SCIENCE TO SAGE · SPECIAL INVESTIGATION

Storms in the Sky, *Storms in the Body*

> *We are 99% water by molecule. The Earth's heartbeat tunes our hearts and brains. And we have chosen to blanket both the sky and ourselves in microwave radiation — the same technology that excites water molecules — without ever asking what happens when you introduce a storm into a living resonant field.*

KAREN ELKINS · SCIENCE TO SAGE

The same disruption. Two scales. One pattern.

The metaphor is the mechanism. What we are doing to the atmosphere and what we are doing to the human body are not separate stories — they are the **same electromagnetic event** playing out at different magnitudes.

At 23.8 GHz, 5G signals interfere with the exact frequency used by weather satellites to read atmospheric water vapor — blinding the instruments we use to see approaching storms. At 60 GHz, 98% of transmitted energy is absorbed by atmospheric oxygen — electromagnetically loading the air we breathe. Meanwhile inside every cell, water — which makes up 99% of all molecules in the human body — is being disrupted at the same resonant frequencies, collapsing the structured biological architecture that life depends on.

And the numbers converge. **Global cancer deaths rose 74% between 1990 and 2023.** Storms are intensifying. Ecosystems are destabilizing. We are looking for causes in a thousand separate places, when the unifying thread may be the invisible ocean of artificial electromagnetic radiation we have created and called progress.

THE SKY	THE BODY
5G at 23.8 GHz blinds water vapor satellites	mmWave disrupts EZ structured water in cells
60 GHz absorbed by atmospheric oxygen	

THE SKY	THE BODY
	Mitochondrial electron transport disrupted — cellular oxygen stressed
Schumann resonance cavity flooded with artificial RF	Heart-brain coherence with Earth field interrupted
Weather forecasting degraded — storms unseen	Immune surveillance disrupted — cancer unseen until late
Atmospheric storms accelerating	Cancer, neurodegeneration, infertility accelerating

01 — THE FIRST TRUTH

You Are Mostly Water — And Water Is Not What You Were Taught

Before anything else in this conversation can land with its full weight, we need to correct something that mainstream biology quietly buries in its footnotes.

99%

OF ALL MOLECULES IN THE HUMAN BODY ARE WATER

— Dr. Gerald Pollack, University of Washington & ScienceDirect

7.83

HZ — EARTH'S SCHUMANN FREQUENCY, MATCHED BY THE HUMAN BRAIN

— HeartMath Institute / PMC Research

98%

OF 60 GHZ MMWAVE ENERGY ABSORBED BY ATMOSPHERIC OXYGEN

— IEEE / RF Global Net

We are told the body is "60–70% water" — and by mass, that is approximately true. But mass is the wrong lens. **Count molecule by molecule — the chemically meaningful measure — and 99 out of every 100 molecules in your body are water molecules.** Every protein, every strand of DNA, every signaling cascade in every cell

occurs within, surrounded by, and dependent upon this vast molecular ocean.

Water is not the medium of life. Water *is* life — structured around it at scales we are only beginning to understand.

Dr. **Gerald Pollack**, Professor of Bioengineering at the University of Washington, identified what he calls the *Fourth Phase of Water* — a structured, liquid-crystalline state designated H_3O_2 (not the H_2O of textbooks) that forms wherever water meets any biological surface. This structured water, which Pollack calls *EZ water* (Exclusion Zone water), carries a negative electrical charge, excludes toxins, acts as a biological battery driving cellular processes, and is exquisitely sensitive to electromagnetic fields.

Infrared light — the natural radiation of living systems — builds and sustains EZ water. Microwave radiation disrupts it. This is not a fringe observation. This is the physics of water interacting with the electromagnetic environment it evolved within.

∴

Now ask: what does it mean to bathe a body that is 99% water molecules in continuous microwave radiation — the same frequency range used to excite water molecules in your kitchen — from thousands of transmitters, from birth, without interruption?

> POLLACK LABORATORY — UNIVERSITY OF WASHINGTON
>
> *EZ water, Fourth Phase of Water — official research home*
>
> pollacklab.org

99% OF BODY MOLECULES ARE WATER — STONY BROOK NEUROTEXT

Peer-reviewed biology confirming water's molecular dominance

neurotext.library.stonybrook.edu

THE FOURTH PHASE OF WATER — INTERNET ARCHIVE

Pollack's landmark book — open access

archive.org

02 — THE LIVING FIELD

The Earth's Heartbeat — And Ours

For the entirety of biological evolution on this planet — billions of years — life developed inside a precise electromagnetic envelope. The Earth and its ionosphere form a resonant cavity, and that cavity generates standing electromagnetic waves at specific frequencies.

The primary Schumann resonance frequency: **7.83 Hz.** The human brain's dominant resting alpha rhythm: **7 to 13 Hz.** The frequencies of heart rate variability. The oscillation rhythms of the autonomic nervous system. These are not coincidences. They are the signature of a

biological system that co-evolved with its electromagnetic environment over deep time.

> *The Schumann resonances generate a range of resonant frequencies that directly overlay those of the human brain, autonomic nervous system, and cardiovascular system. Of all the physiological systems studied, the rhythms produced by the brain and heart are most affected by changes in geomagnetic conditions.*
>
> — HEARTMATH INSTITUTE, GLOBAL COHERENCE RESEARCH

The HeartMath Institute has spent decades documenting this coupling — the way human heart rate variability synchronizes with geomagnetic field fluctuations, the way the heart's own electromagnetic field radiates outward and interacts with the Earth's field. Their Global Coherence Monitoring System, a network of magnetometers deployed worldwide, continuously records this conversation between human physiology and planetary electromagnetics.

Research published in peer-reviewed journals found that **EEG patterns, heart rate, blood pressure and reaction times all show**

oscillations with identical periods to the geomagnetic field data — demonstrating that whole-body physiological changes occur in conjunction with geomagnetic activity, reflected in changing heart and brain rhythms.

The ancient traditions called this attunement. The Vedic sages called the base frequency *OM*. What they were describing in the language of direct experience, we can now measure with magnetometers and EEG equipment. We are not separate from the Earth's electromagnetic field. We are resonators within it.

And we are now flooding that field — in the ionospheric cavity, in the atmosphere, in our homes, on our bodies — with artificial electromagnetic radiation at frequencies and intensities that have no precedent in evolutionary history.

> HEARTMATH — GLOBAL COHERENCE RESEARCH
>
> *Scientific documentation of heart-brain synchronization with Earth's geomagnetic field*
>
> heartmath.org

> HEARTMATH — INFLUENCE OF HEART COHERENCE ON GEOMAGNETIC SYNCHRONIZATION
>
> *Peer-reviewed research on HRV and geomagnetic activity coupling*
>
> heartmath.org — HRV Research

> PMC — SCHUMANN RESONANCE AND EEG SPECTRAL POWER CORRELATION

Peer-reviewed confirmation that Schumann resonances match human brainwave patterns in frequency and intensity

ncbi.nlm.nih.gov/pmc/articles/PMC4718669

03 — STORMS IN THE SKY

What 5G Does to the Atmosphere

The telecommunications engineers know something that most people do not. At 60 GHz — one of the primary mmWave bands designated for 5G — **98% of transmitted energy is absorbed by atmospheric oxygen molecules.** This is such a well-established physical fact that engineers actually use it to their advantage: the absorption limits signal range, which allows the same frequencies to be reused across short distances without interference.

The atmosphere absorbs the signal. The molecules are excited. Energy is transferred. At the frequencies where water vapor absorbs electromagnetic radiation — around 23.8 GHz and 24 GHz — 5G transmitters operate. This is the same frequency band that weather satellites use to detect and measure water vapor in the atmosphere.

> *The 23.8 GHz spectrum is where water vapor can be seen from space. And right*

> *next door — 24 GHz — is the channel designated for 5G. My biggest worry is it's going to set our ability to predict the weather back to decades in the past and ultimately impact our ability to save lives.*
>
> — DR. ANTONIO BUSALACCHI, PRESIDENT, UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH

Weather satellites are passive instruments — exquisitely sensitive receivers tuned to the faint electromagnetic signatures that water vapor, oxygen, and temperature emit from the atmosphere. When thousands of 5G transmitters broadcast on adjacent frequencies, those faint signals disappear into noise. The instruments that warn us of approaching storms — the systems that have made five-day forecasts as accurate as one-day forecasts were in the 1980s — are being blinded.

We are simultaneously exciting the atmospheric molecules that carry weather information *and* destroying our ability to read the signals those molecules send. We are creating storms and dismantling our ability to see them coming.

And consider what Pollack showed us about water in living systems: *the structure of water responds to the electromagnetic environment it inhabits.* The water vapor forming clouds, the water droplets in the troposphere — this water too exists in structured states that respond to electromagnetic fields. We are altering the electromagnetic

environment of the atmosphere with no knowledge of what that does to the behavior of atmospheric water at the molecular level.

NATIONAL GEOGRAPHIC — WILL 5G WRECK WEATHER FORECASTS?

In-depth report on how 5G's 24 GHz band directly interferes with atmospheric water vapor measurement

nationalgeographic.com

5G AT 60 GHZ — OXYGEN ABSORPTION PROPERTIES

Technical documentation confirming 98% of 60 GHz energy absorbed by atmospheric oxygen

smombiegate.org — 60 GHz Oxygen

IET COMMUNICATIONS — ATMOSPHERIC ABSORPTION AND MMWAVE 5G

Peer-reviewed engineering paper on how H_2O and O_2 molecules interact with mmWave frequencies

ietresearch.onlinelibrary.wiley.com

HACKADAY — HOW 5G IS LIKELY TO PUT WEATHER FORECASTING AT RISK

Technical analysis of how passive weather satellites lose water vapor signal in 5G noise

hackaday.com

04 — STORMS IN THE BODY

Oxidative Storms, Cortisol Storms, Cellular Chaos

The disruption in the sky has its precise cellular mirror. What 5G frequencies do to atmospheric oxygen and water vapor molecules, they do to the oxygen and water molecules inside the human body — with measurable, documented, accelerating biological consequences.

> *EMF exposure consistently triggers the formation of excessive reactive oxygen species, which aggressively damage cell membranes, proteins, and DNA. The natural secretion of melatonin and cortisol — critical hormones regulating sleep, stress responses, immune function, and cancer protection — is significantly disturbed, leading to immune compromise and heightened chronic disease risk.*
>
> — RFSAFE RESEARCH COMPILATION, 2025 / HARDELL & NILSSON, 2025

A 2026 peer-reviewed study exposed animals to 6 GHz radiofrequency radiation — well within 5G operating frequencies — for four hours daily over six weeks. The results showed **measurable elevation of cortisol markers, increased oxidative stress in blood plasma, and morphological changes in kidney tissue.** The body registers artificial microwave radiation as a stressor — triggering the same hormonal storm cascade as psychological trauma, physical injury, or extreme temperature.

A landmark 2025 paper in *Electromagnetic Biology and Medicine* proposed the **Electromagnetic Pathogenesis (EMP) model** — identifying the primary mechanism by which non-ionizing EMFs cause harm: an increase in electron tunneling through the mitochondrial electron transport chain. The mitochondria — the cell's power generators — are disrupted. Energy production falters. Reactive oxygen species cascade. DNA is damaged. The cell cannot repair itself.

This is an oxidative storm. Not metaphor. Measurable chemistry. The same free-radical cascade that we know drives cancer, neurodegeneration, cardiovascular disease, and premature aging — triggered by the electromagnetic environment we have constructed and called infrastructure.

> **The mechanism the Lancet named.** In 2018, *The Lancet Planetary Health* published a landmark commentary calling for recognition of "planetary electromagnetic pollution" — noting that chronic exposure to RF-EMF has been associated with increased oxidative stress, DNA damage, and cancer risk, and that regulations based on 1990s thermal-only standards are scientifically indefensible.

The world's most prestigious medical journal named this.

And nothing changed. The rollout accelerated.

THE LANCET PLANETARY HEALTH — PLANETARY ELECTROMAGNETIC POLLUTION

Landmark 2018 call to action recognizing EMF pollution as a global health issue requiring regulatory overhaul

thelancet.com

ELECTROMAGNETIC BIOLOGY & MEDICINE, 2025 — EMP MODEL

New peer-reviewed model linking EMF to mitochondrial disruption, oxidative stress, cancer, and neurodegeneration

tandfonline.com

SAGE JOURNALS, 2026 — 6 GHZ RF, CORTISOL & OXIDATIVE STRESS

2026 animal study documenting cortisol elevation, plasma oxidative stress and kidney morphology changes from 6 GHz RF exposure

journals.sagepub.com

PMC 2025 — COMPREHENSIVE EMF BIOLOGICAL EFFECTS MODEL

Peer-reviewed analysis connecting EMF exposure to cancer, infertility, electro-hypersensitivity, DNA damage and oxidative stress

> pmc.ncbi.nlm.nih.gov/articles/PMC12179773

05 — THE ACCELERATING NUMBERS

Cancer Rates Are Not a Mystery — They Are a Mirror

The data is not subtle. The trajectory is not ambiguous. The question is whether we are willing to look at what is accelerating alongside what we have deployed.

74%

INCREASE IN GLOBAL CANCER DEATHS 1990–2023

— Global Burden of Disease Study 2023, PMC

60%+

FURTHER PROJECTED INCREASE IN CANCER BY 2050

— GBD 2023 Forecasts

$1.3T

GLOBAL 5G INVESTMENT PROJECTED BY 2030

— PatentPC / Allied Market Research

The sharpest projected growth in cancer burden is occurring in the countries undergoing the most rapid wireless infrastructure expansion. The mechanism — oxidative stress, DNA damage, mitochondrial disruption, hormonal dysregulation — is now documented. The epidemiological signal is strengthening. The biological model is built.

And the regulatory bodies that should be responding are, by documented evidence, captured by the industries they regulate.

06 — THE SCIENCE SPEAKING

Dr. Lennart Hardell and the Evidence They Cannot Dismiss

> *My advice: dismantle 5G. It is a toxic agent forced on humans.*

> — LENNART HARDELL, MD, PHD —
> PROFESSOR OF ONCOLOGY,
> INTERNATIONALLY RECOGNISED CANCER RESEARCHER

Dr. Lennart Hardell first gained global recognition documenting the link between Agent Orange and cancer. He has spent decades since applying the same rigorous epidemiological methods to radiofrequency radiation — with findings that converge on a single conclusion: **RF radiation should be classified as a Group 1 human carcinogen**, placing it alongside asbestos and tobacco.

His argument rests on three converging streams of evidence: human epidemiology showing increased glioma and acoustic neuroma in long-term mobile phone users; animal studies demonstrating the same tumor types in RF-exposed rats; and laboratory findings of DNA strand breaks, oxidative stress, and disrupted cell signaling — the biological mechanisms that explain how cancer begins.

His most recent work documents *Microwave Syndrome* — the emergence of headaches, sleep disruption, cognitive impairment, and fatigue in residents following the installation of 5G base stations near their homes, resolving when they relocated away from the transmitters.

The US National Toxicology Program's $25 million, 10-year animal study confirmed the human epidemiological findings: **statistically significant increases in malignant schwannomas of the heart and malignant gliomas of the brain** in RF-exposed rats — the same tumor types found in long-term human users. A subsequent

independent pathology panel concluded the cancer link was even stronger than the NTP had acknowledged.

HARDELL — PUBMED / ONCOLOGY LETTERS, 2020

Health risks from RF radiation including 5G should be assessed by experts with no conflicts of interest

pubmed.ncbi.nlm.nih.gov/32774488

FIRST 5G HUMAN HEALTH STUDY — ENVIRONMENTAL HEALTH TRUST

16 case reports of Microwave Syndrome following 5G installation — symptoms resolved on relocation

ehtrust.org

NTP TECHNICAL REPORT — NIH/NCBI

US National Toxicology Program full peer-reviewed report — $25M, 10-year carcinogenicity study

ncbi.nlm.nih.gov/books/NBK564537

HARDELL RESEARCH BLOG

Ongoing peer-reviewed publications on RF radiation, 5G, and regulatory critique

lennarthardellenglish.wordpress.com

07 — THE CAPTURED INSTITUTIONS

Why WHO, ICNIRP and the FCC Cannot Be Trusted on This Question

The organisations setting global safety standards for electromagnetic radiation carry documented, structural conflicts of interest with the telecommunications industry. This is not allegation — it is the conclusion of formal parliamentary investigations, peer-reviewed journal articles, and the researchers who have spent careers inside these systems.

INSTITUTION	DOCUMENTED PROBLEM
ICNIRP	A self-selecting private club of 14 members with no oversight. Founded by Michael Repacholi, who was found to be channeling industry money through a hospital for his EMF activities — now an industry consultant, yet remains ICNIRP Emeritus Member.
WHO EMF Project	Founded by the same Repacholi, largely funded by the telecom industry's own lobbying organisations — the GSM Association and Mobile Manufacturers Forum — while he simultaneously headed both WHO and ICNIRP.

INSTITUTION	DOCUMENTED PROBLEM
FCC (US)	Described in a Harvard report as a "captured agency" — regulatory revolving doors between the FCC and the telecommunications industry mean the regulator effectively serves the industry it is supposed to regulate.

> *There seems to be a cartel of individuals monopolizing evaluation committees, thus reinforcing the no-risk paradigm. We believe that this activity should qualify as scientific misconduct.*
>
> — HARDELL & CARLBERG, ONCOLOGY LETTERS, 2020

EU Parliament Members Michele Rivasi and Dr. Klaus Buchner released a 98-page formal investigation into ICNIRP's conflicts of interest. The parallels to tobacco, asbestos, and leaded gasoline — industries that deployed the same strategy of regulatory capture and manufactured scientific uncertainty for decades — are not incidental. They are the playbook.

ICNIRP CONFLICTS OF INTEREST — FULL DOCUMENTATION

Environmental Health Trust — funding ties, member conflicts, suppressed research

ehtrust.org — ICNIRP Conflicts

EU PARLIAMENT 98-PAGE ICNIRP CONFLICTS REPORT

Formal parliamentary investigation by MEPs Rivasi and Buchner

linkedin.com — ICNIRP Report

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08 — FOLLOW THE MONEY

The Patent Gold Rush — Who Cannot Afford for This to Stop

The financial stakes explain everything about why the safety conversation is not happening. This is not conspiracy — it is basic corporate economics applied at civilizational scale.

$23B

AT&T'S SINGLE SPECTRUM ACQUISITION — 2025

Covering 400+ U.S. markets

$81B

U.S. C-BAND SPECTRUM AUCTION ALONE — 2021

One of the largest sales in history

60,000+

DECLARED 5G PATENT FAMILIES — 10X INCREASE SINCE 2017

$15–20B/year licensing market

AT&T has spent tens of billions securing the spectrum licenses that make 5G operation possible — including a $23 billion all-cash acquisition of nationwide spectrum in 2025, and more than 1,040 MHz of millimeter-wave spectrum covering virtually every U.S. market. Their entire corporate trajectory depends on 5G being deployed, normalized, and never meaningfully challenged on safety grounds.

Google / Alphabet pursued the construction of a fully instrumented 5G smart city in Toronto through Sidewalk Labs — promising 5G connectivity woven through every surface, sensors measuring all aspects of activity, and a centralized identity management system connecting residents' civic records. Critics described it as "a colonizing experiment in surveillance capitalism." The project was

cancelled after public backlash — but the vision did not die. It was folded back into Alphabet. The infrastructure ambition continues.

Google has filed multiple direct 5G patents — including for secure 5G IoT network architecture — and companies like Google and Meta are now actively shaping the 6G standards process, cementing their position in the next generation of the technology before the current one has been safety-evaluated.

> **The structural reality:** Companies holding 5G patents and spectrum licenses have collectively invested hundreds of billions of dollars. This creates an overwhelming institutional incentive to suppress, delay, or discredit safety research that might trigger regulatory intervention. Every dollar invested in spectrum is a dollar that requires 5G to be seen as safe — because the alternative is writing off the largest technology investment in history.

AT&T $23B SPECTRUM ACQUISITION — OFFICIAL ANNOUNCEMENT

AT&T's own press release on their largest spectrum purchase, 400+ U.S. markets

about.att.com

GOOGLE PATENTS — 5G IOT SECURITY (US20210368341A1)

Google's direct 5G patent holdings — secure access architecture for 5G IoT networks

patents.google.com

USPTO — OFFICIAL 5G PATENT ACTIVITY REPORT

U.S. Patent Office analysis of 5G patent concentration, major holders, and global trends

uspto.gov — 5G Patent Report

SIDEWALK LABS SMART CITY DATA CONCERNS — CIGI

Scholarly analysis of Google's smart city surveillance ambitions and data governance failures

cigionline.org

09 — WHERE TO TURN

Independent Science — Outside the Captured System

5G APPEAL TO THE EU

Signed by hundreds of independent scientists and physicians — calling for moratorium on 5G until safety studies are conducted

5gappeal.eu

ENVIRONMENTAL HEALTH TRUST

Comprehensive peer-reviewed research archive on EMF, RF radiation, and biological effects

ehtrust.org

ICBE-EMF — INDEPENDENT COMMISSION ON BIOLOGICAL EFFECTS

Scientists providing alternative framework to ICNIRP — peer-reviewed, industry-free

icbe-emf.org

PHYSICIANS FOR SAFE TECHNOLOGY

Medical professionals compiling and translating EMF research for clinical understanding

mdsafetech.org

RADIATION RESEARCH — HARDELL'S PLATFORM

Case reports, 5G health documentation, and independent research

radiationresearch.org

DR. MAGDA HAVAS PHD

Decades of independent research on biological effects of electromagnetic radiation

magdahavas.com

HEARTMATH INSTITUTE — GLOBAL COHERENCE RESEARCH

Science of heart-brain-Earth electromagnetic synchronization and what disrupts it

heartmath.org/gci

POLLACK LABORATORY — EZ WATER RESEARCH

Fourth Phase of Water science — University of Washington

pollacklab.org

We Did Not Ask Permission from the Living System We Inhabit

Billions of years of evolution tuned the human body to the electromagnetic heartbeat of this planet. Our brains pulse at 7.83 Hz. Our hearts entrain to the geomagnetic field. Our cells are built of structured water that breathes with infrared light and organizes with extraordinary molecular intelligence.

We have introduced, in a geological eyeblink, an electromagnetic environment of artificial microwave

radiation at densities and frequencies with no precedent in evolutionary time — without studying what it does to the water in our cells, to the resonance of our hearts, to the oxygen in our blood, to the structured field that makes weather readable and biology coherent.

The storms in the sky are intensifying. The storms in the body are intensifying. Cancer rates are accelerating. Neurodegeneration is accelerating. The atmospheric warning systems are going blind.

The pattern is the same at every scale, because it is the same disturbance. And it is not too late to ask the question that should have been asked first.

SCIENCE TO SAGE

BRIDGING RIGOROUS SCIENCE & TIMELESS WISDOM

CURATED BY KAREN ELKINS

ALL RESEARCH CITED IS PEER-REVIEWED OR SOURCED FROM INDEPENDENT SCIENTIFIC INSTITUTIONS. LINKS ACTIVE AT TIME OF PUBLICATION.