

Institutional Corruption in Dealing With the Risks of Radiofrequency Radiation in the Past 50 Years

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ZARET--Milton M., M.D., of Rye Brook N.Y., passed away peacefully on May 29 at the age of 91. Pearl Harbor survivor, renowned ophthalmologist, and champion of safeguards against microwave radiation ...

The obituary in the *New York Times* from June 20, 2012 was on a man, who suffered a tragic fate when his scientific results were not in line with the opinion of military, industry, and politics. Louis Slesin, editor of *Microwave News*, paid tribute to Milton Zaret's scientific merits in a comprehensive article [1]. When he distributed this article he added: "If you think those who raise concerns about cell phone health risks are treated badly today, you may be surprised to learn that it's really nothing new."

My experience with the European REFLEX study, which was organized and coordinated by me and maliciously slandered by industry and politics [2], is my motive to confirm the truth of Slesin's statement. How powerful groups even in democratic societies deal with the results of radiofrequency radiation research has indeed not changed in the past 50 years, only their reasons vary. While during the cold war world peace was at stake, today it is simply greed for profit.

Andrew Marino, who himself contributed as a scientist considerably to the state of knowledge about biological effects of electromagnetic fields, describes in his book *Going Somewhere – Truth About a Life in Science* a meeting with Zaret [3]. Marino had read that Zaret accused the Defense Department and the CIA to have destroyed the records of his research results. As ophthalmologist Zaret had found out in several years of research that microwaves cause cataracts. Paul Tyler, high-ranking medical corps officer in the U.S. Navy, contradicted this claim in a public statement, in which he denied any health problems from microwaves. Marino learnt from Zaret that early in his career he had been frequently consulted by army and government officials and had been highly appreciated as an expert in this area of research. But all the sudden the attitude of these people towards him changed, and finally the same people cast him out like a leper. Zaret did not quite conceive why his relationship with army and government took such an unhappy turn, but Marino understood immediately that Zaret's career had to end the way it did.

The cataract story

Milton Zaret, also mentioned by Devra Davis in her book *Disconnect* [4], had studied medicine after the war and became an ophthalmologist. On behalf of the Defense Department he examined around 1,600 servicemen from Air Force, Navy, and Army in the late fifties to find out whether radar radiation might injure the eyes. It is well known, that cataracts occur in both eyes in half of the seventy-year-old, but hardly in twenty- and thirty-year-old persons, and never only in one eye unless this one has somehow been injured from the outside. In the summer of 1961, four years after the Soviet Union had with the Sputnik obtained dominance in the universe, Zaret discovered cataracts in two young technicians and this in the one eye they had focused the radar antenna with and, thus, exposed to radiation. An alteration on the back surface of the lens pointed to a special form of the disease, which he had never seen before. He later confirmed these findings in follow-up examinations of more than three dozen radar technicians younger than forty years.

Zaret published his research results in the early seventies [5]. He was now convinced that cataracts are caused by non-ionizing radiation of low intensity after long-term exposure. Too, he assumed that not only the eyes but also other organs exposed to radiation are affected in a similar way. So, Zaret became one of the first scientists to believe in the existence of non-thermal radiation effects. And he was actually the first medical doctor to testify in a U.S. Senate hearing in 1973. There he said: "There is a clear, present and ever increasing danger to the entire population of our country from exposure to the entire non-ionizing portion of the electromagnetic spectrum. The dangers cannot be overstated because most non-ionizing radiation injuries occur covertly, usually do not become manifest until after latent periods of years, and when they do become manifest, the effects are seldom recognized."

The military did not accept Zaret's view of what long-term microwave radiation in the non-thermal range may do and his demand to lower the exposure limits accordingly, because it would have threatened the use of radar and the entire radiofrequency technology when launching new weapons systems. This is the true reason why the collaboration with Zaret ended all the sudden, and the refusal to fund his work also set an end to his studies. However, far more burdensome for Zaret was the slander to which he was exposed to from now on as a person and scientist. His fate was sealed in 1972 when Colonel Budd Appleton of the Walter Reed Army Medical Center published a paper in which he claimed that he could not confirm Zaret's research results. This paper was placed in the internationally most-renowned *Archives of Ophthalmology*. Since then it informs about the official opinion on the state of knowledge, that radiofrequency radiation cannot be the cause of cataracts.

It is ignored, however, till today that Appleton's paper has been proven flawed and fabricated. Nevertheless, Zaret's research results, too, lack a final confirmation, because after Appleton's publication it was not considered necessary anymore to further address the issue.

The campaign against Zaret was mainly conducted by the high-ranking medical corps officers Paul Tyler and Budd Appleton that acted on behalf of the armed forces in agreement with the government and the CIA. They were supported by a microwave industry that had just begun to flourish and earned already a lot of money with the production and marketing of radar tools and microwave ovens, and that feared for its business. Mobile communication technologies did not yet exist. With the start of the Sputnik the Soviet Union had just shown what this nation and its scientists were able to accomplish in technology. The cold war was approaching its climax, and the U.S. military was required to do anything in its power to protect the United States from the threat of another world war. In this dramatic situation it was impossible to abstain from the radiofrequency technology because of not yet convincingly proven health risks of the people. The military doctors had the ingrate task to enforce the decision of the U.S. government in public, without damaging its reputation. They solved this task with lies and deception, not by truthfully informing the public, which probably would have shown great understanding in view of the threat to world peace. Thus, they preferred to destroy Zaret's integrity as a person and scientist and to break their Hippocratic Oath, which they would have been obliged to as medical doctors. However, to their honor, it must be added that even if they did wrong they served the then national interest of the United States.

The REFLEX story

Still today, the U.S. military ignores the state of the international research and assumes that microwaves are harmless for the people as long as the exposure limits are observed. It comes as no surprise that this assumption has meanwhile been adopted by the mobile communication industry all over the world. And it is defended by all means, although it is absolutely contrary to the present state of knowledge. A typical example is the action against the REFLEX study [2]. From the very beginning, this EU-funded research project – carried out between 2000 and 2004 by 12 research teams from 7 European countries – was a nuisance to the mobile communication industry and to politics too, because of its unexpected results. Two research groups, one at the Free University of Berlin and the other one at the Medical University of Vienna, had found out that low frequency as well as radiofrequency electromagnetic fields own a genotoxic potential. These results contradicted the conclusions from the *German Mobile Telecommunication Research Programme* (DMF), especially, however, the reliability of the currently valid exposure limits that had been so vehemently defended in the DMF [6].

Four years after the REFLEX study had ended Alexander Lerchl, professor at the Jacobs University in Bremen and in the meantime member of the German Commission on Radiological Protection (SSK) of the Federal Office for Radiation Protection (BfS), claimed that the results were faked. While studying the papers published by the Vienna team Lerchl came to the following dramatic conclusion, and I translate: *The findings of Diem et al. were truly alarming. If they should be confirmed, would this be not only a wake-up call but also the beginning of the end of wireless technologies because DNA damage is the first step in the process of cancer development.* This came at a time when the EU Commission was to decide on the funding of a REFLEX follow-up study, in which the biological effects of radiofrequency radiation were supposed to be investigated in humans and no longer in test tubes with isolated cells. Obviously, the industry saw an urgent need for action. To prevent a support of the study, which the reviewers had given a high score and recommended for funding, the emergency brakes had to be applied. And it seems that Lerchl, who as an advocate of the interests of the mobile communication industry has astonishingly been promoted scientific adviser of the government, was entrusted with this task.

In May and August 2008 coverage in the German weekly *Der Spiegel* at Lerchl's instigation provided the alleged fraud scandal at the Medical University of Vienna with the desired publicity. In a first article *Beim Tricksen ertappt* [Caught at foul play] it says like this: *Two sensational studies on the risk of mobile phone radiation are obviously the work of a fraudster – what did the chief professors know? (...) It was one of the most horrific findings about the danger of mobile phones. Mobile phone radiation, so it said, would break the fragile strands of the DNA inside the cells. Possible effect: cancer. (...) Because Lerchl insisted, the Vienna University acted.* The second article *Die Favoritin des Professors* [The professor's favorite] was directed at the Council for Scientific Ethics of the Medical University of Vienna, which could not confirm Lerchl's allegation. In this article the university and the rector are accused of having failed to clarify the case. But what probably characterizes Lerchl most aptly is his close cooperation with the operators of an Internet forum that committed itself to the defamation of mobile communication critics and had, therefore, been legally convicted because of the violation of personal rights.

In a series of contributions to the *Laborjournal online* Lerchl himself describes the matter from his point of view, and I translate: *Worst-case scenario in Vienna. There are scandals nobody is interested in at some point, and there are those that get worse. Into the last category falls that which is currently happening at the Medical University of Vienna (MUV).* And when the MUV's Council for Scientific Ethics did not confirm his allegations he complains that *science alone is not able to clean up its act – that much is clear.* After the editors of two scientific journals did not comply with his demand to retract the papers of the Vienna team, he accuses them of incompetence and irresponsibility. And in his booklet *Fälscher im Labor und ihre Helfer* [Fraudsters in the lab and their helpers] Lerchl sorts the Vienna team into the series of big fraudsters whose atrocious deeds caused immense damage to science. To even further substantiate his allegations and to finally put paid to the REFLEX results, he invents the story that, after he had made public the data fraud, the EU Commission demanded from MUV to return the funds.

For Lerchl it is meaningless that two ethic committees were unsuccessful in providing evidence of data fraud. He sticks to his view – and gives the following reasons in his booklet on fraud, and I translate: *When, as in the present case, studies are published that discredit an entire technology - in this case mobile communication - the damage is probably a considerable one, and that for very different reasons. When a new base station is to be installed, citizens who see their health put at risk routinely protest against it. Mobile phone service providers are criticized, have to defend themselves at town hall meetings, and are sometimes exposed to harsh criticism why a base station is to be placed exactly at the proposed site. Often, after having obtained expert assessments, alternative sites are sought and found, all of which is associated with high costs. And then there are those people who are so confused that they decide for themselves and their families to use mobile phones as little as possible or even to completely do without mobile phones. These damages (non-completion of contracts) are also difficult to quantify and in the end are not suitable as a basis for damage claims.*

Conclusion

The U.S. military doctors Paul Tyler and Budd Appleton deprived Milton Zaret of his social status as a person and scientist, when they destroyed his career with statements from bribed witnesses, character assassination, and fabricated research results. It can be assumed that they were aware of their wrongdoing. Thus, they betrayed not only science, but as medical doctors they also broke their Hippocratic Oath. They can claim, however, that they did their country a decisive service in a time when mankind was close to a third world war. Compared to this imminent disaster their complot against Zaret may have appeared to them to be by far the lesser of two evils.

Compared to this, Alexander Lerchl's reasons look rather pathetic. He manipulated his research until the results fitted the demands of the mobile communication industry, which first of all wants to maximize its profits. Be it lack of intellect or unscrupulousness, with methods comparable to those of the American doctors he portrayed scientists, whose findings deviated from his expectations, in public as fraudsters. No wonder that Lerchl, who denies any risk from radiofrequency radiation thus totally neglecting the present state of research, is supported by the mobile communication industry in every way. However, it is an utter mockery to the public, if such a person – as it has been the case – is appointed to the national advisory committee responsible for protecting the citizens from radiofrequency radiation.

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