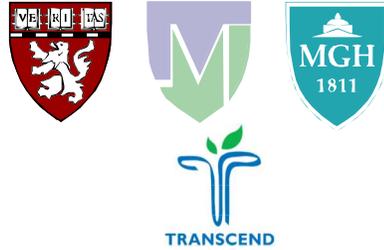


## HARVARD MEDICAL SCHOOL

Martha R. Herbert, Ph.D., M.D.  
Assistant Professor, Neurology  
Director, TRANSCEND Research Program  
www.transcendresearch.org  
transcend@partners.org



## MASSACHUSETTS GENERAL HOSPITAL

Martinos Center for Biomedical Imaging  
149 13<sup>th</sup> Street, Room 2<sup>nd</sup> Floor  
Charlestown (Boston), Massachusetts  
02129

Phone: 617-724-5920  
martha.herbert@mgh.harvard.edu  
<https://connects.catalyst.harvard.edu/profiles/display/Person/47629>

9 September 2016

District Office  
200 Douglas Street  
Petaluma, California 94952

Dear Petaluma City School District,

I am a pediatric neurologist and neuroscientist on the faculty of Harvard Medical School and on staff at the Massachusetts General Hospital. I am Board Certified in Neurology with Special Competency in Child Neurology, and Subspecialty Certification in Neurodevelopmental Disorders. I have an extensive history of research and clinical practice in neurodevelopmental disorders, particularly autism spectrum disorders. I have published papers in brain imaging research, in physiological abnormalities in autism spectrum disorders, and in environmental influences on neurodevelopmental disorders such as autism and on brain development and function.

A few years ago I accepted an invitation to review literature pertinent to a potential link between Autism Spectrum Disorders and Electromagnetic Frequencies (EMF) and Radiofrequency Radiation (RFR). I set out to write a paper of modest length, but found much more literature than I had anticipated to review. I ended up producing a 60 page single spaced paper with over 550 citations. It is available at [http://www.bioinitiative.org/report/wpcontent/uploads/pdfs/sec20\\_2012\\_Findings\\_in\\_Autism.pdf](http://www.bioinitiative.org/report/wpcontent/uploads/pdfs/sec20_2012_Findings_in_Autism.pdf) and it was published in a revised and somewhat shortened form in two parts in the peer reviewed indexed journal Pathophysiology (2013).

More recently I published an article entitled "Connections in Our Environment: Sizing up Electromagnetic Fields," in Autism Notebook Spring 2015 edition. In this article I describe how there is a whole series of problems at the cellular, sub-cellular and metabolic levels and immune levels that have been identified in autism. And interestingly, for every single one of those problems, there's literature about how EMFs can create those kinds of problems.

The argument I made in these articles is not that EMF is proven to cause autism, but rather, that EMF can certainly contribute to degrading the physiological integrity of the system at the cellular and molecular level – and this in turn appears to contribute to the pathogenesis/causation not only of autism but of many highly common chronic illnesses, including cancer, obesity, diabetes and heart

disease.. Please see this article on page 24-25 at the link <http://virtualpublications.soloprinting.com/publication/?i=252361>

In fact, there are thousands of papers that have accumulated over decades –and are now accumulating at an accelerating pace, as our ability to measure impacts become more sensitive – that document adverse health and neurological impacts of EMF/RFR. Children are more vulnerable than adults, and children with chronic illnesses and/or neurodevelopmental disabilities are even more vulnerable. Elderly or chronically ill adults are more vulnerable than healthy adults.

Current technologies were designed and promulgated without taking account of biological impacts other than thermal impacts. We now know that there are a large array of impacts that have nothing to do with the heating of tissue. The claim from WiFi proponents that the only concern is thermal impacts is now definitively outdated scientifically.

Radiofrequency electromagnetic radiation from WiFi and cell towers can exert a disorganizing effect on the ability to learn and remember, and can also be destabilizing to immune and metabolic function. This will make it harder for some children to learn, particularly those who are already having learning or medical problems in the first place. And since half of the children in this country have some kind of chronic illness, this means that a lot of people are more vulnerable than you might expect to these issues.

Powerful industrial entities have a vested interest in leading the public to believe that EMF/RFR, which we cannot see, taste or touch, is harmless, but this is not true. Please do the right and precautionary thing for our children.

I urge you to opt for wired technologies in Petaluma City School District classrooms, particularly for those subpopulations that are most sensitive. It will be easier for you to make a healthier decision now than to undo misguided decisions later.

Thank you.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Martha Herbert', with a long horizontal flourish extending to the right.

Martha Herbert, PhD, MD