PRE-FILED TESTIMONY
OF LENNART HARDELL, MD, PhD
MPUC Docket No. 2011-00262

Q. Please state your name and address.

A. Lennart Hardell, MD, PhD
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Q. Briefly state your occupation, educational background and current employment.

A. I am a professor of oncology at Orebro University Hospital specializing in the epidemiological research studying cancer risks related to exposure to environmental toxins, including electromagnetic radiation. I have been a specialist in oncology since 1979. My work as an oncologist has included medical treatment of cancer patients and radiotherapy. In parallel with that work I have performed epidemiological research mostly on risk factors for cancer. Attached as Exhibit A is my curriculum vitae (C.V.).

Q. Are you a member of any professional organizations? If so, please list.

A. This is listed in my C.V.

Q. Have you authored any papers or journal articles?

A. I have published more than 300 scientific articles in peer-reviewed scientific journals, chapters in books, and commentaries. In addition I have published 149 abstracts for scientific meetings and shorter communications. A full list is shown on Exhibit A.

Q. Briefly describe your work and experience related to the study of health risks related to electromagnetic fields and radiofrequency electromagnetic fields in the 30 MHz to 300 GHz range (RF-EMF). Identify any studies or published writings on the subject.

A. In 1995 we published our evaluation of cancer risks associated with exposure to extremely low frequency electromagnetic fields (ELF-EMF) in a peer-reviewed scientific journal as supplement (Hardell et al 1995).

After that I have participated in and been the lead investigator and author of a large number of scientific studies on use of mobile phones and cordless phones and the risk for certain malignant diseases (brain tumors, salivary gland tumors, testicular cancer, non-Hodgkin lymphoma, malignant melanoma). This has resulted in more than 80 publications that are listed in Exhibit A. I have also on numerous occasions been invited to participate in scientific meetings to present the results from our studies in this area. I am regularly referee for journals on submitted scientific articles. I was invited to be part of the expert panel at IARC in May 2011 on the evaluation of scientific evidence of the carcinogenic effects of RF-EMF. Recently I was invited to submit an article on this topic to the publication Late Lessons from Early Warnings, volume II; European Environment Agency, Copenhagen, as well as the BioInitiative 2012 Report, and to different journals. I have also supervised several medical dissertations within epidemiology, mostly on risk factors for cancer.

Q. Are you familiar with other peer-reviewed epidemiological studies addressing the risk of cancer, disease, or other adverse health effects resulting from the exposure to RF-EMF, meaning radio frequency radiation at levels below which thermal effects are known to occur?

A. Yes. Since this is one of my specialties I have studied and scrutinized most of the peer-reviewed studies that have been published on the subject since the 1990's. It has also been part of being a scientific expert, etc see above.

Q. Have you performed any meta-analyses of different studies on the subject? Briefly describe the work you have produced conducting meta-analyses and the conclusions.

A. Yes, my co-workers and I have performed three meta-analyses of the risk for brain tumors associated with use of wireless phones.

The first one was published in 2007 in Occupational Environmental Medicine (Hardell et al 2007a). Of the 16 case-control studies that were published on this topic, 11 gave results for 10 years use or more (latency period = time from first use of the mobile phone until the brain tumor was diagnosed). An association with acoustic neuroma was found in four studies in the group with at least 10 years use of a mobile phone. Six studies gave results for malignant brain tumors in that latency group. All gave increased odds ratios (OR), especially for ipsilateral exposure, that is the phone had been used on the same side of the brain as the tumor appeared. In the meta-analysis, ipsilateral cell phone use gave OR = 2.4, 95% confidence interval (CI) = 1.1 - 5.3, for acoustic neuroma and OR = 2.0, 95 % CI = 1.2 - 3.4, for glioma using a tumor latency period of 10 years and more.

The next overview including meta-analysis was published in Pathophysiology in 2009. In summary the review yielded a consistent pattern of an increased risk for glioma and acoustic neuroma after >10 years mobile phone use, but not for meningioma. We concluded that current standards for exposure to microwaves during mobile phone use were not adequate for long-term exposure and needed to be revised (Hardell et al 2009).

Our most recent meta-analysis was published Dec 20, 2012 in Pathophysiology (Hardell et al 2012). We gave an overview of current epidemiological evidence for an

increased risk for brain tumors including a meta-analysis of the Hardell group and Interphone results for mobile phone use. These studies with results for longest duration of use served as important bases for IARC classification of RF-EMF as possible human carcinogen, see discussion below.

In contrast to the Hardell group studies, results for cordless phones are lacking in Interphone and the other studies in this area. Cordless phones emit similar RF-EMF emissions as mobile phones. Thus, including such use in the 'unexposed' group would obscure the possibility to identify an increased risk for cancer associated with use of wireless phones (mobile phones and cordless phones). It is like studying the risk for lung cancer among smokers and disregarding use of one type of cigarettes (e.g. one brand) and to include that group in the non-smoking group. Since also use of cordless phones emit RF-EMF emissions with increased risk for brain tumors in the Hardell group studies, excluding such use from the exposed groups (instead included in the 'unexposed' group) results in lower risk estimates and diminishes the possibility to find an increased risk.

The 2012 meta-analysis gave for glioma in the most exposed part of the brain, the temporal lobe, OR = 1.71, 95 % CI = 1.04-2.81 in the $\geq$ 10 years (>10 years in the Hardell group) latency group. Ipsilateral mobile phone use $\geq$ 1,640 hours in total gave OR = 2.29, 95 % CI = 1.56-3.37. The results for meningioma were OR = 1.25, 95 % CI = 0.31-4.98 and OR = 1.35, 95 % CI = 0.81-2.23, respectively. Regarding acoustic neuroma ipsilateral mobile phone use in the latency group $\geq$ 10 years gave OR = 1.81, 95 % CI = 0.73-4.45. For ipsilateral cumulative use $\geq$ 1,640 hours OR = 2.55, 95 % CI = 1.50-4.40 was obtained. Also, use of cordless phones increased the risk for glioma and acoustic neuroma in the Hardell group studies. This meta-analysis confirmed previous

findings of an increased risk for glioma and acoustic neuroma associated with use of wireless phones (Hardell et al 2012).

In summary, there is sufficient evidence to conclude that RF-EMFs are bioactive and have a potential to cause health impacts. There is a consistent pattern of increased risk for glioma and acoustic neuroma associated with use of wireless phones (mobile phones and cordless phones). The current safety limits and reference levels are not adequate to protect public health. New public health standards and limits are needed.

Q. What information is there about glioma patient survival and is that relevant to the causal association between glioma and cell phone RF-EMF exposure?

A. A carcinogenic effect of RF-EMF emissions would be strengthened if exposure might negatively correlate with survival of glioma patients. The Hardell group analysed survival of glioma patients in the study period 1997-2003. Decreased survival of glioma cases (glioblastoma multiforme) with long-term and high cumulative use of wireless phones was found (Hardell, Carlberg 2012). Thus, this is an additional finding that adds to the biological relevance of a causation of glioma by exposure to RF-EMF. The results show an increased risk for glioma for wireless phone use but also worse outcome of the disease.

It should be added that a poorer survival among children with acute lymphoblastic leukaemia exposed to ELF-EMF has been reported in two studies (Foliart et al 2006, Svendsen et al 2007). These findings certainly strengthen a causal association between exposure to ELF-EMF and childhood leukaemia.

Q. Experts testifying for CMP, Drs. Bailey and Shkolnikov, emphasized the importance of a Danish cohort study on mobile phone users and cancer risks. Are you familiar with that study?

A. Yes.

Q. Are the results in the Danish cohort study reliable and based on sound epidemiological methods?

A. No. This was a record linkage study partly funded by two Danish telecom-operating companies, TeleDenmark Mobil and Sonofon, with no individual exposure data. It has produced four articles that we have made a thorough review of (Söderqvist et al 2012a). We concluded that its many limitations - embedded in the study design from the very beginning and mainly related to poor exposure assessment - cloud the findings of the four reports to such an extent that render them uninformative, at best. At worst, they may be used in a seemingly solid argument against an increased risk– and the reader may not understand that the Danish cohort study is a textbook example of a study design that precludes the possibility to find an increased risk, as we have discussed in our review. The term *business bias* may apply to the Danish cohort study, a terminology recently discussed by Levis et al (2012). There is always a potential of conflicts of interest when a study is sponsored by the industry (Hardell et al 2007b)

The Danish cohort study was included in the IARC evaluation of RF-EMF as human carcinogen, but the conclusion was that "phone provider, as a surrogate for mobile phone use, could have resulted in considerable misclassification in exposure assessment." (Baan et al 2011). Thus, the Danish cohort study was considered to be uninformative as to cancer risks from mobile phone use.

Q. Is there a potential for adverse health effects from RF-EMF radiation from mobile phone base stations?

A. Yes. By searching PubMed, we identified a total of 10 epidemiological studies that assessed for putative health effects of mobile phone base stations. Seven of these studies explored the association between base station proximity and neurobehavioral effects and three investigated cancer. We found that eight of the 10 studies reported increased prevalence of adverse neurobehavioral symptoms or cancer in populations living at distances < 500 meters from base stations. None of the studies reported exposure above accepted international guidelines, suggesting that current guidelines may be inadequate in protecting the health of human populations (Khurana et al 2010). The results and discussion by the Salford group on non-thermal effects on the blood-brain-barrier and neuronal death in their experimental studies are most relevant in this context (Salford et al 2012), see also discussion below.

Q. Based on all of the epidemiological evidence available, please state your opinion about the extent of the association between exposure to RF-EMF and cancer.

A. There is a consistent pattern of an increased risk of glioma (malignant brain tumor) and acoustic neuroma (benign tumor on the 8th cranial nerve) associated with use of wireless phones (both mobile phones and cordless phones). The increased risk is highest for tumors on the same side of the head (ipsilateral) as the phone has been used during long-term and highest cumulative use in hours over the years. The conclusion is based on all studies, especially those that provide results for at least 10 years latency period (time from first use until tumor diagnosis) for use of wireless phones.

It should be noted that this association was not found for meningioma. Patients with that tumor type were included in the same studies on glioma and acoustic neuroma. A systematic bias in the studies that would explain the results for glioma and acoustic neuroma would also have been the case for meningioma. Thus, different results in the same studies according to tumor type give strength to the findings of an increased risk for glioma and acoustic neuroma.

In summary the strengths of evidence areas follow, using the Hill criteria from 1965 (Hill 1965). For more details see also Carlberg, Hardell (2012) and Hardell et al (2011, 2012).

1. **Strength:** Ipsilateral use (tumor in the brain on same side as where wireless phone was used) finds the highest risk, especially for localisations with highest exposure (temporal lobe). Cumulative hours of use finds the highest risk
2. **Consistency**: Similar results have been found in different studies, e.g. the Hardell group and Interphone.
3. **Specificity:** Regions of brain which absorb the highest wireless phone radiation (e.g., temporal lobe) have the highest risk. Risk pattern differs according to brain tumor type.
4. **Temporality**: Those with most years since first use have the highest risk; i.e. an effect of latency time.
5. **Biological gradient:** There is a clear dose-response effect, i.e. higher cumulative use in hours of wireless phones gives a higher risk with statistically significant trend.
6. **Plausibility**: Laboratory studies show toxic effects from RF-EMF on DNA that may lead to an increased risk for brain tumors. These non-thermal effects are mediated via

the formation of reactive oxygen species (ROS).

7. **Coherence:** Several studies show by now an increasing incidence of brain tumors, especially of the type that would be expected based on epidemiological results (glioblastoma multiforme), in the most exposed parts of the brain (temporal and adjacent lobes).

8. **Experiment:** In the Hardell group studies it was shown that the group of subjects that only used the mobile phone in a car with a fixed external antenna (no exposure) did not have an increased risk for brain tumors in contrast to users without such devices (Hardell et al 2002). The EMF-RF toxic effects on DNA mediated by ROS can be prevented by antioxidants.

Sir Austin Bradford Hill (1965) noted that: "However, before deducing 'causation' and taking action we shall not invariably have to sit around awaiting the results of that research. The whole chain may have to be unravelled or a few links may suffice. It will depend on circumstances." p 295. And "If we are wrong in deducing causation from associations no great harm will be done....All scientific work is incomplete...That does not confer upon us a freedom to ignore the knowledge we already have, or to postpone the action that it appears to demand at a given time." p 300.

Using the Hill criteria on use of wireless phones and brain tumor risk infers causation of the association found in epidemiological studies. Most of these criteria are fulfilled.

Q. Have you reviewed the joint testimony of William H. Bailey, Ph.D. and Yakov Shkolnikov, Ph.D., dated September 19, 2012, and their testimony dated November 16, 2010, which was presented jointly with Linda S. Erdreich, Ph.D.?

A. Yes.

Q. In their testimony, Dr. Bailey and Dr. Shkolnikov cite a report by the ICNIRP Committee, which concluded, "the trend in the accumulated evidence is increasingly against the hypothesis that mobile phone use causes brain tumors." Do you agree with that conclusion?

A. No, this is not a statement based on up-to-date knowledge of the scientific literature; see above, e.g. regarding meta-analysis of the brain tumor risk. Furthermore, it should be noted that the International Agency for Research on Cancer (IARC) at WHO evaluation of the carcinogenic effect of RF-EMF on humans took place during a 24 – 31 May 2011 meeting at Lyon in France. The Working Group consisted of 30 scientists and categorised the radiofrequency electromagnetic fields from mobile phones, and from other devices that emit similar non-ionising electromagnetic fields (RF-EMF), as Group 2B, i.e. a 'possible', human carcinogen (Baan et al 2011, IARC in press).

The IARC decision on mobile phones was based mainly on two sets of case-control human studies; the Hardell group of studies from Sweden and the IARC Interphone study. Both provided complementary and supportive results on positive associations between two types of brain tumors; glioma and acoustic neuroma, and exposure to RF-EMF from wireless phones. I was an invited expert and the results from our research group were included in the evaluation as foundation for classification of the carcinogenic potential to humans from RF-EMF exposure. The Danish cohort study on mobile phone 'users' was considered to be uninformative. Besides our studies only Interphone gave results for long-term use of mobile phones (also cordless phones in our study group). The other studies were judged to be uninformative as to long-term cancer risks.

Q. Dr. Bailey and Dr. Shkolnikov testified that: "Despite the substantial increase in mobile phone use since the mid-1990s, rates of brain cancer incidence have generally remained consistent over time." Do you agree with that conclusion?

A. No, see our discussion about brain tumor incidence in our recent article in Pathophysiology (Hardell et al 2012). In fact several studies have shown increasing incidence of brain tumors.

In Denmark a statistically significant increase in incidence rate per year for brain and central nervous system tumors (combined) was seen during 2000-2009; in men +2.7 %, 95 % CI = +1.1 to 4.3 % and in women +2.9 %, 95 % CI = +0.7 to 5.2 % (NORDCAN). Furthermore, updated results for brain and central nervous system tumors have been released in Denmark. The age-standardized incidence of brain and central nervous system tumors increased with 40 % among men and 29 % among women during 2001-2010 (Sundhedsstyrelsen, 2010). A more recent news release based on the Danish Cancer Register stated that during the last 10 years there has been an increasing number of cases with the most malignant glioma type, glioblastoma multiforme (astrocytoma WHO grade IV), especially among men (http://www.cancer.dk/Nyheder/nyhedsartikler /2012kv4/Kraftig+stigning+i+hjernesvulster.htm).

Zada et al (2012) studied incidence trends of primary malignant brain tumors in the Los Angeles area during 1992-2006. The overall incidence of primary malignant brain tumors decreased over the time period with the exception of glioblastoma multiforme (astrocytoma WHO grade IV). The annual age adjusted incidence rate of that tumor type increased statistically significant in the frontal lobe of the brain with Annual Percentage Change (APC) +2.4 % to +3.0 % ($p \leq 0.001$) and temporal lobe APC +1.3 %

to +2.3 % ($p \leq 0.027$) across all registries. In the California Cancer Registry the incidence of glioblastoma multiforme increased also in cerebellum, APC +11.9 % ($p < 0.001$). That means that the incidence increased most in the parts of the brain with highest absorption of RF-EMF emissions during use of wireless phones (Cardis et al 2008) and especially for the tumor type, glioblastoma multiforme, with high risk from such emissions (Hardell et al 2012).

Of interest is also the report by de Vocht et al (2011) from England that showed for the time period 1998 to 2007 a statistically significant increasing incidence of brain tumors, the majority glioma, in the temporal lobe for men and women ($p < 0.01$), and frontal lobe for men ($p < 0.01$). That means an increasing risk for a tumor type in a specific area of the brain that would be predicted based on current knowledge on the risk pattern.

Deltour et al (2012) reported increasing glioma incidence rates in Denmark, Finland, Norway, and Sweden for the time period 1979-2008. APC increased for men with +0.4 %, 95 % CI +0.1 to 0.6 % and for women with +0.3 %, 95 % CI +0.1 to 0.5 %. A study from Australia for the time period 2000-2008 showed that APC for malignant brain tumors increased statistically significant +3.9 %, 95 % CI +2.4 to 5.4 % (Dobes et al 2011). An increase was seen among both men and women. The APC for benign tumors increased with +1.7 %, 95 % CI -1.4 to +4.9 %, thus not statistically significant.

From urban Shanghai an increasing incidence of brain and nervous system tumors for the time period 1983-2007 was reported with APC +1.2 %, 95 % CI +0.4 to 1.9 % in males and APC +2.8 %, 95 % CI +2.1 to 3.4 % in females (Ding and Wang 2011).

We reported increasing incidence of astrocytoma WHO grades I-IV during 1970-2007 in Sweden. In the age group > 19 years the annual change was +2.16 %, 95 % CI +0.25 to 4.10 % during 2000-2007, for further details see Hardell and Carlberg (2009).

In summary, it should be noted that studies on tumor type and anatomical localisation show an increasing incidence of brain tumors that would be expected based on increased risk from RF-EMF emissions.

Q. Dr. Bailey and Dr. Shkolnikov discuss the IARC 2B classification. They emphasize a finding by the IARC that there is only "limited evidence" for cancer resulting from RF exposure. Can you explain what is meant by "limited evidence" in this context and its implications for assessing potential risks to humans from RF exposure?

A. A summary of the evaluation has been published by Baan et al in Lancet Oncology 2011 (Baan et al 2011) and the whole Monograph is to be published (IARC in press).

The conclusion at the IARC meeting was that RF-EMF is a 'possible' human carcinogen, Group 2B of evidence. There was a very large majority among the 30 participating independent experts for that decision; almost all voted for Group 2B in the summary evaluation. I was one of the 30 invited experts. The classification system can be found in the IARC Preamble.

(http://monographs.iarc.fr/ENG/Preamble/CurrentPreamble.pdf) .

IARC evaluates the **'hazard**' of potential carcinogens, i.e. 'an agent that is capable of causing cancer under some circumstances', while a cancer **risk** is an estimate of the carcinogenic effects expected from an exposure to a cancer hazard. The IARC

monographs are an exercise in evaluating cancer hazards, despite the historical presence of the words 'risks' in the title.

IARC has categorised nearly 1 000 potentially carcinogenic **hazardous** agents, which it has studied over the past 40 years, into 5 classifications. These are differentiated by strengths of evidence.

In descending order of strengths of evidence they are:

- **Group 1**, which are '**established'** human carcinogens, such as asbestos, diesel engine exhaust, tobacco, and X-rays (109 agents);
- **Group 2A**, which are **'probable'** carcinogens, such as perchloroethylene (65 agents);
- **Group 2B,** which are **'possible'** carcinogens, such as other traffic fumes, lead, DDT and now radiofrequency electromagnetic fields including mobile phones (275 agents);
- **Group 3**, where the agent is '**not classifiable'** because the evidence is inadequate and does not permit another classification (503 agents); and
- **Group 4**, where the agent is **'probably not carcinogenic to humans'**, based on fairly strong evidence **against** a cancer effect in both humans and animals (1 agent).

Source: http://monographs.iarc.fr/ENG/Classification/index.php

It should be noted that most of the agents (n=503) were evaluated as 'not classifiable' Group 3 and one as 'probably not carcinogenic to humans', Group 4. Thus classification of RF-EMF as a carcinogen (possible) is based on scientific literature. It is not an agent that cannot be classified according to its potency to be a human carcinogen. This is an important distinction regarding the carcinogenic evidence of exposure to RF-EMF, i.e. belongs to the group of agents in Group 1 or 2 with carcinogenic potential.

More discussion can be found in our chapter in Late Lessons from Early Warnings, part 2, published by European Environment Agency, Copenhagen, Denmark (Hardell et al 2013).

Q. Have there been any court cases in Europe finding that cancer was caused by EMF exposure?

A. Yes. An increased risk for leukemia among children has been reported in a small town near Rome because of the Vatican Radio broadcaster's high-powered transmitters. That is the type of malignant disease that would be expected based on scientific knowledge and the IARC evaluation of ELF-EMF as a Group 2B carcinogen to humans (IARC 2002). Italy's supreme Court has ordered Vatican Radio to compensate the victims (http://www.independent.co.uk/news/world/europe/vatican-radio-is-told-to-pay-out-over-cancer-risk-scare-2228541.html) (http://www.magdahavas.com/study-finds-vatican-radio-causes-cancer).

The first case on compensation of a patient who developed a neuroma after long-term wireless phone use has now been established in court. The Italian Supreme Court affirmed a previous ruling that the Insurance Body for Work (INAIL) must grant worker's compensation to a businessman who had used wireless phones for 12 years and developed a neuroma in the brain (www.applelettrosmog.it; www.microwavenews.com). He had used both mobile and cordless phones for five to six hours per day preferably on the same side as the tumor developed. The neuroma was located in the trigeminal Gasser's ganglion in the brain (5th cranial nerve). It is the same type of tumor as the acoustic neuroma in the 8th cranial nerve located in the same area of the brain where an increased risk of acoustic neuroma has been found among wireless phone users. The Italian case fulfils the criteria for a causal association; more than 10 years use of wireless phones, high cumulative exposure on the same side as the tumor appeared, and a tumor

type that would be predicted based on previous research on use of wireless phones and brain tumor risk. No further appeal of the Supreme Court decision is possible.

Q. Does the IARC 2B classification of carcinogenicity apply to all sources of RF-EMF?

A. Yes. In an email by Dr Baan at IARC dated 29 Aug 2011 it was stated that: "So the classification 2B, possibly carcinogenic, holds for all types of radiation within the radiofrequency part of the electromagnetic spectrum, including the radiation emitted by base-station antennas, radio/TV towers, radar, Wi-Fi, smart meters, etc.", see Exhibit C. This is an important message; the IARC decision includes "the whole radiofrequency region of the electromagnetic spectrum." The frequency range 30 kHz – 300 GHz is also defined in the publication by Baan et al (2011).

Q. Dr. Bailey and Dr. Shkolnikov testified that: "a careful scientist cannot conclude that studies and reports have identified a true, non-thermal effect." Do you agree, assuming a definition of non-thermal effect as biological effects occurring below RF-EMF intensities at which thermal effects are known to occur?

A. There are by now a vast majority of scientific studies published in peer-reviewed scientific journals showing non-thermal effects. The brain tumor risk as discussed above is one non-thermal risk.

We used serum transthyretin (TTR) as a marker of cerebrospinal fluid and blood-brain barrier damage in a cross-sectional study on 313 subjects (Söderqvist et al 2009a). We found a statistically significant positive β coefficient for TTR for time since first use of mobile phones and desktop cordless phones combined (P = 0.03), i.e. increased serum concentrations of TTR. The electromagnetic field parameters were similar for the phone types. In a provocation study on 41 persons exposed for 30 min to an 890-MHz GSM

signal with specific absorption rate of 1.0 Watt/kg to the temporal area of the brain, we found statistically significant increased serum TTR 60 min after exposure (Söderqvist et al 2009b).

The lipocalin type of prostaglandin D synthase or ß-trace protein (BTP) is synthesized in the choroid plexus, leptomeninges and oligodendrocytes of the central nervous system and is secreted into the cerebrospinal fluid. BTP is the key enzyme in the synthesis of prostaglandin D2, an endogenous sleep-promoting neurohormone in the brain. Exposure to RF-EMF has in some studies been associated with disturbed sleep. We studied the concentration of BTP in blood in relation to emissions from wireless phones (Hardell et al 2010, Söderqvist et al 2012b). The concentration of BTP decreased in the youngest age-group in the study, 18-30 years, with increasing number of years of use of a wireless phones. Also cumulative use in hours decreased the concentration of BTP. EMF emissions may down-regulate the synthesis of BTP in the brain. This mechanism might be involved in sleep disturbances reported in persons exposed to RF-EMF fields.

Another example of non-thermal effect is the finding that exposure to RF-EMF induces significant sperm DNA damage (Aitken et al 2005) and subsequent sperm apoptosis (De Iuliis et al 2009). Studies have shown a positive association between mobile phone use and impaired male reproduction (Agarwal et al 2009).

Specifically, the post-meiotic phase during DNA synthesis is the most vulnerable phase to environmental toxins, because during that phase the cells have lost part of their cytoplasm containing the abundant antioxidant enzymes that protect from reactive oxygen species (ROS) oxidation (Olsen et al 2005). Studies have shown that RF-EMF

may stimulate ROS generation both in vivo (Avci et al 2012) and in vitro (Lu et al 2012). Increased generation of ROS is considered to be one of the primary mechanisms that are involved in the bio-effects that are mediated by RF-EMF exposure (Friedman et al 2007).

In a recently published study, it was demonstrated that RF-EMF exposure induced the formation of oxidative base damage in a mouse spermatocyte-derived cell line (Liu et al 2013). This was mediated by ROS production. These results suggest that RF-EMF radiation emitted during mobile phone use may produce genotoxicity in the form of DNA base damage, see Graphical Abstract with Legend, Dr Liu with courtesy, Exhibit D.

To further elucidate the central role of ROS in RF-EMF exposure-induced DNA base damage, the authors used α-tocopherol pre-treatment to antagonize the oxidation of ROS; α-tocopherol is an important lipophilic antioxidant that can inactivate harmful ROS. The protective role of α-tocopherol pre-treatment confirmed that ROS are involved in RF exposure-induced DNA base damage (Liu et al 2013). The mode of action for RF-EMF-induced genotoxicity involved the induction of oxidative DNA base damage. These findings support the novel idea that low energy RF-EMF that is insufficient to directly induce DNA strand breaks may nonetheless produce genotoxic effects in the form of DNA base damage.

Another recently published study showed that 2.45 GHz low-level RF-EMF radiation induced oxidative stress and suppressed implantation or pregnancy in mice. It was also concluded that it might lead to deformity of the embryo in case pregnancy continues. The oxidative stress may lead to DNA strand breakage in the brain according to the authors and thus be a mechanism for causation of brain tumors. The effects were

non-thermal at power density = 0.033549 mW/cm^2, and specific absorption rate (SAR) = 0.023023 W/kg (Shahin et al 2013).

Antioxidants such as melatonin, vitamin C and vitamin E can alleviate the ROS oxidation and apoptosis that are induced by RF-EMF in an animal model (Oral et al 2006, Ozguner et al 2006).

The results in the study by Liu et al (2013) and Shahin et al (2013) are important findings to further elucidate the mechanisms for RF-EMF genotoxicity. These effects are clearly non-thermal. In summary these and other studies show that oxidative stress is an important mechanism for adverse health effects from RF-EMF emissions.

Non-thermal effects of electromagnetic fields on living systems have been further discussed in a monograph from the Ramazzini Institute (Giuliani, Soffritti 2010). http://www.icems.eu/papers/ramazzini_library5_part1.pdf; http://www.icems.eu/papers/ramazzini_library5_part2.pdf

Q. Is the blood-brain-barrier (BBB) a predictor of low-dose, or "non-thermal", adverse health effects?

A. Yes. In the BioInitiative Report 2012 leading researchers in this area, Dr Salford, Dr Nittby and Dr Persson conclude: "The intense use of mobile phones, not least by youngsters, is a serious memento. A neuronal damage may not have immediately demonstrable consequences, even if repeated. It may, however, in the long run, result in reduced brain reserve capacity that might be unveiled by other later neuronal disease or even the wear and tear of ageing. We cannot exclude that after some decades of (often), daily use, a whole generation of users, may suffer negative effects such as autoimmune

and neuro-degenerative diseases maybe already in their middle age". (Salford et al 2012, page 45). They continue with:

> "One remarkable observation, which we have made in our studies throughout the years, is that exposure with whole-body average power densities below 10 mW/kg gives rise to a more pronounced albumin leakage than higher power densities, all at non-thermal levels. These very low SAR-values, such as 1 mW/kg, exist at a distance of more than one meter away from the mobile phone antenna and at a distance of about 150–200 m from a base station.
>
> Further, when a mobile phone operating at 915 MHz (and its antenna) is held 1.4 cm from the human head, the very low SAR levels of 10 mW/kg exist in deep-lying parts of the human brain such as the basal ganglia, and the power density of 1 mW/kg and less is absorbed in thalamus bilaterally.
>
> With this information as a background, it is difficult to recommend safety limits as the function of existing mobile systems might not allow for limits that produce SAR levels below 1 or 0,1 mW/kg in the human brain, which are reported to cause a pathological leakage of the BBB and to neuronal damage." (Salford et al 2012, Page 45)

Thus, these very low RF-EMF levels giving neuronal damage (dark neurons) and BBB-leakage must be considered in the context of exposure from smart meters. Note the oxidative stress found in the Shahin et al (2013) study at power density 0.033549 mW/cm^2.

Q. Do you agree with their testimony that the authors of the Bioinitiative Report used flawed methods and failed to follow "the standard, scientific methods for developing exposure limits."

A. No. This is a statement that has no scientific credibility and is unfounded; see e.g. the BioInitiative Report 2012 (www.bioinitiative.org). In the Preface (http://www.bioinitiative.org/report/wp-content/uploads/pdfs/seci_2012_Preface.pdf) it is stated that:

> "Today, the BioInitiative 2012 Report updates five years of science, public health, public policy and global response to the growing health issue of chronic exposure to electromagnetic fields and radiofrequency radiation in the daily life of billions of people around the world.
>
> The BioInitiative 2012 Report has been prepared by 29 authors from ten countries, ten holding medical degrees (MDs), 21 PhDs, and three MsC, MA or MPHs. Among the authors are three former presidents of the Bioelectromagnetics Society [BEMS], and five full members of BEMS. One distinguished author is the Chair of the Russian National Committee on Non-Ionizing Radiation. Another is a Senior Advisor to the European Environmental Agency. As in 2007, each author is responsible for their own chapter.
>
> The great strength of the BioInitiative Report (www.bioinitiative.org) is that it has been done independent of

governments, existing bodies and industry professional societies that have clung to old standards. Precisely because of this, the BioInitiative Report presents a solid scientific and public health policy assessment that is evidence-based." (http://www.bioinitiative.org/report/wp-content/uploads/pdfs/seci_2012_Preface.pdf)

It should be stressed that the different chapters are written by world leading experts in the relevant scientific areas.

Q. Are there peer-reviewed studies reporting results that could support a plausible explanation for any mechanisms by which cancer could be caused by RF exposure?

A. Yes. The energy level associated with exposure is too low to cause direct DNA strand breaks and DNA crosslinks. However, DNA damages can be caused by cellular biochemical activities such as free radicals. Several studies indicate that RF-EMFs increase free radical activity in cells (Lai, Singh 1997, Phillips et al 2009). One mechanism is probably mediated via the Fenton reaction. Hydrogen peroxide is converted into hydroxyl free radicals that are potent cytotoxic molecules. This reaction is catalyzed by iron. High levels of iron are found in metabolic active cells such as cancer cells and cells undergoing abnormal proliferation, but also in brain cells. Glia cells might turn cancerous due to DNA damage, see also discussion above.

Q. Are children and adolescents more sensitive than adults to the toxic effects from RF-EMF exposure?

A. Yes. Children have smaller head and thinner skull bone than adults. Their brain tissue has also higher conductivity and these circumstances give higher absorption from RF-EMF than for adults (Cardis et al 2008, Christ et al 2010, Gandhi et al 2012). The

developing brain is more sensitive to toxins (Kheifets et al 2005) and it is still developing until about 20 years of age (Dosenbach et al 2010). The greater absorption of RF energy per unit of time, the greater sensitivity of their brains, and their longer lifetimes with the risk to develop a brain tumor and other diseases leaves children at a higher risk than adults from mobile phone radiation.

We studied the risk for glioma in different age groups. Highest risk was found for first use of mobile phone or cordless phone before the age of 20 years. Thus, mobile phone use yielded for glioma OR = 3.1, 95 % CI = 1.4-6.7 and cordless phone OR 2.6, 95 % CI = 1.2-5.5. The risk increased further for ipsilateral mobile phone use in the youngest age group to OR = 4.4, 95 % CI = 1.3-15, and to OR = 4.3, 95 % CI = 1.4-13 for cordless phone use (Hardell et al 2012).

Also for acoustic neuroma the risk was highest in the youngest age group with OR = 5.0, 95 % CI = 1.5-16 for use of mobile phone increasing to OR = 6.8, 95 % CI = 1.4-34 for ipsilateral use.

CEFALO was a multicenter case-control study on the risk for brain tumors among children and adolescents aged 7–19 years. A statistically non-significant increased risk among regular users (one call per week for at least 6 months) of mobile phones was found; OR = 1.36, 95 % CI = 0.92-2.02. This OR increased somewhat with cumulative duration of subscriptions and duration of calls (Aydin et al 2011a). No data for long-term use were given; the longest latency period was 5 years. Interestingly, further support of a true association was found in the results based on operator-recorded use for 62 cases and 101 controls, which for time since first subscription >2.8 years yielded a statistically

significant OR of 2.15, 95 % CI = 1.07-4.29, with a statistically significant trend (p=0.001).

Use of cordless phones was not well assessed. The authors stated that such use was covered only in the first 3 years of use. No explanation was given for this most peculiar definition. Wireless phone use was not considered, that is use of both mobile phones and cordless phones as the relevant exposure category, as used by the Hardell group and adopted by IARC (Baan et al 2011). Instead Aydin et al (2011a) included use of cordless phones in the 'unexposed' category when risk estimates were calculated for mobile phone use. Similarly, when use of cordless phones was analysed mobile phone use was regarded as 'no exposure'. Thus, an increased risk was potentially concealed.

Aydin et al discussed recall bias – that people tend to overestimate their number of calls – and interestingly they showed that controls overestimated their number of calls more than cases (Aydin et al 2011b). It was concluded that it was unlikely that a false positive result occurred in CEFALO and that the OR was underestimated for heavy users. Thus the results in the study were biased towards unity (no risk) for several reasons, e.g. including use of cordless phones in the 'unexposed' group and overestimated use of mobile phones among the controls. The true OR would thus have been higher than that presented in the study. The authors summarised that they "did not observe that regular use of a mobile phone increased the risk for brain tumors in children and adolescents." This statement is not correct. The results indicate an increased risk, in spite of low exposure, short latency period and limitations in study design and analyses, as we have discussed elsewhere (Söderqvist et al 2011).

Another example of the higher sensitivity of adolescents is our finding of decreased BTP concentration in blood among long-term wireless phone users in the age group 18-30 years, but not among older persons, see Hardell et al (2010) and Söderqvist et al (2012b).

Q. Should peak power densities or average power densities of RF-EMF be considered as to the health effects?

A. This is a question that has not been well studied. First it must be emphasized that a carcinogenic hazard in general exists regardless of dose for epigenetic toxic effects, i.e. no threshold. Dr Baan at IARC notes in a March 30, 2012 email that with lower dose "the hazard still exists". *See* Exhibit E.

As to ionizing radiation it is well known that the toxic effect of a specific radiation dose is higher if given as a single shot in radiotherapy than if the same dose is fractionated over several days (lower average dose over time).

By analogy peak density of RF-EMF may more accurately represent the radiation exposure to the body than power density that is a calculated average dose during a specified time, i.e. single peaks of radiation may have toxic effects and multiple peaks of radiation may have cumulative effects that are not accurately represented by averaged values. Thus, peaks of density should not be recalculated as average dose over time when the risk is estimated, instead the peak density should also be considered. The peak density is of special concern regarding e.g. the foetus (pregnant women), children, adolescents, sick and disabled.

Regarding ionizing radiation there is no homeostasis; that is that the body does not adapt to the exposure. The effects are permanent when a given part of the body is

irradiated, the given radiation dose makes additional radiotherapy impossible (depending on dose) – otherwise more serious tissue damage would occur. Regarding RF-EMF there are no well-done studies that show homeostasis in the human body for non-thermal effects. On the contrary studies show accumulating adverse health effects as exemplified by the brain tumor risk depending on cumulative does over time (dose-response). Our results of decreased BTP concentration among long-term users of wireless phones (18-30 years of age) is another example of an cumulative effect and not homeostasis. If the human body would adapt to the RF-EMF exposure no adverse health risks would occur, which is not the case.

Q. Dr. Bailey and Dr. Shkolnikov testified that: "The weight of the evidence does not support the idea that significant biological or adverse health effects can occur" from EMF-RF exposure. Do you agree with this conclusion?

A. No. On the contrary the weight of evidence shows an increased risk for certain types of brain tumors, see discussion above. The results are in accordance with what would biologically be plausible; see above the Hill (1965) criteria of evidence. On 23 January 2013 concern of adverse health effects by e.g. use of mobile phones were expressed at a meeting at the EU parliament in Brussels while Late Lessons from Early Warnings, Volume II was launched. (http://www.eea.europa.eu/acl_users/credentials_cookie_auth/login_form?came_from=http%3A//www.eea.europa.eu/publications/late-lessons-2).

Furthermore, several studies show other non-thermal effects in humans that can be linked to certain outcomes like fertility and disturbed sleep as examples, see also the BioInitiative 2012 Report (www.bioinitiative.org).

Q. In your opinion, could a careful scientist familiar with the body of knowledge on the subject reliably conclude that there are no risks of adverse health effects from the exposure to RF in the 2.4 GHz range?

A. No. The body of evidence shows risk of impaired health from the RF-EMF exposure and 2.4 GHz is included in the IARC evaluation 30 kHz – 300 kHz. Hill's analytic framework for assessing when the association is strong enough to infer causation and warrant action has been discussed above. This is particularly relevant when the question is whether a person is exposed to an agent of possible harm, such as RF-EMF, in the home or in his/her own living environments without consent.

Sir Bradford Hill in his famous article on causation provides a helpful framework for assessing the risk and he offers some very insightful comments that are useful in this context (Hill 1965). To answer those scientists who insist that every positive study be replicated, he states that "Once again looking at the obverse of the coin there will be occasions when repetition is absent or impossible and yet we should not hesitate to draw conclusions". Hill, p. 297.

To those who insist we wait until the exact causal mechanism is established, he states: "It will be helpful if the causation we suspect is biologically plausible. But this is a feature I am convinced we cannot demand. What is biologically plausible depends upon the biological knowledge of the day". P. 298.

To those who insist on more in vivo or in vitro evidence, he states: "Nevertheless, while such laboratory evidence can enormously strengthen the hypothesis and, indeed, may determine the actual causative agent, the lack of such evidence cannot nullify the

epidemiological observations in man". P. 298 "What I do not believe - and this has been suggested - is that we can usefully lay down some hard-and-fast rules of evidence that must be obeyed before we accept cause and effect." P. 299

Q. What is the message from the European Environment Agency (EEA) in Copenhagen regarding emerging technologies such as wireless networks currently in use?

A. On 23 January 2013 EEA published their 'Late Lessons from Early Warnings, Volume II' at a public meeting in the EU parliament in Brussels. Among the Key recommendations are:

- Policy makers should respond to early warnings more rapidly, the report says, particularly in cases of large scale emerging technologies. It proposes that those causing any future harm should pay for the damage.
- Risk assessment can also be improved, the report says, by embracing uncertainty more broadly and acknowledging what is not known. For example, 'No evidence of harm' has often been misinterpreted to mean 'evidence of no harm' when the relevant research was not available.
- The report calls for new forms of governance involving citizens in choices about innovation pathways and risk analysis. This would help to reduce exposure to hazards and encourage innovations with broader societal benefits. Greater interaction between business, governments and citizens could foster more robust and diverse innovations at less cost to health and the environment (http://www.eea.europa.eu/pressroom/newsreleases/the-cost-of-ignoring-the) .

One chapter deals with mobile phones and brain tumors as an emerging issue (Hardell et al 2013). The whole volume can be downloaded from the EEA website (http://www.eea.europa.eu/publications/late-lessons-2).

Q. Based on your own research and scientific knowledge what is your opinion about the risks associated with smart meters?

A. There is accumulating scientific evidence on the potential of exposure to RF-EMF to give adverse health consequences and these effects are clearly non-thermal at low intensity. Certain groups of humans such as children, adolescents, elderly and the sick and disabled are more sensitive than others. The unborn child (foetus) may be at especially high risk. Exposure to RF-EMF from smart meters is without consent in contrast to use of wireless phones that are used by the individual's own choice. I have not performed a detailed study of smart meter technology, and ultimately this is more of a policy question than a scientific one. But, in my opinion, using the Hill criteria on association or causation, there is sufficient evidence to warrant actions that would prevent or avoid exposure, and the utility should be required to prove that smart meter radiation is safe without relying on safety standards that protect only against thermal effects.

Dated this ___31st___ day of January, 2013.

Lennart Hardell

Lennart Hardell

Hardell Exhibit A

C.V. Lennart Hardell

Education, appointments

Medical degree from University of Uppsala, Sweden, October 27, 1971.
Authorization to practice the medical profession, National Board of Health and Welfare, Stockholm, November 5, 1971.
Specialized in internal medicine, October 18, 1976.
Specialized in oncology, June 20, 1979.
Medical dissertation, University of Umeå, May 15, 1981.
Qualified as an Asssociate Professor of Oncology, University of Umeå, December 9, 1983.
Research fellow at School of Public Health, University of California, Berkeley, USA, August 20, 1984 - August 19, 1985.
Consultant at the Department of Oncology, Örebro Medical Center, Örebro, Sweden August 1, 1991.
Qualified for appointment as a Professor of Oncology in Århus, Denmark, 1992.
Research appointment at the Swedish Medical Research Council July 1, 1994 – June 30, 2000 in molecular genetic epidemiology.
Professor in Oncology, Örebro University, Örebro May 1, 2001.

Research, academic assignments

Head of a research team since the 1980's investigating mostly environmental risk factors for cancer
Supervised eight researchers for their medical dissertations.
Served in several expert panels for medical dissertations.
Chairman of Örebro County Council Radiation Protection Committee July 1, 1995 – December 31, 1998.
Vice chairman in Örebro County Council Research Committee January 27, 1992 – December 31, 1998.
Vice secretary of Örebro County Council Ethical Committe January 27, 1992 – December 31, 1998.
Deputy of Ethical Committee at Akademiska sjukhuset, Uppsala, Sweden until December 31, 1998.
Member of Research Committee at the Medical Center, Örebro.
Member of Educational Committee at Örebro Medical Center, Örebro.
Faculty member of Internationl Journal of Oncology.
Member of editorial board of American Journal of Industrial Medicine.
Continously referee for a large number of medical journals.
Partner in EU research project: Occupational risk factors for rare cancer of unknown etiology.
Member of Collegium Ramazzini 2003.

Member of Swedish expert group on 'Exposure to electromagnetic fields and the risk of malignant diseases - an evaluation of epidemiological and experimental findings'. 1995.
Member of IARC expert committee on the evaluation of the carcinogenic effect of RF-EMF on humans, 24 – 31 May 2011.
Invited to a large number of scientific meetings since the 1980's to present results from my group's scientific studies,
.
Published 348 research papers and 149 abstracts, short reports

Awards

Receiver of the Fernström Award, University of Umeå, October 9, 1982.
Receiver of Cancer- and Allergy Fund Environmental Research Prize, April 24, 1997, Stockholm.
Miljöpartiet de Gröna (Green Environmental Party) Research Prize, September 21, 2001.
European Journal of Cancer Prevention Research Prize November 2005
Acta Oncologica Lecture Prize 2006-03-22
Prize winner Swedish Cooperation (Änglamark) 2007

Publications

1. Hardell L. Maligna mesenkymala mjukdelstumörer och exposition för fenoxisyror - en klinisk observation. Läkartidningen 1977;71:2753-2754.

2. Hardell L. Kemiska substanser och maligna mesenkymala tumörer. Svensk förening för radiobiologi. Förhandlingar 1978;9:18-21.

3. Hardell L, Sandström A. Case-control studie: Maligna mesenkymala mjukdelstumörer och exposition för fenoxisyror eller klorfenoler. Läkartidningen 1978;75:3535-6.

4. Hardell L, Sandström A. Case-control study: Soft-tissue sarcomas and exposure to phenoxyacetic acids or chlorophenols. Paper presented at the conference on pesticides and human health. Society for Occupational and Environmental Health, Washington D.C., USA, December 10-13,1978

5. Hardell L, Sandström A. Case-control study: Soft-tissue sarcomas and exposure to phenoxy acids or chlorophenols. Br J Cancer 1979;39:711-7.

6. Hardell L. Malignant lymphoma of histiocytic type and exposure to phenoxyacetic acids or chlorophenols. Lancet 1979;I:55-6.

7. Eriksson M, Hardell L, Berg NO, Möller T, Axelson O. Case-control studie över maligna mesenkymala mjukdelstumörer och exposition för kemiska substanser. Läkartidningen 1979;76:3872 -5.

8. Hardell L. Cancer epidemiology in Northern Sweden. Nordic Council Arct Med Res Rep 1980;26:94-7.

9. Hardell L. The clofibrate problem: A different viewpoint. Lancet 1980;II:1081 2.

10. Hardell L. Direct testimony before the United States Environmental Agency. Washington D.C. Exhibit No 762. 1980;September 29-30.

11. Eriksson M, Hardell L, Berg No, Möller T, Axelson O. Soft-tissue sarcomas and exposure to chemical substances: A case-referent study. Br J Ind Med 1981;38:27-33.

12. Hardell L, Eriksson M, Lenner P. En fall-kontroll studie: Maligna lymfom och exposition för kemiska substanser, särskilt organiska lösningsmedel, klorfenoler och fenoxisyror. Läkartidningen 1980;77:208-10.

13. Hardell L. Case-control studies: Soft-tissue sarcomas and malignant lymphomas and exposure to phenoxy acids or chlorophenols. In: Progress in Mutation Research Vol 2, Ed.: Kappas. Elsevier/North-Holland., Biomedical Press 1981;105-8.

14. Hardell L, Eriksson M, Lenner P, Lundgren E. Malignant lymphoma and exposure to chemicals, especially organic solvents, chlorophenols and phenoxy acids: A case-control study. Br J Cancer 1981;43:169-76.

15. Hardell L, Eriksson M. Soft-tissue sarcomas, phenoxy herbicides and chlorinated phenols. Lancet 1981;II:250.

16. Hardell L. Relation of soft-tissue sarcoma, malignant lymphoma and colon cancer to phenoxy acids, chlorophenols and other agents. Scand J Work Environ Health 1981;7:119-30.

17. Hardell L. Direct testimony before the United States Environmental Protection Agency. Washington D.C. Exhibit No 956. 1981;February 9.

18. Hardell L, Eriksson M. Fenoxisyror, klorfenoler och cancer. Läkartidningen 1981;78:2862-3.

19. Hardell L. Epidemiological studies on soft-tissue sarcoma and malignant lymphoma and their relation to phenoxy acid or chlorophenol exposure. Umeå University Medical Dissertations. New Series No 65 - ISSN 0346-6612,1981.

20. Hardell L. Fall-kontroll studier: Maligna mesenkymala mjukdelstumörer, maligna lymfom och exponering för fenoxisyror eller klorfenoler. NJF-seminar 1980; November 12 - 13. Nordisk jordbruksforskning 1981;1:58-9.

21. Osterman B, Hardell L, Holm J, Lenner P, Lindholm C, Wahlin A. Erfarenheter av intensiv cytostaticabehandling vid akut myeloisk leukemi. Läkartidningen 1982;79:2107-9.

22. Axelson O, Flodin U, Hardell L. A comment on the reference series with regard to mutiple exposure evaluation in a case-referent study. Scand J Work Environ Health suppl 1, 1982;8:15-9.

23. Hardell L. Cancer. I: Invärtesmedicin för kommunala högskolan. Ed.: Hedner P. Studentlitteratur, Lund 1982;263-8.

24. Hardell L, Axelson O. Soft-tissue sarcoma, malignant lymphoma and exposure to phenoxy acids or chlorophenols. Lancet 1982;I:1408-9.

25. Hardell L, Johansson B, Axelson O. Epidemiological study on nasal cancer and nasopharyngeal cancer and their relation to phenoxy acid or chlorophenol exposure. Am J Ind Med 1982;3:247-57.

26. Bengtsson NO; Hardell L, Eriksson M. Asbestos expsoure and malignant lymphoma. Lancet 1982;II:1453.

27. Sandahl C, Hardell L. Koststudie vid onkologisk klinik. Delstudie. Maten på sjukhuset. I: Patient- och II: Personal-synpunkter. Näringsforskning 1983;27:14-21.

28. Hardell L. Epidemiological studies on soft-tissue sarcoma, malignant lymphoma, nasal and nasopharyngeal cancer and their relation to phenoxy acid or chlorophenol exposure. In: Chlorinated Dioxins and Dibenzofurans in the Total Environment. Eds.: Choudhary, Keith, Rappe. Butterworth Publishers, Boston, 1983;367-74.

29. Hardell L. Exposure to polychlorinated dibenzo-p-dioxins and dibenzofurans in the environment. In: 13th International Cancer Congress. Part E. Cancer Management. Eds.: Mirand, Hutchinson, Michich. Alan R. Liss, New York, 1983;3757-69.

30. Hardell L, Bengtsson NO. Epidemiological study of socioeconomic factors and clinical findings in Hodgkin's disease, and reanalysis of previous data regarding chemical exposure. Br J Cancer 1983;48:217-25.

31. Sandahl C, Rönnlund U, Hardell L. Koststudie vid onkologisk klinik. Nutritionsstatus hos radioterapibehandlade head- och neckpatienter. Umeå universitet 1983.

32. Epidemiological studies. Direct testimony of Dr. Lennart Hardell, "The Herbicide Court Case". Nova Scotia Canada, May 1983 (presented by Dr. M. Eriksson).

33. Hardell L, Axelson O, Rappe C. Nasal cancer and chlorophenols. Lancet 1983;I:1167.

34. Sandahl C, Rönnlund U, Hardell L. Bättre näringsstatus hos cancerpatienter med hjälp av nutritionsgrupp och kostombud? Läkartidningen 1983;80:2234-5.

35. Axelson O, Hardell L. Cancer and exposure to chlorophenols and phenoxy acids - some comments on the Swedish experiences. In: Proceedings of a symposium chlorophenates in the wood industry. Ed.: Jeffries E. Division of Occupational and Environmental Health, University of British Columbia, Vancouver, B.C. Canada 1984;30-40.

36. Sandahl C, Rönnlund U, Hardell L. Nutritionsstastus hos patienter med strålbehandling av cancer i svalg, munhåla och strupe. Näringsforskning 1984;28:14-20.

37. Hardell L, Bengtsson NO, Jonsson U, Eriksson S, Larsson LG. Aetiological aspects on primary liver cancer with special regard to alcohol, organic solvents and acute intermittent porphyria - an epidemiological investigation. Br J Cancer 1984;50:389-397.

38. Eriksson M; Hardell L. Hälsorisker förenade med fenoxisyreanvändning i skogsbruket. Sammanfattande bedömning. Skrift 1984.

39. Sandahl C, Rönnlund U, Hardell L. Framgångsrik kostterapi vid strålningsinducerad diarré - en fallstudie. Läkartidningen 1985;82:860-2.

40. Hardell L. Review of some health effects aspects of the Pacific Waste Management Corporation risk assessment. Paper presented before the California Energy Commission, Irwindale, Los Angeles, 1985;May 30.

41. Smith AH, Smith MT, Hardell L. Health risk assessment for proposed waste-to-energy facilities. Report from School of Public Health, University of California, Berkeley, August 1985.

42. Hardell L. Onkologiskt centrum - lärdomar från USA. Läkartidningen 1985;82:2751-2.

43. Hardell L. Vård av AIDS-patienter - erfarenheter från San Francisco. Läkartidningen 1985;82:3999-4000.

44. Hardell L, Axelson O. Phenoxyherbicides and other pesticides in the etiology of cancer: Some comments on Swedish experiences. In: Cancer Prevention: Strategies in the workplace. Eds.: Becker CE, Coy MJ. Hemisphere Publishing Corporation, Washington 1986;107-119.

45. Bengtsson NO, Hardell L. Porphyrias, porphyrins and hepatocellular cancer. Br J Cancer 1986;54:115-7.

46. Flodin U, Fredriksson M, Axelson O, Persson B, Hardell L. Background radiation, electrical work, and some other exposures associated with acute myeloid leukemia in a case-referent study. Arch Env Health 1986;41:77-84.

47. Hardell L. Efter Tjernobyl: Många frågor återstår. Läkartidningen 1986;83:4167-68.

48. Hardell L, Eriksson M. Soft-tissue sarcoma and exposure to dioxins. Lancet 1986;II:868.

49. Hardell L. Some aspects of expsoure to polychlorinated dibenzo-para-dioxins and dibenzofurans in the ecological system. In: Hexachlorobenzene: Proceedings of an international symposium. IARC Scientific Publications No 77. Eds.: Morris CR, Cabral JRP. Lyon 1986;243-47.

50. Hardell L. Aspects of primary liver cancer and its relation to porphyria cutanea tarda and porphyria acuta intermittens. In: Hexachlorobenzene: Proceedings of an international symposium. IARC Scientific Publications No 77. Eds.: Morris CR, Cabral JRP. Lyon 1986;591-2.

51. Axelson O, Hardell L, Saracci R, Simonato L. Epidemiological studies: Panel discussion. In: Hexachlorobenzene: Proceedings of an international symposium. IARC Scientific Publications No 77. Eds.: Morris CR, Cabral JRP. Lyon 1986;593-4.

52. Weerasinghe NCA, Schecter AJ, Pan JC, Lapp RL, Giblin DE, Meehan JL, Hardell L, Gross ML. Levels of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) in adipose tissue of U.S. Vietnam veterans seeking medical assistance. Chemosphere 1986;15:1787-94.

53. Hardell L. Rebuttals of the final report on cancer by the Royal Commission on the Use and Effects of Chemical Agents on Australian Personnel in Vietnam. Ed.: Axelson O. Linköping University ISSN 02808471 1986;January 21.

54. Axelson O, Hardell L. Storm in a cup of 2,4,5-T. Med J Australia 1986;144:612-3.

55. Hardell L, Axelson O. Storm in a cup of 2,4,5-T. Med J Australia 1986;145:299.

56. Axelson O, Hardell L. Australian epidemonology - on Royal misruling in the realm of epidemiology. Paper rpesented at the Fifth International Symposium, Epidemiology In Occupational Health, Los Angeles, CA, USA 1986:September 9-11.

57. Nygren M, Rappe C, Lindström G, Hansson M, Bergqvist P-A, Marklund S, Domellöf L, Hardell L, Olsson M. Identification of 2,3,7,8-substituted polychlorinated dioxins and dibenzofurans in environmental and human samples. In: Chlorinated dioxins and dibenzofurans in perspective. Eds.: Rappe C, Choudhary G, Keith L. Lewis Publishers Inc., Chelsea, Michigan. 1986;15-32.

58. Andersson B, Danell M, Backman J, Bengtsson NO, Hardell L. Riskfaktorer för utveckling av maligna testikeltumörer i Västerbotten (AC), Norrbotten (BD) och Västernorrland (Y) 1960 - 1984. Umeå universitet, Vårdlärararinstitutionen 1986.

59. Hardell L. Efter Tjernobyl: Informationen måste vara vederhäftig. Läkartidningen 1987;84:185.

60. Hardell L. Soft-tissue sarcoma and exposure to chlorinated phenols - an overview of epidemiological studies. In: Toxicological research at Umeå. Eds.: Persson SÅ, Karlsson N, Wahlström G. FOA report E 40033, March 1987;14-5.

61. Hardell L. Cancer. I: Invärtesmedicin. Sjukdomslära och vårdaspekter. Eds.: Hedner P, Agardh C-D. Studentlitteratur, Lund 1987;391-8.

62. Hardell L, Moss A, Osmond D, Volberding P. Exposure to hair dyes and polychlorinated dibenzo-p-dioxins in AIDS patients with Kaposi sarcoma: An epidemiological investigation. Cancer Det and Prev Suppl 1.1987;1:567-70.

63. Hardell L, Hallquist A, Löfroth P-O. Joniserande strålning och thyreoideacancer. Läkartidningen 1987;45:3714-15.

64. Hardell L, Axelson O. Vietnam Veterans and Agent Orange - on the manipulation of science by a Royal Commission in Australia. Submitted to the Ecologist, accepted.

65. Hardell L, Eriksson M. The association between soft-tissue sarcomas and exposure to phenoxyacetic acids: A new case-referent study. Cancer 1988;62:652-656.

66. Hardell L, Eriksson M. HIV-infection and dioxin exposure - risk factors for Kaposi sarcoma and malignant lymphoma. Lancet 1988;I:591.

67. Adami HO, Allebeck P, Hardell L. Alkohol och cancer - sambanden säkra bara för få cancerformer. Läkartidningen 1988;85:2961-64.

68. Fredriksson M, Hardell L, Bengtsson NO, Axelson O. Confounding in occupational health. Paper presented before the 6th International Symposium, Epidemiology in Occupational Health, August 16-18, 1988, Stockholm, Sweden. In: Progress in Occupational Epidemiology. Hogstedt C, Reuterwall C. eds. Elsevier, Amsterdam 1988;63-66.

69. Hardell L. Tamoxifen as risk factor for carcinoma of corpus uteri. Lancet 1988;II:563.

70. Hallquist A, Hardell L, Hietala SO, Löfroth PO. Radiotherapy as riskfactor for thyroid carcinoma. In: Noduli e tumori della tiroide. Batelli T, Maltoni C, Vecchi A. eds. Monduzzi Editore. Ancona 1988, p455-460.

71. Hardell L. Pevic irradiation and tamoxifen as risk factors for carcinoma of corpus uteri: A case - control study. Lancet 1988;II:1432.

72. Hardell L. Pelvis irradiation and tamoxifen as risk factors for carcinoma of corpus uteri. Lancet II 1988:1432.

73. Hardell L. Dioxiner och cancer. I: Dioxinet in på livet, Källa 34. Forskningrådsnämnden 1989;23-34,50-51.

74. Fredriksson M, Bengtsson NO, Hardell L, Axelson O. Colon cancer, physical activity and occupational exposures - a case-control study. Cancer 1989;63:1838-1842.

75. Axelson O, Persson B, Hardell L. New Swedish studies on malignant lymphomas, soft tissue sarcomas and occupational exposures. In: Evatt revisited: Interpretation of scientific evidence. Steele EJ, Bellett AJD, McCullagh PJ, Selinger B (eds). Centre for Human Aspects of Science and Technology, The University of Sydney 1989;pp19-22.

76. Hardell L, Axelson O. The boring story of Agent Orange ant the Australian Royal Commission. The Medical Journal of Australia 1989;150:602.

77. Eriksson M, Hardell L, Adami, H-O. Exposure to dioxins as a risk factor for soft-tissue sarcoma - A population-based case-control study. J N C I 1990;82:486-490.

78. Eriksson M, Hardell L. Response to "Potential missclassification in some studies claiming an association between chlorophenol exposure and various malignancies. J N C I 1990;82:1786.

79. Hardell L. Phenoxy herbicides, cancer and Swedish forestry workers. In: Atwood PL (ed.) Agent Orange: Medical, scientific, legal, political and psychological issues. William Joiner Ceter for the Study of War and Social Consequences. University of Massachusetts at Boston, 1990;pp21-24.

80. Hardell L. Tamoxifen as a risk factor for endometrial cancer. Cancer 1990;1661.

81. Hardell L. Nya svenska studier av maligna lymfom, mjukdelssarcom och exponering för fenoxisyror och klorfenoler. I: Carlestål B (ed) Bekämpningsmedel och cancer, kunskapsläge och forskningsbehov. Kungliga skogs- och lantbruksakademien. Stockholm 1990;47:50-53.

82. Hardell L. Serious errors in new volume on Agent Orange and dioxin. Am J Ind Med 1990;17:261-267.

83. Hardell L. Tamoxifen som riskfaktor för endometriecancer. Läkartidningen 1990;87:1240-1241.

84. Bengtsson NO, Hardell L. Porfyri och levercancer - en kommentar. Läkartidningen 1990;20:1755.

85. Hardell L. Re: Agent Orange Controversy: A response. Am J Ind Med 1991;19:403-5.

86. Hardell L, Eriksson M. The association between cancer mortality and dioxin exposure: A comment on the hazard of repition of epidemiological misinterpretation. A J Ind Med 1991;19:547-9.

87. Eriksson M, Hardell L. Employment in pulp mills as a possible risk factor for soft-tissue sarcoma - a case report. Br J Cancer 1991;48:288.

88. Hardell L, Eriksson M, Axelson O, Fredriksson M. Dioxin and mortality from cancer. N E J M 1991;25:1810.

89. Hardell L, Eriksson M. Dioxinexponering ger förhöjd risk för mjukdelssarkom. Läkartidningen 1991;88:4005-6 (In Swedish).

90. Eriksson M, Hardell L. Nya rön styrker samband dioxiner, fenoxisyror och maligna lymfom. Läkartidningen 1991;88:2210-11 (In Swedish).

91. Hardell L, Eriksson M. Non-Hodgkin lymphoma and previous exposure to hexachlorophene: a case report. J Occup Med 1992;34:849-850.

92. Eriksson M, Hardell L, Malker H, Weiner J. Malignant lymphoproliferative diseases in occupations with potential exposure to phenoxyacetic acids or dioxins - a register-based study. Am J Ind Med 1992;22:305-312.

93. Hardell L. Hexachlorphene expsoure in a young patient with soft-tissue sarcoma. Br J Ind Med 1992:49:743.

94. Hardell L. Primary gastric lymphoma and occupational exposures. Lancet 1992;340:186-187.

95. Hardell L, Axelson O. Glöm inte ekonomiska intressen som drivkrafter bakom fusk i forskningen. Läkartidningen 1992;89:3574-3577.

96. Eksborg S, Hardell L, Bengtsson NO, Sjödin M, Elfsson B. Epirubicin as a single agent therapy for the treatment of breast cancer - a pahrmaccokinetic and clinical study. Med Oncol & Tumor Pharmacother 1992;22:305-312.

97. Hardell L. Soft-tissue sarcoma and dioxins. The First Citizen's Conference on Dioxin. Proceedings. P Connett, Elmore B (eds). St. Lawrence University, Canton, NY Dec 1992, pp 50-55.

98. Hardell L, Danell M, Marklund SL, Fredriksson M. Levels of selenium in plasma and glutathione peroxidase in erythrocytes and the risk of breast cancer: A case-control study. Biol Trace Element Res 1993;36:99-108.

99. Hardell L. Phenoxy herbicides, chlorophenols, soft-tissue sarcoma (STS) and malignant lymphoma. Br J Cancer 1993;67:1154-1155.

100. Hardell L. Human exposure to 2,3,7,8-TCDD and risk of cancer - a response. CRC Crit Rev Toxicol 1993;23:337-339.

101. Hardell L. Cancer. In: Invärtesmedicin. Sjukdomslära och vårdaspekter. Eds: Hedner P, Agardh C-D. Studentlitteratur, Lund 1993, pp 443-452.

102. Hallquist A, Hardell L, Degerman A, Boquist L. Occupational exposures and thyroid cancer - results of a case-control study. Eur J Cancer Prev. 1993;2:345-349.

103. Hallquist A, Hardell L, Löfroth P. External radiotherapy prior to thyroid cancer: a case control study. Int J Radiation Oncology Biol Phys 1993;27:1085-1089.

104. Hardell L. Hexachlorophene exposure in a young patient with soft tissue sarcoma. Br J Ind Med. 1993;50:670.

105. Hardell L, Eriksson M, Axelson O. On the misinterpreation of epidemiological evidence of carcinogenic effects from dioxin-containing phenoxy acids and chlorphenols. New Solutions 1994;4:49-56.

106. Hardell L, Eriksson M, Degerman A. Exposure to phenoxyacetic acids, chlorophenols, or organic solvents in relation to histopathology, stage, and anatomical localization of non-Hodgkin lymphoma. Cancer Research 1994;54:2386-2389.

107. Hardell L. Endometriosis during tamoxifen treatment. Lancet 1994;I:978.

108. Hallquist A, Hardell L, Degerman A, Wingren G, Boquist L. Medical diagnostic and therapeutic ionizing radiation and the risk for thyroid cancer: a case-control study. Eur J Cancer Prevention 1994;3:259-267.

109. Hardell L. Pesticides and soft-tissue sarcoma. In: The Identification and Control of Environmental and Occupational Diseases. Mehlman MA, Upton A (eds). pp 461-472, 1994.

110. Hardell L, Eriksson M, Axelson O, Hoar Zahm S. Cancer epidemiology. In: Schecter A (ed): "Dioxins and Health." New York: Plenum Press, pp 525-547, 1994.

111. Hallquist A, Hardell L, Degerman A, Boquist L. Thyroid cancer - reproductive factors, previous diseases, drug intake, family history, and diet: a case control study. European J Cancer Prev 3:481-488,1994.

112. Hardell L. TCDD carcinogenicity in humans. Environ Health Perspect 1994;102:814.

113. Hardell L. Chlorophenols, phenoxyacetic acids, and dioxins. In: Occupational Medicine, Zenz C, Dickerson OB, Horath Jr EP (eds). Mosby, St Louis, Missouri 1994, pp 654-660.

114. Hardell L, Moberg Wing A, Ljungberg B, Dreifaldt AC, Degerman A, Hallmans G. Levels of cadmium, zinc and copper in renal cell carcinoma and normal kidney. Eur J Cancer Prev 1994;3:45-48.

115. Schecter A, Hardell L, Päpke O, Lis A, Ball M, Stanley J, Boggess K, Leu FP. Two case reports: I. Dioxin levels in blood of two paper mill workers with non-Hodgkin's lymphoma. II. Elevation of dioxins in blood, liver and fat in an American veteran who died of soft-tissue sarcoma. Kyoto, Japan, Nov 21-25,1994. Dioxin '94;21:181-183.

116. Dahl P, Lindström G, Hardell L, Liljegren G. Analysis of polychlorinated biphenyls (PCBs) in breast tissue. Kyoto, Japan, Nov 21-25, 1994. Dioxin '94;19:209-214.

117. Hardell, Degerman A, Tomic R, Marklund SL, Bergfors M. Levels of selenium in plasma and gluthatione peroxidase in erythrocytes in patients with prostate cancer or benign hyperplasia. Eur J Cancer Prev 1995;4:91-95.

118. Hardell L, Eriksson M, Degerman A. Meta-analysis of four Swedish case-control studies on exposure to pesticides as risk-factor for soft-tissue sarcoma including the relation to tumour localization and histopatholgical type. Int J Oncology 1995;6:847-851.

119. Hagberg H, Rask-Andersen A, Hardell L, Nordström M. Is hairy cell leukemia more common among farmers? Br J Haematol 1995;89:942-948.

120. Hardell L, Fredriksson M, Eriksson M, Hansson M, Rappe C. Adipose tissue concentrations of dioxins and dibenzofurans in patients with malignant lymphoproliferative diseases and in patients without a malignant disease. Eur J Cancer Prev 1995;4:225-229.

121. van Bavel B, Dahl P, Karlsson L, Hardell L, Rappe C, Lindström G. Supercritical fluid extraction of PCBs from human adipose tissue for HRGC/LRMS analysis. Chemosphere 1995;30:1229-1236.

122. Rask-Andersen A, Hagberg H, Hardell L, Nordström M. Is hairy cell leukemia more common among farmers? - a pilot study. Oncology Reports 1995;2:447-450.

123. Wingren G, Hallquist A, Degerman A, Hardell L. Occupation and female papillary cancer of the thyroid. JOEM 1995;37:294-297.

124. Fredriksson M, Hardell L, Bengtsson NO, Axelson O. Colon cancer, dietary habits and physical activity - a further report of a case-control study. Int J Oncology 1995;7:133-141.

125. Hardell L, Eriksson M, Athlin L, Rappe C, Hansson M. Adipose tissue concentrations of dioxins and dibenzofurans in potentially exposed patients with malignant lymphoma or sarcoma - a case report. Oncology Reports 1995;2:749-753.

126. Hardell L, Holmberg B, Malker H, Paulsson LE. Exposure to electromagnetic fields and the risk of malignant diseases - an evaluation of epidemiological and experimental findings. Eur J Cancer Prev 1995 (4; Supplement 1):3-107.

127. Demers PA, Kogevinas M, Bofetta P, Leclerc A, Luce D. Battista GM, Belli S, Bolm-Audorf U, Brinton LA, Colin D, Comba P, Hardell L, Hayes RB, Magnani C, Merler E, Morcet JF, Preston-Martin S, Matos E, Rodella S, Vaughan TL, Zheng W, Vainio H. Wood-dust and sino-nasal cancer: A pooled re-analysis of thirteen case-control studies. Am J Ind Med 1995;28:151-166.

128. Hardell L, Holmgren G, Steen L, Fredriksson M, Axelson O. Familial amyloid polyneuropathy and the influence of organic solvents and other agents evaluated in a case-control study. Epidemiology 1995;6:598-601.

129. Lindström G, van Bavel B, Järemo M, Karlsson L, Rappe C, Hardell L. The use of supercritical fluid extraction (SFE) as a sample preparation method in the analysis of PCDD,

PCDF and PCB in human tissue. In: Clement R, Ramamoorthy S. Analyctical and Bioanalytical Standards and QA/QC Formation/Treatment Emissions/Incineration. Edmonton, Canada: Dioxin'95. 1995;23:27-30.

130. Hardell L, Liljegren G, Dahl P, Lindström G. Concentrations of dixoins (PCDDs), dibenzofurans (PCDFs) and polychlorinated biphenyls (PCBs) in breast cancer patients and controls. In: Birnbaum L, et al. Toxicology, Ecotoxicology, Mechanisma of Action, Metabolism. Edmonton, Canada: Dioxin'95. 1995;25:123-124.

131. Lindström G, van Bavel B, Järemo M, Karlsson L, Rappe C, Hardell L. The use of supercritical fluid extraction (SFE) as a sample preparation method in the analysis of PCDD, PCDF and PCB in human tissue. Organohalogen Compounds 1995;23:27-30.

132. Hardell L, Fredrikson M, Axelson O. Case-control study on colon cancer regarding previous diseases and drug intake. Int J Oncology 1996;8:439-444.

133. Sigvardsson S, Hardell L, Przybeck TR, Cloniger R. Increased cancer risk among Swedish female alcoholics. Epidemiology 1996;7:140-143.

134. Hardell L, Holmberg B, Malker H, Paulsson LE. What is the etiology of human brain tumors? Cancer 1996;77:1006-1008.

135. Hardell L, Axelson O, Fredrikson M. Antihypertensive drugs and risk of malignant diseases. Lancet 1996;348:542.

136. Lindström G, van Bavel B, Broman K, Hardell L. Determination of chlordane in human adipose tissue by SFE-LC. Organohalogen Compounds 1996;27:253-258.

137. Hardell L, van Bavel B, Lindström G, Fredrikson M, Hagberg H, Nordström M, Liljegren G, Johansson B. Higher concentrations of specific polychlorinated biphenyl congeners in adipose tissue from non-Hodgkin lymphoma patients compared to controls without a malignant disease. Int J Oncol 1996;9:603-608.

138. Hardell L, Axelson O, Fredrikson M, Söderkvist P. Läkemedel och risk för cancer bör tas på allvar. Läkartidningen 1996;44:3886.

139. Hardell L, Lindström G, van Bavel B, Broma K, Fredrikson M, Nordström M, Johansson B, Liljegren G, Hagberg H. Increased concentrations of chlordane in adipose tissue from non-Hodgkin's lymphoma patients compared with controls without a malignant disease. Int J Oncol 1996;9:1139-1142.

140. Hardell L, Lindström G, Liljegren G, Dahl, P, Magnusson A. Increased concentrations of octachlorodibenzo-*p*-dioxin in cases with breast cancer - results from a case-control study. Eur J Cancer Prev 1996;5:351-357.

141. Tondel M, Carlsson G, Hardell L, Eriksson M, Jakobsson S, Flodin U, Axelson O. Incidence of neoplasms in ages 0-19 y in parts of Sweden with high ^{37}Cs fallout after the Chernobyl accident. Health Physics 1996;71:947-950.

142. Hardell L, Lindström G, van Bavel B, Fredrikson M. PCB i miljön kan vara ett hot mot hälsan. Läkartidningen 1997;94:111.

143. Hardell L, Tondel M, Flodin U, Sköldestig Å, Axelson O, Jakobsson S, Eriksson M, Carlsson G. Ökad incidens av hjärntumörer i åldrarna 0-19 år i Sverige under tidsperioden 1978-92. Läkartidningen 1997; 94:728-731.

144. Lecelerc A, Luce D, Demers PA, Bofetta P, Kogevinas M, Belli S, Bolm-Audorffff U, Brinton LA, Colin D, Comba P, Gérin M, Hardell L, Hayes RB, Magnani C, Merler E, Morcet JF, Preston-Martin S, Vaughan TL, Zheng W. Sinonasal cancer and occupation. Results from the reanalysis of twelve case-control studies. Am J Ind Med. 1997;31:153-165.

145. Lindström G, van Bavel B, Hardell L, Liljegren G. Identification of the flame retardants polybrominated dipehnyl ethers in adipose tissue from patients with non-Hodgkin's lymphoma in Sweden. Oncology Reports 1997;4:999-1000.

146. Wingren G, Hardell L, Hallquist A, Axelson O. Diagnostic X-rays and female papillary thyroid cancer. In: 100 Jahre Röntgen: Medizinische Strahlenbelastung-Bewertung des Risikos. Schmitz-Feurhake I, Lengfelder E (eds). Gesellschaft f□r Strahlenschutz e.V. M□nster, Bremen, 1997:60-66.

147. Axelson O, Fredrikson M, Holmgren G, Steen L, Hardell L. Familial amyloid polyneurothy - combined effects of solvent exposure and genetic background. Proceedings Molecular Epidemiology Symposium. IMM-rapport 1/97:54-58.

148. Hardell L, Liljegren G, Lindström G, van Bavel B. PCBs, chlordanes and the etiology of non-Hodgkin's lymphoma. Epidemiology 1997;8:689.

149. Hardell L, Ohlson CG, Fredrikson M. Occupational exposure to polyvinyl chloride as a risk factor for testicular cancer evaluated in a case-control study. Int J Cancer 1997;73:828-830.

150. Karlsson M, Hardell L, Hallquist A. No association between immunochemical expression of p53, c-*erb*-2, Ki-67, estrogen and progesterone receptors in female papillary thyroid cancer and ionizing radiation. Cancer Letters 1997;120:173-177.

151. Nordström M, Hardell L, Magnuson A, Hagberg H, Rask-Andersen A. Occupation and occupational exposure to UV-light as risk factors for hairy cell leukemia evaluated in a case-control study. Eur J Cancer Prev 1997;6 467-472.

152. Hardell L, van Bavel B, Lindström G, Liljegren G Johansson B. Increased age related concentrations of polychlorinated biphenyls in four male patients with Ewing's sarcoma. Int J Env Health Res. 1997;7:307-313.

153. Wingren G, Hallquist A, Hardell L. Diagnostic x-ray exposure and female papillary thyroid cancer: A pooled analysis of two Swedish case-control studies. Eur J Cancer Prev 1997;6:550-556.

154. Hardell L, Nordenstam M, Moqvist I, Lindberg L. Alternativmedicinsk inget alternativ. Läkartidningen, 1998;95:2092-2095.

155. Hardell L. Lindström G, van Bavel B, Fredrikson M, Liljegren G. Some aspects of the etiology of non-Hodgkin's lymphoma. Env Health Perspect 1998;106(Suppl 2):679-681.

156. Liljegren G, Hardell L, Lindström G, Dahl P, Magnuson A. Case-control study on breast cancer and adipose tissue concentrations of congener specific polychlorinated biphenyls, DDE and hexachlorobenzene. Eur J Cancer Prev 1998;7:135-140.

157. Nordström M, Hardell L, Magnuson A, Hagberg H, Rask-Andersen A. Occupational exposures as risk factors for hairy cell leukemia evaluated in a case-control study. Br J Cancer 1998;77:2048-2052.

158. Hardell L, Axelson O. Environmental and occupational aspects on non-Hodgkin's lymphoma. Oncology Research 1998;10:1-5.

159. Schildt EB, Eriksson M, Hardell L, Magnuson A. Oral infections and dental factors in relation to oral cancer: a Swedish case-control study. Eur J Cancer Prev 1998;7:201-206.

160. Schildt EB, Eriksson M, Hardell L, Magnuso A. Oral snuff, smoking habits and alcohol consumption in relation to oral cancer evaluated in a Swedish case-control study. Int J Cancer 1998;77:341-346.

161. Hardell L, Eriksson M, Axelson O. Agent Orange in war medicine: An aftermath myth. Int J Health Services 1998;28:715-724.

162. Demers PA, Bofetta P (eds), Kogevinas M, Battista G, Belli S, Blair A, Bolm-Audorf U, Brinton LA, Colin D, Comba P, Gérin M, Hardell L, Hayes RB, Leclerc A, Luce D, Magnani C, Matos E, Merler E, Miller BA, Preston-Martin S, Robinson CF, Rodella S, Roscoes RJ, Vainio H, Vaughan TL, Winter PD, Zheng W, Saracci R. Cancer risk form occupational exposure to wood dust. A pooled analysis of epidemiological studies. IARC Technical Report No. 30, Lyon, 1998.

163. Eriksson M, Hardell L, Malker H, Weiner J. Increased cancer incidence in physicians, dentists and health care workers. Oncology Reports 1998;5:1413-1418.

164. Hardell L, Lindström G, van Bavel B, Wingfors H, Sundelin E, Liljegren G. Concentrations of the flame retardant 2,2',4,4'-tetrabrominated diphenyl ether in human adipose tissue in Swedish persons and the risk for non-Hodgkin's lymphoma. Oncol Res 1998;10:429-432.

165. Hardell L, Näsman Å, Ohlson CG, Fredrikson M. Case-control study on risk factors for testicular cancer. Int J Oncology 1998;13:1299-1303.

166. Lindström G, Hardell L, van Bavel B, Wingfors H, Sundelin E, Lindholm P. Current level of 2,2'4,4'-tetrabrominated diphenyl ether in human adipose tissue in Sweden - a risk factor for non-Hodgkin's lymphoma? Organohalogen Compounds 1998;35:431-434.

167. Wingfors H, van Bavel B, Lindström G, Hardell L. Comparison of total lipid adjusted levels and profiles of PCBs in human blood and adipose tissue. Organohalogen Compounds 1998;37:417-420.

168. Wingfors H, van Bavel B, Lindström G, Fredriksson P, Schumacher M, Domingo JL, Hardell L. A multivariate data evaluation of the PCB profiles in human background samples from Sweden and Spain. Organohalogen Compounds 1998;38:207-210.

169. Hardell L, Eriksson M. Case-control study of non-Hodgkin's lymphoma and exposure to pesticides. Organohalogen Compounds 1998;38:257-258.

170. Hardell L, Ohlson CG, Fredrikson M. Occupational exposure to polyvinyl chloride as a risk factor for testicular cancer evaluated in a case-control study. Organohalogen Compounds 1998;38-239-242.

171. Hardell L, Lindström G, van Bavel B, Wingfors H, Sundelin E, Liljegren G, Lindholm P. Ökar flamskyddsmedel risken för non-Hodgkin lymfom? Halterna av polybromerade difenyletrar ökar i miljön. Läkartidningen 1998;95:5890-5893.

172. Wingren G, Hardell L, Hallquist A, Axelson O. Diagnostic X-ray exposure and female papillary thyroid cancer. In: 100 Jahre Röntgen: Medizinische Strahlenbelastung Bewertung des Risikos. Bericht Nr. 15-18 des Otto Hug Strahleninstitutes MHM, München 1998, pp 60-66.

173. Wingfors H, Lindström G, van Bavel B, Schumacher M, Hardell L. Multivariate data evaluation of PCB and dioxin profiles in the general population in Sweden and Spain. Organohalogen Compounds 1998;38:207-210.

174. Nordström M, Hardell L, Fredrikson M. Previous medical history and medications as risk factors for hairy cell leukemia. Oncol Rep 1999;415-419.

175. Mannetje A, Kogevinas M, Luce D, Demers P, Bolm-Audorf U, Comba P, Hardell L, Hayes RB, Leclerc A, Magnani C, Merler E, Tobias A, Bofetta P. Sinonasal cancer, occupation and tobacco smoking in European women and men. Am J Ind Med 1999;36:101-107.

176. Schildt EB, Eriksson M, Hardell L, Magnuson A. Occupational exposures as risk factors for oral cancer evaluated in a Swedish case-control study. Oncol Rep 1999;6:317-320.

177. Cardis E, Kilkenny M, Armstrong BK, Blettner M, Cartwright R, Comba P, Guénel P, Hallquist A, Hardell L, Hours M, Jong K, Krewski D, Martuzzi M, McKinney PA, Michaelis J, Modan B, Pearce N, Sadetzki S, Schlaeffer K, Siemiatycki J, Vecchia P, Wiart J, Woodward A. International case-control study of adult brain, head and neck tumours: Results of the feasibility study. Radiation Protection Dosimetry 1999;83:179-183.

178. Negri E, Dal Maso L, Ron E, La Vecchia C, Mark SD, Preston-Martin S, McTiernam A, Kolonel L, Yoshimoto Y, Jin F, Wingren G, Galanti MR, Hardell L, Glattre E, Lund E, Levi F, Linos D, Braga C, Franceschi S. A pooled analysis of case-control studies of thyroid cancer. II. Menstrual and reproductive factors. Cancer Causes Control 1999;10:143-155.

179. Hardell L, Näsman Å, Påhlson A, Hallquist A, Hansson Mild K. Use of cellular telephones and the risk for brain tumours: A case-control study. Int J Oncology 1999;15:113-116.

180. Hardell L, Eriksson M. A case-control study of non-Hodgkin lymphoma and exposure to pesticides. Cancer 1999;85:1353-1360.

181. Hardell L, Eriksson M. Reply to: Comments on a case-control study of non-Hodgkin lymphoma and exposure to pesticides. Cancer 1999;86:730-731.

182. Hardell L, Reizenstein J, Johansson B, Gertzén H, Hansson Mild K. Angiosarcoma of the scalp and use of a cordless (portable) telephone. Epidemiology 1999;10:785-786.

183. Hardell L, Näsman Å, Påhlson A, Hallquist A, Hansson Mild K. Reply to: Use of cellular phones and the risk of brain tumours: A case-control study. Int J Oncology 1999;15:1045-1047.

184. Lindström G, van Bavel B, Wingfors H, Hardell L, Sundström G, Widell A. Dioxin archaeology - revealing of potential human exposure to polychlorinated dioxins and furans in the early 1940's. Organohalogen Compounds 1999;44:9-12.

185. Ekström AM, Eriksson M, Hansson LE, Lindgren A, Signorello LB, Nyrén O, Hardell L. Occupational exposures and risk of gastric cancer in a population-based case-control study. Cancer Res 1999;59:5932-5937.

186. Nordström M, Hardell L, Linde A, Schloss L. Elevated antibody levels to Epstein-Barr virus antigens in patients with hairy cell leukaemia compared to controls in relations to exposure to pesticides, organic solvents, animals and exhausts. Oncology Research 1999;11:539-544.

187. Wingfors H, Lindström G, van Bvel B, Schumcher M, Hardell L. Multivariate data evaluation of PCB and dioxin profiles in the general population from Sweden and Spain. Chemosphere, 2000;40:1083-1088.

188. Nordström M, Hardell L, Lindström G, Wingfors H, Hardell K, Linde A. Concentrations of organochlorines related to titers to Epstein-Barr virus Early Antigen (EA) IgG as risk factors for hairy cell leukaemia. Env Health Perspect 2000;108:441-445.

189. Hardell L, Näsman Å, Påhlson A, Halllquist A. Case-control study on radiology work, medical x-ray investigations, and use of cellular telephones as risk factors for brain tumors. Medscape General Medicine 2000. http://www.medscape.com/Medscape/GeneralMedicine/journal/2000/v02.n03/mgm0504.hard/mgm0504.hard.html.

190. Ohlson CG, Hardell L. Testicular cancer and occupational exposures with a focus on xenoestrogens in polyvinyl chloride plastics. Chemosphere, 2000;40:1277-1282.

191. Hardell L, Hansson Mild K, Hallquist A. Mobiltelefoner och risken för hjärntumörer - försiktighetsprincipen bör tillämpas. Läkartidningen 2000;97:3908-3909. (In Swedish)

192. Hardell L, Hansson Mild K, Hallquist A. Försiktighetsprincipen bör tillämpas. Läkartidningen 2000;37:4628-4631. (In Swedish)

193. Hardell L. Cellular phones as risk factors for brain tumors. Medscape General Medicine, Available December 1, 2000 at:http://www.medscape.com/Medscape/GeneralMedicine/journal2/mgm1201.hard.htm

194. Hardell L, Sigvardson S, Przybeck TR, Cloninger R. Cancer risk among Swedish female alcoholics by age, birth cohort and severity of alcoholism. European J Cancer Prev 2000;9:297-301.

195. Hardell L, Breivald M, Hennerdal S, Fernberg JO, Strander H. Shrinkage of desmoid tumour with interferon alfa treatment. Cytokines, Cellular & Molecular Therapy 2000;6:155-156.

196. Kaerlev L, Stubbe Teglbjaerg P, Sabroe S, Kolstad HA, Ahrens W, Eriksson M, Llopis Gonzáles A, Guénel P, Hardell L, Launoy G, Merler E, Merletti F, Morales Suárez-Varela M, Stang A. Occupation and small bowel adenocarcinoma: A European case-control study. Occup Environ Med 2000;57:760-766.

197. Kaerlev L, Stubbe Teglbjaerg P, Sabroe S, Kolstad HA, Ahrens W, Eriksson M, Guénel P, Hardell L, Launoy G, Merler E, Merletti F, Stang A, Olsen J. Is there an association between alcohol intake and smoking and small bowel adenocarcinoma? Results from a European multi-center case-control study. Cancer Causes Control 2000;11:791-797.

198. Kaerlev L, Stubbe Teglbjaerg P, Sabroe S, Kolstad HA, Ahrens W, Eriksson M, Guénel P, Hardell L, Launoy G, Merler E, Merletti F, Stang A. Medical risk factors for small bowel adenocarcinoma with focus on Crohn disease: A European population-based case-control study. Scand J Gastroenterol 2001;36:641-646.

199. Morales-Suarés-Varela MM, Olsen J, Kaerlev L, Guénel P, Arveux P, Wingren G, Hardell L, Ahrens W, Stang A, Llopis-Gonzales A, Merletti F, Guillén-Grima F, Johansen P. Are alcohol intake and smoking associated with mycosis fungoides? A European multicentre case-control study. European J Cancer 2001;37:392-397.

200. Hardell L, Hansson Mild K, Hallquist A. Radiofrequency exposure and the risk for brain tumors. Epidemiology 2001;12:135.

201. Hansson Mild K, Hardell L. Epidemiological study on the use of cellular telephones and the risk for brain tumors.In: Wireless Phones and Health II. State of the Science. Carlo GL, Thibodeau PM (eds). Kluwer Academic Publishers, Boston 2001, pp 199-202.

202. Hardell L, Dreifaldt AC. Breast-feeding and the risk of malignant diseases in childhood. Eur J Clin Nutr 2001;55:179-185.

203. Hardell L, Hansson Mild K. Cellular telephones and risk of brain tumours. Lancet 2001;357:960-961.

204. Hardell L, Eriksson M, Lindström G, van Bavel B, Linde A, Liljegren G. Case-control study on concentrations of organohalogen compounds and titers of antibodies to Epstein-Barr virus antigens in the etiology of non-Hodgkin lymphoma. Leukemia & Lymphoma 2001;42:619-629.

205. Hardell L, Hansson Mild K. Handled cellular telephones and brain cancer risk. JAMA 2001;285:1838.

206. Hardell L. Klokare om försiktighetsprincipen får råda. Medikament 2001;3:20-22. (In Swedish)

207. Hardell L, Hansson Mild K. Re: Cellular telephones and cancer - a nationwide cohort study in Denmark. J Natl Cancer Inst 2001;93:952.

208. Hardell L, Lindström G, van Bavel B, Hardell K, Linde A, Carlberg M, Liljegren G. Adipose tissue concentrations of dioxins and dibenzofurans, titers of antibodies to Epstein-Barr virus Early antigen and the risk for non-Hodgkin lymphoma. Environmental Research 2001;87:99-107.

209. Hardell L, Hansson Mild K, Påhlson A, Hallquist A. Ionising radiation, cellular telephones and the risk for brain tumours. Eur J Cancer Prevention 2001;10:523-529.

210. Hallquist A, Hardell L, Wingren G. Diagnostic X-ray exposure and female papillary thyroid cancer. In: Die Wirkung niedrieger Strahlendose-im Kindes- und Jugendalter, in der Medizin, Umwelt und Teknik, am Arbeitsplats. Köhnlein W, Nussbaum RH (eds). Gesellschaft für Strahlenschutz e.V. Berlin, Bremen 2001, pp124-125.

211. Hansson Mild K, Hamnerius Y, Hardell L, Mattsson MO, Sandström M. Internationell konsensus om lågfrekventa magnetiska fält: "Möjligen cancerframkallande". Läkartidningen 2001;46:5188-5199. (In Swedish)

212. Axelson O, Fredrikson M, Åkerblom G, Hardell L. Childhood leukemia (0-19 years) and exposure to ionizing radiation in homes built from uranium containing alum shale concrete. Epidemiology 2002; 13: 146-150.

213. Luce D, Leclerc A, Bégin D, Demers PA, Gérin M, Orlowski E, Kogevinas M, Belli S, Bugel I, Bolm-Audorff U, Brinton LA, Comba P, Hardell L, Hayes RB, Magnani C, Lerler E, Preston-Martin S, Vaughan TL, Zheng W, Bofetta P. Sinonasal cancer and occupational exposures: A pooled analysis of 12 case-control studies. Cancer Causes Control 2002; 13: 147-157.

214. Hardell L, Eriksson M, Nordström M. Exposure to pesticides as risk factor for non-Hodgkin's lymphoma and hairy cell leukemia - pooled analysis of two Swedish case-control studies. Leukemia and Lymphoma 2002;45:1043-1049.

215. Hardell L, Lindström G, van Bavel B. Is DDT exposure during fetal period and breast feeding associated with neurological impairment? Environmental Research 2002;88:141-144.

216. Hardell L, Hallquist A, Hansson Mild K, Carlberg M, Påhlson A, Lilja A. Cellular and cordless telephones and the risk for brain tumors. Eur J Cancer Prev 2002;11:377-386.

217. Hardell L, Hansson Mild K. Mobiltelefoner, trådlösa telefoner och risken för hjärntumörer. Medikament 2002;6:80-83 (In Swedish)

218. Hardell L, Johansson B, Hansson Mild K. Mobiltelefoner och basalcellscancer - en fallrapport. Medikament 2002;6:84-85. (In Swedish)

219. Hardell L, Hansson Mild K, Carlberg M. Case-control study on the use of cellular and cordless phones and the risk for malignant brain tumours. Int J Radiat Biol 2002;78:931-936.

220. Hansson Mild K, Sandström M, Hardell L. Mobiltelefoner och hälsoeffekter - en aktuell kunskapsöversikt. Vård 2002;3:63-72. (In Swedish)

221. Hansson Mild K, Hardell L, Kundi M, Mattsson MO. SSI-rapporten - en tendentiös partsinlaga hävdar svenska forskare. Medikament 2002;7:39-44 (In Swedish).

222. Hardell L. Från Hormoslyr till mobiltelefoner - historiska lärdomar om försiktighetsprincipen. Medikament 2002;7:48-52 (In Swedish).

223. Kaerlev L, Stubbe Teglbjaerg P, Sabroe S, Kolstad HA, Ahrens W, Eriksson M, Llopis González A, Guénel P, Hardell L, Launoy G, Merler E, Merletti F, Morales Suárez-Varela M, Stang A. Occupational risk factors for small bowel carcinoid tumour - a European population-based case-control study. J Occup Environ Med 2002;44:516-522.

224. Hardell L, van Bavel B, Lindström G, Carlberg M, Dreifaldt AC, Wijkström H, Starkhammar H, Eriksson M, Hallquist A, Kolmert T. Increased concentrations of polychlorinated biphenyls, hexachlorobenzene and chlordanes in mothers to men with testicular cancer. Environmental Health Perspectives 2002, http://dx.doi.org/

225. Kaerlev L, Stubbe Teglbjaerg P, Sabroe S, Kolstad HA, Ahrens W, Eriksson M, Guénel P, Gorini G, Hardell L, Cyr D, Zambon P, Stang A, Olsen J. The importance of smoking and medical history for development of small bowel carcinoid tumor: A European population-based case-control study. Cancer Causes Control 2002; 13(1): 27-34.

226. Hardell L, Hansson Mild K, Carlberg M. Further aspects on cellular telephones and brain cancer. Int J Oncology 2003; 22: 399-407.

227. Hardell L, Hansson Mild, K, Carlberg M, Hallquist A, Påhlson A. Vestibular schwannoma, tinnitus and cellular telephones. Neuroepidemiology 2003; 22: 124-129.

228. Schildt EB, Nylander K, Eriksson M, Hardell L, Magnuson A, Roos G. Expression of p53 and proliferation markers in relation to risk factors in oral cancer - a molecular epidemiological study. Int J Oncology 2003; 22: 861-868.

229. Hansson Mild K, Hardell L, Hallquist A, Sandström M. Biologiska effekter av elektromagnetiska fält. Reserapport från en internationell workshop. Medikament 2003; 1: 66-71. (In Swedish)

230. Morales MM, Olsen J, Johansen P, Kaerlev L, Guénel P, Arveux P, Wingren G, Hardell L, Ahrens W, Stang A, Llopis A, Merletti F, Villanueva MA. Viral infection, atopy and mycosis fungoides: A European multicenter case-control study. Eur J Cancer 2003; 39: 511-516.

231. Hardell L, Eriksson M. Cancerprevention – en väg till framgång? Exemplet non-Hodgkin lymfom. Medikament 2003; 2: 29-33.

232. Hansson Mild K, Hardell L, Kundi M, Mattsson MO. Mobile telephones and cancer: Is there really no evidence of an association? (Review). Int J Molecular Medicine 2003; 12: 67-72.

233. Hardell L. Environmental organochlorine exposure and the risk for breast cancer. In: Silent Invaders Pesticides, Livehoods and Women's Health. Jacobs M, Dinham B (eds). Zed Books London & New York 2003, pp 142-147.

234. Hansson Mild K, Mattsson M-O, Hardell L. Magnetic fields in incubators a risk factor in IVF/ICSI fertilization? Electromagnetic Biology and Medicine 2003; doi.

235. Hardell L, Eriksson M, Axelson O, Flesch-Janys D. Epidemiological studies on cancer and exposure to dioxins and related compounds. In: Schecter A, Gasiewicz TA (eds). Dioxins and Health, Second Edition. John Wiley & Sons, Inc., Hoboken, NJ, USA 2003, pp 729-764.

236. Hardell L, van Bavel B, Lindström G, Carlberg M, Dreifaldt AC, Wijkström H, Starkhammar H, Eriksson M, Hallquist A, Kolmert T. Increased concentrations of polychlorinated biphenyls, hexachlorobenzene and chlordanes in mothers to men with testicular cancer. Environmental Health Perspectives 2003; 111: 930-934.

237. Hansson Mild K, Mattsson MO, Hardell L. Magnetic fields in incubators a risk factor in IVF/ICSI fertilization? Electromagnetic Biology and Medicine 2003;22:51-53.

238. Hardell L, Eriksson M. Is the decline of the increasing incidence of non-Hodgkin's lymphoma in Sweden and other countries a result of cancer preventive measures? Environmental Health Perspectives 2003;111:1704-1706.

239. Hardell L, Hansson Mild K, Johansson B. Cellular and cordless telephones and basal cell carcinoma: a case report. Arch Env Health 2003;58(6):380-382.

240. Hardell L, Malmqvist N, Ohlson CG, Westberg H, Eriksson M. Testicular cancer and occupational exposure to polyvinyl chloride plastics: A case-control study. Int J Cancer 2004;109:425-429. DOI 10.1002/ijc.11709 (published on line 9 Jan 2004).

241. Hardell L. From phenoxyacetic acids to cellular telephones: Is there historic evidence of the precautionary principle in cancer prevention? Int J Health Services 2004;4:25-37.

242. Kundi M, Hansson Mild K, Hardell L, Mattsson MO. Mobile telephones and cancer - a review of epidemiological evidence. J Toxicology Environ Health B, 2004;7(5):351-384.

243. Kärrman, A., van Bavel, B., Järnberg, U., Hardell, L., Lindström, G. Perfluoroalkylated compounds in whole blood and plasma from the Swedish population. Naturvårdsverket, redovisning från nationell miljöövervakning 2004.
http://www.naturvardsverket.se/dokument/mo/modok/export/pfos_blod.pdf

244. Hardell L, van Bavel B, Lindström G, Björnfoth H, Orgum P, Carlberg M, Smed Sörensen C, Graflund M. Adipose tissue concentrations of *p,p*'-DDE and the risk for endometrial cancer. Gynecologic Oncology 2004;95:706-711.

245. Hardell L, Eriksson M. Increased concentrations of polychlorinated biphenyls, hexachorobenzene and chlordanes. Response. Environ Health Perspect 2004;12:A22.

246. Dreifaldt AC, Carlberg M, Hardell L. Increasing incidence of childhood malignant diseases in Sweden during the time period 1960-1997. Eur J Cancer 2004;40:1351-1360.

247. Hardell L, Hallquist A, Hansson Mild K, Carlberg M, Gertzén H, Schildt EB, Dahlqvist Å. No association between the use of cellular or cordless telephones and salivary gland tumours. Occup Environ Med 2004;61:675-679.

248. Tondel M, Hjalmasson P, Hardell L, Carlsson G, Axelson O. Increase of regional cancer incidence in Sweden due to the Chernobyl accident? Journal of Epidemiology and Community Health 2004;58:1011-1016.

249. Hardell L, van Bavel B, Lindström G, Carlberg M, Wijkström H, Starkhammar H, Eriksson M. Concentrations of polychlorinated biphenyls in blood and the risk for testicular cancer. Int J Androl 2004;27:282-290.

250. Morales MM, Olsen J, Johansen P, Kaerlev L, Guénel P, Arveux P, Wingren G, Hardell L, Ahrens W, Stang A, Llopis A, Merletti F, Aurrekoetxea JJ. Occupational risk factors for mycosis fungoides: A European multicenter case-control study. J Occup Env Med 2004;46:205-211.

251. Hardell L. Commentary. No association between mobile phone usage and development of acoustic neurmoma. Evidence-based Healthcare 2004;8:213-215.

252. Hardell L, Hansson Mild K. Re: Cellular telephone use and risk of acoustic neuroma. Am J Epidemiol, 2004;160(9):923.

253. Kärrman A, van Bavel B, Järnberg U, Hardell L, Lindström L. Levels of perfluoroalkylated compounds in whole blood from Sweden. Organohalogen Compounds 2004;66:4058-4062

254. Kärrman A, van Bavel B, Järnberg U, Lindström G. 2004. Development of a method for the analysis of perfluoroalkylated compounds in whole blood. Organohalogen Compounds 2004; 66:4053-4057

255. Lindström G, Hardell L, van Bavel B, Björnfoth H. 2004. Adipose tissue concentrations of PCB, HCB, chlordane, PBDE and p,p'-DDE and the risk for endometrial cancer. Organohalogen Compounds 2004;66:3228-3233

256. Lindström G, Kärrman A, van Bavel B, Hardell L, Hedlund B. Levels of persistant fluorinated, chlorinated and brominated compounds in human blood collected in Sweden in 1997-2000. Organohalogen Compounds 2004;66:2639-2642.

257. Hardell L, Hansson Mild K, Carlberg M, Hallquist A. Cellular and cordless telephones and the association with brain tumors in different age groups. Arch Env Health 2004;59(3):132-137.

258. Kärrman A, van Bavel B, Järnberg U, Hardell L, Lindström G. Development of a solid-phase extraction-HPLC/Single quadrupole MS method for quantification of perfluorochemicals in whole blood. Anal Chem 2005;77(3):864-870.

259. Hardell L, Carlberg M, Hansson Mild K. Use of cellular telephones and brain tumour risk in urban and rural areas. Occup Env Med 2005;62:390-394.

260. Hardell L, Carlberg M, Hansson Mild K. Case-control study on cellular and cordless telephones and the risk for acoustic neuroma or meningioma in patients diagnosed 2000-2003. Neuroepidemiology 2005;25:120-128.

261. Hansson Mild K, Hardell L, Carlberg M, Wilén J. How to combine the use of different mobile and cordless telephones in epidemiological studies? Eur J Cancer Prev 2005;14:285-288.

262. Hardell L, Hansson Mild K. Re: Mobile phone use and acoustic neuroma. Epidemiology 2005; 16:415.

263. Westberg H, Hardell L, Malmqvist N, Ohlson CG, Axelson O. On the use of different measures of exposure – experiences from a case-control study on testicular cancer and PVC exposure. J Occup Env Hygiene 2005;2:351-356.

264. Åkerblom G, Hardell L , Fredrikson M, Axelson O. On the exposure circumstances and some further risk estimates regarding leukemia in ages 0-19 years and exposure to ionizing radiation in homes of uranium-containing alum shale-based concrete. In: The Natural Radiation Environment VII. McLaughlin JP, Simopoulus SE, Steinhäusler F (eds). Elsevier, 2005, pp 77-84.

265. Lutz JM, Cree I, Sabroe S, Kvist TK, Bjoerk Clausen L, Afonso N, Ahrens W, Ballard TJ, Bell J, Dufour C, Eriksson M, Févotte J, Guénel P, Hardell L, Jöckel KH, Miranda A, Merletti F, Morales-Suarez-Varel MM, Stengrevics A, Lynge E. Occupational risks for uveal melanoma. Results from a case-control study in nine European countries. Cancer Causes Control 2005;16:437-447.

266. Hardell L, Carlberg M, Hansson Mild K. Case-control study of the association between use of cellular and cordless telephones and malignant brain tumors diagnosed during 2000-2003. Environ Res 2005, doi:10.1016/j.envres.2005.04.006.

267. Hardell L, Eriksson M, Carlberg M, Sundström C, Hansson Mild K. Use of cellular and cordless telephones and the risk for non-Hodgkin's lymphoma. Int Arch of Env Health 2005; 78: 625-632.

268. Morales Suárez-Varela M, Olsen J, Johansen P, Kaerlev L, Guénel P, Arveux P, Wingren G, Hardell L, Ahrens W, Stang A, Llopis A. Occupational exposures and mycosis fungoides. A European multicentre case-control study. Cancer Causes Control 2005; 16: 1253-1259.

269. Hardell L, van Bavel B, Lindström G, Eriksson M, Carlberg M. In utero exposure to persistent organic pollutants in relation to testicular cancer risk. Int J Androl 2005 doi: 10.1111/j.1365-2605.2005.00622.x.

270. Hansson Mild K, Mattsson MO, Hardell L, Bowman JD, Kundi M. Occupational Carcinogens: ELF MFs. Env Health Persp 2005; 113: A726-727.

271. Hardell L, Hansson Mild K, Kundi M. Re: Long term use mobile phone use and brain tumor risk. Am J Epidemiol 2005; 162: 600-601.

272. Björnfoth H, van Bavel B, Lindström G, Andersson SO, Bohr L, Carlberg M, Hardell L. Possible risk of prostate cancer associated with adipose tissue concentrations of persistent organic pollutants. Organohalogen Compounds 2005; 67: 1638-1649.

273. Hardell L, Carlberg M, Hansson Mild K. Pooled analysis of two case-control studies on the use of cellular and cordless telephones and the risk for benign brain tumours diagnosed during 1997-2003. Int J Oncol 2006; 509-518.

274. Hardell L, Hansson Mild K. Mobile phone use and risk of acoustic neuroma: results of the Interphone case-control study in five North European countries. Br J Cancer 2006; 94:1348-1349. doi:10.1038sj.bjc.6603070.

275. Tondel M, Lindgren P, Hjalmarsson P, Hardell L, Persson B. Increased incidence of malignancies in Sweden after the Chernobyl accident – a promoting effect? Am J Ind Medicine 2006; 49: 159-168.

276. Hardell L, Carlberg M, Hansson Mild K. Pooled analysis of two case-control studies on use of cellular and cordless telephones and the risk for malignant brain tumours diagnosed in 1997-2003. Int Arch of Env Health 2006; 79: 630-639, doi 10.1007/s00420-006-0088-5.

277. Hansson Mild K, Mattson MO, Hardell L, Simkó L. Tamoxifen och magnetfältspåverkan. Läkartidningen 2006; 103 (8): e15.

278. Morales Suárez-Varela M, Olsen J, Johansen P, Kaerlev L, Guénel P, Arveux P, Wingren G, Hardell L, Ahrens W, Stang A, Llopis A, Merletti F, Guillen-Grima F, Masala G. Occupational sun exposure and mycosis fungoides: A European multicenter case-control study. JOEM 2006; 48: 390-393. DOI: 10.1097/01.jom.0000194160.95468.20

279. Kärrman A, van Bavel B, Järnberg U, Hardell L, Lindström G. Perfluorinated chemicals in relation to other persistent organic pollutants in human blood. Chemosphere 2006; 64(9): 1582-1589. doi:10.1016/j.chemosphere.2005.11.040.

280. Hardell L, Carlberg M, Hansson Mild K. Case-control study of the association between use of cellular and cordless telephones and malignant brain tumors diagnosed during 2000-2003. Environ Res 2006; 10: 232-241. doi:10.1016/j.envres.2005.04.006.

281. Hardell L, Andersson SO, Carlberg M, Bohr L, van Bavel B, Lindström G, Björnfoth H, Ginman C. Adipose tissue concentrations of persistent organic pollutants and the risk of prostate cancer. JOEM, 2006; 48: 700-707, DOI: 10.1097/01.jom.0000205989.46603.43.

282. Hardell L, Hansson Mild K. Cellular telephones and the risk for brain tumours. World J Surgical Oncology 2006; 4: 74. DOI 10.1186/1477-7819-4-74 Available from: http://www.wjso.com/content/4/1/74.

283. Hardell L, Björnfoth H, Hardell K, van Bavel B, Lindström G, Carlberg M, Eriksson M. Concentrations of organohalogen compounds and titers of antibodies to Epstein-Barr virus antigens and the risk for non-Hodgkin lymphoma. Organohalogen Compounds 2006; 68: 2535-2538.

284. Hardell L, Lindström G, van Bavel B, Wedrén H, Melgaard B. High concentrations of organochlorines in a patient with kidney cancer. Medicinal Chemistry 2006; 2: 607-610.

285. Hardell L, van Bavel B, Lindström G, Eriksson M, Carlberg M. In utero exposure to persistent organic pollutants in relation to testicular cancer. Int J Androl 2006; 29: 228-234. doi:10.1111/j.1365-2605.0622.x

286. Hardell L, Hansson Mild K. Mobile phone use and risk of glioma in adults. BMJ 2006; 332: 1035 doi:10.1136/bmj.332.7548.1035.a.

287. Karlsson M, Julander A, van Bavel B, Hardell L. Levels of brominated flame retardants in blood in relation to levels in household air dust. Environ Int 2007; 33: 62-69 doi: 10.1016/j.envint.2006.06.025.

288. Hardell L, Walker M, Walhjalt B, Friedman LS, Richter ED. Secret ties to industry and conflicting interests in cancer research. Am J Ind Med 2007; 50: 227-233. DOI 10.1002/ajim.2037.

289. Hardell L, Carlberg M, Ohlson CG, Westberg H, Eriksson M, Hansson Mild K. Use of cellular and cordless telephones and risk of testicular cancer. Int J Androl. 2007; 30: 115-122. doi:10.111/j.1365-2605.0072.x.

290. Hansson Mild K, Hardell L, Carlberg M. Pooled analysis of two Swedish case-control studies on the use of mobile and cordless telephones and the risk of brain tumours diagnosed 1997-2003. Internat J Occup Safety Ergonomics (JOSE) 2007;13(1): 63-71.

291. Belpomme D, Irigaray P, Sasco AJ, Newby JA, Howard V, Clapp R, Hardell L. The growing incidence of cancer: Role of lifestyle and screening detection (Review). Int J Oncol 2007; 30:1037-1049.

292. Hardell L, Carlberg M, Söderqvist F, Hansson Mild K, Morgan LL: Long-term use of cellular phones and brain tumours – increased risk associated with use for ≥ 10 years. Occup Env Med 2007;64:626-632. doi 10.1136/oem.2006.029751

293. Hardell L, Carlberg M, Hardell K, Björnfoth H, Wickbom G, Ionescu M, van Bavel B, Lindström G. Decreased survival in pancreatic cancer in patients with high concentrations of organochlorines in adipose tissue. Biomedicine & Pharmacotherapy. 2007;16:659-664. doi:10.1016/jbiopha.2007.04.006

294. Söderqvist F, Hardell L, Carlberg M, Hansson Mild K. Ownership and use of wireless telephones: a population-based study of Swedish children aged 7-14 years. BMC Public Health 2007, 7:105. doi:10.1186/1471-2458-7-105

295. Belpomme D, Irigaray P, Hardell L, Montagnier L, Epstein S, Clapp R, Sasco AJ. The multitude and diversity of exogenous carcinogens. Environ Res 2007;101:414-429.

296. Irigaray P, Newby JA, Clapp R, Hardell L, Howard V, Montagnier L, Epstein S, Belpomme D. Lifestyle-realted factors and environmental agents causing cancer: An overview. Biomedicine & Pharmacotherapy 2007;61:640-658.

297. Hansson Mild K, Hardell L, Carlberg M. Pooled analysis of two Swedish case-control studies on the use of mobile and cordless telephones and the risk of brain tumours diagnosed during 1997-2003. Bezpieczenstwo Pracy 2007;4:22-26 (In Polish).

298. Hardell L, Walker MJ. Walhjalt B, Friedman LS, Richter ED. Heimliche Verbindungen zur Industrie und Intressenkonflikte in der Krebsfoschung. Umwelt-medizin-gesellschaft 2007;20(3):61-67.

299. Hardell L, Walker MJ, Walhjalt B, Friedman LS. Re: a rebutal: secret ties to industry and conflicting interests cancer research. Am J Ind Med 2007;50(9):697-698.

300. Ahrens W, Timmer A, Vyberg M, Fletcher T, Guénel P, Merler E, Merletti F, Morales M, Olsson H, Olsen J, Hardell L, Kaerlev L, Raverdy N, Lynge E. Risk factors for extrahepatic biliary tract carcinoma in men: medical conditions and lifestyle. Eur J Gastroenterol Hepatol 2007;19(8);623-630.

301. Ahrens W, Mambetova C, Bourdon-Raverdy N, Llopis-Gonzáles A, Guénel P, Hardell L, Merletti F, Morales-Suárez-Varela M, Olsen J, Olsson H, vyberg M, Zambon P. Occupational exposure to endocrine disrupting compounds and biliary ract cancer among men. Scand J Work Environ Health 2007;33(5):387-396.

302. Hardell L. Pesticides, soft-tissue sarcoma and non-Hodgkin lymphoma – historical aspects on the precautionary principle in cancer prevention. Acta Oncologica 2008;47:347-354. doi: 10.1080/02841860701753697

303. Hardell L, Sage C. Biological effect from electromagnetic field exposure and public exposure standards. Biomedicine & Pharmacotherapy 2008;62:104-109. doi: 10.1016/j.bipha.2007.12.004.

304. Hardell L, Carlberg M, Söderqvist F, Hansson Mild K. Meta-analysis of long-term mobile phone use and the association with brain tumours. Int J Oncol 2008;32:1097-1103.

305. Belpomme D, Irigaray P, Hardell L. Electromagnetic fields as cancer-causing agents. Env Research 2008; 107(2):289-290. doi:10.1016/j.envres.2008.01.017

306. Johansson B, Karlsson L, Liljegren G, Hardell L, Persliden J. Pulsed dose rate brachytherapy as the sole adjuvant radiotherapy after breast-conserving surgery of T1-T2 breast cancer: First long time results from a clinical study. Radiother Oncol 2008. doi10.1016/j.radonc.2008.02.022

307. Eriksson M, Hardell L, Carlberg M, Åkerman M. Pesticide exposure as risk factor for non-Hodgkin lymphoma including histopathological subgroup analysis. Int J Cancer 2008;123:1657-1663.

308. Hardell L, Carlberg M, Hansson Mild K. Methodological aspects of epidemiological studies on the use of mobile phones and their association with brain tumors. Open Environmental Sciences 2008;2:54-61.

309. Hardell L, Carlberg M, Söderqvist F, Hardell K, Björnfoth H, van Bavel B, Lindström G. Increased concentration of certain persistent organic pollutants in subjects with self-reported electromagnetic hypersensitivity – a pilot study. Electromagn Biol Med 2008;27(2):197-203.

310. Söderqvist F, Carlberg M, Hardell L. Use of wireless telephones associated with self-reported health symptoms: a population-based study among Swedish adolescents aged 15-19 years. Env Health 2008;21;7:18.

311. Hardell L, Walker MJ, Walhjalt B. Re: A rebuttalt: Secret ties to industry and conflicting interests in cancer research, March 2007;50(3):227-233. Am J Ind Med 2008; 51: 717-718.

312. Söderqvist F, Carlberg M, Hardell L. Use of wireless telephones and serum S100B levels: A descriptive cross-sectional study among healthy Swedish adults aged 18-65 years. Sci Tot Env 2009; 407: 798-805.

313. Khurana VG, Teo C, Kundi M, Hardell L. Cellphones and brain tumors: A brief review of the long-term epidemiologic data. J Surg Neurol 2009. doi:10.1016/j.sumeu.2009.01.019.

314. Hardell K, Carlberg M, Hardell L, Björnfoth H, Ericson I, Eriksson M, van Bavel B, Lindström G. Concentrations of organohalogen compounds and titres of antibodies to Epstein-Barr virus antigens and the risk for non-Hodgkin lymphoma. Oncology Reports 2009; 21: 1567-1576.

315. Hardell L, Carlberg M, Hansson Mild K. Epidemiological evidence for an association between use of wireless phones and tumor diseases. Pathophysiology 2009; 16:113-122. doi:10.1016/j.pathophys.2009.01.003.

316. Söderqvist F, Carlberg M, Hardell L. Wireless phones, serum transthyretin and the blod-cerebrospinal fluid barrier: A cross-sectional study. Env Health 2009; 8:19.

317. Söderqvist F, Carlberg M, Hansson Mild K, Hardell L. Exposure to 890 MHz mobile phone-like signal and serum levels of S100B and transthyretin in volunteers. Toxicology Letters 2009; 189: 63-65. doi:10.1016/j.toxlet.2009.04.027.

318. Hardell L, Carlberg M. Mobile phones, cordless phones and the risk for brain tumours. Int J Oncol 2009; 35:5-17.

319. Kundi M, Hardell L, Sage C, Sobel E. Electromagnetic fields and the precautionary principle. Env Health Persp 2009;117(11):A484-A485.

320. Söderqvist F, Hardell L, Carlberg M, Hansson Mild K. Radiofrequency fields, transthyretin and Alzheimer's disease. J Alzheimers Dis, 2010;20(2):599-606.

321. Hardell L, Carlberg M, Söderqvist F, Hansson Mild K. Re: Time trends in brain tumor incidence rates in Denmark, Finland, Norway, and Sweden, 1974-2003. JNCI 2010;102(10):740-741.

322. Khurana VG, Hardell L, Everaert J, Bortkiewicz A, Carlberg M, Ahonen M. Epidemiological evidence for health risks from mobile phone base stations. Int J Env Occup Health 2010;16(39:263-267.

323. Hardell L, Carlberg M, Hansson Mild K. Mobile phone use and the risk for malignant brain tumors – a case-control study on deceased cases and controls. Neuroepidemiology 2010;35(2):109-114.

324. Hardell L, Söderqvist F, Carlberg M, Zetterberg H, Hansson Mild K. Exposure to wireless phone emissions and serum ß-trace protein. Int J Mol Med 2010;26:301-306.

325. Behrens T, Lynge E, Cree I, Sabroe S, Lutz JM, Alfonso N, Eriksson M, Guénel P, Merletti F, Morales-Suarez-Varela M, Stengrevics A, Févotte J, Llopis-González A, Gorini G, Sharkova G, Hardell L, Ahrens W. Occupational exposure to electromagnetic fields and sex-differential risk of uveal melanoma. Occup Env Med 2010;67(11):751-759.

326. Villeneuve S, Cyr D, Lynge E, Orsi L, Sabroe S, Merletti F, Gorini G, Morales-Suarez-Varela M, Ahrens W, Baumgardt-Elms C, Kaerlev L, Eriksson M, Hardell L, Févotte J, Guénel P. Occpation and occpuational exposure to endocrine disrupting chemicals in male breast-cancer: a case-control study in Europe. Occup Env Med 2010;67(12):837-844.

327. Fritschi L, Guenel P, Ahrens W; European Study Group on Occupational Causes of Rare Cancers. Breast cancer in priests – follow up of an observation made 167 years ago. Eur J Epidemiol. 2010;25(3):219-21.

328. Schmeisser N, Kaerlev L, Bourdon-Raverdy N, Ganry O, Llopis-González A, Guénel P, Hardell L, Merletti F, Zambon P, Morales-Suárez-Varela M, Olsen J, Olsson H, Vyberg M, Ahrens W. Occupational exposure to pesticides and bile tract carcinoma in men: results from a European multicenter case-control study. Cancer Causes Control. 2010;21(9):1493-1502.

329. Behrens T, Kaerlev L, Cree I, Lutz JM, Afonso N, Eriksson M, Guénel P, Merletti F, Morales-Suarez-Varela M, Stengrevics A, Sabroe S, Cyr D, Llopis-González A, Gorini G, Sharkova G, Hardell L, Ahrens W. Hormonal exposure and the risk of uveal melanoma. Cancer Causes Control. 2010;21(10):1625-1634.

330. Hardell L. Wireless phone use and brain tumour risk. Eur J Oncol Library 2010;5:363-378.

331. Hardell L, Carlberg M, and Hansson Mild K: Re-analysis of risk for glioma in relation to mobile telephone use: comparison with the results of the Interphone international case-control study. Int J Epidemiol 2011;40(4):1126-1128..

332. Hardell L, Carlberg M, Hansson Mild K. Pooled analysis of case-control studies on malignant brain tumours and the use of mobile and cordless phones including living and deceased subjects. Int J Oncol 2011;38(5):1465-1474.

333. Lai H, Hardell L. Cell phone radiofrequency radiation exposure and brain glucose metabolism. JAMA 2011;2011;305(8):828-829.

334. Johansson B, Karlsson L, Reizenstein J, von Beckerath M, Hardell L, Persliden J. Pulsed dose rate brachytherapy as the boost in combination with external beam irridation in base of tongue cancer. Long term results from a uniform clinical series J Contemp Brachyther 2011;3(1):11-17.

335. Johansson B, Karlsson L, Hardell L, Persliden J. Long term results of PDR brachytherapy for lip cancer. J Contemp Brachyther 2011;3(2):65-69.

336. Hardell L. Fel igen om mobiltelefoni och hjärntumörer. Läkartidningen 2011; 42: 2104. (In Swedish)

337. Söderqvist F, Carlberg M, Hansson Mild K, Hardell L. Childhood brain tumour risk and its association with wireless phones: a commentary. Environ Health. 2011;10(1):106.

338. Hardell L, Carlberg M, Hansson Mild K, Eriksson M. Case-control study on the use of mobile and cordless phones and the risk for malignant melanoma in the head and neck region. Pathophysiology. 2011;18(4):325-33.

339. Behrens T, Lynge E, Cree I, Lutz JM, Eriksson M, Guénel P, Merletti F, Morales-Suarez-Varela M, Afonso N, Stengrevics A, Stang A, Févotte J, Sabroe S, Llopis-González A, Gorini G, Hardell L, Ahrens W. Occupational exposure to endocrine-disrupting chemcials and the risk of uveal melanoma. Scand J Work Environ Health. 2012;38:476-483.

340. Behrens T, Lynge E, Cree I, Lutz JM, Eriksson M, Guénel P, Merletti F, Morales-Suarez-Varela M, Afonso N, Stengrevics A, Févotte J, Sabroe S, Llopis-González A, Gorini G, Hardell L, Stang A, Ahrens W. Pesticide exposure in farming and forestry and the risk of uveal melanoma. Cancer Causes Control. 2012;23(1):141-151.

341. Söderqvist F, Carlberg M, Hardell L. Review of four publications on the Danish cohort study on mobile phone subscribers and risk of brain tumours. Rev Environ Health. 2012;27(1):51-58.

342. Söderqvist F, Carlberg M, Hardell L. Use of wireless phones and risk of salivary gland tumours: a case-control study. Eur J Cancer Prev. 2012;21:576-579.

343. Söderqvist F, Carlberg M, Zetterberg H, Hardell L. Use of wireless phones and serum β-trace protein in randomly recruited persons aged 18-65 years: a cross-sectional study. Electromagn Biol Med. 2012;31:416-424.

344. Carlberg M, Hardell L. On the association between glioma, wireless phones, heredity and ionising radiation. Pathophysiology 2012; 19:243-252.

345. Hardell L, Carlberg M. Use of mobile and cordless phones and survival of patients with glioma. Neuroepidemiology. 2012;40:101-108.

346. Hardell L, Carlberg M, Hansson-Mild K. Use of mobile phones and cordless phones is associated with increased risk for glioma and acoustic neuroma. Pathophysiology. 2012 Dec 20. doi:pii: S0928-4680(12)00110-1. 10.1016/j.pathophys.2012.11.001.

347. Hardell L, Carlberg M, Gee D, Mobile phone use and brain tumour risk: early warnings, early actions? In: Late Lessons from Early Warnings, part 2. European Environment Agency, Copenhagen, Denmark. Available on line 23 January, 2013 (http://www.eea.europa.eu/acl_users/credentials_cookie_auth/login_form?came_from=http%3A//www.eea.europa.eu/publications/late-lessons-2).

348. Hardell L, Carlberg M, Hansson Mild K. Use of Wireless Phones and Evidence for Increased Risk of Brain Tumors. The BioInitiative Report 2012. http://www.bioinitiative.org/

Dreifaldt AC, Carlberg M, Hardell L. Risk of childhood cancer in children to Swedish fishermen. Submitted.

Abstracts, shorter reviews:

1. Hardell L, Eriksson M, Lenner P. (Hodgkins sjukdom - en komplettering) Replik. Läkartidningen 1980;77;983.

2. Hardell L, Eriksson M, Lenner P, Lundgren E. Malignant lymphoma and exposure to chemicals, especially organic solvents, chlorophenols and phenoxy acids: A Case-control study. Poster at the 13th International Cancer Congress, Seattle, Washington, USA. September 8-15, 1982.

3. Hardell L. Exposure to chlorophenols and phenoxyherbicides in the working environment. Abstract before the 13th International Cancer Congress, Seattle, Washington, USA, September 8-15, 1982.

4. Hardell L. Epidemiological studies on soft-tissue sarcoma, malignant lymphoma, nasal and nasopharyngeal cancer and their relation to phenoxy acid or chlorophenol expsoure. Abstract and extended abstract before Division of Environmental Chemistry, American Chemical Society, Kansas City, Missouri, USA. September 15-16, 1982.

5. Ericson I, Brånin B, Hardell L. Remissvar: Kolets hälso- och miljöeffekter. Slutrapport, april 1985. Umeå universitet 20 september, 1983.

6. Rönnlund U, Sandahl L, Hardell L. Maten på sjukhuset. Ett litet häfte om matens betydelse. Onkologiska kliniken, Regionsjukhuset, Umeå 1983.

7. Hardell et al. Peer review scientific panel on dioxins consensus statement. EPA, Cincinnati, Ohio, USA. July 29, 1983.

8. Domellöf L, Hansson M, Hardell L, Nygren M, Rappe C. Levels of polychlorinated dibenzodioxins (PCCDs) and dibenzofurans (PCDFs) in fat tissue from cancer patients and controls. Abstract before the AACR Annual Meeting, Toronto, Ontario, Canada. May 9-12, 1984.

9. Domellöf L, Hardell L, Hansson M, Nygren M, Rappe C. dioxiner och furaner i fettbiopsier från cancerpatienter och kontroller. Poster vid Svensk kirurgisk förenings vårmöte i Umeå, Sweden. 26-30 mars, 1984.

10. Flodin U, Axelson O, Persson B, Hardell L. Solvents and acute myeloid leukemia. Abstract and extended abstract before the ICOST-meeting in Stockholm, Sweden. October 15-17, 1984.

11. Hardell L. Phenoxyherbicides and other pesticides in the etiology of cancer. Extended abstract before the 2nd Annual Symposium on Recent Advances in Occupational Cancer. Cancer Prevention - Strategies in the Workplace. San Fransisco, CA, USA. December 7-8, 1984.

12. Hardell L, Domellöf L, Nygren M, Hansson M, Rappe C. Levels of polychlorinated dibenzodioxins and dibenzofurans in adipose tissue of patients with soft-tissue sarcoma or malignant lymphoma exposed to phenoxy acids and of unexposed controls. Abstract and extended abstract before Division of Environmental Chemistry, American Chemical Society, Miami, Florida, USA. April 29-May 3, 1985.

13. Hardell L. On the relation of soft-tissue sarcoma and malignant lymphoma to exposure to phenoxy acids or chlorophenols: An updated overview of the Swedish studies. Abstract and extended abstract before Division of Environmental Chemistry, American Chemical Society, Miami, Florida, USA. April 29-May 3, 1985.

14. Nygren M, Hansson M, Rappe C, Domellöf L, Hardell L. Analysis of polychlorinated dibenzo-p-dioxins and dibenzofurans in adipose tissue from soft-tissue sarcoma patients and controls. Paper presented at the 189th American Chemical Society Conference, Miami, Florida, USA. April 29-May 3, 1985.

15. Hardell L, Moss A, Osmond D, Volberding P. Exposure to polychlorinated dibenzo-p-dioxins (PCDDs) in AIDS-patients with sarcoma Kaposi - an epidemiological investigation. Abstract before ISPO International Symposium. Immunobiology of Cancer and Allied Immune Dysfunctions. Copenhagen, Denmark. November 4 -7, 1985.

16. Hardell L. Utgör förekomsten av polyklorinerade dioxiner och dibenzofuraner i det ekologiska systemet hälsorikser för människan? Poster vid Läkarstämman, Stockholm. December 1985.

17. Axelson O, Hardell L. Australian epidemonolgy - on Royal misruling in the realm of epidemiology. Abstract before the Fifth International Symposium. Epidemiology in Occupational Health. Los Angeles, CA, USA. September 9 - 11, 1986. Scand J Work, Environ Health 1987;13:178.

18. Hardell L. The contribution of carcinogen control in the environment. Abstract before the 14th International Cancer Congress Budapest, Hungary. August 21-27, 1986.

19. Bengtsson NO, Hardell L. Increased risk of hepatocellular cancer (HCC) in patients with porphyria acuta intermittens (PAI) or porphyria cutanea tarda (PCT). Abstract before the 14th International Cancer Congress Budapest, Hungary. August 21-27, 1986.

20. Hardell L. Läsvärd serie om senaste nytt inom onkologin. Important advances in oncology 1985. Eds.: DeVita VT, Hellman S, Rosenberg SA. Book review. Läkartidningen 1986;83:1501-2.

21. Hardell L. Praktiska matråd till cancersjuka. Råd vid matproblem. Anmälan av patientskrift. Läkartidningen 1986;83:2646.

22. Hardell L. Soft-tissue sarcoma. Edited by Laurence H. Baker. Book review. Acta Radiologica Onc 1986;25:311.

23. Hardell L. Kongressrapport från 14:e internationella cancerkongressen 1986. Gastrointestinal cancer. Nycomed 1986.

24. Hardell L, Bengtsson NO, Fredriksson M, Axelson O. On the relation of coloncancer to occupations, exposure to various agents, food habits and previous diseases - a case-referent study. Abstract before 4th European Conference on Clinical Oncology and Cancer Nursing. Madrid, Spain. November 1-4, 1987.

25. Hallquist A, Hardell L. thyroid cancer following radiotherapy. Abstract before 4th European Conference on Clinical Oncology and Cancer Nursing. Madrid, Spain. November 1-4, 1987.

26. Eriksson M, Hardell L. Soft-tissue sarcoma and exposure to phenoxy acids - a new case-referent study. Abstract before the 4th European Conference on Clinical oncology and Cancer Nursing. Madrid, Spain. November 1-4, 1987.

27. Paulsson C, Bergqvist P-A, Hardell L. Remissvar: Dioxin - kunskapsläge, utsläppsbegränsning, kartläggningsbehov, forskningsbehov. Umeå universitet 4 september, 1987.

28. Flodin U, Fredriksson M, Persson B, Hardell L, Axelson O. A case-referent study on acute myeloid leukemia and occupational agents. Abstract before the International Congress on Occupational Health; Work for Health. Sydney, Australia. September 27-October 1, 1987.

29. Hardell L. Breast Cancer. Eds.: Harris JR, Henderson IC, Hellman S, Kinne DW. Book review. Läkartidningen.

30. Fredriksson M, Hardell L, Bengtsson NO, Axelson O. Confounding in occupational studies. Abstract before the Sixth International Symposium on Epidemiology in Occupational Health. Stockholm, Sweden 1988, August 16-18.

31. Hardell L, Bengtsson NO, Fredriksson M, Axelson O. Occupational riskfactors for colon cancer. Abstract before the Sixth International Symposium on Epidemiology in Occupational Health. Stockholm, Sweden 1988, August 16-18.

32. Hardell L, Danell M, Ängquist CA, Nordberg G, Kjellgren A, Zackari AL, Andersson H, Marklund S. Breast cancer and selenium. Presented before the 14th International Cancer Congress in Budapest, Hungary. August 21-27, 1986.

33. Eriksson M, Hardell L. Soft-tissue sarcoma and exposure to phenoxy acids - a new case-referent study. Abstract before "Dioxin 88", Umeå, Sweden August 21-26, 1988.

34. Hallquist A, Hardell L, Jonsson H, Hietala SO. Thyorid cancer - a clinical study among men in northern Sweden. ECCO 5, 1989.

35. Hardell L, Bengtsson NO, Norberg B, Osterman B, Sjödin M, Eksborg S. Epirubicin as single drug treatment in metastatic breast cancer - a pharmacokinetic study. Nordic Update on Farmorubicin, Stockholm October 26-27, 1989.

36. Hardell L, Danell M, Marklund S, Fredriksson M. Levels of selenium in serum and gluthatione peroxidase in hemoglobin and the risk of breast cancer - a case-control study. Nottingham International Breast Cancer Meeting. September 26-28, 1990.

37. Hardell L, Eriksson M. Exposure to dioxins as a risk factor for soft tissue sarcoma. 11th International Symposium on Chlorinated Dioxins and Related Compunds, 23-27 September 1991, Research Triangle Park, North Carolina, USA.

38. Hardell L, Bengtsson NO, Lindh B, Sjödin M, Eksborg S. Epirubicin as single drug treatment in metastatic breast cancer - a pharmacokinetic study. The sixth European Conference on Clincal Oncology and Cancer Nursing, 27-31 October, 1991 Florence, Italy.

39. Hardell L, Eriksson M. Exposure to dioxins as a risk factor for soft tissue sarcoma. The sixth European Conference on Clincal Oncology and Cancer Nursing, 27-31 October 1991, Florence, Italy.

40. Hardell L, Eriksson M. Pesticides and soft tissue sarcoma. The 18th meeting of the Scandinavian Sarcoma Group, 6-8 May, 1991, Bergen, Norway.

41. Hallqvist A, Boqvist L, Hardell L, Tavelin B. Thyreoideacancer hos män - prognostiskt index och klinisk uppföljning av papillär - follikulär typ. Svenska Läkarsällskapets Riksstämma 25-27 nov 1992.

42. Eksborg S, Hardell L, Bengtssion NO, Sjödin M, Elfsson B. Epirubicin as a single agent therapy for the treatment of breast cancer - a pharmacocinetic and clinical study. 4th International Congress on Anti-Cancer Chemotherapy. Paris, France, February 2-5, 1993.

43. Hardell L, Holmgren G, Steen L, Fredriksson M, Axelson O. Familial amyloid polyneuropathy and the influence of organic solvents and other agents evaluated in a case-control study. VIIth International Symposiun on Amyloidosis. Kingston, Ontario, Cananda, July 11-15, 1993.

44. Hardell L, Eriksson M. Dioxin-contaminated pesticides as risk factors for soft-tissue sarcoma in relation to tumour localization and histopathological type. Dioxin' 93. 13th International Symposium on Chlorinated Dioxins and Related Compounds. Vienna, Austria, September 20-24, 1993.

45. LeClerc A, Luce D, Hardell L, et al. Occupational risk factors for sinonasal cancer: a reanalysis of several case-control studies. 24th International Congress on Occupational Health, Nice, France, September 26, October 1, 1993.

46. Wingren G, Degerman A, Hardell L, Hallquist A. Occupational determinants for papillary and mixed cancer of the thyroid among females. Conference on Women's Health. Baltimore, USA, November 1-2, 1993.

47. Söderkvist P, Eriksson B, Hardell L. Genetic alterations of p53 tumor suppressor genen in herbicide exposed soft-tissue sarcomas. Interactions of Cancer Susceptibility Genes and Environmental Carcinogenes. Lyon, France, November 9-13, 1993.

48. Eriksson M, Hardell L. Increased cancer incidence in physicians, dentists and health care workers. ECCO 7. 7th European Conference on Clinical Oncology and Cancer Nursing. Jerusalem, Israel, November 14-18, 1993.

49. Hagberg H, Hardell L, Nordström M, Rask-Andersen A. Hårcellsleukemi vanligare bland lantbrukare? Svenska Läkarsällskapets Riksstämma, Stockholm, December 1-3, 1993.

50. Rask-Andersen A, Hagberg H, Hardell L. Nordström M. Hairy cell leukemia more common among farmers? International Congress on Agricultural Medicine and Rural Health, Stockholm, July 10-13, 1994.

51. Demers PA, Leclerc A, Luce D. Kogevinas M, Bofetta P, Gérin M, Battista GM, Belli S, Bolm-Audorf U, Bolm-Audrof U, Comba P, Fukuda K, Hardell L, Hayes RB, Magnani C, Merler E, Preston-Martin S, Rodella S, Shibata A, Vaughan TL, Zheng W, Colin D, Vainio H. Wood-dust and sino-nasal cancer: A pooled re-analysis of thirteen case-control studies. ICOH Symposium on Occupational Epidemiology. Como, Italy, September 21-23, 1994.

52. Hardell L, Dahl P, Liljegren G, Lindström G. Halter av dioxiner, dibenzofuraner, PCB, DDE och hexaklorbensen hos bröstcancerpatienter och kontroller. Svenska Läkaresällskapets Riksstämma 29 nov-1 dec 1995.

53. Hallquist A, Hardell L. Röntegnundersökningar som riskfaktor för thyreoideacancer. Svenska Läkaresällskapets Riksstämma 29 nov-1 dec 1995.

54. Schildt EB, Eriksson M, Hardell L, Magnusson A. Snus, rökning och alkohol som riskfaktorer för munhålecancer. Svenska Läkaresällskapets Riksstämma 29 nov-1 dec 1995.

55. Wingren G, Hardell L, Hallquist A, Axelson O. Diagnosit X-rays and female papillary cancer. : 100 Jahre Röntgen: Medizinische Strahlenbelastung-Bewertung des Risikos.

Schmitz-Feurhake I, Lengfelder E (eds). Gesellschaft f□r Strahlenschutz e.V. M□nster, Bremen, 1995, April 28-30.

56. Axelson O, Fredrikson M, Holmgren G, Steen L, Hardell L. Familial amyloid polyneuropathy - combined effects of solvent exposure and genetic background. Molecular Epidemiology Symposium. Novum Reserach Center, Hudding University Hospital, Sweden, May 30-31, 1996.

57. Lindström G, van Bavel B, Broman K, Hardell L. Determination of chlordane in human adipose tissue by SFE-LC off-line MS. Dioxin 96, Amsterdam, Holland, August 12-16, 1996.

58. Schildt EB, Eriksson M, Hardell L, Magnusson A. Snus, rökning och alkohol som riskfaktorer för munhålecancer. Symposium om snusets hälsorisker, Socialstyrelsen, Stockholm 19-20 september, 1996.

59. Hardell L, van Bavel B, Lindström G, Fredrikson M, Liljegren G. Higher concentrations of specific polychlorinated biphenyl congeners and chlordanes in adipose tissue from non-Hodgkin's lymphoma paitents compared with controls without a malignant disease. International Symposium. Dioxins and Furans: Epidemiologic Assessment of Cancer Risk and Other Human Health Effects. Deutsches Krebsforschungszentrum, Heidelberg, Germany, November 7-8, 1996.

60. Hardell L. Cancer beskriven för 3000 år sedan. Cancer- och Allergifonden 1996;2(1):4.

61. Hardell L. Farlig kemi från moderliv till döden. Cancer- och Allergifonden 1996;2(2):10

62. Hardell L. Kliniska observationer till påvisade cancerrisker - exemplen Hormoslyr, mjudelssarkom och malignt lymfom. Haema 1997;2:9-10.

63. Hardell L, Lindström G, van Bavel B, Fredrikson M. Exposure to organochlorine substances as risk factor for non-Hodgkin’s lymphoma. 2nd Workd Congress on Advances in Oncology, Athens, Greece, October 16-18, 1997.

64. Hardell L. Kliniska observationer till påvisade cancerrisker - exemplen Hormoslyr, mjukdelssarkom och malignt lymfom. Haema 1997;2:9-10.

65. Hardell L, Axelson O, Fredrikson M, Åkerblom G. Childhood leukaemia and indoor exposure to gamma radiation. Effects of Low Dose Ionizing Radiation, Westfälische Wilhelms Univeristät Munster. March 18-21, 1998.

66. Hallquist A, Hardell L, Wingren G. Diagnostic x-ray exposure and female papillary thyroid cancer: a pooled analysis of two Swedish studies. Effects of Low Dose Ionizing Radiation, Westfälische Wilhelms Univeristät Munster. March 18-21, 1998.

67. Hallquist A, Hardell L, Karlsson MG. No association between immunochemical expression of p53, c-*erb*-2, Ki-67, estrogen and progesterone receptors in female papillary thyroid cancer and ionizing radiation. Effects of Low Dose Ionizing Radiation, Westfälische Wilhelms Univeristät Munster. March 18-21, 1998.

68. Mannetje A, Kogevinas M, Luce D, Demers P, Bolm-Audorf U, Comba P, Hardell L, Hayes RB, Leclerc A, Magnani C, Merler E, Tobias A, Bofetta P, Begin D, Gérin M. Estimation of the attributable risk for sinonasal cancer in relation to occupation and smoking,

by sex. Women's Health: Occupation, Cancer & Reproduction. Reykjavik, Island, May 14-16, 1998.

69. Hardell L. Expsoure to organochlorines and the risk for breast cancer. Int J Mol Med 1998;2(suppl):s23.

70. Schildt EB, Erisson M, Hardell L, Magnuson A. Infektioner i munhålan och tandvårdsfaktorer i relation till munhålecancer-en fall-kontrollstudie. Svenska Läkarsällskapets Riksstämma, Göteborg 24-26 november, 1998.

71. Nordström M, Linde A, Schloss L, Näsman Å, Hardell L. Elevated antibody levels to Epstein-Barr virus antigens in patients with hairy cell leukaemia compared to controls in relation to exposure to pesticides, organic solvents, animals and exhaust. VII International Conference on Malignant Lymphoma, Lugano, June 2-5, 1999.

72. Lindström G, Hardell L, Wingfors H. Gifterna i mat ökar igen. Dagens Nyheter, DN Debatt 7/7 1999.

73. Hardell L, Wingfors H, Lindström G. Nytt miljögift upptäckt i maten. Dagens Nyheter, DN Debatt 11/10 1999.

74. L-Baeckström G, Lundegårdh B, Hardell L. Kvinnerstaprogrammet-odlingssystem och hälsa. Ekologiskt Lantbruk 1999;28:130.

75. Rönnblom K, (Hardell L handledare). Nu har en till fått cancer i byn. Kartläggning av cancerförekomst i några byar i Västerbotten. Ett arbete ramen för FOU-kursen i Umeå för allmänläkare 1989-1999. Rapport 2000, 1-16.

76. Hardell L, Hansson Mild K. Mobiltelefoni och hälsa. Cancer- och Allergifonden 2000;5:6.

77. Hardell L. Bromerade flamskyddsmedel gift i maten. Cancer- och Allergifonden 2000;5:15.

78. Hardell L, Sigvardsson S. Sprit ger cancer. Dagens Nyheter, DN Debatt 11/12 2000.

79. Hansson Mild K, Bergqvist U, Hamnerius Y, Hardell L, Mattsson MO, Paulsson LE, Ramel C. Sandström M. Mobiltelefoni och hälsoeffekter. Svenska Nationalkommittén för Radiovetenskap (SNRV) 2001.

80. Hardell L, Dreifaldt AC, Lindström G. Ny svensk studie om miljögifter i bröstmjölk. DN Debatt 2001-04-05.

81, Sigvardsson S, Hardell L. Alkohol ökar cancerrisker. Blå Bandet februari 2001, Årgång 119, Nr 1.

82. Hardell L, Lindström G. Skrämmande mörklägga cancerrisker. DN Debatt 2001-04-22.

83. Hardell L, Lindström G. Miljögift i modersmjölk borde inte accepteras. Cancer- och Allergifonden Juni 2001, Årgång 7.

84. Hardell L. Hälsorisk av mobiltelefoni - myt eller verklighet. Cancer- och Allergifonden Juni 2001, Årgång 7.

85. Hardell L. WHO ger TCDD cancerstämpel, 44 miljoner liter Agent Orange föll över Vietnam. Cancer- och Allergifonden Juni 2001, Årgång 7.

86. Hardell L. Personangrepp gagnar inte forskning. Brännpunkt. Svenska Dagbladet 2001-09-11.

87. Nilson L, Nordström G, Hardell L. Ta ansvar för miljögifterna i lamporna. Ny Teknik 2001, Nr 48.

88. Hansson Mild K, Hamnerius Y, Hardell L, Mattsson MO, Sandström M. Öka forskningen om magnetfält. Världshälsoorganisationen klassar magnetfält som "möjligen cancerframkallande". LO-Tidningen 2001;26:3.

89. Lindström G, Hardell L, Pettersson A, Karlsson M, van Bavel B. Determination of polychlorinated biphenyls, hexahlorobensen, p,p'-DDE, cis-chlordane, oxychlordane, MC6, trans-chlordane, cis-nonachlor and polybrominated diphenyl ether in human plasma lipids. MTM Report 2001; 01-10.

90. Hansson Mild K, Mattsson MO, Hardell L. Magnetfält i injkubatorer riskfaktorer vid assisterad befruktning? Läkartidningen 2002;99:3328.

91. Hardell L, Hansson Mild K. Cancerprevention lönar sig. Svenska Dagbladet 2002-09-07.

92. Hardell L, Hallquist A, Hansson Mild K. Mobile phones and the risk for brain tumours. Biological Effects of EMFs 2nd International Workshop. Rhodes, Greece, 7-11 Ocotober, 2002, pp 359-362.

93. Axelson O, Fredrikson M, Åkberblom G, Hardell L. Om leukemi och boende in blåbetonghus - en kritik av kritiker. Strålskyddsnytt 2002;4:6-7.

94. Åkerblom G, Hardell L, Fredrikson M, Axelson O. On the exposure circumstances and some further risk estimates regarding leukemia in ages 0-19 years and exposure to ionizing radiation in homes of uranium-containing alum shale-based concrete. Sventh International symposium. Natural Radiation Environment (NRE-VII). Rhodes, Greece May 20-24, 2002.

95. Lindström G, Hardell L. Fisk med hög dioxinhalt tillåts ännu Sverige. Cancer- och Allergifonden Informerar 2002;8:23.

96. Hardell L, Hansson Mild K. Bilar med batteriet placerat under bagageutrymmet baktill i bilen kan ge höga elektromagnetiska fält. Cancer- och Allergifonden Informerar 2002;8:24.

97. Hansson Mild K, Hardell L. Cellular and cordless telephones and the risk for brain tumours. URSI XXVII General Assembly, Maastricht, Aug 2002 (invited paper).

98. Hardell L, van Bavel B, Lindström G. Increased concentrations of polychlorinated biphenyls and hexachlorobensene in motehrs to men with testicular cancer. Doxin 2002.

99. Van Bavel B, Hardell L, Kitti A, Liljedahl M, Karlsson M, Pettersson A, Tysklind A, Lindström G. High levels of PBDE in 5 % of 220 blood samples from the Swedish population. Dioxin 2002.

100. Dreifaldt AC, Carlberg M, Hardell L. Childhood sarcoma in Sweden 1960-1998. The meeting of the Scandinavian Sarcoma Group, June, 2003, Copenhagen, Denmark.

101. Hardell L, Hansson Mild K, Hallquist A, Carlberg M. No risk found for salivary gland tumours with the use of mobile or cordless telephones. The Bioelectromagnetics Society 25th annual meeting, Waliea, Maui, USA, June 22-27, 2003.

102. Hardell L, Eriksson M, Lindström M, van Bavel B. Miljögifter hos modern under graviditeten risk för sons testikelcancer. Cancer- och Allergifonden Informerar 2003;9:13.

103. Hardell L, Hnasson Mild K. Ökad risk för tumör på hörselnerven vid användning av NMT mobiltelefon. Cancer- och Allergifonden Informerar 2003;9:20.

104. Hardell L, Eriksson M. Kampen mot dioxiner och PCB lönar sig. Lymfkörtelcancerkurvan planar ut. Cancer- och Allergifonden Informerar 2003;9:23.

105. van Bavel B, Smeds A, Saukko P, Björnfoth H, Hardell L, Lindström G. Levels of PCBs, chlordane, DDE, HxCB and PBDE in human adipose tissue from Hungary compared to levels in Sweden. Dioxin 03´ Boston, USA, Augusti 2003.

106. Hansson Mild K, Wilén J, Carlberg M, Sandström M, Hardell L. How to combine the use of different mobile and cordless telephones in epidemiological studies. EBEA, Budapest, nov 15th and 16th 2003.

107. Hansson Mild K, Hardell L. Mobile and cordless telephones and the association with brain tumors in different age groups. 5th COST 281 MCM and Workshop "Mobile Telecommunications and the Brain" Budapest, nov 15th and 16th 2003.

108. Hardell L, Lindström G. Förebygga cancer är lönsamt. Nerikes Allehanda 22 augusti 2003.

109. Tondel M, Lindgren P, Hjalmarsson P, Hardell L, Axelson O. Increased cancer incidence in North Sweden – an early promoting effect caused by the Chernobyl accident. Epidemiology 2003;14(5):S94.

110. Hardell L, Hansson Mild K. Use of cellular and cordless telephones and the association with brain tumours in different age groups. 2004 Annual Meeting BEMS, Washington DC, June 2004.

111. Hardell L. Att förebygga cancer är mycket lönsamt för samhället – exemplet non-Hodgkin lymfom. Lions Cancerfond tidning 2004.

112. Hansson Mild K, Hardell L. Brain tumours and mobile phone use: an overview of the studies by the Örebro group. Workshop Are RF-fields able to raise the risk of cancer? COST 281, Schriesheim, Germany, November 15-17, 2004.

113. Hardell L. Stopp kreften før den utvikler seg. Konferense om komplementær kreftbehandling. Kreft foreningen, Oslo, Norge 3-4 juni, 2004.

114. Hansson Mild K, Wilén J, Carlberg M, Hardell L. ”Exposure” and ”dose” in mobile phone health studies. Mobile Communication and Health: Medical, Biological and Social Problems. Russia, Moscow, September 20-22, 2004.

115. Ohlson CG, Hardell L, Malmqvist N, Westberg H. Olika exponeringsmått I en fall-kontrollstudie av testikelcancer. Läkarstämman, Göreborg, november 2004.

116. Kärrman A, van Bavel B, Järnberg U, Hardell L, Lindström L. PFOS in the blood of the Swedish population. Dioxin 2004, Berlin (Poster), August 2004.

117. Lindström G, Kärrman A, van Bavel B, Hardell L, Hedlund B, 2004. Levels of persistant fluorinated, chlorinated and brominated compounds in human blood collected in Sweden in 1997-2000. Dioxin 2004, Berlin (Poster), August 2004.

118. Morales Suárez-Varela M, Olsen J, Johansen P, Kaerlev L, Guénel P, Arveux P, Wingren G, Hardell L, Ahrens W. Occupational risks for mycosis fungoides: results from a case-control study in nine European countries. European Congress of Epidemiology. Porto, Portugal, September 8-11, 2004.

119. Hardell L. From phenoxyacetic acids to cellular telephones: What does the precautionary principle learn us? The International Conference, Borgholm. Öland May 19-20, 2005.

120. Björnfoth H, van Bavel B, Lindström G, Andersson SO, Bohr L, Carlberg M, Hardell L. Possible risk of prostate cancer associated with adipose tissue concentrations of persistent organic pollutants. Dioxin 2005, Toronto, Canada August 21-26, 2005.

121. Hardell L Carlberg M, Hansson Mild K. Pooled analysis of two case-control studies on use of cellular and cordless telephones and the risk for brain tumours diagnosed during 1997-2003. Cell phones and cancer? Annual ECP symposium & Michael J. Hill Memorial Lecture. Floreal Club, Blankenberg, Belgium Nov 4-5, 2005.

122. Hardell L. Oljan, det svarta guldet, skapar svarta siffror I cancerstatisken. Cancer- och Allergifonden 2005; 1: 7.

123. Hardell L. Den ekologiska odlingen befriar oss från ”cocktail” av bekämpningsmedel. Cancer- och Allergifonden 2005; 1: 9.

124. Hardell L. Trådlös bordstelefon okänd strålningskälla i de svenska hemmen. Cancer- och Allergifonden 2005; 1: 29

125. Hardell L, Hansson Mild K. Case-control study in patients diagnosed 2000-2003 with acoustic neuroma or meningioma and use of cellular and cordless telephones. Bioelectromagnetics 2005, A joint meeting of The Bioelectromagnetics Society and The European Bioelectromagnetics Association, Dublin, Ireland, p 106, 2005.

126. Tondel M, Hjalmarsson P, Hardell L, Carlsson G. Re: Increase of regional total cancer incidence in north Sweden due to Chernobyl accident. Jech.com 2005.

127. Hardell L, Hansson Mild K. Pooled analysis of two case-control studies on use of cellular and cordless telephones and the risk for brain tumours diagnosed during 1997-2003. ICEMS, Italy, February 20-26, 2006

128. Hansson Mild K, Hardell L. The risk for brain tumours and use of cellular and cordless telephones: A pooled analysis of two case-control studies on cases diagnosed during 1997-2003. International Conference and COST 281 Workshop on Emerging EMF Technologies. Graz, April 20-21, 2006.

129. Hardell L, Hansson Mild K. Case-control study in patients diagnosed 2000-2003 with acoustic neuroma or meiningioma and use of cellular and corldess phones. EHE '06, Madeira, Spain, 27-29 April 2006.

130. Hardell L, Björnfoth H, Hardell K, van Bavel B, Lindström G, Carlberg M, Eriksson M. 2006. Concentrations of organohalogen compounds and titers of antibodies to Epstein-Barr virus antigens and the risk for non-Hodgkin lymphoma. Dioxin 2006, Oslo, Norway, August 2006.

131. Hardell L, Hansson Mild K, Carlberg M. Mobile and cellular telephones and the risk for brain tumours. Mobile and cellular telephones and the risk for brain tumours. Biological Effects of EMFs. 4th International Workshop. Limin Hersonissou, Crete, Greece, 16-20 October, 2006.

132. Söderqvist F, Hardell L, Hansson Mild K, Carlberg M. A population based prevalence study of the use of cordless and mobile phones among children aged 7-14 years. Mobile and cellular telephones and the risk for brain tumours. Biological Effects of EMFs. 4th International Workshop. Limin Hersonissou, Crete, Greece, 16-20 October, 2006.

133. Söderqvist F, Hardell L, Hansson Mild K, Carlberg M. Populationsbaserad studie av användning av mobiltelefon och trådlös bordstelefon i åldergruppen 7-14 år i Sverige. SOF:s Höstmöte/Riksstämman Göteborg, Nov 2006.

134. Hardell L, Hansson Mild K, Carlberg M. Mobiltelefoner och hjärntumörer – finns det ett samband? SOF:s Höstmöte/Riksstämman Göteborg, Nov 2006.

135. Hardell L. Cancerprevention eftersatt forskningsfält. Cancer- och Allergifonden 2006; 12(1):11

136. Hardell L, Hansson-Mild K. Trådlös telefon och mobil ökar cancerrisken. Cancer- och Allergifonden 2006; 12(1): 29.

137. Albin M, Bergman Å, Bignert A, Blanck H, Brandt I, Brittebo E….Hardell L, et al. Forskningen om miljögifter kan krascha. Göteborgs-Posten 2006-11-23.

138. Hardell L, Hansson Mild K. Mobilen ger visst tumör i hjärnan. Ny rapport: Risken ökar med 39 procent. Aftonbladet 2007-01-31.

139. Hardell L. Hög tid att välja försiktighetsprincipen. Cancer- och Allergifonden 2007;13(1):10.

140. Hardell L. Hur bildas cancer? Nixon och EU proklamerade krig mot cancern – cancergåtan är mycket mer än en gåta. Cancer- och Allergifonden 2007;13(1):12.

141. Hardell L. Prostata och bröst med cancerdrabbade. De tio vanligaste cancertyperna enligt statistiks gällande nya fall under 2005. Cancer- och Allergifonden 2007;13(1):13.

142. Hardell L, Söderqvist F, Carlberg M, Hansson-Mild K. Mobile and cordless telephone use and the association with brain tumours; tertile and laterality analyses of two-case control studies. The Bioelectromagnetic Society 30th Annual Meeting. San Diego, USA June 8-12, 2008.

143. Söderqvist F, Carlberg M, Hardell L. Wireless telephone use. 5th International Workshop on Biological Effects of Electromagnetic Fields. Città de Mare, Terrasini, Palermo, Italy September 28 – October 2, 2008.

144. Hardell L. Kennedys gliom väcker mobildiskussion i USA. Cancer- och Allergifonden 2008;14(1):15.

145. Hardell L. Rysk nationalkommitté slår larm: Mobiltelefoner extra farliga för ungdomar. Cancer- och Allergifonden 2008;14(1):15.

146. Hardell L. Mobile phones, cordless phones and brain tumour risk in different age groups. Radiation Research Trust. September 8-9, 2008.

147, Kelley E, Hardell L, Boella F, Giuliani L. Epidemiological evidence suggests preference of the US versus the EU standards for partial body exposure to microwaves. ICEMS 2009.

148. Hardell L, Carlberg M, Hansson Mild K. Pooled analysis of case-control studies on malignant brain tumours and the use of mobile and cordless phones including living and deceased cases. Ebea, Rome 2011; February 21-24, 2011.

149. Söderqvist F, Carlberg M, Zetterberg H, Hardell L. Use of wireless phnones and serum beta-trace protein. Ebea, Rome 2011; February 21-24, 2011.

REFERENCES

Agarwal A, Desai NR, Makker K, Varghese A, Mouradi R, Sabanegh E, Sharma R. Effects of radiofrequency electromagnetic waves (RF-EMW) from cellular phones on human ejaculated semen: an in vitro pilot study. Fertil Steril 2009; 92:1318-1325.

Aitken RJ, Bennetts LE, Sawyer D, Wiklendt AM, King BV. Impact of radio frequency electromagnetic radiation on DNA integrity in the male germline. Int J Andrology 2005; 28:171-179.

Avci B, Akar A, Bilgici B, Tuncel OK.Oxidative stress induced by 1.8 GHz radio frequency electromagnetic radiation and effects of garlic extract in rats. Int J Rad Biol 2012;88:799-805.

Aydin D, Feychting M, Schüz J, Tynes T, Andersen TV, Schmidt LS, et al. Mobile phone use and brain tumours in children and adolescents: a multicenter case-control study. J Natl Cancer Inst 2011a; 103:1264-1276.

Aydin D, Feychting M, Schüz J, Andersen TV, Harbo Poulsen A, Prochazka M, et al. Impact of random and systematic recall errors and selection bias in case-control studies on mobile phone use and brain tumors in adolescents (CEFALO Study). Bioelectromagnetics 2011b;32:396-407.

Baan R, Grosse Y, Lauby-Secretan B, El Ghissassi F, Bouvard V, Benbrahim-Tallaa L, et al. Carcinogenicity of radiofrequency electromagnetic fields. Lancet Oncology 2011; 12; 624-626.

Cardis E, Deltour I, Mann S, Moissonnier M, Taki M, Varsier N, et al. Distribution of RF energy emitted by mobile phones in anatomical structures of the brain. Physics Med Biol 2008; 53:2771-2783.

Carlberg M, Hardell L. On the association between glioma, wireless phones, heredity and ionising radiation. Pathophysiology 2012;19(4):243-252.

Christ A, Gosselin MC, Christopoulou M, Kühn S, Kuster N. Age-dependent tissue-specific exposure of cell phone users. Physics Med Biol 2010; 55:1767-1783.

Deltour I, Auvinen A, Feychting M, Johansen C, Klaeboe L, Sankila R, et al. Mobile phone use and incidence of glioma in the Nordic countries 1997-2008: Consistency Check. Epidemiology. 2012; 23(2):301-307.

De Iuliis GN, Newey RJ, King BV, Aitken RJ Mobile phone radiation induces reactive oxygen species production and DNA damage in human spermatozoa in vitro. PLoS One 2009; 4:e6446.

de Vocht F, Burstyn I, Cherrie JW. Time trends (1998-2007) in brain cancer incidence rates in relation to mobile phone use in England. Bioelectromagnetics 2011; 32(5):334-339.

Dobes M, Shadbolt B, Khurana VG, Jain S, Smith SF, Smee R, et al. A multicenter study of primary brain tumor incidence in Australia (2000-2008). Neuro Oncol. 2011; 13(7):783-790.

Ding L-X, Wang Y-X. Increasing incidence of brain and nervous tumours in urban Shanghai, China, 1983-2007. Asian Pac J Cancer Prev 2011; 12(12):3319-3322.

Dosenbach NU, Nardos N, Cohen AL, Fair DA, Power JD, Church JA, et al. Prediction of individual brain maturity using fMRI. Science 2010;329:1358-1361.

Foliart DE, Pollock BH, Mezei G, Iriye R, Silva JM, Ebi KL, et al. Magnetic field exposure and long-term survival among children with leukaemia. Br J Cancer 2006; 94:161-164.

Friedman J, Kraus S, Hauptman Y, Schiff Y, Seger R. Mechanism of short-term ERK activation by electromagnetic fields at mobile phone frequencies. Biochem J 2007; 405: 559-568.

Gandhi OP, Morgan LL, de Salles AA, Han YY, Herberman RB, Davis DL. Exposure limits: the underestimation of absorbed cell phone radiation, especially in children. Electromagn Biol Med 2012; 31:34-51.

Giuliani L, Soffritti M (Eds). Non-thermal effects and mechanisms of interaction between electromagnetic fields and living matter. Ramzzini Institute. Eur J Oncol 2010; Vol 5.

Hardell L, Holmberg B, Malker H, Paulsson LE. Exposure to electromagnetic fields and the risk of malignant diseases - an evaluation of epidemiological and experimental findings. Eur J Cancer Prev 1995 (4; Supplement 1):3-107.

Hardell L, Hallquist A, Hansson Mild K, Carlberg M, Påhlson A, Lilja A. Cellular and cordless telephones and the risk for brain tumours. Eur J Cancer Prev 2002;11:377-386.

Hardell L, Carlberg M, Söderqvist F, Hansson Mild K, Morgan LL. Long-term use of cellular phones and brain tumours – increased risk associated with use for > 10 years. Occup Env Med 2007a; 64:626-632.

Hardell L, Walker M, Walhjalt B, Friedman LS, Richter ED. Secret ties to industry and conflicting interests in cancer research. Am J Ind Med 2007b; 50: 227-233

Hardell L, Carlberg M, Hansson Mild K. Epidemiological evidence for an association between use of wireless phones and tumor diseases. Pathophysiology 2009; 16:113-122.

Hardell L, Carlberg M. Mobile phones, cordless phones and the risk for brain tumours. Int J Oncol 2009;35(1):5-17.

Hardell L, Söderqvist F, Carlberg M, Zetterberg H, Hansson Mild K. Exposure to wireless phone emissions and serum ß-trace protein. Int J Mol Med 2010;26:301-306.

Hardell L, Carlberg M, Hansson Mild K. Pooled analysis of case-control studies on malignant

brain tumours and the use of mobile and cordless phones including living and deceased subjects. Int J Oncol 2011;38(5):1465-1474.

Hardell L, Carlberg M. Use of mobile and cordless phones and survival of patients with glioma. Neuroepidemiology 2012; 40:101-108.

Hardell L, Carlberg M, Hansson-Mild K. Use of mobile phones and cordless phones is associated with increased risk for glioma and acoustic neuroma. Pathophysiology 2012 Dec 20. doi:pii: S0928-4680(12)00110-1. 10.1016/j.pathophys.2012.11.001.

Hardell L, Carlberg M, Gee D. Mobile phones and brain tumour risk: early warnings, early actions? In: Late Lessons from Early Warnings, Volume II. European Environment Agency, Copenhagen, Denmark, Available on line 23 January, 2013 (http://www.eea.europa.eu/acl_users/credentials_cookie_auth/login_form?came_from=http%3A//www.eea.europa.eu/publications/late-lessons-2).

Hill AB. Environment and disease: Association or causation? Proceedings Royal Society of Medicine 1965;58:295-300.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 80. Non-Ionizing Radiation, Part I: Static and Extremely Low-Frequency (ELF) Electric and Magnetic Fields, IARC Press 2002, Lyon, France.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 102. Non-Ionizing radiation, Part II: Radiofrequency Electromagnetic Fields [includes mobile telephones]. IARC, Lyon, France, in press.

Kheifets L, Repacholi M, Saunders R, van Deventer E. The sensitivity of children to electromagnetic fields. Pediatrics 2005; 116:303-313.

Khurana VG, Hardell L, Everaert J, Bortkiewicz A, Carlberg M, Ahonen M. Epidemiological evidence for health risks from mobile phone base stations. Int J Env Occup Health 2010; 16:263-267.

Lai H, Singh NP. Melatonin and a spin-trap compound blocked radiofrequency radiation-induced DNA strand breaks in rat brain cells. Bioelectromagnetics 1997; 18:446-454.

Levis AG, Gennaro V, Garbisa S. Buisness bias as usual. In: Social Costs Today. Institutional analyses of the present crises. Eds: Ramazzotti P, Frigato P, Elsner W. Routledge Taylor & Francis Group. London and New York 2012, pp 225-268.

Liu C, Duan W, Xu S, Chen C, He M, Zhang L, Yu Z, Zhou Z. Exposure to 1800MHz radiofrequency electromagnetic radiation induces oxidative DNA base damage in a mouse spermatocyte-derived cell line. Toxicology Letters 2013;doi:10.1016/j.toxlet.2013.01.003

Lu YS, Huang BT, Huang YX. Reactive oxygen species formation and apoptosis in human peripheral blood mononuclear cell induced by 900 MHz mobile phone radiation. Oxid Med Cell Longev 2012; I.D:740280. doi: 10.1155/2012/740280.

NORDCAN, (http://www-dep.iarc.fr/NORDCAN/english/frame.asp)

Olsen AK, Lindeman B, Wiger R, Duale N, Brunborg G. How do male germ cells handle DNA damage? Toxicol Appl Pharmacol 2005; 207:521-531.

Oral B, Guney M, Ozguner F, Karahan N, Mungan T, Comlekci S, Cesur G. Endometrial apoptosis induced by a 900-MHz mobile phone: preventive effects of vitamins E and C. Adv Ther 2006;23:957-973.

Ozguner F, Bardak Y, Comlekci S. Protective effects of melatonin and caffeic acid phenethyl ester against retinal oxidative stress in long-term use of mobile phone: a comparative study. Mol Cell Biochem 2006; 282:83-88.

Phillips JL, Singh NP, Lai H. Electromagnetic fields and DNA damage, Pathophysiology 2009;16:79-88.

Salford LG, Nittby H, Persson BRR. Effects of electromagnetic fields from wireless communication upon the blood-brain-barrier. BioInitiative Report 2012 (http://www.bioinitiative.org)

Shahin, S, Singh VP, Shukla RK, Dhawan A, Gangwar RK, Singh SP, et al. 2.45 GHz microwave irradiation-induced oxidative stress affects implantation or pregnancy in mice. Mus musculus. Appl Biochem Biotechnol 2013; DOI 10.1007/s12010-012-0079-9.

Sundhedsstyrelsen. Cancerregisteret 2010.
(http://www.sst.dk/publ/Publ2011/DAF/Cancer/Cancerregisteret2010.pdf)

Svendsen A-L, Weihkopf T, Kaatsch P, Schüz J. Exposure to magnetic fields and survival after diagnosis of childhood leukemia: A German cohort study, Cancer Epidemiology Biomarkers Prevention 2007;16:1167-1171.

Söderqvist F, Carlberg M, Hardell L. Wireless phones, serum transthyretin and the blod-cerebrospinal fluid barrier: A cross-sectional study. Env Health 2009a; 8:19.

Söderqvist F, Carlberg M, Hansson Mild K, Hardell L. Exposure to 890 MHz mobile phone-like signal and serum levels of S100B and transthyretin in volunteers. Toxicology Letters 2009b; 189: 63-65. doi:10.1016/j.toxlet.2009.04.027.

Söderqvist F, Carlberg M, Hansson Mild K, Hardell L. Childhood brain tumour risk and its association with wireless phones: a commentary, Environmental Health 2011; 10:106.

Söderqvist F, Carlberg M, Hardell L. Review of four publications on the Danish cohort study on mobile phone subscribers and risk of brain tumours. Rev Environ Health. 2012a;27:51-58.

Söderqvist F, Carlberg M, Zetterberg H, Hardell L. Use of wireless phones and serum □-trace protein in randomly recruited persons aged 18-65 years: a cross-sectional study. Electromagn Biol Med. 2012b; 31:416-424.

Zada G, Bond AE, Wang Y-P, Giannotta SL, Deapan D. Incidence trends in the anatomic location of primary malignant brain tumors in the United States: 1992-2006. World Neurosurg. 2012;77(3-4):518-524.

Hardell Exhibit C

-----Original Message-----
From: Robert Baan <BaanR@iarc.fr>
Date: Mon, 29 Aug 2011 09:47:10
To: connieahudson@yahoo.com<connieahudson@yahoo.com>
Cc: COM (com@iarc.fr)<com@iarc.fr>
Subject: EMF Class 2B Classification

Dear Dr Hudson,

Thank you for your message, which was forwarded to me, and to which I would like to respond as follows.

The IARC Working Group classified "Radiofrequency Electromagnetic Fields" (RF-EMF) as possibly carcinogenic to humans (Group 2B).
The information that formed the main basis for this evaluation was found in epidemiological studies on cell-phone use, where a slightly increased risk for glioma (a malignant form of brain cancer) and acoustic neuroma (a non-cancerous type) was reported among heavy users.
There were some indications of increased cancer among radar-maintenance workers (occupational exposure), but no reliable data from studies among, e.g., people living close to base-station antennas, radio/TV towers, etc (environmental exposure).
Although the key information came from mobile telephone use, the Working Group considered that the three types of exposure entail basically the same type of radiation, and decided to make an overall evaluation on RF-EMF, covering the whole radiofrequency region of the electromagnetic spectrum.
In support of this, information from studies with experimental animals showed that effects on cancer incidence and cancer latency were seen with exposures to different frequencies within the RF region.
So the classification 2B, possibly carcinogenic, holds for all types of radiation within the radiofrequency part of the electromagnetic spectrum, including the radiation emitted by base-station antennas, radio/TV towers, radar, Wi-Fi, smart meters, etc.
An important point is the radiation level. The exposure from cellular phones (personal exposure) is substantially higher and much more focused (usually on the brain) than exposures from radio/tv towers, antennas, or Wi-Fi.

I hope this is useful.

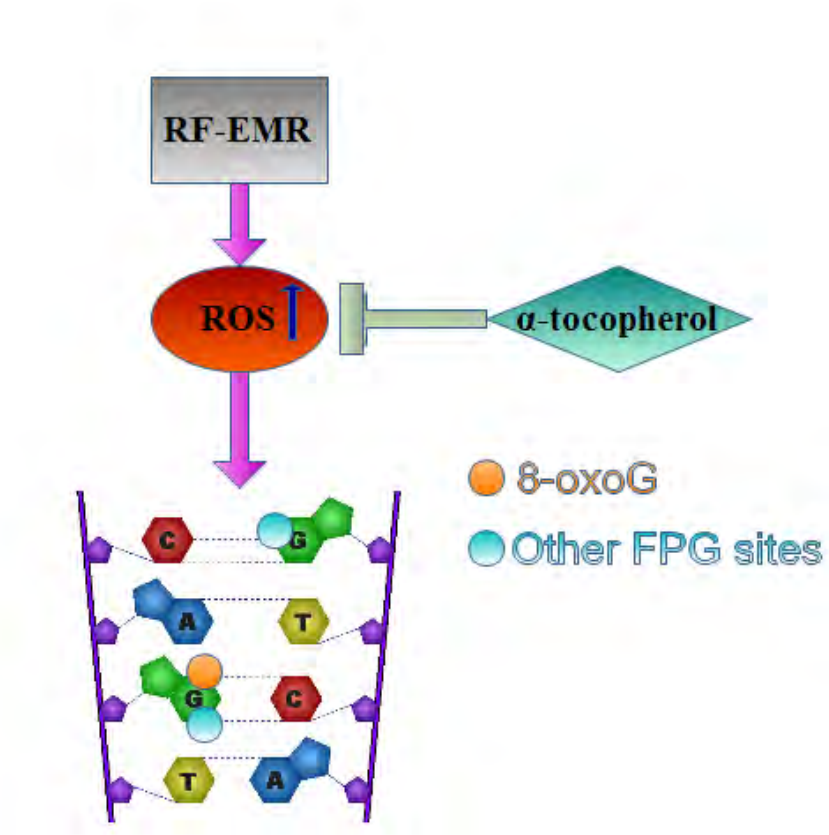
Thank you for your interest in our work.

Sincerely yours,

Robert A Baan PhD
The IARC Monographs
IARC, Lyon, FRANCE

Hardell Exhibit D

Proposed model for the effects of RF-EMR on DNA integrity in germ cell line. Though the use of a mouse spermatocyte-derived cell line, we demonstrated that RF exposure might increase ROS production and subsequently induce the formation of oxidative base damage as evaluated by FPG-comet assay and 8-oxoG formation. The increase of ROS and the protective role of α-tocopherol pretreatment confirms that ROS are involved in RF exposure-induced DNA base damage. However, such exposure can't lead to detectable DNA strand breakage. These results may suggest that RF-EMR emitted during mobile phone use may produce genotoxicity in the form of DNA base damage other than DNA strand breaks.



Hardell Exhibit E

FROM: Robert A Baan PhD
Responsible Officer, Monograph 102 on RF-EMF
The IARC Monographs IARC,
Sent: Friday, March 30, 2012 10:21 a.m.
Subject: IARC's RF classification

Dear Mrs. Atzmon,

The IARC Monographs classification of Radiofrequency Electromagnetic Fields (RFEMF) covers the entire radiofrequency segment of the electromagnetic spectrum (30 kHz-300 GHz). Within this spectrum, the electromagnetic fields around (or the radiation emitted by) mobile telephones represent the most intense and most widespread exposure situation, for which a small increase in risk for glioma and acoustic neuroma has been found in the group of 'heavy users'. Because there were also some indications of increased cancer risks from studies on occupational exposures to different frequency-ranges (in the military, in the plastic-ware industry), the IARC Working Group did not want to restrict the overall evaluation to “RF-EMF from mobile phones” or to “RF-EMF from mobile phones that were used in the late 1990s” or to “RF-EMF from mobile phones that were used in the INTERPHONE study”, since many other devices emit the same type of RF radiation, e.g., basestation antennas, radio/tv antennas, WiFi stations, smart meters, etc. Therefore, all these fall under the same broad evaluation of “Radiofrequency Electromagnetic Fields”.

This is what the Working Group discussed and decided last year. Of course, because the exposure levels for many of these other devices and exposure situations are so much lower than the exposure to someone who has a functioning cell phone against her/his ear, the risk will be considerably less (although the hazard still exists).

I hope this is sufficiently clear to be useful. Thank you for your interest in our work.

Sincerely yours,

Robert A Baan PhD
Responsible Officer, Monograph 102 on RF-EMF The IARC Monographs IARC,
Lyon, FRANCE