



# ecodwell™

GOING BEYOND GREEN™—HEALTHY HOME MONTHLY

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## JULY/AUGUST 2018

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**Dirty electricity (DE) can** harm your family, friends, clients, and you. What can you do? We're here to help. Our EMR seminar instructors are completing a comprehensive update of our DE curriculum, and including it in the course materials for our Electromagnetic Radiation and Advanced Electromagnetic Radiation seminars, IBE 212 and 312. There are just three seats left available for IBE 212 and ten seats remaining for IBE 312 (which required prior attendance at IBE 212), and class sizes are strictly limited.

**The dates for IBE 212 are** 27 through 31 August 2018, the venue is IHM Retreat & Conference Center, in the beautiful foothills overlooking Santa Fe, New Mexico. A [\\$350 deposit](#) or [payment in full of your tuition](#) will reserve your seat (the refundable period expires thirty days prior to the first day of classes).

**The dates for IBE 312 are** 03 through 07 December 2018, the venue is IHM Retreat & Conference Center, in the beautiful foothills overlooking Santa Fe, New Mexico. A [\\$350 deposit](#) or [payment in full of your tuition](#) will reserve your seat (the refundable period expires thirty days prior to the first day of classes).

**I'm pleased to announce** that a slew of entirely new, written from scratch Building Biology fact sheets and whitepapers are coming to the IBE website, free of charge to the general public. They'll be downloadable, and sharable, in PDF format. We all know people who could benefit from reading one or more of these documents, so get ready to spread the word. Our anticipated launch date is 20 December 2018.

**I'm also pleased to announce** that we've decided to hold our Healthy Design Seminars, [IBE 214](#) and [IBE 215](#) annually. They are scheduled to run concurrently this year, with a one-day break in-between, at the same venue and at the same time as our Advanced Electromagnetic radiation seminar (providing great networking opportunities between devotees of the two disciplines. The dates are 03 through 07 December, for [IBE 214](#), and 07 through 10 December for [IBE 215](#), at IHM Retreat & Conference Center, Santa Fe, New Mexico. The largest congregation of students in one place in IBE's thirty-one year history.

Michael Conn, IBE Executive Director



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## Beyond Green

**IBE 312: Advanced Electromagnetic Radiation to be held December 2018, then in 2020.**



Join us from December 3-7 for our biennial Advanced EMR seminar. This intensive, hands-on seminar provides techniques for measurement and mitigation of man-made electromagnetic radiation (EMR). Featuring a week of solid labwork, instructors Larry Gust, Rob Metzinger, and Spark Burmaster will provide hands-on meter training to take your assessment abilities to a new level of professionalism. IBE 212 EMR (to be held 27-31 August) is a prerequisite for this advanced seminar. [Click here for info and to enroll.](#)

### Calendar of Coming Events

#### Upcoming IBE Events: 2018

[IBE 212 Electromagnetic Radiation](#) – 27 through 31 August, 2018, at IHM Retreat & Conference Center, Santa Fe, New Mexico.

[IBE 312 Advanced Electromagnetic Radiation](#) – 3 through 7 December, 2018, at IHM Retreat & Conference Center, Santa Fe, New Mexico.

[IBE 214 IEQ for Architects and Builders](#) – 2 through 5 December, 2018 at IHM Retreat & Conference Center, Santa Fe, New Mexico.

[IBE 215 Design for Health](#) – 7 through 10 December, 2018 at IHM Retreat & Conference Center, Santa Fe, New Mexico.

**Replacing Vacant Lots With Green Spaces Can Ease Depression In Urban Communities**

*From the WAMU 88.5 American University website:*

(A) study, [published Friday in JAMA Network Open](#), found that having access to even small green spaces can reduce symptoms of depression for people who live near them, especially in low-income neighborhoods.

Previous research has shown that green spaces are associated with better mental health, but this study is “innovative,” says Rachel Morello-Frosch, a professor at the department of environmental science, policy and management at the University of California, Berkeley, who wasn’t involved in the research.

“To my knowledge, this is the first intervention to test — like you would in a drug trial — by randomly allocating a treatment to see what you see,” adds Morello-Frosch. Most previous studies to look into this have been mostly observational.

Read the [full article here](#).



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## Your Environment Matters

### **2Thriving aims for a paradigm shift in healthcare clinician education**

*by Alison Main & Christopher Buonocore, BBEC, EMRS*



What happens when a building biologist, an environmental health writer, and a functional medicine practitioner team up? The answer lies in the partnership between Christopher Buonocore, BBEC, EMRS; Alison Main; and Melanie Dorion, NP, and their new Virginia-based organization 2Thriving.

Here, co-founders Alison and Chris sit down to talk about 2Thriving's origin, mission, and their upcoming October 27, 2018 conference in Staunton, Virginia, "[Healing Chronic Illness in a Toxic World. A Paradigm Shift in Medicine: Your Environment Matters.](#)"

#### **Q: What exactly is 2Thriving?**

**Alison Main:** 2Thriving is an organization dedicated to educating healthcare clinicians and professionals on the role of the environment in healing and preventing chronic disease. And by "environment," we mean that expansively. The "built environment" encompasses the buildings and structures where we live, also considering the psychological, social, and cultural components of the space. The "biological environment" includes our anatomical and physiological bodies, such as the foods we eat, the supplements we take, and our metabolic function. And the "regulatory environment" includes our public policies and legal statutes, essentially the overarching world-view climate, be that local or global.

**Chris Buonocore:** We believe there are a multitude of products, processes and choices that healthcare practitioners and professionals must make, both for themselves, their practice, and for their patients. Integrating all these disparate factors can seem both complicated and overwhelming. Much of the advice healthcare providers receive and accept is not coming from professionals or specialized sources. 2Thriving aims to change that.

**AM:** Most practitioners don't even realize the full scope of the picture to seek out this information. I know from first-hand experience the sheer impossibility of trying to heal in a sick environment. And my story is far from unique. For over a decade, dealing with worsening neuro-immune health conditions, I sought guidance from every type of clinician and specialist, from primary care doctors to Reiki masters. And in that time, not a single practitioner asked me about my environment, what was in my apartment, what technologies and products I used, how and where I used them. And that was the vital missing link. I was a resident of Manhattan at the time, and it was a New York building biologist, Matthew Waletzke, who first introduced me to the concept. Not a healthcare



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practitioner. And I only found my way to building biology through my own extensive research, not from any clinical direction.

**CB:** I too have a similar story. I remember asking my doctor over ten years ago how I could determine if my home was a problem for my health. He had very limited advice and did not suggest an indoor professional. And still today, we see that product companies, supplement companies, and diet methodologies are driving the decision-making in healthcare. When really, professional advice, diagnostics and expert interpretations should be the guiding hand. Functional medicine advice is a good idea. So is seeking an indoor professional to assess the home. Speaking to public policy leaders about the environmental issues in your area can be instrumental as well. Only now are we seeing the merging of these concepts. But healthcare clinicians need to know how to put it all together. That's what we are trying to do.

**AM:** Most everyone knows chronic illness and autoimmune diseases are on the rise. Clinicians and patients alike need to embrace that their environment is an essential component of healing and preventing these diseases and conditions. We want people to feel hope instead of hopelessness. There is an approach that can work. There are solutions. Most practitioners, despite all good intentions, just don't know about them.

**Q: What makes 2Thriving different from other environmental health organizations?**

**CB:** I don't believe anyone else has put together a functional medicine practitioner, an environmental specialist, and an environmental health writer on the same team.

**AM:** Not to mention, all three of us have very personal experience healing from complex chronic illness, and in the process navigating the roadblocks due to our healthcare providers' lack of awareness about environmental factors. So, together, we bring academic,

professional, and empirical knowledge in a very authentic way.

**CB:** We are sub-decade professionals, with similar beliefs, ideas, and visions, and we are collaborating to develop a cohesive picture to the modern problem at hand. I think it's important that we are partnering with each other at a younger age, so we can grow together. We aren't trying to stake our claim as old-school experts without communicating and connecting with the rest of the world. We realize we can't create meaningful and lasting change without continually dialoguing with others who are linked to the many facets of healthcare and public policy.

**AM:** We know this is much larger than just the three of us, so we want to get people in the same room and space together, talking and collaborating, and learning. The idea is to educate others, while we simultaneously observe and listen to what's happening around us, and within us. That's why our partnerships and connections are so important. Because we aim to educate those who can then help educate others.

**Q: How did the three of you come together to form this organization and launch a conference?**

**CB:** I don't remember who said it first, but we were sitting in Melanie's kitchen one evening talking. I mentioned a conversation I recently had with a nutritionist about the layers of environmental exposures and health. She said to me, "No one ever explains any of this." Then Melanie jumped in and said, "That's exactly the kind of stuff I never hear either. No one teaches us this in school, and no one talks about this at medical conferences." We all just looked at each other, and one of us said, "Well, we should do that."

**AM:** And so we did. It was a moment of collective awareness that we are all uniquely positioned and aligned to put this together. There's a tremendous deficit of knowledge in the healthcare sector, to the patients' ultimate detriment, and the clinicians' frustration. And



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that's across all healthcare disciplines – from neurology to naturopathy, from health coaching to acupuncture. Melanie experiences this first-hand at work every day, as she sees a mounting list of complex chronically ill patients coming into her office. We wanted to create an organization with corresponding educational events and partnerships to fill that gap.

**CB:** That's another reason why we all got here... because we're all educators. I consider my business LifeSource Environmental Solutions a research and education company. Sure, I have a whole lot of meters and a whole lot of technical methods, and all of that is interesting and helpful, but it doesn't mean anything unless you can explain to people how to apply it, and what to do with it. I make my clients part of the process, so they have a certain equity in it. That way, they don't forget what to do, whether it's unplug their router, or replace a consumer cleaning product. Melanie is an educator as well, with her business Pentad Integrative Health, she's creating online modules on integrative medicine topics for clinicians; and she regularly lectures at medical conferences. And Alison is an educator too, through her work with Environmental Health Trust, and her writing and research. Alison's articles are well-documented and make concise correlations on highly specialized and thought-provoking topics, taking you from the unknown to the known.

**AM:** I regularly interview a gamut of international clinicians, academics, and scientists. And I've come to see a pattern. Medical practitioners are being faced with more and more patients that are experiencing an intense degree of chronic illness. And our holistic environment is becoming more toxic. If nothing changes, chronically ill patients will grow to a much larger percentage of the population. The solution is a lot more than just a cabinet filled with supplements. And consider this: Let's say you've been sick for many years. You're journaling symptoms and triggers, and logging elimination experiments, and you may conclude, "Hey, I feel unwell inside my house. But, I feel well outside the house. Something in my house must be making me sick." So,

you'll do some research and discover these awesome people called building biologists! And you'll hire one of them for a home assessment and mitigate what's possible. But even at that phase, if you're fixing your built environment, but you're neglecting your nutrition, lifestyle, exercise, and community, and you're letting the world around you fall apart, you're still not going to heal. Clinicians need to know how to direct patients on all these levels.

**Q: Tell us about your upcoming conference, and what makes it different from other health conferences today?**

**AM:** We are launching an on-site conference on October 27, 2018 in Staunton, Virginia at Mary Baldwin University. "Healing Chronic Illness in a Toxic World. A Paradigm Shift in Medicine: Your Environment Matters" is a full-day, workshop-format integrative health event, bringing together expert clinicians, home environmental specialists, and public policy officials. Morning lectures will segue into afternoon hands-on small group workshops, where attendees will learn directly from the speakers. The idea is to go from professional theory to practical application in the same day, so everyone returns home with actionable solutions.

**CB:** This format breaks with traditional conference norms. People typically leave conferences feeling like they've been lectured at for twelve hours, too overwhelmed to remember the onslaught of information thrown at them. They rarely get their questions answered or a chance to talk one-on-one with a speaker. We are giving people the opportunity to apply what they learn in an interactive format, have meaningful conversations, and establish real connections they can take beyond the event itself.

**AM:** We've intentionally capped our speaker line-up to four expert professionals, to allow for significant interaction and individual dialogue. Speakers will also lead their own workshops, and we've chosen four key and



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interrelated environmental health topics. Dr. Aly Cohen, founder and medical director of The Smart Human will be speaking on *“Proactive Approaches to Reduce Environmental Exposures: Avoidance, Lifestyle Changes, and Practical Resources.”* Theodora Scarato, executive director of Environmental Health Trust, will talk about *“Prioritizing Protective Policy for Wireless and Electromagnetic Fields in the United States: Public Health Needs and Solutions for Meaningful Change.”* Chris will discuss *“The Influence of Electromagnetic Radiation on Indoor Air Quality: Reducing Chemical, Biological and Electromagnetic Exposures.”* And Melanie will address *“How Nutritional Deficiencies Impact Detox and Chronic Illness.”*

**CB:** Our conference is so different because you get a workshop with a person who is directly in that field. Aly Cohen is an environmental medicine physician who pulls everything together in her practice and her business. Melanie Dorion is a functional medicine clinician who does a lot of practical testing on clients. Theodora Scarato is a major public policy leader at the forefront of the environmental health arena. From our speakers to our exhibitors and partners, everyone participating in and supporting our conference is actively involved in making change right now. It’s rare to get access to these experts for a full day.

**AM:** Essentially, we wanted to recreate that experience of the three of us sitting around Melanie’s kitchen table, sharing ideas, strategies and challenges. It’s capturing that type of intimate dialogue and intelligent connection, just on a larger scale.

**Q: How do your different professions contribute to your organization?**

**CB:** Building biology gives a great overview of many concepts that affect health, such as the structure of the building, the way you clean it, the way you maintain it, the construction, the materials used to build the structure, the electrical system, all the chemical exposures from the

product sector. So you consider all these products in the built environment, and the effect it has on people. All of that really plays a major role in your health.

**AM:** I half-jokingly tell people that “I write about all the things we don’t realize we’re doing to kill ourselves.” But really, I write to educate people, and provide resources for further information, so they can make positive decisions in their own lives. My work with Environmental Health Trust has really bridged the public policy connection for me. I’ve had somewhat of a multifaceted career, as I’m also a seasoned creative director, crafting integrated campaigns to launch and promote large-scale events and conferences. This was advantageous for us to get a conference launched as our inaugural event. Plus, adding a creative element to our partnership enables us to blend something that is scientific and educational, with something that is also artistic and inspirational. I don’t think any other organization has such a dynamic. It fosters an authentic energy to how we connect with our audience and our partners, and how we connect with each other. And I think that shows.

**CB:** None of this exists in a vacuum. Everything we do is interrelated. And, speaking toward our other co-founder, Melanie is a healthcare practitioner who first-hand experiences and articulates the continued challenges of seeing more and more patients with environmentally acquired illness. She is constantly learning new concepts and adapting new strategies to help her patients manage their illnesses and heal. And she’s one of the very few practitioners currently aware of the levels of complexity needed to address such patients. The goal is to get practitioners to consider environmental factors at the forefront. It’s something we’ve individually been doing with our own work, but Thriving and our upcoming conference offers a much larger platform.

**Q: So is this a missing link for a lot of healthcare practitioners?**



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**CB:** Absolutely. Because the practitioner gives the patient a protocol – they tell them exercise, eat right, be cautious with personal care products. But the clinician never sees how the patient applies these protocols at home. We often think our health problems will be solved by taking a pill, or the right exercise regimen, or optimizing our routine. But, we overlook the place where we do all of that. And that's why optimizing the space is key. And educating clinicians is a high priority.

**AM:** We've all seen trends, patterns, and certain directions in healthcare, clinical practices, and home health. And we've witnessed and experienced a lot of wrong directions, so the question becomes – how can we help clinicians right those mis-directions for their practice and their patients? That answer is going to continually evolve as our society and our world changes. Just like our conference format is dynamic and interactive, our organization itself is not meant to be static, because the nature of these educational needs will shift with changes in people, circumstances, and the external environment.



Alison Main is a freelance writer with an expertise in environmental health, electromagnetic safety, chemical safety, technology addiction, regulatory policy, and building biology. She has been published in Paleo Magazine, Craftsmanship Magazine, Best Self Magazine, Notre Dame Magazine, NaturalHealth365.com and other print and digital publications. She graduated Phi Beta Kappa, Summa Cum Laude with a B.A. in English and Economics from the University of Notre Dame, and she holds a degree in Graphic and Digital Design from Parsons School of Design. She is a member of the American Association for the Advancement of Science (AAAS) and an affiliate member of the International Society for Environ-

mentally Acquired Illness (ISEAI). Her website is <http://www.alisonmain.com/> and she can be reached at [alison@alisonmain.me](mailto:alison@alisonmain.me).



Christopher Buonocore, BBEC, EMRS has a B.S. in Indoor Health and is a certified Building Biology Environmental Consultant (BBEC) and Electromagnetic Radiation Specialist (EMRS). He has adapted 40 contact hours of FEMA Chemical, Biological, Radiological, Nuclear & Explosive (CBRNE) Awareness training scaled to residential applications. Chris considers exposures emerging from indoor sources as well as from external sources and offers a holistic approach employing ethnography and physical exposures to uncover the sources of environmental conditions affecting your health. A particular interest is placed in creating safe living spaces for those suffering with Electro-Hypersensitivity (EHS), Multiple Chemical Sensitivities (MCS), Lyme Disease, Mold toxin exposures and injured veterans. His website is <http://www.thelifesourcesolution.com/> and he can be reached at [chris@thelifesourcesolution.com](mailto:chris@thelifesourcesolution.com).

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***2Thriving is offering IBE graduates, students, and EcoDwell readers a special discount on registration for the “Healing Chronic Illness in a Toxic World” conference. Use code IBE at checkout for only \$195/ticket.***

***To register, visit <http://www.2thriving.com/>***

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## 5G: Great risk for EU, U.S. and International Health!

### Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field (EMF) Exposures and the Mechanism that Causes Them

by Dr. Martin Pall

#### Summary:



We know that there is a massive literature, providing a high level of scientific certainty, for each of eight pathophysiological effects caused by non-thermal microwave frequency EMF exposures. This is shown in from 12 to 35 reviews on each specific effect, with each review listed in Chapter 1, providing a substantial body of evidence on the existence of each effect. Such EMFs:

1. Attack our nervous systems including our brains leading to widespread neurological/neuropsychiatric effects and possibly many other effects. This nervous system attack is of great concern.
2. Attack our endocrine (that is hormonal) systems. In this context, the main things that make us functionally different from single celled creatures are our nervous system and our endocrine systems – even a simple planaria worm needs both of these. Thus the consequences of the disruption of these two regulatory systems is immense, such that it is a travesty to ignore these findings.
3. Produce oxidative stress and free radical damage, which have central roles in essentially all chronic diseases.
4. Attack the DNA of our cells, producing single strand and double strand breaks in cellular DNA and oxidized bases in our cellular DNA. These in turn produce cancer and also mutations in germ line cells which produce mutations in future generations.
5. Produce elevated levels of apoptosis (programmed cell death), events especially important in causing both neurodegenerative diseases and infertility.
6. Lower male and female fertility, lower sex hormones, lower libido and increased levels of spontaneous abortion and, as already stated, attack the DNA in sperm cells.
7. Produce excessive intracellular calcium [Ca<sup>2+</sup>]<sub>i</sub> and excessive calcium signaling.
8. Attack the cells of our bodies to cause cancer. Such attacks are thought to act via 15 different mechanisms during cancer causation.

There is also a substantial literature showing that EMFs also cause other effects including life threatening cardiac effects (Chapter 3). In addition substantial evidence suggests EMF causation of very early onset dementias, including Alzheimer's, digital and other types of dementias (Chapter 3); and there is evidence that EMF exposures in utero and shortly after birth can cause ADHD and autism (Chapter 5).

Each of these effects is produced via the main mechanism of action of microwave/lower frequency EMFs, activation of voltage-gated calcium channels (VGCCs) (Chapter 2). Each of them is produced via

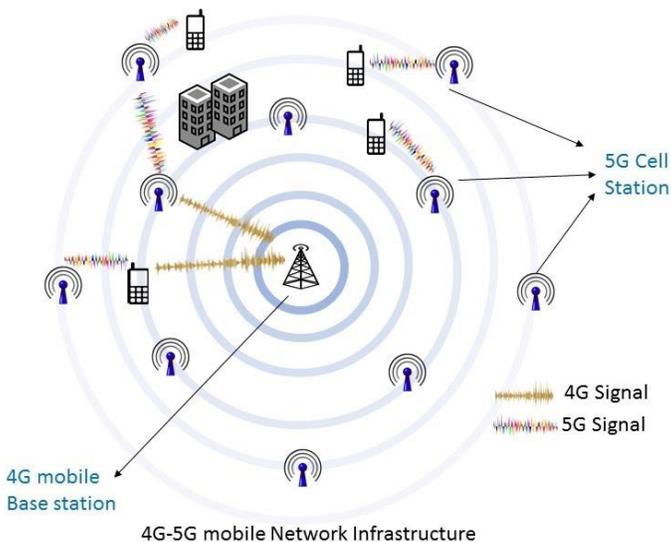


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what are called downstream effects of VGCC activation. It follows from this that we have a good understanding not only that these effects occur, but also how they can occur. The extraordinary sensitivity of the VGCC voltage sensor to the forces of the EMFs tells us that the current safety guidelines allow us to be exposed to EMF levels that are something like 7.2 million times too high. That sensitivity is predicted by the physics. Therefore, the physics and the biology are each pointing to the same mechanism of action of non-thermal EMFs.



The different effects produced are obviously very deep concerns. They become much deeper and become existential threats when one considers that several of these effects are both cumulative and eventually irreversible. There is substantial evidence for the cumulative nature and eventual irreversibility of the neurological/neuropsychiatric effects, of the reproductive effects, the mutational DNA effects, the cardiac effects, of some but not other of the hormonal effects (Chapter 3); any causation of ADHD and autism may add additional concerns (here the cumulative

nature is probably limited to the perinatal period). When we know that sperm counts have dropped by more than 50% throughout the technologically advanced countries on earth, it is difficult to avoid the conclusion that the vast majority of the population in those countries is already substantially impacted. The same conclusion can be made based on the widespread nature of the neuropsychiatric effects in those countries. Both of those effects will get much much worse even with no increase in current exposures, due to the cumulative nature and irreversibility of these effects. I expect we will see crash in human reproduction almost to zero as happened in the Magras and Xenos mouse study which I estimate to occur within about 5 years, without any increases in our exposures. Obviously 4G and 5G will make the situation much worse. Similarly I expect that the deterioration in brain function that we are already seeing will seal our fate if we fail to act rapidly and vigorously. Our collective brain function may become completely incapable of dealing with such a mega-crisis situation.

Now it can be argued that some of these may not develop as I expect, although those expectations are based on the best available evidence. One may even be able to argue this for all of those expectations. However, when we have substantial risk of multiple existential threats to every single technologically advanced country on earth, failure to act vigorously means there is a very high probability of complete destruction of these societies. And the chaos which would inevitably ensue, in a world that still has nuclear weapons, may well lead to extinction. In the face of these types or risk, the only reasonable course is to move with great vigor to stop new exposures and lower current exposures. One can still access the internet, using wired connections. And we can lower cell phone tower and cell phone radiation substantially. Smart meters, if needed, can work via wired connections.



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Over 60% of this document (Chapters 5 & 6), is focused on the failures of statements from SCENIHR, the telecommunications industry, the U.S. FCC and the U.S. FDA to reflect the science. Their statements repeatedly omit much, often all of the most important science. Their statements are rife not only with omissions, but also with easily demonstrable falsehoods and with false logic. These have often occurred at times where we know that they knew better. These have occurred along with vigorous efforts by the telecommunications industry to corrupt the science by attacking individual scientists whose only fault is that they have obtained important findings that the industry does not like. These attacks have occurred along with vigorous efforts to corrupt two agencies that have important regulatory roles.



**5G will blanket neighborhoods in an inescapable net of electromagnetic radiation.**

There are also possible concerns about individual industry-linked research studies. All wireless

communication devices put out polarized EMFs that carry information via pulsations. Both the pulsations and the polarization make these EMFs much more biologically active. There are three other factors that also influence the production of effects. Several industry-linked studies may have used these factors, along with using very tiny numbers of individual animals in their studies, to produce studies which may have been designed to fail (Chapter 5). It is not clear at this point whether this type of concern is quite limited or whether it is very broad.

The European Commission has done nothing to protect European citizens from any of these very serious health hazards and the U.S. FDA, EPA and National Cancer Institute have done nothing to protect American citizens. The U.S. FCC has been much worse than that, acting vigorously with wanton disregard for our health.



*Dr. Martin Pall, Ph.D, holds a BA degree in Physics, with honors, Phi Beta Kappa, at Johns Hopkins University, and earned his Ph.D. in Biochemistry and Genetics at Cal Tech. He is Professor Emeritus of Washington State University, in Biochemistry and Basic Medical Sciences. He has received eight international awards for his work in environmental medicine and research into the impact of chemical exposure on human health. A published a paper in 2013 on the “mechanism of action” in EMF exposure, and how EMFs impact the cells of our body.*

*In 2010: Dr. Pall was appointed life-time, honorary ambassador and member of the scientific advisory board of the International Society for Applied Preventative Medicine). Dr. Pall is a founding faculty member of the new Environmental Medicine Faculty in Italy. He is American Academy of Environmental Medicine's 2014 recipient of the Jonathon Forman Award.*