

THE UNIVERSITY OF TEXAS AT DALLAS

March 18, 2017  
8:00 a.m. - 4:00 p.m.  
Davidson Auditorium (JSOM 1.118)

# Environmental Electromagnetic Field & Chronic Pain Symposium

# Abstract

About 50 million American adults are grappling with chronic and severe pain. The annual treatment cost of chronic pain has been estimated at \$635 billion, which exceeds the combined cost for treatment of cancer, heart disease and diabetes. A substantial body of scientific evidence supports that exposure to electromagnetic fields (EMF) affect pain sensitivity and pain inhibition. A recent publication by Dr. Mario Romero-Ortega, a faculty member of the University of Texas at Dallas, presents scientifically based evidence which links exposure to EMF to severe pain. Unfortunately, most healthcare providers and the public are not well informed about the association between EMF exposure and pain sensitivity. The current epidemic of addiction to prescription pain medication, including opioids, has been partially attributed to our limited understanding of the etiology of chronic pain and the environmental risk factors.

The University of Texas at Dallas, in collaboration with the American Environmental Health Foundation, is sponsoring a one-day symposium, free to the public, to address and discuss EMF and chronic pain.

## Rationale

A recent finding by the National Center for Complementary and Integrative Health of the National Institute of Health suggests that about 50 million American adults are grappling with chronic and severe pain. The annual treatment cost of chronic pain has been estimated at \$635 billion, which exceeds the combined cost for treatment of cancer, heart disease and diabetes.

The etiology of chronic pain is multi-factorial; however, a substantial body of scientific evidence supports that exposure to electromagnetic fields affects pain sensitivity (nociception) and pain inhibition (analgesia). Most health care providers and the public are not well informed about the association between exposure to electromagnetic fields (EMF) and pain sensitivity. The current epidemic of addiction to prescription pain medication, including opioids, has been partially attributed to our limited understanding of the etiology of chronic pain and the environmental factors that either induce or exacerbate the pain.

## Vision

Our vision is to educate the public, healthcare providers and law makers on the long-term consequences of chronic exposure to EMF, i.e. chronic pain, insomnia, fatigue, fibromyalgia and compromised IQ in children.

# Agenda

## Registration and Continental Breakfast

Opening Remarks.....**George Fair, PhD**  
Dean  
School of Interdisciplinary Studies  
University of Texas at Dallas  
**William Rea, MD, FACS, FAAEM**  
American Environmental Health Foundation (AEHF)

Keynote Speaker.....**C-K Chou, PhD**  
Professor  
Chairman of IEEE/EMBS Committee on Man and Radiation  
Chairman of TC 95 of the IEEE International Committee on Electromagnetic Safety  
  
Title of Talk: What Scientists and Regulators Have Done to Address Safety Concerns of Radio-Frequency Exposure?

## Coffee Break, Exhibition and Networking

Speakers.....**William J Rea, MD, FACS, FAAEM**  
Physician, Scientist and Environmentalist  
Founder and CEO  
American Environmental Health Foundation, Dallas TX  
  
Title of Talk: Electromagnetic Field Exposure: Assessment and Treatment  
  
**Geetanjali Bendale, MS**  
Doctoral Candidate, Department of Bioengineering  
University of Texas  
  
Title of Talk: Peripheral Nerve Injuries and Alternation Due to Mechanical or Surgical Damage  
  
**Sanjay Anand, PhD**  
Post-Doctoral Research Fellow, Department of Bioengineering  
University of Texas  
  
Title of Talk: Introduction to Radio-Frequency Electromagnetic Fields

## Lunch

Speakers.....**Mario Romero-Ortega, PhD**  
Associate Professor Department of Bioengineering  
University of Texas at Dallas  
  
Title of Talk: Amputation Pain Induced by Radio-Frequency Electromagnetic Field  
  
**Stephanie McCarter, MD**  
Physician Scientist and Environmental Activist  
American Environmental Health Foundation, Dallas, Texas  
  
Title of Talk: What is EMF-EMR? How Does It Affect Us and How Can We Protect Ourselves?  
  
**Martie Whitteken, CCN**  
Health by Nature, Radio Host  
Author and Advocate  
  
Title of Talk: Our Intestinal Microbes Control a Massive Number of Our Body's Functions. Do We Know How Electromagnetic Fields Affect Them?

## Panel Discussion and Wrap up



**Chung-Kwang Chou, PhD**  
**Electrical Engineering**

**Title of Talk:** What Scientists and Regulators Have Done to Address Safety Concerns of Radio-Frequency Exposure?

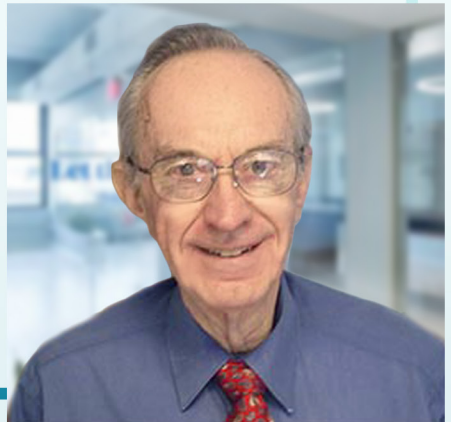
Dr. C-K Chou was the chief EME scientist with Motorola and Motorola Solutions from 2001 to 2013, where he was responsible for radio frequency (RF) product safety. He is currently the chairman of TC 95 of the IEEE International Committee on Electromagnetic Safety, responsible for exposure standards from 0 to 300 GHz; distinguished

lecturer of IEEE Broadcast Technology Society; and on the Advisory Panel of Non-Ionizing Radiation of the NCRP. Chou has authored hundreds of peer-reviewed papers and book chapters, and presented hundreds of conference papers, abstracts and invited talks.

**William J. Rea, MD, FACS, FAAEM**  
**Thoracic and Cardiovascular Surgeon**

**Title of Talk:** Electromagnetic Field Exposure: Assessment and Treatment

Dr. William J. Rea is a thoracic and cardiovascular surgeon with a strong passion for the environmental aspects of health and disease. Founder of the Environmental Health Center (EHC-D), Rea is currently director of the highly specialized Dallas based medical facility. In 1988, Rea was named to the world's first professorial chair of environmental medicine at the Robens Institute of Toxicology at the University of Surrey in Guildford, England. Rea has published more than 100 peer-reviewed research papers related to the topic of thoracic and cardiovascular surgery and environmental medicine.





**Geetanjali Bendale, MS**  
Master's in Bioengineering from the  
University of Texas at Arlington

**Title of Talk:** Peripheral Nerve Injuries and Alternation Due to Mechanical or Surgical Damage

Geetanjali Bendale graduated with her master's in bioengineering from the University of Texas at Arlington in 2014. She is currently pursuing her PhD in bioengineering from the University of Texas at Dallas. At the Regenerative Neurobiology and Neuro-electronics Laboratory, Bendale's

research focuses on enhancing nerve regeneration and functional recovery using biological cues and electrical stimulation.

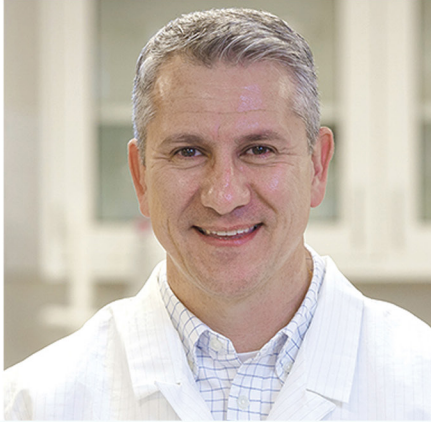
**Sanjay Anand, PhD**  
Post-Doctoral Fellow at the  
University of Texas at Dallas

**Title of Talk:** Introduction to Radio-Frequency Electromagnetic Fields

Dr. Sanjay Anand is currently a post-doctoral fellow at the University of Texas at Dallas in the Regenerative Neurobiology and Neuroelectronics Laboratory with Dr. Mario Romero-Ortega. Anand recently defended his doctorate in biomedical engineering from UT Dallas after receiving his bachelor's degree in biomedical engineering from the Georgia Institute of Technology. His research focuses on using molecular guidance cues to guide regenerative peripheral nerves to develop better neural prosthesis following injury. He has been the recipient of the GAANN Fellowship in 2013 and has presented his work at the NIC, BMES and ACES conferences.







**Mario Romero-Ortega, PhD**  
Associate Professor at the  
University of Texas at Dallas

**Title of Talk:** Amputation Pain Induced by Radio-Frequency Electromagnetic Field

Dr. Mario Romero-Ortega is an associate professor of bioengineering at the University of Texas at Dallas, adjunct faculty in the surgery department at the University of Texas Southwestern Medical Center (UTSW) and the UTA Research Institute (UTARI), and Partner Researcher at the University of Wollongong, Australia. He received his doctorate

in neuroscience from Tulane University and postdoctoral training from UTSW as Associate Member of the Christopher Reeve Paralysis Foundation Research Consortium on Spinal Cord Injury. Romero-Ortega has served as director of the Regenerative Neurobiology Research Division at Texas Scottish Rite Hospital and assistant professor of neurology and plastic surgery at UTSW. He currently serves as associate editor of *Frontiers in Neuroengineering*.

**Stephanie McCarter, MD**  
Internal Medicine and Environmental  
Medicine

**Title of Talk:** What is EMF-EMR? How Does It Affect Us and How Can We Protect Ourselves?

Dr. Stephanie McCarter currently practices internal medicine and environmental medicine with Dr. William Rea at the Environmental Health Center of Dallas. She has 13 years of experience in the field of environmental medicine and has built her own eco-friendly, low-EMF home, working with well-known experts in healthy house building. McCarter had been acknowledged for her work on Rea's most recent book, *Reversibility of Chronic Degenerative Disease and Hypersensitivity, Vol. 1*. She has extensive experience with electromagnetic sensitivity.





**Martie Whittekin, CCN**  
**Board-Certified Clinical Nutritionist**

**Title of Talk:** Our intestinal microbes control a massive number of our body's functions. Do we know how electromagnetic fields affect them?

Martie Whittekin is a clinical nutritionist, author and radio host. Her first book, *Natural Alternatives to Nexium ... and Other Acid Blockers* is a national best-seller. Her newest book is *The Probiotic Cure*. Ms. Whittekin hosts *Health by Nature*, a syndicated health and nutrition talk radio show. Since the 1980s,

Whittekin has been a national leader in the nutritional product industry and an activist for health freedom. She states that intestinal microbes control a massive number of the body's functions. She asks, "Do we know how electromagnetic fields affect them?"

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# Sponsors

**The University of Texas at Dallas**

**Healthcare Studies Program  
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**The American Environmental Health Foundation**

American Environmental Health Foundation: founded in 1975 by William Rea, MD, the mission of this not-for-profit foundation is to improve the health and well-being of individuals suffering from various maladies and adverse health conditions caused by exposure to environmental contaminants.

For more information contact Rosie Peterson at [rpeterson@utdallas.edu](mailto:rpeterson@utdallas.edu).

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