



# Media Advisory

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## **“The BRAG™ Antenna Ranking of Schools” Grades School Children’s Exposure to Cell Antennas in U.S. State Capitols & Washington, D.C.**

**—Report recommends a setback of 1,500 feet for wireless  
infrastructure near schools<sup>1</sup>**

**April 21, 2010, Washington, D.C.** A new report, “The BRAG™ Antenna Ranking of Schools” (*BRAG™ Ranking*), will be unveiled next week by **Professor Magda Havas, PhD** of Trent University, Canada, along with Jim Turner, Esq., Chairman of **Citizens for Health**, Camilla Rees, Founder of [ElectromagneticHealth.org](http://ElectromagneticHealth.org), Janet Newton, President of the **EMR Policy Institute**, The ElectroSensitive Society, and Christine Hoch, Executive Director of **Moms for Safe Wireless**. The BRAG™ Antenna Ranking of Schools report will be introduced in a Media Teleconference on Wednesday, April 28<sup>th</sup> at 10:00 a.m. Eastern. RSVP to [Emily@electromagnetichealth.org](mailto:Emily@electromagnetichealth.org) for dial-in instructions.

The BRAG™ Ranking is the result of a multi-year study of school children’s potential exposure to cell phone antennas and base stations in U.S. state capitols prepared by Dr. Havas and students at Trent University, Canada. Exposure metrics for approximately 6,000 public and private schools were assessed. A composite grade was generated for each school based on 1) how close the nearest antenna was to the school, 2) how many antennas were located within 0.25 miles or approximately 400 meters (the distance within which scientific research documents mental, emotional and physical symptoms in adults), and 3) within 0.6 miles, or approximately 1 kilometer, from the school.

**Grades, and rankings, for individual schools, as well as a comparative ranking of state capitols, and the full 173-page BRAG™ Antenna Ranking of Schools report, are available on an embargoed basis at <http://files.me.com/magda.havas/jz62ck>.**

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<sup>1</sup> Note this does not apply to Wi-Max, a high-powered series of antennas being installed now across the U.S., for which the “return to background level” distance is likely to be much greater than 1,500 feet.

**The embargo will lift on Wednesday, April 28<sup>th</sup> at 10:00 a.m. Eastern. E-mail [Emily@ElectromagneticHealth.org](mailto:Emily@ElectromagneticHealth.org) for a password to view the BRAG™ report.**

## **School Color Code**

Each school evaluated is categorized with a *Color Code*: **Black** (for the most antennas near the school and the highest potential microwave exposure, i.e. BAD), **Red**, **Amber** and **Green** ('BRAG'). To be classified within the safest BRAG™ category, or "**Green**", the school would have no antennas within 0.25 miles and less than 6 antennas within 0.6 miles. To be classified as "**Black**", schools would have two of the three possibilities . . . closest antenna within 0.06 miles (~100 yards); more than 12 antennas within 0.25 miles and/or more than 75 antennas within 0.6 miles.

## **State Capitol Grade**

A composite grade reflecting antenna density near schools in each State Capitol was calculated using a weighted average of schools in the State Capitol ranked **Black**, **Red**, **Amber** and **Green**, giving a grade range of 0-100%.

## **Electromagnetic Hypersensitivity Symptoms Near Cellular Antennas<sup>2</sup>**

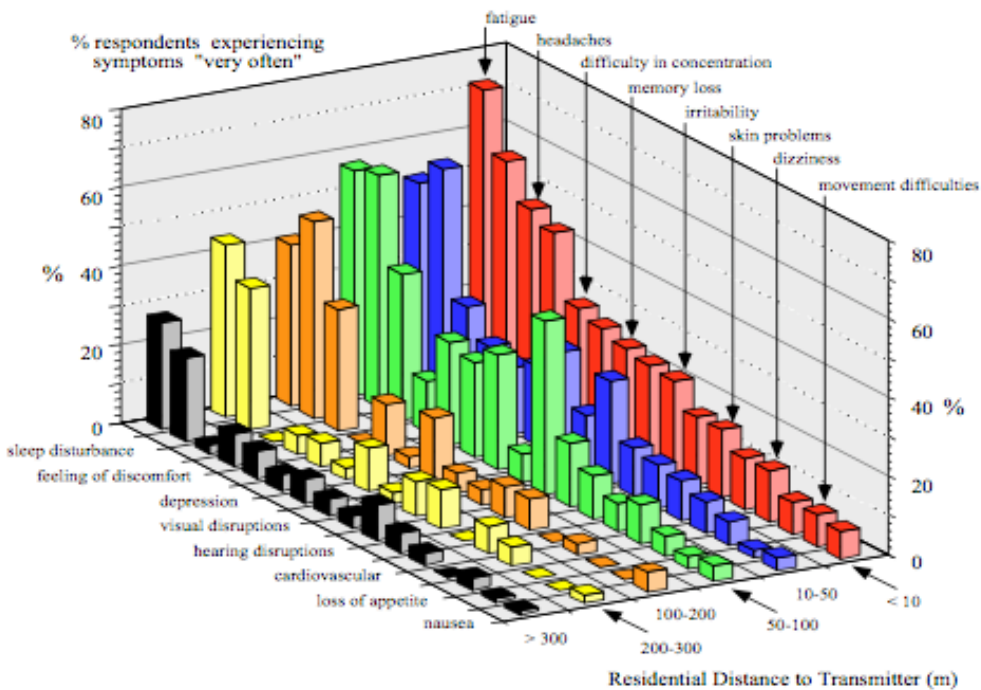
Professor Havas, PhD, says, "Symptoms people experience near cell phone antennas, within a 0.25 mile radius include: fatigue, headaches, difficulty concentrating, memory loss, irritability, dizziness, depression, visual disruptions, hearing disruptions and much more. Since we know children are more vulnerable to microwave radiation than adults, putting cellular antennas near schools, or on school premises, is a mistake." She adds, "If we want children to do their best academically, emotionally, physically and socially, schools should be *microwave-free*—free from ambient radiation from neighborhood antennas, as well as free from wireless internet."

See Figure 1, *Frequency of Electromagnetic Hypersensitivity Symptoms Based on Distance to Cell Phone Base Station* (Santini et al, 2002).

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<sup>2</sup> An extensive literature review of telecommunications infrastructure, including cell towers, will be published in 2010 by a peer-reviewed journal in Canada. The paper, entitled *Biological Effects from Exposure to Electromagnetic Radiation Emitted by Cell Tower Base Stations and Other Antenna Arrays*, is co-authored by award-winning medical/science journalist, B. Blake Levitt, and noted bioelectromagnetics researcher, Henry Lai, Ph.D. The literature reviewed contains over 100 citations, approximately 80% of which showed biological effects, many of which have adverse health implications.

**Figure 1. Frequency of Electromagnetic Hypersensitivity Symptoms Based on Distance to Cell Phone Base Station (Santini et al, 2002).**



Other research showing electrohypersensitivity symptoms experienced from cell phone base station emissions include a study from the Netherlands which found significant effects on well being, such as headaches, muscle fatigue/pain, and dizziness (TNO Study, 2003), as well as a study from Austria, demonstrating symptoms such as headaches, cold hands or feet, difficulty concentrating, tremors, loss of appetite and feelings of exhaustion (Hutter et al 2006).

Note that the maximum radiation exposure in the latter study was 0.4 microW/cm<sup>2</sup>, in contrast to the maximum exposure guideline in the USA for the general population of only 1,000 microW/cm<sup>2</sup> for a 30-minute exposure. *Thus, not only have symptoms of electrohypersensitivity been demonstrated at exposures that are a fraction (0.04%) of U.S. exposure guidelines, but the guidelines themselves do not take into consideration the effects of realistic exposure durations, such as chronic exposures experienced in school, office or residential settings.*

Beyond electrohypersensitivity symptoms near cell antennas, German doctors have found that the proportion of newly developing cancer cases is significantly higher among patients who live within 400 meters of a cell phone transmitter. The relative risk of getting cancer in the study increased by 200% after 5 years operation of the transmitter. (H. Eger et al., "The Influence of Being Physically Near to a Cell Phone

*Transmission Mast on the Incidence of Cancer” (Umwelt·Medizin·Gesellschaft 17,4 2004)).*

In Israel, Wolf et al (2004) similarly found that within 350 meters of cell phone antennas there was a 300% increased incidence of cancer among men and women and a 900% cancer increase among women alone.

## **The BRAG™ Recommendations for Schools**

**The BRAG™ Antenna Ranking of Schools report recommends the following:**

- 1. Schools, school districts, all municipalities and states call upon the FCC for a ruling that requires a 1,500 feet setback for any/all wireless infrastructure near schools.** This is the distance at which the scientific literature indicates acute symptoms of electrohypersensitivity are not noticeable and background levels of radiation return to normal from most cellular infrastructure<sup>3</sup>. Symptoms of electrohypersensitivity have been demonstrated at exposures that are a fraction (0.04%) of U.S. exposure guidelines, in part because the guidelines themselves only take into consideration a 30-minute exposure, not chronic exposures. Until guidelines are changed to reflect what the science shows is happening with longer exposures, a policy of “prudent avoidance” would justify setbacks for antenna infrastructure near schools.
- 2. Radio frequency radiation in school environments be monitored and documented on a regular basis, and especially after antennas are erected nearby or when new wireless technology is introduced into the school environment.**
- 3. If levels of exposure to radiofrequency fields, magnetic fields or dirty electricity exceed the BRAG™ recommendations for these frequencies, that steps be taken to reduce these exposures on school property.**
- 4. That health complaints of electrohypersensitivity reported by students and staff be taken seriously, that they be documented, and that appropriate steps be taken in a timely fashion to address the complaint. This involves education of teachers and nursing staff.**

The **BRAG™ Recommendations for Schools** also offers specific guidance for schools and school districts on how to minimize exposure to ‘electrosmog’, including remediation strategies to shield from cell phone and wireless

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<sup>3</sup> Note this does not apply to WiMax, a high-powered series of antennas being installed now across the U.S., for which the “return to background level” distance is likely to be much greater than 1,500 feet.  
BRAG™ Antenna Ranking of Schools, 2010.

communication, and exposures from magnetic fields and high frequency transients (i.e. dirty electricity) on wiring. It also provides links to scientific research on health issues in school settings.

Jim Turner, Esq., Chairman of **Citizens for Health**, says, “**The BRAG™ Antenna Ranking of Schools** is a wake-up call. The ‘*microwave-free schools*’ message must be heard loud and clear by school boards, school principals, teachers and parents groups”.

He adds, “It is imperative we encourage communities to create healthier learning environments for children.”

Claire Barnett, Executive Director, Healthy Schools Network, says, “As an organization that advocates for children’s environmental health, Healthy Schools has long supported a policy of “prudent avoidance of EMF’s”. The findings of this report indicate that states, communities, and schools are not practicing prudent avoidance around schools.”

### **Upcoming Media Teleconference Highlights–Wednesday, April 28<sup>th</sup> (10:00 a.m. Eastern –RSVP to [Emily@ElectromagneticHealth.org](mailto:Emily@ElectromagneticHealth.org))**

- Introduction to “**The BRAG™ Antenna Ranking of Schools**”
- 63% of students in State Capitols and D.C. (1.4 million students) are at possible risk for microwave radiation over exposure from nearby antennas
- **BRAG™ Top 5 State Capitols** and the **BRAG™ Bottom 5 State Capitols**
- Schools in 10 State Capitols have more than 100 Antennas within 0.25 mile
- Many schools across the U.S. have antennas on school property
- The Best-Ranked State Capitol was Richmond, VA, with a score of 87%, and the Worst Ranked State Capitol was Boston, MA with an overall score of 44%.
- Review of the “**BRAG™ Recommendations for Schools**” for EMF monitoring and remediation
- How to look up a school’s “BRAG™ Grade”
- Calculating a BRAG™ grade for schools NOT located in State Capitols, or for other locations such as hospitals, nursing homes, fire stations, homes, etc.
- **Review of existing science demonstrating biological effects** from microwave radiation, including molecular, cellular, physical, systemic and epidemiological evidence

- Review of **Resolutions and Appeals from Scientific and Medical Experts on EMF** during the last decade
- The failings of Government leading to the present scenario where radiation from hundreds of thousands of antennas is microwaving school children and teachers
- Arguments discounting the importance and urgency of this emerging public health issue from parties with commercial interests and ways one can respond
- **ANNOUNCEMENT OF 1<sup>st</sup> TELECLASS FOR PARENTS, TEACHERS AND SCHOOL ADMINISTRATORS WITH MAGDA HAVAS, PhD – Friday, May 7<sup>th</sup>** at 11:00 a.m. Eastern. RSVP Required. Capacity limited. Contact [Emily@ElectromagneticHealth.org](mailto:Emily@ElectromagneticHealth.org)

**Magda Havas, PhD** ([www.magdahavas.com](http://www.magdahavas.com)) is Associate Professor of Environmental & Resource Studies at Trent University, Canada, where she teaches and does research on the biological effects of environmental contaminants, including radio frequency radiation, electromagnetic fields, dirty electricity and ground current. She has served as expert witness on matters dealing with electrical pollution in both Canada and the United States and is a widely published scientist in this field. [mhavas@trentu.ca](mailto:mhavas@trentu.ca) or (705) 748-1011 x7882.

**Jim Turner, Esq.** is Chairman of *Citizens for Health*, a leading national health advocacy organization ([www.citizens.org](http://www.citizens.org)). For 16 years Citizens has been a pioneer in the natural health freedom movement, advocating for organic food, clean water, dietary supplements and non-drug therapies like acupuncture, naturopathy and chiropractic. Jim Turner, Esq., who is principal of Swankin-Turner in Washington, D.C. is co-author with A. Lawrence Chickering of “*Voice of the People: The Transpartisan Imperative in American Life*”. [jim@swankin-turner.com](mailto:jim@swankin-turner.com)

**Camilla Rees, MBA** is founder of [www.ElectromagneticHealth.org](http://www.ElectromagneticHealth.org). She is co-author with Dr. Havas of “*Public Health SOS: The Shadow Side of the Wireless Revolution*”, co-author of “*Cellphones and Brain Tumors: 15 Reasons for Concern, Science, Spin and the Truth Behind Interphone*”, creator of the *EMF Petition to Congress*, author of “*Alzheimer’s Mouse Study—Do We Smell a Rat?*”, founder of the *Campaign for Radiation Free Schools* and co-author of *The Campaign for Safer Cell Phones’ Briefing Book*. [Camilla@electromagnetichealth.org](mailto:Camilla@electromagnetichealth.org)

**Janet Newton** is President of The EMR Policy Institute ([www.EMRPolicy.org](http://www.EMRPolicy.org)). Since 2003, The EMR Policy Institute has worked at federal, state and international levels to foster unbiased research on electromagnetic radiation and to create better cooperation between federal regulatory agencies with a stake in public health. Its focus is on EMR regulation, science, litigation and public policy. [JNewton@emrpolicy.org](mailto:JNewton@emrpolicy.org)

**Christine Hoch** is Executive Director of Moms for Safe Wireless, a non-profit national organization dedicated to educating individuals on the reported health effects of wireless products and technologies ([www.momsforsafewireless.org](http://www.momsforsafewireless.org)). Moms for Safe Wireless focuses on children because children are especially sensitive to all electromagnetic fields, with fragile developing nervous systems, more conductive brain tissues and smaller skeletons that are more easily penetrated by radiation waves. Previously Ms. Hoch was a senior program leader at the National Safety Council's Environmental Health Center. [choch@comcast.net](mailto:choch@comcast.net)

## **“The BRAG™ Antenna Ranking of Schools” —Can Your School Brag?**

- ❑ **TO REGISTER for the Media Teleconference Call** on Wednesday, April 28<sup>th</sup> at 10:00 a.m. (Eastern) please RSVP to [Emily@electromagnetichealth.org](mailto:Emily@electromagnetichealth.org). Dial-in instructions will be sent.
  
- ❑ **To REGISTER for the 1<sup>st</sup> Teleclass for Parents, Teachers and School Administrators with Magda Havas, PhD the following week** – Friday, May 7<sup>th</sup> at 11:00 a.m. (Eastern) please contact [Emily@ElectromagneticHealth.org](mailto:Emily@ElectromagneticHealth.org). Capacity is limited. For notice of future teleclasses, sign up for the Face Book page, *Campaign for Radiation Free Schools*. <http://sn.im/veri4>
  
- ❑ **MEDIA INQUIRIES**— Dr. Havas will be in Washington, D.C. Wednesday, April 28<sup>th</sup> and in New York City Thursday, April 29<sup>th</sup>—May 5<sup>th</sup>. She will be available for interviews in both places. Please contact Camilla Rees at (917) 359-8450 or [Camilla@electromagnetichealth.org](mailto:Camilla@electromagnetichealth.org) to schedule. All collaborating organizations can also be reached directly at the e-mail addresses provided above.

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