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Brain Tumor Cluster Investigated at RMIT University in Melbourne

May 13

The brain tumor cluster at Australia's RMIT University is Topic A for EMF watchers around the world. It all began on Thursday when Australian TV news reported that the university had launched an investigation into seven cases of brain tumors among staff members in a 17-storey building on its Melbourne campus. Five of those who developed tumors worked on the top floor of the building (two others were on the 11th and 14th floors), and six of the seven had been there for more than a decade, according to the *Australian*, a national newspaper.

Five of the cases were uncovered in the last month, while two others were reported in 1999 and 2001, Melbourne's *The Age* reported.

Initially, most of the attention was focused on the mobile phone antennas on the roof of the high-rise. But others point to power-frequency and other types of EMFs as a possible cause. For instance, Don Maisch, a doctoral student at Wollongong University and an EMF activist based in Tasmania, wants to make sure the fields from electrical and electronic equipment housed on top of the building are properly measured. People working on the top floor "are very likely getting a good dose of ELF 'dirty electricity' with high voltage transients, harmonics, and RF all riding on the 50 Hz power supply," he wrote on his blog.

Others are not yet ready to discount the cell tower antennas. They challenge the idea that all the radiation is being beamed out towards the horizon; they point to possible sidelobes and reflections: "The floor below is definitely not a safe place!" commented Jean-Pierre Lentin, a French journalist and author of *Ces Ondes Qui Tuent, Ces Ondes Qui Soignent (Waves that Kill, Waves that Heal)*.

The RMIT cluster is by no means the first brain tumor cluster that has been linked to EMFs, and most of the efforts to find their causes have been perfunctory at best. Take, for example, the cluster of 12 cancer cases, including five brain tumors, that was identified at a Congressional office building in Washington in the early 1990s. Even though the director of the Congressional Budget Office himself requested an investigation, the health hazard evaluation performed by NIOSH, the National Institute for Occupational Safety and Health, was a sham. "No good came out of the report," said one of those who worked in the building at the time. (For more details on this and other clusters, see *MWN*, M/A93.)

Today, a number of experts quoted in the press are already saying that the causes of the brain tumors will probably not be identified.

"To be quite frank, I think it's an unfortunate coincidence," Prof. Michael Abramson of Melbourne's Monash University told the *Australian*. Abramson

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is a director of the Australian Centre of RF Bioeffects Research. Mark Elwood, the head of the National Cancer Control Initiative made a similar argument to *The Age*. Elwood has been a consultant to both the electric utility and the telecom industries in the past.

Whether the promised investigation will uncover anything will depend on those who carry it out. (It is worth noting that the head of RMIT's school of engineering, Professor Irena Cosic, is also a director of the Australian RF research center.) Will it be another whitewash or will the Australians rise to the occasion and do a careful and detailed investigation? We'll let you know.

May 19

As the investigation of the RMIT University brain tumor cluster continues in Melbourne, we are reminded of another cancer cluster, which was also much in the news down under about this time last year. In this earlier case, some ten women working in the Australian Broadcasting Co.'s (ABC) offices in Brisbane developed breast cancer and, as at RMIT, power-frequency EMFs and RF radiation were under suspicion because there were antennas on the roof of the ABC building.

EMC Technologies, a test and measurement consulting company, was called in to survey the entire ABC site. Soon afterwards, ABC Queensland director Chris Wordsworth told the *Sydney Morning Herald* that testing had shown "nothing adverse."

That April, Chris Zombolas, the technical director of EMC Technologies, confirmed to us what Wordsworth had already told the local newspapers: He had not found high levels of any electromagnetic signals. But, Zombolas added, he was not in a position to release the report — that would be up to ABC. Figuring there was nothing much more to the story, we moved on and did not give it much thought until the RMIT cluster became news.

With nothing official or specific yet available on the RMIT investigation, we turned our attention back to the ABC cluster. A Google search quickly uncovered a report from the Queensland Department of Health. To call it flimsy would be generous. The text runs only seven pages and is devoid of any specifics. For instance, with respect to the possible environmental contaminants, it simply states: "The assessment did not reveal any significant suspicious or unusual exposures." That's it. Nothing is quantified. EMFs and RF radiation are not even mentioned. The conclusion is, well, there is no conclusion, other than that if something new turns up, the health department will reopen the investigation.

We recently contacted Zombolas again and he told us that he is still not at liberty to give us the ABC report. We then asked ABC directly. So far we have not heard back.

EMC Technologies has once again been hired to do the electromagnetic measurements at RMIT .

May 25

RMIT University has announced that environmental surveys have identified "no anomalies" on the top two floors of the Melbourne building where a cluster of brain tumor cases had been identified.

The university obviously wants to allay staff and student health concerns, but the interim report on electromagnetic measurements will fall far short of accomplishing this. (We leave it to others to take a close look at the air and water quality tests, as well as the ionizing radiation survey.) The problem lies less with the measurements made by EMC Technologies, than with the context in which they are placed.

All the measured levels are compared to current Australian exposure limits, which like most other national standards, are not designed to protect against cancer risks, but rather shocks and burns. The measured levels are a tiny fraction of those that would present acute health risks, but such comparisons tell us nothing about the likelihood of possible chronic (e.g. cancer) hazards.

For instance, the maximum measured power-frequency (50Hz) magnetic field was 14.4 mG on the top floor of the university building. EMC Technologies notes that this is only 1.4% of the limit for the general population, which is 1,000 mG. Put that way, it sounds like there's nothing to worry about—until one realizes that the EMF-childhood leukemia risk is believed to come into play at about 3-4 mG. In that context, the 14.4 mG is 350-480% above the cancer threshold. Had the report noted this, we doubt that the news media would have gone with a headline like "RMIT Tumour Tests Show Nothing Unusual," as did *The Age* earlier today.

We hasten to add that there is no confirmed link between adult brain tumors and EMF exposures, but the eight-year, US\$7million California EMF Program concluded that EMFs are a likely cause of brain cancer.

A cancer risk at RF frequencies is more uncertain, but the same logic applies. If there is such a risk, it too would likely occur at much lower levels than that for RF burns. Here again, the exposure standards seek only to protect against such acute hazards. Converting the measured RF level into a percentage of the current exposure standard is misleading.

In our view, the EMF/EMR survey report settles nothing. It may be unfair to ask RMIT University to resolve an international controversy that has been raging for decades, but the brain tumor cluster has made this an imperative. After all, the university is part of the Australian Centre for Radiofrequency Bioeffects Research.

An interesting coincidence: At practically the same moment that RMIT issued its survey results, the WHO EMF Project released a new fact sheet on *Base Stations and Wireless Technologies*. It too presents the RF levels from mobile phone towers as a percentage of a standard that protect only against acute hazards. No one should be surprised. The WHO has consistently rejected the possibility of an EMF or RF cancer risk.

U.K. Set To Ban House Next to Power Lines

May 1... A paradigm shift is taking place in the U.K. A high-level government advisory panel, the Stakeholder Advisory Group on ELF EMFs or SAGE, is set to recommend that homes should no longer be built near overhead power lines, according to the April 26 *Daily Telegraph*.

In an April 29 follow-up item, Nic Fleming revealed that the National Grid is considering buying some 75,000 homes in England and Wales that are within 230 feet of high-voltage lines or 115 feet from lower-voltage lines. In contrast, on this side of the Atlantic, there is still no official recognition that power line EMFs present a cancer risk. For instance, an Arizona Public Service (APS) environmental scientist recently told the *Arizona Republic* that there are “no known adverse health risks.” Who does APS’ Marty Eroh cite for support for this view? The World Health Organization.

Ted Litovitz Dies at 82

May 4... Ted Litovitz, a physics professor at Catholic University in Washington DC, died on May 1 after a long battle with kidney cancer. He was 82. The silver-tongued EMF researcher leaves a mixed legacy. Though Litovitz was a champion among those who believed he had documented the existence of low-level magnetic field effects, some of his experiments were never reliably replicated and remained controversial.

Much of his later career was devoted to showing that an incoherent or noisy signal can block the biological effects of a 60 Hz field. Litovitz was awarded a number of patents, which he then licensed to the EMX Corp. EMX products failed to win acceptance however. In 2001, Litovitz succeeded in convincing Peter Angelos, the rich Baltimore lawyer, to give him \$500,000 for biomedical studies —this was one of the many times when research funds were extremely scarce in the U.S. His funeral is being held today in Falls Church, VA.

Carlo Predicts Cancer Epidemic

May 9... George Carlo is projecting that by the year 2010, there will be half a million cases of brain and eye cancer each year attributable to cell phone use, based on current epidemiological studies. Carlo made this prediction yesterday on New Zealand’s TV3 news show, *Campbell Live*, hosted by John Campbell.

In the same interview, Carlo accuses Disney of putting 8-to-12-year-olds in “unbelievable danger,” calling Disney’s marketing of cell phone service to such young kids “grotesque.” You can watch the interview, as well as two related news segments on the TV3 Web site.

Carlo ran the U.S. cell phone industry’s mobile phone research program between 1993 and 1999. More recently, he entered into a “strategic alliance” with BioPro Technology, which markets devices that Carlo and the company claim can protect users from the stress caused by EMFs.

Is the New IEEE RF Standard Biased?

May 17... How comprehensive and objective is the new IEEE RF exposure standard (C95.1-2005)? Not at all, says Vladimir Binhi of the General Physics Institute of the Russian Academy of Sciences in Moscow and the author of *Magnetobiology*. In a recent short comment, Binhi claims that the IEEE standard is biased, arguing that it dismisses non-thermal biological effects and ignores a large body of work documenting their existence. For its part, the IEEE committee, chaired by C.K. Chou of Motorola and John D’Andrea of the U.S. Navy (at Brooks Air Force Base), maintains that, “All relevant reported biological effects at either low (‘non-thermal’) or high (‘thermal’) levels were evaluated.” You can judge for yourself: The Swiss Research Foundation on Mobile Communication has posted a copy of the new standard, which covers the frequency range 3kHz to 300 GHz, on its Web site. American and Russian researchers have long been at odds about what constitutes a safe exposure standard. At times, Russian limits have been up to 1,000 stricter than those in the U.S.

Metal Earrings Can Raise Phone Peak SARs

May 28... Metal earrings can spark hotter hot spots in the heads of cell phone users. A team of Spanish scientists has found that the peak SAR—a measure of the energy delivered to human tissue—can be up to 25% higher when a 900 MHz phone is pressed up to an ear pierced with a metallic object. In a paper that will appear in a future issue of *Bioelectromagnetics*, David Sanchez-Hernandez and coworkers at the Polytechnic University of Cartagena don’t say exactly where such hot spots may turn up nor whether this type of magnification will also occur with 1800 MHz phones, but they do advise that this finding merits “special attention.”

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