Istanbul, Turkey

Prof. Dr. Cemil Sert, Ph.D., Department of Biophysics of Medicine Faculty, Harran University, Turkey

Prof. Dr. Nesrin Seyhan, B.Sc., Ph.D., Medical Faculty of Gazi University; Chair, Biophysics Dept; Director GNRK Ctr.; Panel Mbr, NATO STO HFM; Scientific Secretariat Member, ICEMS; Advisory Committee Member, WHO EMF, Turkey

Prof. Dr. Bahriye Sirav (Aral), PhD., Gazi University Faculty of Medicine, Dept of Biophysics, Turkey

Ukraine

Dr. Oleg Banyra, MD, 2nd Municipal Polyclinic, St. Paraskeva Medical Centre, Ukraine

Prof. Victor Martynyuk, PhD., ECS "Institute of Biology", Head of Biophysics Dept, Taras Shevchenko National University of Kie Ukraine

Prof. Igor Yakymenko, Ph.D., D.Sc., Institute of Experimental Pathology, Oncology & Radiobiology, National Academy of Sciences of Ukraine

United Kingdom

Michael Bevington, M.A., M.Ed., Chair of Trustees, ElectroSensitivity UK (ES-UK), UK

Mr. Roger Coghill, MA, C Biol, MI Biol, MA Environ Mgt; Member Institute of Biology; Member, UK SAGE Committee on EMF Precautions, UK

Mr. David Gee, Associate Fellow, Institute of Environment, Health and Societies, Brunel University, UK

Dr. Andrew Goldsworthy BSc PhD, Lecturer in Biology (retired), Imperial College, London, UK

Emeritus Professor Denis L. Henshaw, PhD., Human Radiation Effects, School of Chemistry, University of Bristol, UK

Dr. Mae-Wan Ho, Ph.D., Institute of Science in Society, UK

Dr. Gerard Hyland, Ph.D., Institute of Biophysics, Neuss, Germany, UK

Dr. Isaac Jamieson, Ph.D., Biosustainable Design, UK

Emeritus Professor, Michael J. O'Carroll, PhD., former Pro Vice-Chancellor, University of Sunderland, UK

Mr. Alasdair Phillips, Electrical Engineer, UK

Dr. Syed Ghulam Sarwar Shah, M.Sc., Ph.D., Public Health Consultant, Honorary Research Fellow, Brunel University, London, UK

Dr. Cyril W. Smith, DIC, PhD, Retired 1990 UK

Dr. Sarah Starkey, Ph.D., independent neuroscience and environmental health research, UK

United States

Dr. Martin Blank, Ph.D., Columbia University, USA

Prof. Jim Burch, MS, Ph.D., Dept. of Epidemiology & Biostatistics, Arnold School of Public Health, University of South Carolina, USA

Prof. David O. Carpenter, MD, Director, Institute for Health and the Environment, University of New York at Albany, USA

Prof. Prof. Simona Carrubba, Ph.D., Biophysics, Daemen College, Women & Children's Hospital of Buffalo Neurology Dept., USA

Dr. Sandra Cruz-Pol, PhD., Professor Electrical Engineering, on Radio Frequencies, Electromagnetics, University of Puerto Rico at

Mayaguez; Member of US National Academies of Sciences Committee for Radio Frequencies; Puerto Rico, USA

Dr. Zoreh Davanipour, D.V.M., Ph.D., Friends Research Institute, USA

Dr. Devra Davis, Ph.D., MPH, President, Environmental Health Trust; Fellow, American College of Epidemiology, USA

Dr. James DeMeo, PhD, retired in private research, USA

Paul Raymond Doyon, EMRS, MAT, MA, Doyon Independent Research Associates, USA

Prof. Om P. Gandhi, Ph.D., Department of Electrical and Computer Engineering, University of Utah, USA

Prof. Beatrice Golomb, MD, Ph.D., University of California at San Diego School of Medicine, USA

Dr Reba Goodman Ph.D, Columbia University, USA

Dr. Martha R. Herbert, MD, Ph.D., Harvard Medical School, Harvard University, USA

Dr. Gunnar Heuser, M.D., Ph.D., F.A.C.P. Emeritus member, Cedars Sinai Medical Center, Los Angeles, CA; Former Assistant Clinical Professor, UCLA; Former member, Brain Research Institute, UCLA. USA

Dr. Donald Hillman, Ph.D., Professor Emeritus, Michigan State University, USA

Elizabeth Kelley, MA, Former. Managing Secretariat, ICEMS, Italy; Director, EMFscientist.org, USA

Dr. Seungmo Kim, Ph.D., Assistant Professor, Department of Electrical and Computer Engineering, Georgia Southern University, USA

Dr. Ronald N. Kostoff, Ph.D., Gainesville, VA, USA

Neha Kumar, Founder, Nonionizing Electromagnetic Radiation Shielding Alternatives, Pvt. Ltd; B.Tech - Industrial Biotech., USA

Dr. Henry Lai, Ph.D., University of Washington, USA

B. Blake Levitt, medical/science journalist, former New York Times contributor, EMF researcher and author, USA

Prof. Trevor G. Marshall, PhD, Autoimmunity Research Foundation, USA

Dr. Albert M. Manville, II, Ph.D. and C.W.B., Adj. Professor, Johns Hopkins University Krieger Graduate School of Arts & Sciences Migratory Bird Management, U.S. Fish & Wildlife Service, USA

Dr. Andrew Marino, J.D., Ph.D., Retired Professor, LSU Health Sciences Center, USA

Dr. Marko Markov, Ph.D., President, Research International, Buffalo, New York, USA

Dr. Jeffrey L. Marrongelle, DC, CCN, President/Managing Partner of BioEnergiMed LLC, USA

Dr. Ronald Melnick, PhD, Senior Toxicologist, (Retired, leader of the NTP's health effects studies of cell phone radio frequency radiation) US National Toxicology Program, National Institute of Environmental Health Sciences, USA

Dr. Samuel Milham, MD, MPH, USA

L. Lloyd Morgan, Environmental Health Trust, USA

Dr. Joel M. Moskowitz, Ph.D., School of Public Health, University of California, Berkeley, USA

Imtiaz Nasim, Graduate Research Assistant, Department of Electrical and Computer Engineering, Georgia Southern University, USA

Dr. Martin L. Pall, Ph.D., Professor Emeritus, Biochemistry & Basic Medical Sciences, Washington State University, USA

Dr. Jerry L. Phillips, Ph.D. University of Colorado, USA

Dr. William J. Rea, M.D., Environmental Health Center, Dallas, Texas, USA

Camilla Rees, MBA, Electromagnetichealth.org; CEO, Wide Angle Health, LLC, USA

Dr. Cindy Lee Russell, M.D. Physicians for Safe Technology, USA

Prof. Narenda P. Singh, MD, University of Washington, USA

Prof. Eugene Sobel, Ph.D., Retired, School of Medicine, University of Southern California, USA

David Stetzer, Stetzer Electric, Inc., Blair, Wisconsin, USA

Dr. Lisa Tully, Ph.D., Energy Medicine Research Institute, Boulder, CO, USA

Supporting Scientists who have published peer reviewed papers in related fields

Olga Ameixa, PhD. Post-Doctoral Researcher, Dept of Biology & CESAM, University of Aveiro Campus, Universitário de Santiago, Portugal Michelle Casciani, MA, Environmental Science, President/Chief Executive Officer, Salvator Mundi International Hospital, Rome, Italy Enrico Corsetti, Engineer, Research Director, Salvator Mundi International Hospital, Rome, Italy

Dr. Dietmar Hildebrand, Ph.D, Biophysicist, Coinvestigator Biostack Experiments, Germany

Xin Li, PhD candidate MSc, Department of Mechanical Engineering, Stevens Institute of Technology, New Jersey, USA

Dr. Carlos A. Loredo Ritter, MD, Pediatrician, Pediatric Neurologist; President, Restoration Physics, North American Sleep Medicine Society, USA

Dr. Robin Maytum, PhD, Senior Lecturer in Biological Science, University of Bedfordshire, Luton, UK

Prof. Dr. Raúl A. Montenegro, Ph.D, Evolutionary Biology, National University of Cordoba; President, FUNAM; Recognitions: Scientific Investigation Award from University of Buenos Aires, UNEP 'Global 500' Award (Brussels, Belgium), the Nuclear Free Future Award (Salzburg, Austria), and Alternative Nobel Prize (Right Livelihood Award, Sweden), Argentina.

Dr. Hugo Schooneveld, PhD, Biologist, Neuroscientist, Advisor to the Dutch EHS Foundation, Netherlands

Dr. Carmen Adella Sirbu, MD, Neurology, Lecturer, Titu Matorescu University, Romania

Jacques Testart, Biologist, Honorary Research Director at I.N.S.E.R.M. (French National Medical Research Institute), France