June 17, 2020

Ms. Marlene H. Dortch Secretary, Federal Communications Commission 445 12th Street, SW Washington, DC 20554

RE: Comments on the FCC's Proposed Rule (Docket No. 19-226): "Targeted Changes to the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields"

Dear Ms. Dortch,

As medical and public health professionals, we are writing to express our opposition to the above captioned rule because of the Commission's failure to adequately consider the established and newly emerging science on RF microwave radiation and its impact on human health, particularly for vulnerable populations.

First and foremost, the proposed rule completely ignores the documented adverse health effects that can occur at the FCC's current radiofrequency (RF) exposure limits, much less those that may occur at the expanded range of frequencies contemplated in the proposed rule. That the Commission fails to even mention 'health effects', 'toxicity', or 'carcinogenicity' anywhere in this document is astonishing, given the extensive and expanding scientific literature currently available and the Commission's obligation to ensure the "safety of life" for all Americans as set forth in the Communications Act of 1934.

To address the specific issues raised in the proposed rule, we offer these comments:

Response to Paragraphs 125 and 126 - The Commission appears to be pushing ahead with plans for the next generation of wireless while scientists are still documenting evidence of cancer and other biological harms from 2G, 3G and 4G exposures. There are no human or animal studies yet on these much higher frequencies, but an absence of studies does not mean an absence of harm. The Commission's own admission that it is unaware of adverse non-thermal effects demonstrates either a failure to actively investigate the issue and engage with scientists studying the short and long-term biological impacts to the human population and possible interference with systems of the natural world, or a conscious effort to disregard science to facilitate the rapid deployment of new technologies to benefit industry.

**Response to Paragraphs 131-135** - Averaging RF microwave exposures over time may be convenient for manufacturers seeking to comply with FCC limits, but this is not how humans experience these exposures. To our knowledge, there is no scientific basis for the claim that periodic, high-level exposures are not harmful. As one scientist remarked recently, the average wind speed in Tornado Alley is 6 miles per hour.

As such, we do not support the proposed change to allow manufacturers to produce wireless devices that govern their own radiation power output by averaging radiated power, especially for notebooks and tablets frequently used by children who, according to the International Agency for Research on Cancer (IARC), are more vulnerable to RF radiation than adults. Given the increasing use of wireless devices by children and adolescents, we encourage the FCC to seek out and utilize testing protocols that reflect real-world situations as has been suggested by the American Academy of Pediatrics (AAP). The FCC should establish temporal limits for both Specific Absorption Rate (SAR) and power density.

Response to Paragraphs 141-143 - We recommend that before the Commission considers even tentative approval of Wireless Power Transfer (WPT) devices operating at ranges in excess of 50 cm., that it first require manufacturers to conduct pre-market testing to demonstrate the safety of such devices when used in all possible "worst case" scenarios, and to develop mitigation techniques that can limit or eliminate inadvertent or collateral damage to the public. Such an analysis must include consideration of non-thermal biological impacts.

\* \* \*

Science moves slowly, and while this may be inconvenient for the restless purveyors of wireless technologies, it does not excuse the Commission from its obligation to protect public health and safety. Thus, considerations of human safety must come first in any decisions made by the Commission and we strongly urge the FCC to reconsider and re-evaluate its RF exposure standards with full consideration of potential adverse health effects for the general public as well as for occupational exposures.

Americans are entitled to know the full extent of any potential health risks associated with exposure to RF microwave radiation, particularly at this time when wireless companies are busy installing hundreds of thousands of new wireless antennas in close proximity to homes and apartments. The determination of risk can best be evaluated from properly conducted, independent studies. The alternative of waiting for decades to learn whether or not these exposures increase disease rates in human populations and in the natural world is a dangerous and irresponsible strategy.

Thank you for your consideration of these comments.

## Sincerely,

Fatima Saleh Ahmed AlHammadi, MD Bill Akpinar, MD George Allibone, MD Jeffrey L. Anderson, MD Anthony M. Aurigemma, MD Tiffany Baer, MD Ricardo Bartelme, MD Chandramohan Batra, MD Alex Bekker, MD Les Berenson, MD
Robin A Bernhoft, MD
Mario Brus, MD
Marie-Claire Buckley, MD
Larry Burk, MD
Julie Calderwood, MD
Dawn L. Cannon, MD
Hyla Cass, MD
Ram Chandra, MD

Perry A. Chapdelaine Jr., MD

Rowena Chua, MD Catherine Clark, MD Wendy S. Cohen, MD Angela Colbeck, MD Eric Cordon, MD Ann F. Corson, MD

Rabbi Gabriel Cousens, MD Jennifer M. Cunningham, MD

Scott Cunningham, MD Geraldine DePaula, MD Laurel DeStefano, MD

B. Dudney, MD Ron Dushkin, MD Larysa Dyrszka, MD David Eisenberg, MD Erica Elliott, MD Barbara Entl, MD Darren Esposito, MD Jill Fetell, MD

Mitchell A. Fleisher, MD Barbara Rugo Focht, MD

Kelly Fox, MD

Jonathan T. Franklin, MD Tracy Freeman, MD Mary Gabriele, MD Kathryn Gill, MD Sharon Goldberg, MD Martha M. Grout, MD George Guess, MD Korianne Haas, MD

Travis L. Herring, MD Richard Horowitz, MD Jason Hurbanek, MD April M. Hurley, MD Toril H. Jelter, MD Richard Johnson, MD Janis Johnson, MD

Karen Harris, MD

Faiz Khan, MD Gabriele Knaus, MD Benjamin Kohn, MD Laura Koniver, MD Athena Kostidis, MD

Sudha Kailas, MD, PhD

Constantine A. Kotsanis, MD

Daciana Lancu, MD Kim Lane, MD Laura Lasater, MD Chris Lawinski, MD

Carol Lien-Kieu Thi Le, MD

Ching Lee, MD Alice Lee, MD Megan Leivant, MD Edward Levitan, MD Tudor Marinescu, MD Anton Mathey, MD

Sherman McCall, MD, PhD Stephanie McCarter, MD Julia W. McCutcheon, MD Joseph McNamara, MD Richard Mills, MD

Joseph T. Morgan, MD, FAAP

Leah Morton, MD Jeffrey Mueller, MD Gudrun Murti, MD Sonya Naryshkin, MD Neil Nathan, MD

Raymond Richard Neutra, MD, PhD

Mona Nicolae, MD Kathleen Nolan, MD Baran Nosratpour, MD Nicholas J. Nossaman, MD Michelle O'Neill, MD Greta N. Park, MD Michelle Perro, MD Alan Peterson, MD

Laura Pines, MD
Lawrence A. Plumlee, MD
Angel Polimeni, MD
Divray Prahbat, MD
Edwin M. Quiñones, MD
Miriam Rahav, MD
Rohit Ramanath, MD
Ezra B. Riber, MD
Bruce Rind, MD
Ronald D. Rosen, MD

Robert Jay Rowen, MD Steven Roy, MD

Cindy Lee Russell, MD Natalie Sadler, MD Yusef Saleeby, MD Irene Sebastian, MD, PhD
Michael Selden, MD
Mark Shebuski, MD
Debbi Silverman, MD
Marjorie Slankard, MD
Allan Spreen, MD
William M. Steely, MD
Yai Supawit Burankul, MD
Teresa Belle Su, MD
MaryKelly Sutton, MD

MaryKelly Sutton, MD
Carol Taccetta, MD
Wallace Taylor, MD
Shadi Tehrani, MD
Glenn A. Thomas, MD
Glenn Tillery, MD
Judy Tsafrir, MD
Jonathan Vellinga, MD
Alan R. Vinitsky, MD

Drue O. Wagner, MD
Mignon Walker, MD
Bradford S Weeks, MD
Richard Wilkerson, MD
Jane Deborah Williams, MD
Kenneth A Wolkoff, MD
Savely Yurkovsky, MD
Anne Zuzelski, MD
Reem Abu-Sbaih, DO

Judith Aldrich, DO Muneer Ali, DO Runa Basu, DO Sunil Bhat, DO Anthony Biano, DO Elliott S Blackman, DO Jacqueline Chan, DO Sheree Cloer, DO

Elva Jo Edwards, DO Anthony M Fernandez, DO

Bill Foley, DO

Karin Cseak, DO

Rebecca Frye, DO, MPH
James E. Gaydos, DO
Daniel Gibbons, DO
Melanie Gisler, DO
Jacey Goddard, DO
Harold Goodman, DO
Edward Hagen, DO

Robert Lee, DO Patricia Leone, DO Claudia Marcelo, DO Lisa Milder, DO

Christine Mitchell, DO Jason Nurnberg, DO Kate Peters, DO Rena Salyer, DO Zohra F Siddiqi, DO Kim Tripp, DO, PhD Michelle Veneziano, DO Rajiv Yadava, DO

William Domb, DMD Kelly Butler, DDS Harry Chadha, DDS Fen-Hui Chen, DDS Richard Crum, DDS Dennis Mihalka, DDS Christelle Renta, ARNP Angela Agrios, ND Marc C Bricca, ND Carol Cuenca, ND

Sally Boyd Daughtrey, ND Lindsey Louise Donahue, ND

Petra Dorfsman, ND Alexander Haskell, ND Melissa Sophia Joy, ND Rachel Roberts Oppitz, ND

John Ruhland, ND Lee Samatowic, ND

Steven Sandberg-Lewis, ND

Katharine Ayers, DC Debby Baskin, DC George Burdi, DC Brenda Davis, DC John R. De Cotiis, DC Fred DiDomenico, DC Michael S. Evangel, DC Jennifer Finkbeiner, DC

Ed Grauke, DC

Michon Hawkins, DC

Jere Jarrett, DC Keith Jassy, DC Lori Morris, DC Tammy Ruefli, DC Nicholas H. Schar, DC Kris Van Oeveren, DC Dale Schusterman, DC

William Thornton, DC, NMD Thomas Tumbarello, DC Spencer G. Williams, DC

Rick Wren, DC

Rachna Kapoor, MPH Abby Kurth, MPH

Angelo Aguila, RN, MSN Alexandra J Attie, RN, BSN Rebekah Bankowski, RN

Tuesday Benavidez-Knight, RN

Betty Bente, RN
Pamela M Berndt, RN
Chris Calkins, RN
Francine Cannata, RN
Manju Carrow, RN
Su Chase-Ziolek, RN
Virginia Corliss, RN
Huguette Cormier, RN

Barbara Cruickshank, RN, MSN

Jennifer Dages, RN, BSN Veronica DeMaria, RN Jennifer Erenberg, RN Diane Ferguson, RN, MSN

Janice Flatto, RN
Judy Fleming, RN
Natalie Ford, RN
Ella Gonik, RN
Cindy Gough, RN
Teresa Gregurek, RN
Christen Renee Greto, RN

Diane Grevell, RN

Pamela A Grusauskas, RN

Chauna L Hall, RN Sharon Hansen, RN Terry Hawkinson, RN Diane Hayes, RN, BSN Joanne Hibbert, RN Sabre Reign King, RN Gayle Klor, RN Ann Kosel, RN, BSN

Shirlynn LaChapelle, RN, BSN, MSN

Ronda L. Lawrence, RN Deborah Lazar, RN Sara Lobato, RN, BSN Denise LoGuidice, RN Terra Louise, RN

Alexandra J Lynch, RN, BSN

Angela Lyubarsky, RN

Mary Ann Masesar, RN, BN

Kim McGee, RN Cynthia McGrane, RN Pat Metcalf, MSN, ARNP Thomas Messinger, RN Margie Miller, ARNP Rabab Mohsin, RN

Janine Morrell, BSN, MSN, ARNP

Julie Mummert, RN Sarah Murray, RN BSN Tracy Navar, RN Jessica O'Byrne, RN Susan Pegram, RN James Perloff, RN Anna Pritchard, RN

Joseph A. Querciagrossa, RN Harriet McCoy, ARPN Christelle Renta, ARNP Aleka Ruggiero, RN

Cynthia Saint Cyr, RN, MSN Melinda Salvestrin, RN Jeanne Sandecki, RN, BSN

Jeanne Schirm, RN
Rebecca Serkez, RN
Laura Sheehan, BSN, DC
Rebecca J. Smith, RN
Jindriska Stewart, RN
Margaret Sutherlin, RN
Mary E Tiplady, RN
Angela Thompson, APRN
Kathy Urratia, RNC

Carolyn Walker, MSN, ARNP

Marki Webber, RN

Amy Weiss-Friedman, RN, BSN

Randye L. Williams, RN Laura Williams, RN Nancy Williams, RN Mara Williams, RN, MSN Brenda S. Wolfe, RN Kathy Allard, PhD Ruth Anderson, PhD

Bhaskar Banerji, PhD

Forian Braich, PhD, DDS Marissa Brand, PhD Tom Bulter, PhD

William Collinge, PhD, MPH

Steven Fenwick, PhD Roberta Godbe-Tipp, PhD Joaquim I Goes, PhD Elizabeth A Goldblatt, PhD

Molly Hauck, PhD Paul Héroux, PhD Olle Johansson, PhD Ellen Kamhi, PhD, RN Mahin Khatami, PhD Henry Lai, PhD

M. Lynn Lamoreux, PhD Kathryn Luchok, PhD Trevor Marshall, PhD Grettel Martinez, PhD Deb Moore, PhD Robin Nemeroff, PhD Sylvia P Onusci, PhD, CNS

Molly Perkins, PhD Ouila Rider, PhD

Steven Schram, PhD, DC Richard Shane, PhD Diane M Testa, PhD

Lisa Tully, PhD

Christine VanderWoude, PhD

Linda (Angelique) Varsou-Papadimitriou,

PhD. MPH

Carolyne Yakaboski, PhD Kay A Baker, LMT

Shelly Allen, LSCW Ivy Amar, CAP

Carolyn B. Welcome, PA-C Mercedes Barnek, CCH

**Stacy Barnes** 

Raylene Blandino, PA-C

Michael Bohdan Slonetsky, LAc, OMD

Joe Bonacci, MS, LAc Susann Brady, APN Kelley Brooksher, HHC Joyce Brown, CNC Audrey Burstein, RRT Rita Campbell, MA HP

Antoinette Caruso, FNTP, CGP

Laurie Chaikin, OD, OTR Karen Christensen, HN

Susan Clark Laughlin, CNHP Lacey Cohen, ANCP-BC Heather Cunningham, LAc

Deana Darby, AHC

Lori Deutsch, DAOM, LAc

Jane E Maier, CN Laurie Eisler, MA Howard F. Robins, DPM Chris Fabijanic, LAc Debra Falkenberg, LPN

Brandon Ferro

Adriana Finnie, MFT JoAnne Fox, RT (CT) Ariela Friedman, MSW Elizabeth G Eisenberg, RAP Larisa Goldin, LMT, MBA Susan Greenberg, FNP-BC Jacqueline Greenfield

Shelley H. Lane, LAc, OMD Maureen Hartker, LAc Diane Hashem, PharmD

Rita Heinz, LCSW

Pauline Helen Spiros, MFT Shila Helmer, SLPA, MRET

Christina Hilderbrandt, CMT, CCM

David Holm, RRT-NPS Randy Ice, PT, CCS

Loretta Ivory, CMH, CNM

Elizabeth Jane Meaney, MPAS, PA-C

Allison Jobke, LPC, NCC Alexandra Kaufman

Lumiel Kim-Hammerich, LAc, DAOM

Shirley J. Knight Susan L. Johnson, PT

Barbara L. Lockwood, DPM Brandon LaGreca, LAc, MAcOM

Emma Lam, PT Michael Legge

Stephanie Leraris, RDH

Tina E. Lewis, MMSC, PA-C, CAQ Edward Lucey, MSW, LMSW Kathleen Lynn Cliff, LMT Margaret M. Glaser, NCSP Suzanne M. Harris, DC, FHP

Deborah Manke, ANP-BC, HNP

Karen McBride

Wayne Mosteller, PharmD

Nicole Cronkhite, LMT, E-RYT

Gustavo Padilla, EMT

Keith J. Pelletier, MHS, CCP, LP, MBA

Linda Piatt, APRN

Joan R. Polzin, LCSW, MSW

Sara Reeder, PA

Sarah Reilly, CNC

Colleen Reiter, RDH, MS

Christine Renaud, DC, FICPA, DACCP

Jillian Rifkind, LAc

Renee Russo, IACT

Sylvia Sanchez, MSTCM

Annie Scheppach, MS, CHHC

Benjamin Schwarcz, LMFT

David A. Schwietert, DC, DABCI

Ingrid Shequin, LAc

Joanne Sherrow, BSc

Robert Sprinkle, MSW

Darina Stoyanova, CCT

Jennelle Thimmesch, LMT

Robert Thompson, MS, RPh, BCNSP

Alice Tobin, EEMCP

Jody L. Truesdale, PA-C

Nancy Van Dover, DVM, OMD, LAc

Star Tyrell, DPT

Janice Winton, OTR/L

Carolyn B. Welcome, PA-C

Carol Wong, PT