

Collusion, Corruption, and Billion-Dollar Verdicts

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Junk science and courtroom fraud are destroying companies, technologies, science, and justice. The Roundup lawsuits are the most egregious current case study.

In large part because of well-funded, one-sided, sometimes vicious mainstream social media and environmental activist stories and campaigns—and the “progressive” takeover of elementary, middle, high school, college, and graduate school curriculums—an increasingly influenced or indoctrinated, scientifically illiterate and gullible public has been persuaded that modern technologies are inherently dangerous, must be eliminated, and can easily be replaced with new, politically acceptable products created in the U.S. or imported from China and other countries. In their view, if more American companies and industries are sent to history’s dustbin, that is a small price that consumers should gladly pay.

San Francisco area juries have awarded several cancer patients \$78 million to \$1 billion *per person* in compensatory and punitive damages, based on claims that the active ingredient in Roundup weed killer caused their cancer, and that Bayer AG is culpable because Monsanto (which it now owns) manufactured the chemical and allegedly failed to let consumers know it is carcinogenic, despite allegedly knowing it was.

The awards were later reduced to tens of millions of dollars, but some 22,000 more “corporate victims” are still being represented by mass tort law firms that continue to seek still more clients. Frequent television, radio, print, and online advertisements and advisories state that “if you ever used Roundup and now have cancer, you could be compensated,” under what many call “jackpot justice.”

Typical ads make statements similar to these:

Were you or a loved one ever exposed to the weed killer Roundup, and did you develop non-Hodgkin lymphoma or NHL?

Several juries have already awarded billions of dollars to people who were exposed to Roundup and later developed non-Hodgkin lymphoma. To receive your settlement, you must not delay, or you may miss the statute of limitations deadline for your case. We charge no fees unless we win.

Recent verdicts in the billions of dollars make it likely that we can settle your case for significant compensation. If you were exposed to Roundup and developed NHL or one of its many related forms of cancer, get a free case evaluation to see if you qualify for compensation, by contacting us now.¹

One law firm went so far as to say the requisite exposure to Roundup could be as minimal as “living near a farm where the potentially dangerous herbicide is used.” If such a person has since been diagnosed with any of a number of “serious” illnesses, its “knowledgeable product liability lawyers” would be happy to discuss how the victim can join the Roundup litigation. The firm’s website even asserts a possible link between glyphosate and 14 “serious health consequences,” including: lymphoma,

non-Hodgkin lymphoma, Parkinson disease, lung cancer, brain cancer, thyroid cancer, kidney disease, nerve damage, leukemia, heart disease, multiple sclerosis, respiratory illness, birth defects, and infertility.²

The verdicts and steadily rising pool of plaintiffs suggest that cumulative awards could reach trillions of dollars. Perhaps not surprisingly, U.S. District Court Judge Vince Chhabria has said Monsanto-Bayer should consider settling the cases for perhaps \$5 billion. In early March 2020, the company agreed to draft terms for a nearly \$10 billion settlement (of which the lawyers would get some 40 percent) with a half dozen law firms representing most of the 22,000 plaintiffs, under the condition that any agreement must protect Bayer from future litigation. Other law firms are likely to balk at any such precondition.^{3,4}

If the verdicts are not reversed on appeal, or if a fair and reasonable settlement cannot be reached, Bayer will likely be bankrupted, this important product could be driven out of existence, other products and companies will soon be in the crosshairs of mass tort law firms, and American jurisprudence will be severely compromised and corrupted.

Unfortunately, most print, television and radio media stories feature the jury verdicts and plaintiff law firm claims very prominently—but provide very little information about the shaky or even fraudulent science behind the alleged glyphosate-cancer links. Social media may be even worse, while Twitter, Facebook, YouTube and Google algorithms and other mechanisms make it extremely difficult to find articles by scientists, medical researchers, and journalists who question claims that glyphosate causes cancer.

Any caring person must feel deeply for these cancer patients. All too many people have family members or friends, young and old, who contracted (and hopefully survived) leukemia, lymphoma, or other cancers. Their cases are tragic on many levels, and people everywhere hope researchers will soon find measures to end the curse of cancer.

However, that is not the issue here. The fascinating, disturbing issues associated with glyphosate involve how this Roundup litigation got started, the highly questionable science behind it, and how certain lawyers, scientists, activists, and judges have been collaborating in or at least permitting the destruction of evidence-based science and American jurisprudence and justice in attacks on companies and products.

This article examines those issues, where the cases now stand, and where this and similar litigation is likely heading—in an effort to lay a foundation for preventing further damage from the glyphosate-Roundup cases and curtailing the spread of similar product liability cases where the evidence does not support the claims or verdicts.

Roundup’s History and Safety

The active ingredient in Roundup is glyphosate. It is now generic, but its original manufacturer was Monsanto, which is

now owned by Bayer AG, the giant German corporation that patented aspirin in 1899 and acquired Monsanto in 2018.

Introduced in 1974, glyphosate is licensed in 130 countries and is the world's most widely used herbicide. Millions of homeowners, gardeners, and farmers use it regularly to kill weeds.

Countless farmers employ it with "Roundup-Ready" corn, soybeans, cotton, and other crops that are genetically engineered to be resistant to it. That lets them practice no-till farming—which means a couple of spray treatments eliminate the need to till cropland or use stoop labor to control weeds.

No-till farming preserves soil structure and organisms, moisture, organic matter, and nutrients. It improves drainage and soil biodiversity, while reducing erosion. It permits the high-yield farming that humanity must practice if we are to feed Earth's growing populations, without having to plow under millions more acres of wildlife habitat. It reduces labor, costs, fuel consumption—and carbon dioxide emissions.

Farmers also like it, says cancer epidemiologist Dr. Geoffrey Kabat, because it is safe to use. Glyphosate is "environmentally benign and has low toxicity." In fact, he says, the acute toxicity of glyphosate is lower than that of table salt, vinegar, chocolate, or coffee.⁵

Multiple studies by respected organizations worldwide have concluded that glyphosate is safe and non-carcinogenic. Reviewers include the U.S. Environmental Protection Agency (EPA),⁶ European Food Safety Authority,⁷ European Chemicals Agency, Food and Agriculture Organization,⁸ Germany's Institute for Risk Assessment,⁹ Health Canada,¹⁰ Australia's Pesticides and Veterinary Medicines Authority,¹¹ and many others.¹²

The U.S. Agricultural Health Study, conducted by the National Cancer Institute and other agencies, has followed the health of more than 52,000 licensed private pesticide applicators (mostly farmers) and more than 32,000 of their spouses from Iowa and North Carolina for more than two decades. More than 80 percent of these test subjects used glyphosate. The study has found *no glyphosate-cancer link*. The study is ongoing, is by far the most extensive such analysis ever done, and has provided multiple continuing updates.¹³

Overall, more than 3,300 studies support glyphosate safety, according to the European Crop Protection Association.¹⁴

Contrary Findings by the International Agency for Cancer Research (IARC)

Only one agency, the France-based International Agency for Cancer Research says otherwise. In March 2015, IARC ruled that glyphosate is a "probable" human carcinogen. It based its conclusions primarily on just two studies of mice—and has been accused of manipulating even those studies (while ignoring other studies) to get its desired results.¹⁵

IARC is a World Health Organization agency that does no research of its own. It primarily reviews other research and classifies chemicals as definitely, probably, or possibly a cause of cancer in humans—or as simply "not classifiable" (a group that to date includes 500 agents). To reach its conclusions, the agency relies on what toxicity experts call "exposure" or "hazard" tests. That approach, which many epidemiologists now view as antiquated and of extremely limited value, defines a cancer "hazard" as an agent that is "capable of causing cancer under some circumstances." It uses laboratory animals to determine whether a chemical *might cause cancer*—even if only at extremely high levels that no animal or human would or could ever be exposed to in the real world.¹⁶

IARC does not utilize actual "risk assessments"—the modern approach that examines the *exposure level* at which a substance *might actually have an adverse effect* on laboratory animals. Because it helps them know levels at which they will actually be at risk, the risk assessment process is useful to people who regulate and use chemicals.

In fact, epidemiologists, toxicity experts, and physicians say, some chemicals may cause cancer or other serious health problems at extremely high doses but be completely harmless at levels encountered in our daily lives. Other substances may be harmful at high doses but beneficial, protective, or vital at low or extremely low doses. Not having them in our bodies at certain low levels can cause severe health problems.

IARC's Group 1 carcinogens—"definitely carcinogenic," its highest likelihood-of-cancer category—means the high-level exposure studies used by IARC found *sufficient* evidence of carcinogenicity in *humans*. There are 120 chemicals, substances, and industrial processes in this group.¹⁷ Group 1 includes plutonium and sunlight, along with aflatoxin, asbestos, benzene, cadmium, lindane, tobacco, industrial processes like welding and steel making, and processed meats.

IARC's Group 2A carcinogens—"probably carcinogenic"—involves exposure studies cited by IARC that found *limited* evidence of carcinogenicity in humans, plus *sufficient* evidence of carcinogenicity in *laboratory animals*. There are 83 chemicals, substances, and processes in this group, including *glyphosate*, dieldrin, malathion, acetaldehyde in bread, anabolic steroids, emissions from high-temperature food frying, red meat, drinking "very hot" beverages, and working as a hairdresser, in a refinery, or at shift work that disrupts people's circadian rhythms.

IARC's Group 2B carcinogens—"possibly carcinogenic"—involves materials and processes that suggest *limited* evidence of carcinogenicity in humans, plus *less than sufficient* evidence of carcinogenicity in lab animals, even according to the high-level exposure studies relied on by IARC. The 314 substances and occupations in Group 2B include chlordane, cobalt, and diesel fuel, as well as bracken ferns, pickled vegetables, carpentry work, and caffeic acid in coffee, tea, and (otherwise) nutritious foods like apples, blueberries, broccoli, and kale.¹⁸

Since 1971, IARC has studied more than 1,100 substances, activities, and agents—and identified more than 500 that it claims could cause cancer in humans at some high exposure level. None of this provides useful public health *risk management* information.

However, IARC's work does provide abundant targets for activists and lawyers who want to stoke public fear; file multimillion-dollar lawsuits against deep-pocket manufacturers; or get modern, synthetic, non-natural chemicals banned or removed from store shelves. They may not target makers of organic coffee beans and organic kale, or very hot beverages, since those manufacturers tend to be allied with law firms suing over glyphosate or do not offer deep financial pockets. But companies that have manufactured, sold, or used asbestos, tobacco, talc, petroleum-based products, or glyphosate are definitely tempting targets.

Questionable-to-Fraudulent Scientific Research

IARC based its glyphosate-causes-cancer finding on supposed evidence from rodent studies. However, subsequent reviews by cancer epidemiologist Dr. Geoffrey Kabat, former National Cancer Institute statistician Dr. Robert Tarone, Reuters investigative journalist Kate Kelland, risk and science communications specialist "Risk Monger" Dr. David Zaruk,

and other analysts demonstrated that the IARC process was tainted beyond repair, from the very beginning.

IARC's glyphosate review was proposed by U.S. government statistician Christopher Portier, who then helped design the study and served as special advisor to the IARC "Working Group" that evaluated it. He allegedly did this while also being paid as an advisor to the anti-chemical Environmental Defense Fund—and on unspecified "other issues" for Lundy and Lundy and another law firm involved in the glyphosate lawsuits against Bayer. Subsequently, investigators learned, soon after IARC issued its cancer ruling, Portier signed a contract under which he received substantially more than \$100,000 for serving as a litigation consultant for two law firms that were preparing to sue Monsanto on behalf of "glyphosate cancer victims." He now serves as a well-paid "expert witness" on some of these lawsuits.¹⁹

Portier, IARC, and the law firms did not disclose these conflicts of interest in a timely manner. But they were revealed in a sworn deposition for one of the cases. It is not certain that the conflicts would have affected the views or decisions of judges and juries involved in these cases, or news stories by "mainstream" media reporters covering them, even if those parties had been aware of the conflicts. But they very well might have.²⁰

Dr. Tarone discovered that, during its deliberations, the IARC panel highlighted *carcinogenic* results from rodent studies it relied on—while ignoring *contradictory no-cancer* results from the same studies. The agency based its findings on two studies of male and female mice that, over a two-year period, were fed diets containing up to 30,000 ppm glyphosate! In the male mice, the studies found cancerous tumors in 1 of 49 mice at 0 ppm, 0 of 49 mice at 500 ppm, 1 of 50 mice at 5,000 ppm, and 2 of 50 mice at 30,000 ppm. In other words, they found the same rates of cancer at 0 and 5,000 ppm and only one more tumor at 30,000 ppm.

Even more "remarkable," said Tarone, IARC provided "no data" on kidney tumors for female mice, even though it had the data. The missing data showed no tumors in any female mice, even at 30,000 ppm. Perhaps the data had to be excluded so that IARC could reach its "probably carcinogenic" finding.

Overall, he concluded, "the IARC classification of glyphosate as a probable carcinogen was the result of a flawed and incomplete evaluation of the very rodent cancer studies that IARC relied upon." A proper summary of the rodent studies relied upon by IARC "would not even support the conclusion that there is *limited* evidence that glyphosate is an *animal* carcinogen" [emphasis added]. And without that animal conclusion, the IARC would not have been able to support its claim that glyphosate is a probable *human* carcinogen. (Note too that these were kidney tumors, not leukemia or non-Hodgkin lymphoma.)¹⁵

And yet the agency did make that carcinogenicity claim—and that claim is the foundation for all these lawsuits.

Dr. Kabat was just as blunt. IARC, he said, "had to cherry-pick results from two mouse studies in order to make its tortured case that the animal evidence supported a conclusion of carcinogenicity." Indeed, he alleged:

It is crucial to repeat that *the classification of glyphosate as probably carcinogenic to humans relied entirely upon the conclusion that there was sufficient evidence of animal carcinogenicity* (because the epidemiologic evidence was not strong). All of this points to a trusted agency redacting the evidence to suit its predetermined and preferred story-line" [emphasis in original].²¹

Apparently, during his pretrial deposition, Portier also

admitted that IARC's animal subgroup interim report had actually concluded there was only "limited" evidence of animal carcinogenicity for glyphosate. Somehow, inexplicably, this conclusion got upgraded to "sufficient" evidence of animal carcinogenicity during the deliberations of the entire Working Group, all but ensuring the chemical would be branded a probable human carcinogen. Even though he was a member of the animal subgroup, Portier allegedly claimed he had no idea of when or how the conclusion was changed.¹⁹

Kate Kelland found 10 instances in which "a negative conclusion about glyphosate leading to tumors was either deleted or replaced with a neutral or positive" statement between the interim and final IARC report.²²

"Limited" evidence being upgraded to "sufficient" evidence was one problem. IARC reviewers also removed multiple conclusions by scientists whose studies had shown *no link* between glyphosate and cancer in laboratory animals, she found. A pathology study ordered by the EPA "firmly" and "unanimously" agreed that glyphosate had *not* caused abnormal growths in the mice being studied; IARC's interim report referenced this sentence, but its final monograph deleted it.²²

IARC refused to respond to questions about the alterations, saying only that the draft was "confidential" and "deliberative in nature," and therefore not subject to inquiries. Agency officials also told U.S. scientists serving on its glyphosate review panel that they were not obligated to follow, and *should not* follow, U.S. transparency requirements or release any emails, notes, or discussion memos related to the development of Monograph 112 on glyphosate.²²

In sharp contrast to this suspicious, secretive, and unscientific process, the European Food Safety Authority's decision-making process for glyphosate and other chemicals is transparent and readily available, and "can be traced from start to finish," the director of the EFSA's pesticide unit has said. "Anyone can go to EFSA's website and review how the assessment evolved over time. So, you can see clearly how experts ... appraised each and every study and also how comments from the public consultation were incorporated into the scientific thinking."²²

Further compounding the doubtful nature of its glyphosate action, the chair of IARC's Glyphosate Working Group (Dr. Aron Blair) was also a senior investigator for the National Cancer Institute's Agricultural Health Study pesticide and herbicide analysis. He knew the AHS results exonerated glyphosate as a probable human carcinogen. However, he failed to inform his colleagues about the study, saying the most recent results had not yet been officially published.²³

Since IARC will not consider unpublished studies, that meant IARC never got to see this critical data—and could claim the Working Group never even knew it existed. Even Dr. Blair admitted the AHS study would very likely have resulted in (perhaps even compelled) a completely different IARC decision on glyphosate. Moreover, Portier and his Glyphosate Working Group colleagues were almost certainly aware of the well-known and widely publicized AHS study; they could easily have obtained copies of the draft results and earlier annual summaries. One suspects they had little interest in doing so, perhaps because, as Dr. Blair admitted in a sworn deposition, the study (like the many others mentioned above) would likely have caused IARC to exonerate the chemical.²⁴

Dr. Zaruk pointed out that Monograph 112 was first announced on July 16, 2014, and was limited to "Some Organophosphate Insecticides." Glyphosate is not an organophosphate insecticide, should never have been

included in this review, and was added after the time period had closed for nominating panel members, including experts knowledgeable about glyphosate. Perhaps not surprisingly, the addition came at the behest of Christopher Portier, amid multiple conflicts of interest.²⁵

The collusion, secret revisions, and conflicts of interest were kept hidden until they came out in sworn trial-related depositions and investigations by Zaruk and Kelland. Dr. Zaruk also noted that IARC has altered documents and changed web addresses to hide revisions, webpage history, and conflicts of interest on multiple other occasions, in violation of its own protocols and assertions. Glyphosate simply represented a continuation of that improper process.²⁶

As Dr. Zaruk suggests, a reputable agency “with any sense of commitment to the scientific process” would at least have considered withdrawing this highly controversial glyphosate monograph (and thus reversing its “probably carcinogenic” ruling), if it was faced “with such overwhelming rejections from the scientific community, from all of the leading risk assessment agencies and from people on their very own panels.”²⁵

As might be expected, IARC has denied most of these charges, ignored or excused what it could not deny, and attacked its critics as paid shills for Monsanto and Bayer, in order to destroy their credibility, silence them and other would-be critics, and persuade reporters not to interview them.²⁷

That IARC has not withdrawn its glyphosate ruling—despite these conflicts, criticisms, and thousands of contradictory studies—speaks volumes for its supposed integrity and credibility. That U.S. courts would allow IARC’s highly suspect work to serve as the foundation for billions of dollars in compensatory and punitive damage awards—while preventing the introduction of thousands of studies exonerating glyphosate—raises frightening questions about the current American legal and trial system.

Corruption and Deception in America’s Courtrooms

The glyphosate lawsuits are based on claims that the chemical causes cancer—and that Bayer (and Monsanto) knew this but deliberately or negligently failed to warn people about the cancer risks. If the allegations are correct, reasonable compensatory and punitive damage awards would be justified, though “reasonable” damages probably does not mean \$78 million to \$1 billion dollars per claim.

However, as already noted, extensive reputable evidence clearly demonstrates that there is no connection between glyphosate use and lymphomas or other cancers. Other reputable evidence reveals extensive dishonesty and corruption behind the IARC ruling that is the foundation for these lawsuits, jury awards, and entire mega-litigation effort. Finally, news articles and other accounts from the trials reveal serious problems with the courtroom proceedings and actions by plaintiff lawyers and presiding judges, as illustrated below.

The first award (\$250 million, later reduced to \$78 million) went to Dewayne Johnson, who was a groundskeeper for 18 months and said he was “drenched” twice by glyphosate—but failed to wash the chemical off for six hours or seek medical attention. He says he called Monsanto to ask about the risks and left a message, but the company never called him back.²⁸ The second award (\$80 million) went to Edwin Hardeman, who used Roundup for years in his own yard.²⁹ The third awards (initially \$1 billion each!) went to Alberta Pilliod and his wife Alva, who also used Roundup for many years.³⁰

Plaintiff attorneys repeatedly cited the IARC cancer claims, attacked Bayer and Monsanto as callous corporations, and attempted to prejudice and inflame the juries and news media with claims that the companies knowingly or even maliciously marketed a highly dangerous, cancer-causing chemical. The lawyers did so in courtrooms and media interviews, while activist groups and social media agitators—some of which are allied with and allegedly even paid by plaintiff law firms—pilloried Monsanto, Bayer, Roundup, and glyphosate in television, radio, print, online, and social media.²⁷

In all of this, the attorneys were aided by years of anti-chemical, anti-corporate media, social media, and Hollywood and activist campaigns that had already set the stage for the enormous jury awards, and for the trial judges to mostly let the plaintiff lawyers get away with clever, deceptive, inflammatory tactics.^{31,32}

In the Hardeman case, Federal District Court Judge Vincent Chhabria strictly limited any defense attorney or witness discussions of the EPA’s analyses and its conclusion that glyphosate is safe. EPA scientists had reviewed numerous studies from all over the world and concluded that glyphosate *is not likely to be carcinogenic in humans*. However, Judge Chhabria refused to let Bayer attorneys discuss this. He said he wanted “to avoid wasting time or misleading the jury, because the primary inquiry is what the scientific studies show, not what the EPA concluded they show.”³³

The judge let Hardeman’s lawyers talk extensively about *what IARC concluded its carefully selected and frequently misrepresented studies show*. But he barred defense lawyers from talking about what extensive EPA and other reviews concluded from hundreds of other studies that unambiguously contradict IARC. He shut down discussions of evidence that contradicted IARC findings and/or exonerated glyphosate—because he felt that letting jurors know what America’s principal agency for pesticide and herbicide safety had concluded about glyphosate would somehow waste time and mislead the jurors.³³

Judge Chhabria also barred Bayer attorneys from discussing conclusions reached by foreign regulators—such as Health Canada ... which says it “left no stone unturned” in evaluating glyphosate. Health Canada found *no likely cancer risk* and said “*no pesticide regulatory authority in the world currently considers glyphosate to be a cancer risk to humans at the levels at which humans are currently exposed*” [emphasis added].³³

All this took place in an American courtroom despite the fact that, according to multiple investigators, as noted above, IARC had engaged in extensive deception, revision, collusion, data manipulation, and exclusion of exculpatory evidence to reach its decision that glyphosate is carcinogenic.³⁴

As noted above, IARC does no studies of its own. Like EPA, it assesses studies by *other* organizations and academic researchers. And IARC is the same agency that insists you can get cancer from working the night shift, eating red and processed meats, drinking hot beverages—and even ingesting trace amounts of allegedly carcinogenic substances found in alcoholic beverages, bread, broccoli, and blueberries.

But Judge Chhabria allowed plaintiff lawyers to present IARC’s conclusions to the jury, while barring most contrary evidence. Observers could justifiably view those proceedings and rulings as judicial bias, judicial and attorney misbehavior, or worse: courtroom fraud or kangaroo court justice.³³

In the Johnson case, Judge Suzanne Bolanos would not permit Portier to testify about the amount of glyphosate someone would have to be exposed to in order to get cancer

(an amount that even IARC has not estimated). However, she did allow him to say that glyphosate causes non-Hodgkin lymphoma in humans—based on IARC’s highly questionable mice studies, discussed above—and that Johnson’s 18-month career as a gardener or his being “drenched” with Roundup could have caused his cancer. For the jury, that appears to have been sufficient evidence of culpability and malice, leading to huge compensatory and punitive damage awards.³⁵

In the face of overwhelming evidence to the contrary, as detailed above, California’s Alameda County Superior Court Judge Winifred Smith claimed evidence presented at trial supported the finding that Monsanto and Bayer knew glyphosate could be dangerous but failed to warn Alva and Alberta Pilliod. She reduced the couple’s total compensatory damages for past and future pain and suffering to \$17 million and punitive damages to \$70 million. That is a dramatic reduction from \$1 billion for each of the plaintiffs, but still highly questionable and reflective of biases and passions during the trial.³⁶

It is easy to conclude that the San Francisco jurors—infamed, misled and angered by years of anti-chemical, anti-corporate campaigns—found it easy to convict Monsanto and Bayer of gross negligence or even deliberate malfeasance—and dispense enormous compensatory and punitive damage awards that even the judges ultimately ruled were grossly excessive.

Unfortunately, highly questionable scientific research and courtroom reliance on them are by no means limited to chemicals. Indeed, the problem appears to be systematic and systemic.

A 2020 Arizona State University study reviewed hundreds of psychological tests that have been used in recent court cases. It found that just 40 percent of the studies received “favorable” grades, and nearly 25 percent were rated “unreliable.” A lot of the psychological evidence relied on by courts should be filtered out by the courts, study coordinator and assistant professor of psychology Tess Neal said, but it is not being filtered out. In fact, lawyers rarely challenge the admissibility of even the most scientifically suspect tests and claims, and challenges that are raised succeed only about a third of the time. “Judges simply fail to exercise the scrutiny required by law,” Professor Neal concluded.^{37,38}

Indeed, much of laboratory science and epidemiology is in crisis, both inside and outside of American courtrooms. Analyses dating back to at least 2005 have found that the vast majority of all studies cannot be replicated, even those in “reputable” peer-reviewed scientific and medical journals. Findings from experimental work and observational studies have all too often turned out not to be reproducible or replicable, the National Association of Scholars and other experts have reported.³⁹⁻⁴¹

Irreproducibility can result from various causes, but the primary ones are incompetence and even outright fraud. Incompetence can involve sloppy data gathering and analysis, or simply a desire to complete a study and present conclusions even if they are not supported by the data. However, outright fraud is also growing problem, as with a “study” that claimed microplastic particles in the ocean endangered numerous species of fish; in reality no research was ever even conducted.³⁹

As experts cited in this article document, IARC work on glyphosate may be equally shoddy or deceptive—and yet could result in massive damage awards against a company that may be driven into bankruptcy.

Of course, microplastics and glyphosate are not the only examples of highly questionable claims serving as the

foundation for regulations and lawsuits. World-renowned toxicologist Dr. Edward Calabrese has documented fraud behind the 1946 Nobel Prize for Physiology or Medicine, which was awarded to Dr. Hermann Muller for his claimed discovery that even tiny amounts of radiation can cause cancer.⁴² This is the “linear no threshold” model, the assertion that there is no threshold below which any kind of radiation is safe. Calabrese accused Muller of being “deliberately deceptive.”⁴³

In reality, in a process called hormesis, low doses of radiation are generally benign or can actually help animals and humans ward off disease, safeguard bodies against certain chemicals or diseases, or actually cure cancer and other diseases. The same is true for low doses of salt, alcohol, selenium, and various other substances, which are dangerous at high doses, but whose presence in the body can be beneficial or even essential.⁴⁴

This epidemic of junk science, deception, biased judges, and prejudicial hearings and trials must be rooted out of our scientific research institutions, public policy arena, and perhaps especially our courtrooms, before it destroys our legal system, science, jurisprudence and free enterprise system—while unjustly convicting (or exonerating) defendants, and unduly enriching lawyers and purported victims.

Failure to Employ Potentially Game-changing Cross-examination

Analyzing the initial San Francisco area courtroom proceedings from another angle—an additional line of questioning that Bayer lawyers could have employed but did not—is a revealing exercise.

It would seem especially appropriate considering the ages of the alleged glyphosate victims: Dewayne Johnson was 47 years old at the time of trial, Edwin Hardeman was 70, Alva Pilliod 77, and Alberta Pilliod 75. Their lifetime health habits and chemical exposure levels are thus relevant issues.

Questions like the following could have elicited vital information, and might have changed the entire tenor of the courtroom proceedings, as well as the damage awards, if not the jury verdicts themselves.

- Can you describe your family cancer history ... your eating, exercise and sleeping habits ... how often you eat high-fat foods ... how often you eat fruits and vegetables ... and your other lifestyle choices that doctors and other experts now know play a significant role in whether or not people get cancer?
- How many times in your life do you estimate you were exposed to substances on IARC’s list of **Group 1 definite human carcinogens**—including sunlight, acetaldehyde in alcoholic beverages, aflatoxin in peanuts, asbestos, cadmium in batteries, lindane ... or any of the 114 other substances and activities in Group 1?¹⁷
- How often have you eaten bacon, sausage, or other processed meats, also in Group 1?
- How many times have you been exposed to any of IARC’s **Group 2A probable human carcinogens**—not just *glyphosate*, but also anabolic steroids, creosote, diazinon, dieldrin, malathion, emissions from high-temperature food frying, or any of the 76 other substances and agents in Group 2A?¹⁷
- How often have you engaged in shift work, where your work and sleep hours frequently changed?
- How often have you consumed red meat like beef, or very hot beverages—also probable human carcinogens, according to IARC?

- How many times have you been exposed to any of IARC's **Group 2B possible human carcinogens**—including bracken ferns, chlordane, diesel fuel, fumonisin, inorganic lead, low-frequency magnetic fields, malathion, parathion, titanium oxide (in white paint, for example), pickled vegetables, caffeic acid in coffee, tea, apples, broccoli, kale, and other fruits and vegetables, or any of the 303 other substances and activities in Group 2B?¹⁷
- How often have you eaten *organic* foods that may have been treated with pyrethrins, a group of *natural* organic pesticides that have been found to cause leukemia and other health problems?
- In view of all that, please explain how you, your doctors, your lawyers and the experts you consulted were able to conclude that none of your family history, none of your lifestyle choices, none of your exposures to dozens or even hundreds of other substances on IARC's lists of carcinogens, caused or contributed to your cancer—and that your cancer is due *solely to your exposure to glyphosate*.
- Put another way, can you explain exactly how you and your experts separated and quantified all these various exposures, activities, agents and lifestyle decisions—and concluded that Roundup was *the sole reason you got cancer*—and all these other hundreds of factors played no role whatsoever?

It does not appear that Bayer's lawyers asked any of these questions—or else the judges did not allow the lawyers to do so.

It is likewise unclear whether anyone conducted studies to determine the rates or prevalence of cancer among employees at plants that manufacture glyphosate and Roundup. That too would have been revealing—and would certainly be relevant to these cases.

Guilt Plus Malice by Monsanto and Bayer?

In granting these cancer victims massive punitive damage awards, the juries were required to conclude that Bayer (and Monsanto) had deliberately engaged in conduct with malice, oppression, or deception by one or more of its officers, directors, or managing agents.

The way the trials appear to have been conducted by the mass tort legal system—and presided over by these judges—likely made it quite easy for juries to reach that conclusion. The massive size of these awards is probably also a product of the admittedly brilliant but often deceptive, years-long publicity and courtroom campaigns waged by these law firms and their activist anti-chemical allies.

It is bad enough that these cancer trials have been driven by emotional appeals to jurors' largely misplaced fears of chemicals and minimal knowledge of chemicals, chemical risks, medicine, and cancer. It is far worse when our courts allowed these lawsuits to also be driven by misconduct, collusion, bias, or deception by IARC, plaintiff lawyers, journalists, activist groups, and other parties. It is infinitely worse when the judges themselves appear to be biased, to have taken sides, to have enforced rules of evidence and rendered decisions all but guaranteed to ensure verdicts and exceptionally large damage awards against Bayer.²⁷

The Next Stages of Jackpot Justice

Mass tort “jackpot justice” law firms continue to devise and implement better strategies, skills, technologies, alliances, financing, and ability to capitalize on previous

victories—making them one of the biggest threats America's corporations, technologies, legal system, and society have ever faced.

This coalition is supported by steadily expanding funding from previous victories, liberal foundations, organic food companies, American citizens whose taxes fund IARC and allied agencies, people who support tax-exempt “public interest” activist groups, and law-firm-devised “investor” groups that put cash into law firm accounts on promises of huge payoffs to come.^{27,32}

Their money also helps law firms find new corporate victims; support friendly scientists and pressure groups that help IARC prepare new monographs on supposedly carcinogenic chemicals; hire social media experts who mobilize citizens and agitators to attack corporate victims and their defenders; work with journalists who support their biases and goals; and help elect friendly, allied, or sympathetic legislators and judges, or secure the appointment of such judges. The firms are also aided by the Ramazini Institute in Italy and National Institute of Environmental Health Sciences in the USA—both taxpayer funded—and by a small army of activist journalists and pseudo-journalists.^{26,27}

(Ms. Carey Gillam, cited in notes 3 and 28, writes for *Time* magazine and other periodicals, which typically identify her as a journalist, author, and researcher for US Right to Know (USRTK), a California-based “nonprofit food industry research group.” She is actually a prominent anti-biotechnology activist and research director for USRTK, which is more accurately described as an anti-pesticide pressure group that received its initial funding from the Organic Consumers Association.^{45,46})

As Dr. Zaruk notes, the predatory jackpot justice lawyers even create, finance, and coordinate their own “public interest” nongovernmental organization (NGO) “think tanks” and “education groups,” like the Council for Education and Research on Toxics. These organizations work with law firms and their allies, dominate print, television, and online media, and coordinate with anti-chemical pressure groups like Pesticide Action Network, Corporate Europe Observatory, SumOfUs, US Right To Know, and Greenpeace.^{26, 27,47,48}

Aside from Reuters and the *Wall Street Journal*, “mainstream” media bias against business, chemicals, and conservative viewpoints—and in favor of organic foods and litigation against big corporations—appears to extend to the way Bayer, Monsanto, Roundup, IARC and glyphosate “victims” have been treated. Meanwhile, as with other topics, Google and social media often make it difficult to find articles that support Roundup or perspectives presented in this paper, or use their algorithms to match one pro-industry or sound science article with several attacking Bayer (and Monsanto), supporting anti-Roundup activism or linking to law firms that continue to seek victim clients.^{25, 46,49-51}

Some ideological allies have engaged in even more outrageous behavior: publicizing home addresses of “uncooperative” legislators, regulators and scientists—and forming “flash mobs” to harass them online, in the media, even at their homes and offices, in restaurants and in other public places. They have few scruples, strongly prefer intimidation over discussion, and typically have no codes of conduct or ethics.

Together, they conduct ingenious, one-sided, years-long campaigns to instill fear of chemicals, loathing of corporations, and visions of vengeance at their hands and through juries, legislators, and regulators.

Ultimately and above all—these groups are determined to enact legislation, control or bankrupt companies, and

effect monumental agricultural, industrial, legal, and social change—through confrontation, intimidation, and litigation, with little or no opportunity for debate, contrary evidence, or normal democratic processes. In the process, they further enrich and empower themselves and their allies.

Some news stories, observers, and commentators seem to have reached a point of dismay and surrender. They suggest that Bayer and its legal team should simply give up hope of ever getting a fair shake from the district courts and juries—and simply seek a multibillion-dollar settlement. Others say Bayer should pin its hopes on reviews and reversals by appellate courts or the U.S. Supreme Court. The company and its directors, shareholders, supporters, and lawyers sometimes appear to be almost of the same mind.^{3,4}

However, Bayer lawyers could surely argue that they have been precluded from presenting an adequate defense. They should certainly be allowed to present evidence that the IARC cancer claims were the product of dishonesty, collusion, misrepresentation, and perhaps even fraud. At the very least they should be permitted to show that IARC claims are contradicted by thousands of other studies, from all over the world, that found glyphosate is *not likely to be carcinogenic to humans*, certainly at typical exposure levels.

They can certainly cite *Daubert v. Merrell Dow Pharmaceuticals*. That 1993 U.S. Supreme Court decision requires that, in cases like these glyphosate cancer claims, plaintiffs must prove that the scientific evidence they present is relevant and reliable. It must have been tested and peer-reviewed against prevailing standards. It must be accepted in the applicable scientific community against permissible known or potential rates of error. The expert evidence must meet basic standards of integrity and credibility, and show more than just a circumstantial link between an alleged cause and the injury in question.

The Court also held that, if expert testimony is the result of *research conducted for the purpose of litigation*, the experts must show precisely how they reached their conclusions and point to objective sources that demonstrate they followed scientific methods practiced by at least a recognized minority in their field. If they cannot do so, the testimony is inadmissible.^{52,53}

The IARC carcinogen claims certainly seem to be such an outlier, so beneath scientific norms, so tainted by conflicts of interest and misconduct, so unrelated to actual chemical risks—indeed so deceptive and even fraudulent—that they should never have been admitted as evidence in any glyphosate trial.

Moreover, as noted above and alleged by multiple experts, there are compelling reasons to believe the IARC research on glyphosate was initiated and conducted largely or primarily for the purpose of launching and driving mass tort litigation against Bayer-Monsanto. Glyphosate should never have been included in any review of organophosphate insecticides and was added at Portier's recommendation.^{19, 20, 25}

Under *Daubert*, these facts alone would impose a much higher burden of proof for courts to even admit the highly suspect and largely circumstantial IARC findings, much less give those findings the weight and prominence they received, even as the courts limited or excluded the results of literally thousands of untarnished scientific studies that found glyphosate is not a human carcinogen.

One would think the Supreme Court would agree—and apply *Daubert* to reverse these jury decisions and damage awards. However, Chief Justice John Roberts can be unpredictable; indeed, he sometimes appears ready to side with his liberal colleagues when outside pressure campaigns

and media stories demand he do so or accuse him of siding with big corporations or other progressive targets.

A high court decision applying *Daubert*, supporting Bayer, sharply chastising the plaintiff lawyers and lower court judges, and reversing the huge compensatory and punitive damage awards is therefore fully warranted, but by no means assured.

“Contaminated” Cereals—and Dangerous Organic Chemicals

Who is likely to be the next predatory lawsuit victim? One prospect could certainly be General Mills and other food companies that have not yet forsworn conventionally grown or biotech grains—and are still selling corn, wheat, alfalfa, canola, soybean, and other products that are not “natural” or “organic” or have “detectable” levels of glyphosate. Harbingers of those attacks have been appearing on the internet and elsewhere for years.⁵⁴

The lawsuits will likely revolve around “linear no threshold” theories (that there is no safe level for any chemical), coupled with the Roundup lawsuits and damage awards, and with more campaigns to terrify children and parents about glyphosate and other chemicals in their food. Organic food interests, anti-chemical activists, and other groups are already driving these campaigns with assertions that “experts” have “linked” or “associated” those chemicals with cancer, autism, obesity, leaky gut, celiac disease, heart disease, endocrine disruption, cholesterol, and almost any allergy afflicting consumers.^{55,56}

Claims of supposed “contamination” often involve extremely sensitive modern instruments capable of detecting parts per billion—or even parts per trillion—followed by assertions that those barely detectable trace contaminants are causing or “could” cause or have been “linked to” or “associated with” multiple afflictions, by “some experts” or “some studies.”

One ppb, one part per billion, is equivalent to 1 second in 32 years, or 50 drops (two teaspoons) of a chemical in an official Olympic-sized swimming pool: 660,000 gallons of water. One ppt, one part per trillion, is 1 second in 32,000 years, or 50 drops (two teaspoons) in 1,000 Olympic pools: 660 million gallons of water. These are the parameters for claims that chemicals “have been detected” in food and might endanger humans.

This raises an interesting question: Shouldn't private entities or government agencies test *organic foods* for the dangerous chemicals and pesticides that organic farmers often use? This partial list from Dr. Zaruk's “Organic Farming Dirty Dozen” illustrates the risks associated with “safe, natural” substances that the organic food industry regularly uses—but ads and media stories claim are almost never used.^{57,58}

- **Pyrethrin** natural organic pesticides are powerful neurotoxins that have been found to cause leukemia and many other health problems.
- **Copper sulfate** used as an organic fungicide and in many other organic farming applications can cause damage to the human brain, liver, kidneys, and stomach and intestinal linings.
- **Boron fertilizer** residues (all-natural and organic) can affect human brains, livers, and hearts, if ingested multiple times or for prolonged periods.
- **Lime sulfur** mildew and insect killer is extremely caustic, causes irreversible eye damage, and can be fatal if inhaled, swallowed, or absorbed through the skin.
- **Rotenone** is a highly toxic, even deadly organic pesticide that is sometimes combined with pyrethrins—and can enhance the onset of Parkinson disease.

- **Nicotine sulfate** is an organic neurotoxin that interferes with nerve-muscle transmissions, causes abnormalities in lab animal offspring, and can lead to increased blood pressure levels, irregular heart-rates and even death in organic gardeners who fail to use the chemical with utmost care.
- **Methyl bromide** all-purpose fumigant can affect people's brain, kidneys, nose, heart, adrenal glands, liver, testes, and lungs.

Using this list, attorneys, expert witnesses, and organizations that support modern agriculture could even argue in articles, social media, courtroom presentations, and elsewhere that *organic foods and chemicals* may have caused some of the cancers that mass tort lawyers have been attributing to Roundup.

Another Likely Next Target of Predatory Legal Actions

Another disturbing exposé by Dr. David Zaruk explains in graphic detail how the IARC colluded with trial lawyers to get yet another chemical (benzene) listed as a Group 1 carcinogen, so that mass tort lawyers could prepare more billion-dollar lawsuits. The playbook for this important chemical is very similar to the game plan that IARC followed on glyphosate.

Even worse, it is all but certain that IARC directors are fully aware that their monographs are being used this way in U.S. courts—in fact are *designed* to be used that way—and that the agency and its directors may have been complicit in the process.^{59,60}

Benzene can be found almost everywhere. It occurs naturally in crude oil and is used primarily as an intermediate chemical. Ethylbenzene, for example, then becomes a precursor to styrene for polymers and plastics, cumene for resins and adhesives, and cyclohexane for nylon fibers and other products.^{61,62} However, IARC recently classified it as a Group 1 definite human carcinogen at almost any dose, based on exposure or hazard studies that allege it causes leukemia and other maladies in workers exposed to very high concentrations of the chemical.¹⁷

Still worse, emails between American scientists, tort lawyers, and the former head of IARC's "Monograph" cancer study unit reveal how U.S. jackpot justice law firms helped determine, not only *which* chemicals the agency would study, but *how often* IARC would study them—until the lawyers were satisfied that the IARC reviews were written in ways that would hold up in court, so that the lawyers could successfully sue deep-pocketed oil and chemical companies.^{58, 59}

IARC prepared an initial monograph on benzene. However, the tort lawyers allegedly were not satisfied and requested a reanalysis, which the lawyers concluded likewise failed to provide a sufficient link between the chemical and non-Hodgkin lymphoma. The lawyers then worked with several friendly U.S. scientists, and ultimately persuaded the agency to produce yet another, "more persuasive" report, Dr. Zaruk concluded.^{58, 59}

Benzene thus finally became a Group 1 definite human carcinogen—with "sufficient" evidence that high exposure levels cause non-Hodgkin Lymphoma in humans. Now law firms can potentially line up thousands of cancer "victims," link their lymphomas to benzene—and seek billions in damages.

The process demonstrates how unscientific IARC has become, how it has been transformed into a willing tool for mass tort law firms, and how many of the agency's scientists and advisors have become (often well-paid) experts in some of those cases. It further underscores why this agency's analyses and findings should never be accepted in legislative or regulatory decision processes—or in courts of law.

Undesirable Results of Eliminating Glyphosate

One company, industry, chemical, or substance after another is being singled out and subjected to lawsuits for billions of dollars in compensatory and punitive damages, with little concern given to the long-term impacts to the health and wellbeing of families and communities across the globe.

For example, eliminating glyphosate would mean no more no-till farming, far fewer biotech crops, and far more land under cultivation, at much higher costs. It would mean far more weeding with stoop labor—by immigrants and poor children in the U.S. (certainly not by the lawyers', activists', or journalists' children), and by millions of children and parents in impoverished agricultural communities in Africa and around the world.

While they suffer, the organic food industry would prosper, replacing the lost crops, employing "natural" but dangerous chemicals to control insects and other pests, producing much more expensive fruits, grains, and vegetables, and plowing millions of additional acres of wildlife habitat to achieve similar crop yields as modern American farming methods produce from far less land.

Moreover, glyphosate is now off patent. That means it is produced by multiple companies in multiple countries, it is cheap, and no one company profits "excessively" from its use. If it can be replaced, it would be by much more expensive, and potentially dangerous, weed-killing chemicals.

On the world stage, eliminating glyphosate and Roundup would also mean still more "agro-ecology" initiatives, promoted and imposed by environmental pressure groups, wealthy foundations and aid agencies that oppose the use of modern seeds, fertilizers, and technologies. It will mean more malnutrition and starvation in Third-World countries, under primitive non-mechanized, subsistence, "traditional" farming methods for decades to come.^{63,64}

Some Good News—EPA Action on Glyphosate

And yet, amid these deep concerns there is also good news. The EPA's August 2019 Guidance Letter to California pesticide registrants⁶ could create obstacles for the glyphosate lawsuits and jury awards. It should also give the U.S. Supreme Court additional reasons for applying *Daubert* evidentiary rules, sound science, and basic American jurisprudence standards to the Bayer case and other pending and future lawsuits of this genre.

That EPA "guidance letter" is based on (a) the agency's careful "independent evaluation" and reexamination of scientific studies and regulatory determinations around the world; and (b) its regulatory and labeling authority under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).⁶

Not only does EPA "disagree with IARC's assessment of glyphosate," the letter states. The agency concludes that the chemical "*is not likely to be carcinogenic to humans*" [emphasis added]. Equally important, based on its findings, EPA now holds that any California "Proposition 65 warning language" based on claims that glyphosate is carcinogenic "constitute[s] a false and misleading statement."

Any products bearing Prop 65 warning statements due to the presence of glyphosate in them are thus "misbranded." EPA will no longer approve such labels, and any such warnings "must be removed from all product labels where the only basis for the warning is glyphosate."⁶

Applying that decision to these lawsuits, because glyphosate is not carcinogenic, Bayer was and is under no obligation to

affix warning labels to Roundup containers stating that the chemical causes or probably causes cancer in humans. In fact, the company is legally obligated not to issue such warnings, because *they would make the label "false and misleading."*

This strongly suggests that there is therefore no basis for cancer claims based on IARC's erroneous, sloppy, collusive, junk or even fraudulent science. There is thus likewise no legal or scientific basis for these lawsuits and jury verdicts—and certainly not for enormous punitive damage awards based on claims that Bayer (and Monsanto) had deliberately engaged in conduct with malice, oppression, or deception by one or more of its officers, directors, or managing agents, by knowingly failing to warn consumers that their product was dangerous and carcinogenic.

Trial and appellate court judges—and state and federal regulatory authorities—should implement these EPA findings in regulations and courtrooms. They should also apply them to law firm, news media, and activist website statements, and to the ads that are still trolling for "victims" of "dangerous" glyphosate consumer products. It stands to reason that many if not all of those statements, claims, ads, and articles would therefore also be false and misleading, or even unlawful.

The EPA decision and guidance may not end the Roundup litigation. However, especially in conjunction with *Daubert*, they could lead to a Supreme Court decision that persuades or compels Judges Chhabria, Bolanos, and Smith, and other courts to hold new trials, and disallow IARC studies that appear to have been conducted for purposes of litigation. They could also cause or compel judges to restrict tort lawyer options for introducing questionable to fraudulent evidence and junk science, inflaming jurors, and claiming that Bayer, Monsanto, and other companies knowingly put carcinogenic products on the market, deliberately failed to warn consumers about their dangers, and must therefore pay multimillion-dollar compensatory and punitive damage awards.

With or without a favorable U.S. Supreme Court decision applying *Daubert* in these glyphosate cases, the EPA action could also compel courts to allow exculpatory evidence in the form of EPA and foreign regulatory and food safety agency reviews of glyphosate and other studies. In the process, it could also reduce the surging tide of similar lawsuits over breakfast cereals, benzene, and other products.

All of this would be a significant and much needed victory for the rule of law, and for consumer and citizen confidence in modern chemicals and technologies, in America's courts, and in U.S. and global scientific, safety and regulatory agencies.

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