

**Resolución para solicitarle al Gobierno de Puerto Rico que prohíba la venta y el uso de herbicidas a base de glifosato y la producción de semillas genéticamente modificadas en nuestro país**

**Por cuanto:** Promovido como “seguro” por Monsanto/Bayer y la EPA, el glifosato es el ingrediente activo en muchos herbicidas comercializados en todo el mundo desde 1974, incluyendo la conocida formulación “Roundup” de la multinacional Monsanto, ampliamente utilizado para el control de malezas en la agricultura, limpieza de carreteras y jardinería.

**Por cuanto:** El herbicida se ha detectado en los alimentos, el agua y en el aire según un Informe de la OMS.

**Por cuanto:** La presencia de glifosato ha sido denunciada en numerosas ocasiones en alimentos que consumen los niños: cereales, avena, barras, galletas, e incluso Pediasure para fórmulas de alimentación enteral a niños hospitalizados.

**Por cuanto:** La Agencia Internacional para la Investigación sobre el Cáncer (IARC, por su sigla en inglés, dependencia de la OMS), en marzo 2015 emitió un informe incorporando el glifosato a la lista de sustancias probablemente carcinógenas para humanos (grupo de sustancias 2A de la IARC).

**Por cuanto:** Recientemente salió a relucir en un tribunal federal de los Estados Unidos, en una de las más de 13,000 demandas contra Monsanto, que oficiales de la Oficina de Plaguicidas de la EPA y la alta gerencia de Monsanto/Bayer se pusieron de acuerdo para aguantar la liberación del informe de la agencia federal ATSDR titulado “Toxicological profile of glyphosate” que apoya y fortalece la opinión de la IARC.

**Por cuanto:** En un artículo científico titulado “Exposure to Glyphosate-Based Herbicides and Risk for Non-Hodgkin Lymphoma: A Meta-Analysis and Supporting Evidence” publicado recientemente en el Journal “Mutation Research” se indica que el riesgo relativo de desarrollar un linfoma no Hodgkin es de un 41% más en personas expuestas al glifosato que en las no expuestas.

**Por cuanto:** Varias organizaciones han solicitado sin éxito alguno a EPA que disminuya los niveles de glifosato aceptados en cereales a 0.1 ppm, el cual era el límite estipulado en 1993 y que fue aumentado a 300 ppm a solicitud unilateral de la empresa Monsanto/Bayer, demostrando el poder de influencia que posee la Compañía.

**Por cuanto:** La exposición de los seres humanos al glifosato ha sido vinculada a varios efectos crónicos reproductivos (defectos de nacimiento), cáncer, neurológicos (incluso implicado en causar el mal de Parkinson), renales, cardíacos, diabetes, colitis, enfermedades respiratorias y disrupción en el aparato reproductivo, y efectos agudos por la exposición directa de agricultores o habitantes cercanos a las plantaciones donde se utiliza.



**Por cuanto:** Esta clasificación provocó litigios en masa en E.U contra Monsanto/Bayer, y en el año 2018 un Tribunal en San Francisco condenó a la multinacional a indemnizar con 289 millones de dólares a un jardinero estadounidense de 46 años, por no haber sido informado sobre la peligrosidad del glifosato para contraer linfoma no Hodgkin. En la demanda más reciente, la tercera de forma consecutiva, un jurado estadounidense encontró que el herbicida "Roundup" es carcinogénico y le otorgó una compensación de más de 2,000 millones a una pareja de septuagenarios que utilizaron por años el herbicida en su propiedad y que como resultado de dicha exposición desarrollaron linfoma no Hodgkin.

**Por cuanto:** El glifosato y los alimentos modificados genéticamente se asocian además a enfermedades como: Alzheimer (cuarta causa de muerte en nuestro país) y el autismo que presenta un alarmante aumento en Estados Unidos y Puerto Rico.

**Por cuanto:** Los cultivos transgénicos han sido desarrollados para un modelo de agricultura industrial y están, por lo tanto, intrínsecamente vinculados a prácticas agrícolas no sostenibles que dañan los recursos naturales en los que se basa la producción de alimentos.

**Por cuanto:** El modelo actual de producción industrial de alimentos es insostenible y hace que los agricultores crezcan dependientes de recursos y capital externos. Esta producción industrializada es comúnmente muy intensa y no ligada a la tierra, siendo orientada hacia la exportación. No están pues, diseñados para mejorar condiciones ecológicas o para cumplir con los requisitos de la alimentación local.

**Por cuanto:** Monsanto/Bayer controla el 31% de las tierras con mayor potencial para la agricultura en el municipio de Juana Díaz. Además de norte a sur y del este al oeste de Puerto Rico, las semilleras ya dominan alrededor de 10,000 cuerdas públicas y privadas. Esto equivale al área destinada a la siembra de plátanos, que el Departamento de Agricultura identifica como el cultivo vegetal de principal importancia económica para el país.

**Por cuanto:** También dichas compañías acaparan el 14% del área de las fincas públicas de la Autoridad de Tierras con mayor potencial para producir alimentos en el corredor agrícola de Guayama a Juana Díaz.

**Por cuanto:** Los empleados de las semilleras caminan con trajes protectores blancos cubiertos de pies a cabeza, en clara señal del trabajo intensivo con sustancias químicas peligrosas para su salud.

**Por cuanto:** Puerto Rico solo produce el 15% de sus propios alimentos y este acaparamiento de tierras productivas agrava la dependencia que se tiene del exterior.

**Por cuanto:** Entre 2006 y 2015 la Isla se convirtió en la localidad con más permisos para hacer experimentos con transgénicos en todo Estados Unidos y sus territorios.



**Por cuanto:** Para conseguir la transición global a la alimentación y a la agricultura sostenible, es imprescindible mejorar la protección ambiental, la resiliencia de los sistemas, y la eficiencia en el uso de los recursos.

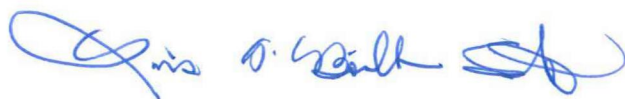
**Por tanto:** Reclamamos que las agencias del Gobierno cuyo primordial fin es la protección del ambiente, los recursos naturales y la salud pública que se fiscalice la implantación y plena vigencia del principio precautorio, que se prohíba la experimentación con transgénicos y el uso de herbicidas a base de glifosatos en Puerto Rico y que la investigación sea dirigida hacia políticas sostenibles que aseguren la sobrevivencia de los ecosistemas y que protejan a la población de los agrotóxicos que suponen un grave riesgo irreversible para la salud de todos los habitantes de nuestro país.

**Por tanto:** Resuélvase por la Facultad de la Escuela Graduada de Salud Pública, reunida en asamblea hoy viernes 24 de mayo del 2019:

1. Que el Gobierno de Puerto Rico prohíba la venta y el uso de herbicidas a base de glifosato y la producción en la Isla de semillas genéticamente modificadas.
2. Para proteger la salud pública resulta necesario que el Gobierno de Puerto Rico publique la lista de los lugares o fincas en Puerto Rico donde se están llevando a cabo experimentos con organismos genéticamente modificados así como indicar las especies o variedades de los organismos que se están utilizando.
3. Que el Gobierno de Puerto Rico abandone la práctica de proveerle incentivos económicos y de cualquier otra índole a estas compañías que degradan, contaminan y envenenan nuestros recursos naturales incluyendo los suelos y los cuerpos de agua superficiales y subterráneos del país.
4. Enviar copia de esta Resolución a los siguientes funcionarios de los Gobiernos estatal y Federal en Puerto Rico: Gobernador de Puerto Rico, Presidente de la Cámara de Representantes de Puerto Rico, Presidente del Senado de Puerto Rico, Presidente de la Junta de Calidad Ambiental, Secretario de Agricultura de Puerto Rico, Secretario del Departamento de Salud, Secretaria del Departamento de Recursos Naturales y Ambientales y a la Directora de la EPA para Puerto Rico y el Caribe.
5. Enviar copia de esta resolución al Presidente de Monsanto/Bayer en Puerto Rico, al CEO y al Presidente de la Junta de Directores de dicha compañía en los Estados Unidos.
6. Enviar copia de esta resolución a todos los medios noticiosos del país para su más amplia divulgación.

Aprobada de forma unánime por los facultativos presentes en la reunión de la Facultad de la Escuela Graduada de Salud Pública celebrada hoy viernes 24 de mayo del 2019, en el Recinto de Ciencias Médicas de la Universidad de Puerto Rico.

**NOTA: esta Resolución fue redactada en su mayoría por estudiantes de la EGSP del curso de Principios de Salud Ambiental (SAAM 6528) del Año Académico 2018-2019.**

A handwritten signature in blue ink, appearing to read "J. A. Smith" followed by a stylized flourish.



# *Spinning Science & Silencing Scientists:*

*A Case Study in How the Chemical Industry Attempts to Influence Science*



Minority Staff Report  
Prepared for Members of the  
Committee on Science, Space & Technology  
U.S. House of Representatives  
February 2018



## TABLE OF CONTENTS

Introduction	Page 1
Background	Page 1
Glyphosate Levels in the U.S. 1992-2015 (Map)	Page 3
Key Players	Page 4
Monsanto's IARC Battle Plan	Page 5
Ghostwriting	Page 6
Orchestrate Outcry	Page 11
Establish Front Groups	Page 14
Silence Scientists	Page 15
Conclusion	Page 17



**Introduction.** On February 6, 2018, the Committee on Science, Space, and Technology is scheduled to hold a hearing entitled, *"In Defense of Scientific Integrity: Examining the IARC Monograph Programme and Glyphosate Review."* The chemical glyphosate is a herbicide most commonly found in Monsanto's commercial weed-killer Roundup. Committee Chairman Lamar Smith scheduled this hearing after months of letter writing criticizing the IARC review of glyphosate and examining the EPA's actions on glyphosate. Many of the criticisms contained in the Committee's letters regarding IARC mimic criticisms that the chemical industry has leveled on the IARC process. Since these industry talking points are apparently the basis for both a Congressional investigation as well as a Committee hearing, Minority Committee Staff have written this staff report to better inform the Committee Members about the chemical industry tactics which have ultimately produced these industry talking points. The report necessarily focuses on the Monsanto Company due to their primary role in inventing, selling, and marketing glyphosate and glyphosate resistant seeds. This report is based in no small part on documents that have been made publically available due to ongoing third-party litigation with Monsanto.<sup>1</sup> These newly released public documents have revealed in an unprecedented manner the tactics of the chemical industry in attacking public health science related to their products.

**Background.** In March 2015, the World Health Organization's (WHO's) International Agency for Research on Cancer (IARC), based in Lyon, France, released a hazard assessment that found glyphosate to be "probably carcinogenic to humans." In December 2017, the EPA released a draft human health risk assessment that concluded, "glyphosate is not likely to be carcinogenic to humans." There are significant differences between these two types of assessments because they attempt to evaluate different questions. According to IARC, "A cancer 'hazard' is an agent that is capable of causing cancer under some circumstances, while a cancer 'risk' is an estimate of the carcinogenic effects expected from exposure to a cancer hazard." As more scientific data is gathered and analyzed to more fully understand the impacts of glyphosate on human health, it is important for the science to lead the way, and for industry and politicians to remain on the sidelines. But that has not happened.



There is significant evidence that Monsanto launched a disinformation campaign to undermine IARC's classification of glyphosate as a probable carcinogen. A multi-district litigation court case against Monsanto regarding potential adverse health consequences of exposures to glyphosate has revealed hundreds of pages of internal Monsanto e-mails, memorandums, and other records that clearly show Monsanto engaged in a decades-long concerted effort to fend off any evidence suggesting potential adverse human health effects from glyphosate and more recently to undermine IARC's findings. They ghost wrote scientific articles on glyphosate, established front groups to help amplify their anti-IARC message and scientific evidence they did not like, and they attempted to silence scientists who reached conclusions questioning glyphosate's safety.

---

<sup>1</sup> The Monsanto Papers, Baum, Hedlund, Aristei & Goldman, accessed here:  
<https://www.baumhedlundlaw.com/toxic-tort-law/monsanto-roundup-lawsuit/monsanto-secret-documents/>



While there are divergent conclusions between IARC and other science agencies, including the EPA, regarding the potential human health hazard of glyphosate, even Monsanto's own scientists acknowledged in internal e-mails that Roundup, the glyphosate containing weed-killer that Monsanto sells, does cause damage. "Glyphosate is OK, but the formulated product causes the damage," one Monsanto researcher wrote in an email.<sup>2</sup> "You cannot say that Roundup is not a carcinogen," wrote another Monsanto toxicologist. "We have not done the necessary testing on the formulation to make that statement."<sup>3</sup> What we do know is that the use of glyphosate has exploded across the United States and around the world since it first came on the market in 1974. In the U.S. alone its use has grown from 11 million pounds in 1987 to nearly 300 million pounds in 2016. Recent studies have also shown that it is prevalent in the U.S. food supply from crackers and cookies to honey and wine. Several studies have also shown that glyphosate is detectable in around 90% of the U.S. population.

This report describes some of the tactics Monsanto has used to control the public debate about glyphosate as well as the scientific studies that have been conducted to assess its potential harm. These efforts appear aimed at corrupting and disrupting any honest, thorough and complete scientific evaluation of glyphosate and its potential adverse impact on the public's health.

---

<sup>2</sup> Email from William Heydens to Donna Farmer and Richard Dirks, Subject: "RE: European Commission Endocrine Disruptors developments (1)," April 25, 2002, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/37-Monsanto-Executive-Admits-Studies-Demonstrate-Formulated-Roundup-Does-the-Damage.pdf>.

<sup>3</sup> Email from Donna Farmer to Monsanto employees, Subject: "RE: Agitation against Roundup," Nov. 22, 2003, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/27-Internal-Monsanto-Email-You-Cannot-Say-That-Roundup-is-not-a-Carcinogen.pdf>.

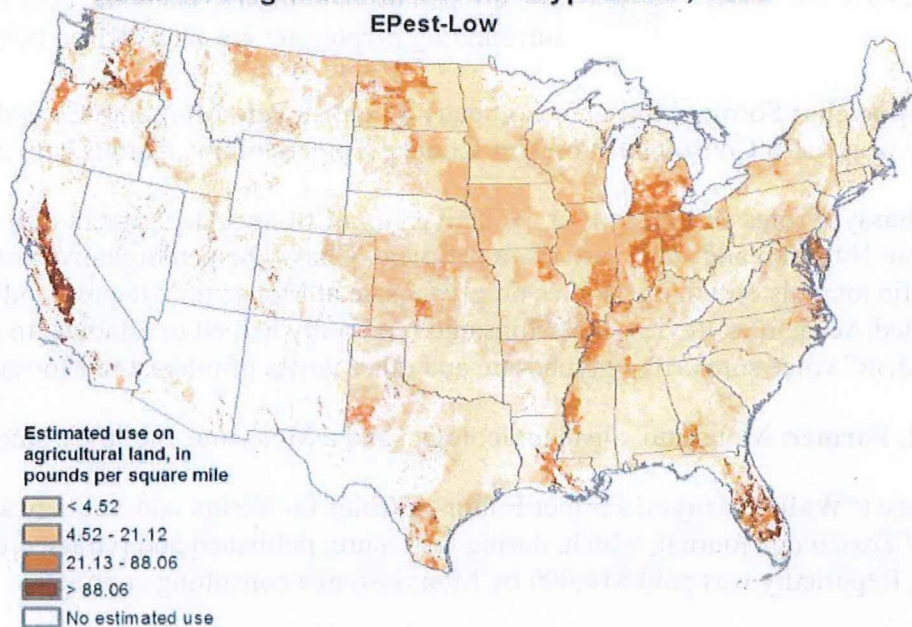


# Glyphosate use in the United States from 1992 to 2015

(Source: U.S. Geological Survey<sup>4</sup>)

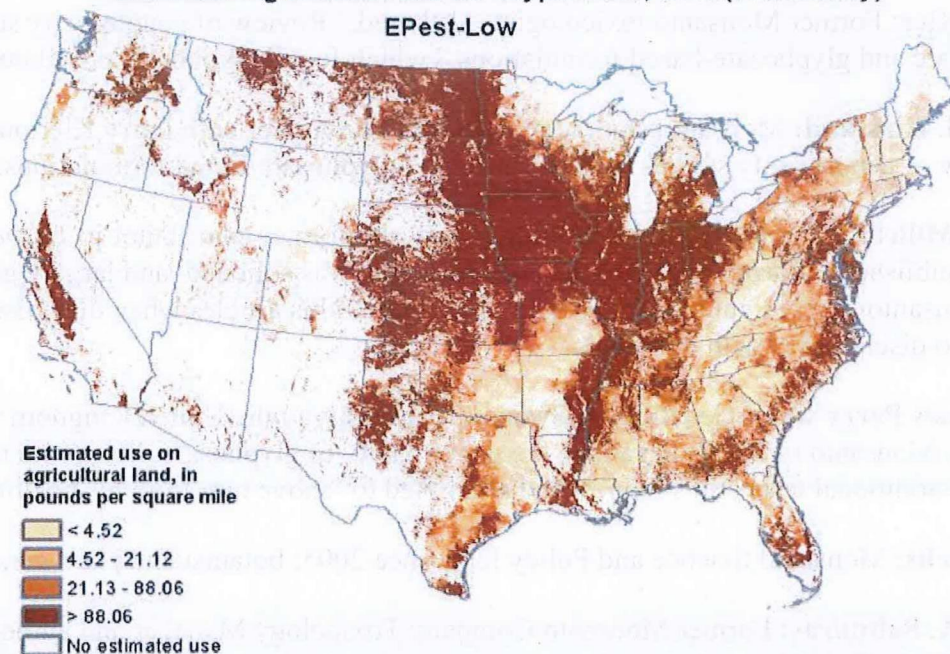
Estimated Agricultural Use for Glyphosate , 1992

EPest-Low



Estimated Agricultural Use for Glyphosate , 2015 (Preliminary)

EPest-Low



<sup>4</sup> Glyphosate use in the U.S. 1992:

[https://water.usgs.gov/nawqa/pnsp/usage/maps/show\\_map.php?year=1992&map=GLYPHOSATE&hilo=H;](https://water.usgs.gov/nawqa/pnsp/usage/maps/show_map.php?year=1992&map=GLYPHOSATE&hilo=H;)

Glyphosate use in the U.S. 2015:

[https://water.usgs.gov/nawqa/pnsp/usage/maps/show\\_map.php?year=2015&map=GLYPHOSATE&hilo=H](https://water.usgs.gov/nawqa/pnsp/usage/maps/show_map.php?year=2015&map=GLYPHOSATE&hilo=H)



MONSANTO



**Key Players.** The individuals listed below are some of the key players mentioned in the internal Monsanto e-mails and records cited in this report. Brief descriptions of their affiliation with Monsanto and their activities surrounding glyphosate are summarized below.

- **John Acquavella:** Former Monsanto Company Scientist, Paid Monsanto Consultant. Currently works as a Consultant/Professor Clinical Epidemiology, Aarhus University.
- **Bruce Chassy:** Professor Emeritus at the University of Illinois Department of Food Science and Human Nutrition and Monsanto grant recipient. Chassy helped organize writing campaigns to scientific journals criticizing studies on glyphosate at Monsanto's request and runs a non-profit called Academics Review that Monsanto reportedly helped to establish to provide an "independent" voice supporting glyphosate and other issues of interest to Monsanto.
- **Donna R. Farmer:** Monsanto's lead toxicologist and a Monsanto employee since 1991.
- **A. Wallace ("Wally") Hayes:** Former Editor-in-Chief for Vision and Strategy at *Food and Chemical Toxicology* journal, which, during his tenure, published and retracted the Seralini rat study. Reportedly was paid \$16,000 by Monsanto in a consulting contract.
- **William F. Heydens:** Currently Monsanto's Product Safety Assessment Strategy Lead.
- **Larry Kier:** Former Monsanto toxicologist. Authored, "Review of genotoxicity studies of glyphosate and glyphosate-based formulations," which found glyphosate posed no risk to humans.
- **David J. Kirkland:** Monsanto contractor who was a co-author with Larry Kier on the study "Review of genotoxicity studies of glyphosate and glyphosate-based formulations."
- **Henry Miller:** Stanford Hoover Institution fellow and former contributor to *Forbes*. In 2015, Miller published a *Forbes* article critical of IARC that was solicited—and largely ghostwritten—by Monsanto. *Forbes* cut ties with Miller and retracted his articles when they discovered his failure to disclose ties with Monsanto.
- **Dr. James Parry** was a Geneticist at Swansea University in the United Kingdom who was hired by Monsanto in 1999 to evaluate the genotoxicity of glyphosate. Monsanto refused to conduct additional tests at his request and attempted to "move him from his position."
- **Eric Sachs:** Monsanto Science and Policy lead since 2005; botanist and plant geneticist.
- **David A. Saltmiras:** Former Monsanto Company Toxicology Manager and author on the so-called Greim Study that refuted animal data indicating glyphosate's carcinogenicity.
- **Gilles-Éric Séralini.** French molecular biologist who conducted a study that found rats fed glyphosate-tolerant corn treated with Roundup had an increased risk of developing tumors. The study, published in the journal *Food and Chemical Toxicology*, was retracted by journal editor and Monsanto contractor A. Wallace Hayes.



**Monsanto's IARC Battle Plan.** Prior to IARC's March 2015 classification of glyphosate as a Group 2A agent that was "probably carcinogenic to humans," Monsanto knew that the existing scientific evidence regarding potential ill-health effects from exposure to glyphosate was not on their side, according to their own internal e-mails. In October 2014, Monsanto scientist William Heydens wrote in an e-mail with the Subject hearing "IARC Evaluation of Glyphosate," "[W]hile we have vulnerability in the area of epidemiology, we also have potential vulnerabilities in the other areas that IARC will consider, namely, exposure, genotox, and mode of action..."<sup>5</sup>

## International Agency Research on Cancer



World Health  
Organization

By February 2015, a battle plan to confront what they suspected would be bad news for glyphosate was already underway.<sup>6</sup> "We should assume and prepare for the outcome of a 2B rating (*possible* human carcinogen); a 2A rating (*probable* human carcinogen) is possible but less likely." Glyphosate received the 2A rating by IARC. According to several key records unsealed in the multi-district litigation against Monsanto, including the company's "Preparedness and Engagement Plan for IARC Carcinogen Rating of Glyphosate," dated February 17, 2015, Monsanto was ready for a full-borne defense of glyphosate when IARC released its Monograph on glyphosate in March 2015.<sup>7</sup>

The Monsanto attack plan included efforts to "amplify" their message that glyphosate was safe pointing to industry-sponsored studies and industry-placed news stories. They sought to generate industry "outrage" over what they thought would be a 2B rating. They had plans to address these "new allegations" regarding the potential hazard of glyphosate and to "neutralize" the impact. They also sought to "amplify" the "positive" message about glyphosate's safety via social media platforms including Twitter and Facebook. They turned to industry trade groups, such as CropLife and industry front groups, such as Genetic Literacy Project and Academics Review as platforms of support for industry spokespersons. They also sought third-party experts to "blog, op/ed, tweet and/or link, repost, retweet, etc." They were planning an onslaught of actions to help undermine IARC and to embolden their justifications to dismiss IARC's scientific findings. They have carried out that battle plan in a consistent and very aggressive manner ever since.

Separately from Monsanto's attacks on IARC they have also tried to wield their influence at the Environmental Protection Agency (EPA) as well. In some instances, they have objected to key scientists sitting on EPA science panels reviewing glyphosate's safety. There have also been questions about other tactics. In May 2017 the EPA's Office of Inspector General opened "an investigation into reports that an EPA employee may have colluded with Monsanto to conduct a biased review of glyphosate," according to the IG's letter announcing the investigation.<sup>8</sup>

<sup>5</sup> Email from William Heydens to Monsanto employees, Subject: "IARC Evaluation of Glyphosate," October 15, 2014, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/35-Monsanto-Admits-Company-Faces-Issues-in-Epidemiology-Exposure-Genotoxicity-and-Mode-of-Action.pdf>

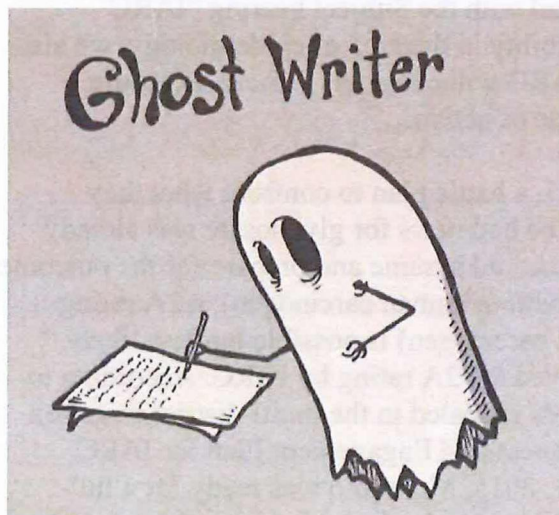
<sup>6</sup> Monsanto internal document, "Glyphosate: IARC," (also referred to as the Monsanto IARC Battle Plan by the media) February 23, 2015, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/72-Documents-Details-Monsantos-Goals-After-IARC-Report.pdf>

<sup>7</sup> *Ibid.*

<sup>8</sup> See: Tiffany Stecker, "Watchdog May Find EPA-Monsanto Links on Pesticides Routine," Bloomberg Energy & Environment Report, June 8, 2017, accessed here: <https://www.bna.com/watchdog-may-find-n73014453069/>



**Ghostwriting.** Internal Monsanto e-mails show that Monsanto scientists “ghost wrote” scientific journal articles on glyphosate. It is clear from these e-mails, revealed in court documents, that ghostwriting articles on glyphosate was a concerted effort by the company. Monsanto scientists wanted to both steer the scientific studies away from identifying potential



adverse human health effects from exposure to glyphosate and they wanted other “independent” scientists listed on these studies to provide the aura of objectivity and independence.

Monsanto did this on several occasions. The internal e-mails show a clear and consistent attempt by some Monsanto scientists to obfuscate their roles in writing, directing and funding glyphosate-related studies. Equally disturbing are examples where they attempted to bury scientific study results that *did* show potential adverse effects from glyphosate exposures. Many of these e-mails portray Monsanto scientists as less interested in discovering if glyphosate and Monsanto’s herbicide

Roundup could have toxic effects and more interested in developing studies that showed no potential ill health effects and had the veneer of independence and objectivity. The e-mails and other records unsealed in the Monsanto court case regarding Roundup have begun to pull back the curtain on those claims and the company’s extraordinary efforts to discredit the scientific conclusions made by IARC on glyphosate and to undermine the reputation of the science agency.

**Ghostwriting Greim.** In 2015, Monsanto anticipated, based on the scientific evidence that was publicly available, that IARC would classify glyphosate as either a Group 2B agent (*possibly* carcinogenic to humans) or Group 2A agent (*probably* carcinogenic to humans). In preparation, they sought to publish new papers countering the animal data used by IARC, which ultimately concluded in March 2015 that glyphosate was a Group 2A agent, “*probably* carcinogenic to humans.” In an email between Monsanto scientists Bill Heydens and Donna Farmer, they discuss what became known as the “Greim paper” – a 2015 study published in *Critical Reviews in Toxicology* whose listed authors include Helmut Greim and David Saltmiras.<sup>9</sup> In the emails, they contemplate paying for a study to combat problematic findings, but determine a cheaper option would be to “ghost-write the Exposure Tox & Genetox sections... [and] add Greim and Kier or Kirkland to have their names on the publication, but we would be keeping the cost down by us doing the writing and they would just edit & sign their names so to speak.”<sup>10</sup> The paper, published in March 2015 with Greim as the lead author, concluded: “After almost forty years of commercial use, and multiple regulatory approvals including toxicology evaluations, literature

<sup>9</sup> Greim H, Saltmiras D, Mostert V, Strupp C, “Evaluation of carcinogenic potential of the herbicide glyphosate, drawing on tumor incidence data from fourteen chronic/carcinogenicity rodent studies,” *Critical Reviews in Toxicology*, March 2015, accessed here: <https://www.ncbi.nlm.nih.gov/pubmed/25716480>.

<sup>10</sup> Email from William Heydens to Donna Farmer, cc David Saltmiras and other Monsanto employees, Subject: “RE: IARC Planning,” February 19, 2015, accessed here: <https://www.baumhedlundlaw.com/pdf/monsanto-documents/Email-Correspondence-Wherein-William-Heydens-Suggests-Experts-Could-Edit-and-Sign-Their-Names-to-Scientific-Paper.pdf>.



reviews, and numerous human health risk assessments, the clear and consistent conclusions are that glyphosate is of low toxicological concern, and no concerns exist with respect to glyphosate use and cancer in humans.” That conclusion dismissed or ignored multiple other studies that have questioned glyphosate’s safety.

Multiple internal Monsanto records show that whatever role Greim had in the study, Monsanto scientists were clear that they were in charge and conducted the bulk of the work on the paper. One internal Monsanto power-point slide says Monsanto could use Greim and one or two other external authors on the paper they envisioned but that the “Majority of writing can be done by Monsanto, keeping OS\$ down.”<sup>11</sup> David Saltmiras, a Monsanto scientist who was a co-author with Greim on the paper, wrote a description of his work for Monsanto in August 2015 labelled “Glyphosate Activities.” He wrote that he “ghost wrote cancer review paper Greim et al. (2015).”<sup>12</sup>

E-mail from Monsanto’s William Heydens to Donna Farmer and cc’d to David Saltmiras, et. al., February 19, 2015.

Subject: RE: IARC Planning

**“A LESS EXPENSIVE/MORE PALATABLE APPROACH MIGHT BE TO INVOLVE EXPERTS ONLY FOR THE AREAS OF CONTENTION, EPIDEMIOLOGY AND POSSIBLY MOA [MODE OF ACTION] (DEPENDING ON WHAT COMES OUT OF THE IARC MEETING), AND WE GHOST-WRITE THE EXPOSURE TOX & GENETOX SECTIONS. AN OPTION WOULD BE TO ADD GREIM AND KIER OR KIRKLAND TO HAVE THEIR NAMES ON THE PUBLICATION, BUT WE WOULD BE KEEPING THE COST DOWN BY US DOING THE WRITING AND THEY WOULD JUST EDIT & SIGN THEIR NAMES SO TO SPEAK. RECALL THAT IS HOW WE HANDLED WILLIAMS KROES & MUNRO, 2000.”<sup>10</sup>**

<sup>11</sup> Monsanto internal presentation, “Proposal for Post-IARC Meeting Scientific Projects DRAFT,” May 11, 2015, accessed here: <https://www.baumhedlundlaw.com/pdf/monsanto-documents/Monsanto-Proposal-for%20Post-IARC-Meeting-Scientific-Projects.pdf>.

<sup>12</sup> David Saltmiras custodial document, “Glyphosate Activities,” August 4, 2015, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/18-Monsanto-Scientist-Admits-to-Ghostwriting-Cancer-Review-Paper.pdf>.



The Greim paper became a focal point of Monsanto's objections to IARC, with the company claiming that if it had been considered, the classification of glyphosate would have been different. While the definition of ghostwriting often differs from this situation – typically meaning that the true author is unnamed – Monsanto itself referred to this process as “ghostwriting” multiple times. In addition, e-mails from Monsanto scientists show that this was not the first time they had “ghostwritten” a journal article on glyphosate. One e-mail says that Monsanto scientists had also ghostwritten an article and had the independent scientists simply edit and sign their names to the paper back in 2000.<sup>13</sup>

E-mail from William Heydens (Monsanto scientist) to John Acquavella (retired Monsanto scientist), November 3, 2015, 1:49 p.m.

Subject: Re: Glyphosate Expert Panel Poster at 2015 SRA Annual Meeting

**“I THOUGHT WE DISCUSSED PREVIOUSLY THAT IT WAS DECIDED BY OUR MANAGEMENT THAT WE WOULD NOT BE ABLE TO USE YOU OR LARRY AS PANELISTS/AUTHORS BECAUSE OF YOUR PRIOR EMPLOYMENT AT MONSANTO...”<sup>14</sup>**

E-mail from John Acquavella (retired Monsanto scientist) to William Heydens (Monsanto scientist), November 3, 2015, 2:55 p.m.

Subject: Re: Glyphosate Expert Panel Poster at 2015 SRA Annual Meeting

**“I DON'T THINK THAT WILL BE OKAY WITH MY PANELISTS. WE CALL THAT GHOST WRITING AND IT IS UNETHICAL.”<sup>14</sup>**

**Too close for comfort.** On the other extreme, Monsanto, at times, has sought to have former Monsanto scientists distance themselves from Monsanto's scientific studies to maintain the charade of independence they have attempted to convey on Monsanto-directed research. In 2015, after the release of the IARC monograph on glyphosate, Monsanto put together a supposedly independent “expert panel review” to dispute the IARC classification. Their effort to bury Monsanto ties to the panel was complicated by a retired Monsanto

scientist who was now consulting for the company, John Acquavella. He objected to his name

<sup>13</sup> Email from William Heydens to Donna Farmer, cc David Saltmiras and other Monsanto employees, Subject: “RE: IARC Planning,” Feb. 19, 2015, accessed here: <https://www.baumhedlundlaw.com/pdf/monsanto-documents/Email-Correspondence-Wherein-William-Heydens-Suggests-Experts-Could-Edit-and-Sign-Their-Names-to-Scientific-Paper.pdf>;

See: Gary M. Williams, Robert Kroes and Ian C. Munro, “Safety Evaluation and Risk Assessment of the Herbicide Roundup and Its Active Ingredient, Glyphosate, for Humans,” *Regulatory Toxicology and Pharmacology*, Volume 31, Issue 2, April 2000, Accessed here:

<https://www.sciencedirect.com/science/article/pii/S0273230099913715?via%3Dihub>;

Despite the evidence in the Monsanto e-mails some of the independent scientists mentioned by Monsanto regarding the “ghost writing” of articles have said they would never do such a thing. See: Warren Cornwall, “Update: After quick review, medical school says no evidence Monsanto ghostwrote professor's paper,” *Science Magazine*, March 23, 2017, accessed here: <http://www.sciencemag.org/news/2017/03/update-after-quick-review-medical-school-says-no-evidence-monsanto-ghostwrote>.



being omitted from a poster listing the names of authors and experts on that panel. Heydens responded to his objection by explaining that management “would not be able to use your or Larry [Kier] as Panelists / authors because of your prior employment at Monsanto.” Acquavella was blunt in his response, writing back, “I don’t think that will be okay with my panelists. We call that ghost writing and it is unethical.”<sup>14</sup>

The next day Acquavella writes that he “can’t be part of deceptive authorship on a presentation or publication” and he schools his former Monsanto co-workers in the ethics of authorship by including excerpts of the International Committee of Medical Journal Editors (ICJME) recommendations regarding authorship.<sup>15</sup>

E-mail from John Acquavella  
(retired Monsanto scientist) to  
William Heydens (Monsanto scientist), and  
cc’d to Donna Farmer  
November 4, 2015,  
Subject: Re: Glyphosate Expert Panel Poster  
at 2015 SRA Annual Meeting

**“YOU GUYS KNOW ME. I CAN’T BE A PART  
OF DECEPTIVE AUTHORSHIP ON A  
PRESENTATION OR PUBLICATION. PLEASE  
NOTE THE ICJME GUIDELINES BELOW THAT  
EVERYONE GOES BY TO DETERMINING  
WHAT IS HONEST/ETHICAL REGARDING  
AUTHORSHIP.”<sup>14</sup>**

Two days later Monsanto’s Heydens attempts to backtrack and set the record straight after a phone call with Acquavella and Donna Farmer. He describes this whole episode as a “huge misunderstanding around authorship.”<sup>16</sup>

E-mail from Erich Sachs to various other  
Monsanto employees, including Donna Farmer  
and David Saltmiras,  
February 24, 2015

Subject: Re: Opportunity: Glyphosate and IARC

**JOHN V AND I TALKED TO HENRY MILLER TODAY.  
HENRY AGREED TO AUTHOR AN ARTICLE ON  
FORBES.COM JOHN WILL WORK WITH A TEAM  
INTERNALLY TO PROVIDE A DRAFT AND HENRY  
WILL EDIT/ADD TO MAKE IT HIS OWN. THE  
ARTICLE CAN BE LIVE SAME DAY IT IS COMPLETED.**

<sup>18</sup>

Ultimately, a later email indicates that Monsanto listed Acquavella as an author. In fact, the abstract, “*Expert Panel Review of the Carcinogenic Potential of the Herbicide Glyphosate*,” as published in the Society for Risk Analysis’ 2015 Annual Meeting also included Williams, Greim, Kier and Kirkland, who Monsanto

<sup>14</sup> Emails between John Acquavella, William Heydens, and Donna Farmer, Subject: “John, Glyphosate Expert Panel Poster at 2015 SRA Annual Meeting,” Nov. 3 – 6, 2015, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/6-Monsanto-Consultant-Protests-Ghostwriting.pdf>.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.



scientists had named in internal e-mails as individuals they had or believed they could ghost write scientific studies on glyphosate for, although Monsanto scientists would do the bulk of the writing.<sup>17</sup>

### **Hiring journalists to discredit IARC.**

In Monsanto's effort to discredit IARC, they sought to recruit writers to publish pieces echoing their criticisms of IARC's process. In February 2015, one month before IARC published their glyphosate monograph that found glyphosate to be a "probable human carcinogen," Monsanto scientist Eric Sachs reached out to Henry Miller, a *Forbes* contributor and a Medical Doctor and Fellow in Scientific Philosophy and Public Policy at Stanford University's Hoover Institute, a conservative think tank. Sachs prompted Miller on the desired content of the article, writing, "Ideally, your article would precede the IARC decision. Why not set the table with the weight of scientific evidence before IARC convenes? Then, regardless of what they do, your article will set the state for a science-based response."<sup>18</sup> Miller agreed – and, after a follow-up email, requested a "high quality draft" from Monsanto.<sup>19</sup> Officials at the company quickly got to work and provided Miller with a draft that was posted on the *Forbes* website largely unchanged. The article was published on March 17, 2015, with the title: "March Madness from the United Nations."<sup>20</sup>

When this ghostwriting was discovered, Miller was fired by *Forbes*. In a statement to Retraction Watch, a *Forbes* representative said: "All contributors to *Forbes.com* sign a contract requiring them to disclose any potential conflicts of interest and only publish content that is their own original writing. When it came to our attention that Mr. Miller violated these terms, we removed all of his posts from *Forbes.com* and ended our relationship with him."<sup>21</sup>

---

<sup>17</sup>Society for Risk Analysis 2015 Annual Meeting Abstracts, Dec. 6-10, 2015, Arlington, Virginia, see page 136, Williams, GM, et. al., "Expert Panel Review of the Carcinogenic Potential of the Herbicide Glyphosate," accessed here: <http://www.sra.org/sites/default/files/pdf/events/Abstracts%202015.pdf>

<sup>18</sup> Email from Eric Sachs to Henry Miller, Subject "Opportunity: Glyphosate and IARC," Feb. 23, 2015, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/21-Internal-Monsanto-Email-Detailing-Company-Effort-to-Preemptively-Criticize-IARC-Ahead-of-Glyphosate-Report.pdf>.

*Pull quote citation:* Email from Eric Sachs to Donna Farmer, David Saltmiras, and other Monsanto employees, Feb. 24, 2015, link above.

<sup>19</sup> Email from Henry Miller to Eric Sachs, Subject: "Re: IARC Outcomes, Process, and Response," March 12, 2015, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/22-Internal-Email-Demonstrating-Monsanto-Ghostwriting-Article-Criticizing-IARC-for-Press.pdf>.

<sup>20</sup> Henry Miller, "March Madness from the United Nations," *Forbes*, March 17, 2015, accessed here: <https://web.archive.org/web/20170220012554/https://www.forbes.com/sites/henrymiller/2015/03/20/march-madness-from-the-united-nations/#21e081ee2e9>.

<sup>21</sup> Andrew P. Han, "Unearthed emails: Monsanto connected to campaign to retract GMO paper," Aug. 10, 2017, Retraction Watch, accessed here: <http://retractionwatch.com/2017/08/10/unearthed-docs-monsanto-connected-campaign-retract-gmo-paper/>



**Orchestrate Outcry.** Henry Miller, whose clandestine ties to Monsanto got him removed as a contributor at *Forbes*, co-authored a piece on *Forbes.com* in September 2012 with Bruce Chassy, the former head of the Department of Food Science and Nutrition at the University of Illinois at Urbana-Champaign. Chassy too has opaque ties to Monsanto.<sup>22</sup> He received funds



from Monsanto for research through the University of Illinois and he would later be recruited to defend Monsanto on the chemical industry website GMO Answers<sup>23</sup> and established a non-profit website called Academics Review with Monsanto's assistance.<sup>24</sup> The article Miller and Chassy wrote for *Forbes* critiqued a study of glyphosate by French microbiologist Gilles-Eric Seralini in the journal *Food and Chemical Toxicology (FCT)* that found that the glyphosate containing herbicide Roundup and genetically modified glyphosate-resistant corn caused tumors in rats.<sup>25</sup>

This spelled trouble for Monsanto's Roundup Ready crops. Monsanto was tipped off about the publication of the Seralini paper by *FCT*'s Editor in Chief for Vision and Strategy, Wally Hayes. On September 26, 2012 Monsanto scientist David Saltmiras sent an e-mail to colleagues and wrote: "Wally Hayes (*FCT* Editor in Chief) called me this morning in response to my voice mail yesterday. He expressed concern that to date he has only received links to blogs, web postings, media releases, etc. and no formal letters to the Editor" regarding the Seralini article.<sup>26</sup> He needed more.

E-mail from Monsanto's Eric Sachs to David Saltmiras, William Heydens, et. al., September 26, 2012.

Subject: RE: Letters to the Editor?

**"I TALKED TO BRUCE CHASSY AND HE WILL SEND HIS LETTER TO WALLY HAYES DIRECTLY AND NOTIFY OTHER SCIENTISTS THAT HAVE SENT LETTERS TO DO THE SAME. HE UNDERSTANDS THE URGENCY."**<sup>26</sup>

<sup>22</sup> Tom Philpott, "These Emails Show Monsanto Leaning on Professors to Fight the GMO PR War," Mother Jones, Oct. 2, 2015, accessed here: <https://www.motherjones.com/food/2015/10/monsanto-professors-gmo-pr/>.

<sup>23</sup> "A University of Illinois Professor Joins the Fight," Sept. 5, 2015, New York Times, accessed here: <https://www.nytimes.com/interactive/2015/09/05/us/document-chassy.html>

<sup>24</sup> Stacy Malkan, "Monsanto Fingerprints Found All Over Attack On Organic Food," Dec. 6, 2017, HuffPost, accessed here: [https://www.huffingtonpost.com/stacy-malkan/monsanto-fingerprints-fou\\_b\\_10757524.html](https://www.huffingtonpost.com/stacy-malkan/monsanto-fingerprints-fou_b_10757524.html) ; "Academics Review – About," accessed here: <http://academicsreview.org/about-academic-review/>

<sup>25</sup> Gilles-Eric Seralini et al., "Long term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize," *Food and Chemical Toxicology*, Sept. 19, 2012, accessed here: [https://ac.els-cdn.com/S0278691512005637/1-s2.0-S0278691512005637-main.pdf?\\_tid=58d0db10-0a9c-11e8-b8f6-00000aach35f&acdnat=1517852905\\_42d9615555402636b3cd425628eb849f](https://ac.els-cdn.com/S0278691512005637/1-s2.0-S0278691512005637-main.pdf?_tid=58d0db10-0a9c-11e8-b8f6-00000aach35f&acdnat=1517852905_42d9615555402636b3cd425628eb849f).

<sup>26</sup> Email from David Saltmiras to Eric Sachs, William Heydens, and other Monsanto employees, Subject: "Letters to the Editor?", Sept. 26, 2015, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/7-Monsanto-Personnel-Discusses-Plan-Seeking-Retracton-of-Serlani-Glyphosate-Study.pdf>.

*Pull quote citation:* Email from Eric Sachs to Monsanto employees, Sept. 26, 2012, link above.



Internal Monsanto records show that Monsanto started aggressively attempting to attack the Seralini paper through third-parties. Monsanto began working their network of scientists.

Monsanto's Daniel Goldstein to Monsanto scientist Eric Sachs, September 28, 2012

Subject: RE: Slides – Seralini Publication

**“I WAS UNCOMFORTABLE EVEN LETTING SHAREHOLDERS KNOW WE ARE AWARE OF THIS LTE.... IT IMPLIES WE HAD SOMETHING TO DO WITH IT-OTHERWISE HOW DO WE HAVE KNOWLEDGE OF IT? ....**

**WE ARE BEING ASKED TO KEEP INTERNAL CORRESPONDENCE DOWN ON THIS SUBJECT.”<sup>28</sup>**

get this paper retracted,” wrote Monsanto scientist Eric Sachs.<sup>27</sup> Others agreed, including Monsanto’s Daniel Goldstein, who wrote: “We are being asked to keep internal correspondence down on this subject.”<sup>28</sup>

While Monsanto’s quiet third-party efforts seemed to help, there was something else working in Monsanto’s favor. Wally Hayes, the *FCT* editor who was also a professor at the Harvard School of Public Health had apparently signed a consulting agreement on August 21, 2012, with Monsanto just before the Seralini paper dispute heated up. A letter dated September 7, 2012 from Monsanto to Hayes, just three weeks before Hayes and Saltmiras began talking about the Seralini paper, was identified as an “Authorization Letter” to the August 21, 2012 Consulting Agreement. The letter said that Hayes’ services in setting up a Latin America South Toxicology Expert Panel, slated to begin on September 7, 2012, would pay him \$400 an hour, not to exceed \$3,200 per day, for a total of \$16,000. David Saltmiras was listed as Monsanto’s representative for the project.<sup>29</sup>

The Seralini paper was officially retracted by Hayes and *FCT* in 2013.<sup>30</sup> Hayes told the *New York Times* that he had not been under contract with Monsanto at the time of the retraction and was paid by the company only after he left the journal. “Monsanto played no role whatsoever in

Monsanto scientists were encouraging and soliciting third parties to criticize the Seralini paper and call out flaws in hopes of putting enough pressure on the *FCT* journal to retract the study. One of the people they turned to was Bruce Chassy who wrote to Hayes complaining about the Seralini paper. But some Monsanto scientists worried because they did not want their fingerprints on any public campaign to retract the paper. “We should not provide ammunition for Seralini, GM critics and the media to charge that Monsanto used its might to

<sup>27</sup> Ibid.

<sup>28</sup> Email from Daniel Goldstein to Eric Sachs and Yong Gao, Subject: “RE: Slides- Seralini Publication,” Sept. 28, 2012, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/14-Monsanto-Emails-Confirming-Undisclosed-Involvement-in-Successful-Retracted-of-Serlani-Study.pdf>

<sup>29</sup> “Authorization Letter to Consulting Agreement dated August 21, 2012, between Prof. A. Wallace Hayes and Monsanto Company,” Aug. 21, 2012, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/10-Monsanto-Consulting-Agreement-with-Food-and-Chemical-Toxicology-Editor.pdf>

<sup>30</sup> Andrew Pollack, “Paper Tying Rat Cancer to Herbicide Is Retracted,” *New York Times*, Nov. 28, 2013, accessed here: <http://www.nytimes.com/2013/11/29/health/paper-tying-rat-cancer-to-herbicide-is-retracted.html>.



the decision that was made to retract,” he told the newspaper. “It was based on input that I got from some very well-respected people, and also my own evaluation,” he said.<sup>31</sup>

Meanwhile, Monsanto’s Saltmiras’s own “business performance” plan for FY2013 touts his own success in these efforts. “Successfully facilitate numerous third party expert letters to the editor which were subsequently published, reflecting the numerous significant deficiencies, poor study design, biased reporting and selective statistics employed by Seralini,” Saltmiras wrote in his review.<sup>32</sup> The website Retraction Watch noted however, “An FCT investigation found no evidence of fraud, misconduct, or gross error, [in the Seralini paper], which are required by Committee on Publication Ethics (COPE) guidelines for retraction; however, FCT cited COPE guidelines in their retraction notice anyway.”<sup>33</sup>

---

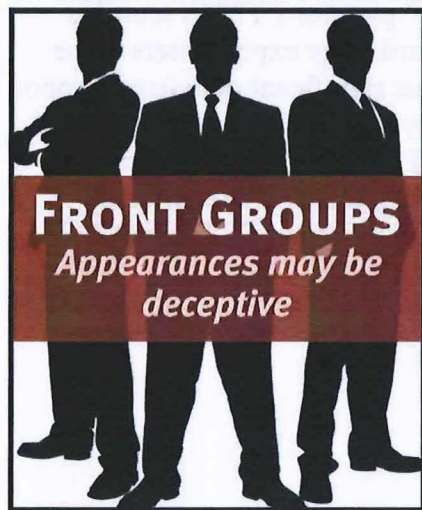
<sup>31</sup>Danny Hakim, “Monsanto Emails Raise Issue of Influencing Research on Roundup Weed Killer,” New York Times, Aug 1, 2017, accessed here: <https://www.nytimes.com/2017/08/01/business/monsantos-sway-over-research-is-seen-in-disclosed-emails.html>.

<sup>32</sup> Internal Monsanto document by David Saltmiras, “FY2013,” Aug. 20, 2013, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/8-Monsanto-Scientist-Admits-to-Leveraging-Relationship-with-Food-and-Chemical-Toxicology-Journal.pdf>.

<sup>33</sup>Andrew P. Han, “Unearthed emails: Monsanto connected to campaign to retract GMO paper,” Retraction Watch, Aug 10, 2017, accessed here” <http://retractionwatch.com/2017/08/10/unearthed-docs-monsanto-connected-campaign-retract-gmo-paper/>.



**Establish Front Groups.** Media reports have pointed to several seemingly independent non-profit groups as having close ties to Monsanto. Some were reportedly established with assistance from Monsanto in order to serve as a platform to confront scientific findings revealing



potential health hazards from glyphosate while concealing Monsanto's direct involvement. This confront-and-conceal approach is nothing new. These tactics have been used by the tobacco industry, energy sector and chemical companies. They often have innocuous-sounding names – for instance, the Campaign for Accuracy in Public Health Research (CAPHR), which is run by the American Chemistry Council (ACC). In this case, the ACC has not attempted to hide their ties with CAPHR and even announced its launch in January 2017. The organization's primary target is IARC.<sup>34</sup> The group's initial press release said: "In particular, CAPHR will seek reform of the International Agency for Research on Cancer's (IARC) Monographs Program, which evaluates the carcinogenic hazard of substances and behaviors."<sup>35</sup>

Other front groups are more secretive. Academics Review was co-founded by Bruce Chassy. The site was founded in January 2010 to "ensure that sound science is widely and easily available." It describes itself as "an association of academic professors, researchers, teachers and credentialed authors from around the world" who "stand against falsehoods, half-baked assertions and theories or claims not subjected to this kind of rigorous review."<sup>36</sup> What it does not reveal are the close ties between Chassy and Monsanto. But one e-mail exchange between Monsanto's Eric Sachs and Chassy shows Monsanto was interested in using the site to its advantage as long as it was able to hide its involvement. "The key will be keeping Monsanto in the

E-mail from Monsanto's Eric Sachs to Bruce Chassy, co-founder of Academics Review.

November 30, 2010

**"YOU AND I NEED TO TALK MORE ABOUT THE 'ACADEMICS REVIEW' SITE AND CONCEPT. I BELIEVE THAT THERE IS A PATH TO A PROCESS THAT WOULD BETTER RESPOND TO SCIENTIFIC CONCERNS AND ALLEGATIONS. ... FROM MY PERSPECTIVE THE PROBLEM IS ONE OF EXPERT ENGAGEMENT AND THAT COULD BE SOLVED BY PAYING EXPERTS TO PROVIDE RESPONSES. ... THE KEY WILL BE KEEPING MONSANTO IN THE BACKGROUND SO AS NOT TO HARM THE CREDIBILITY OF THE INFORMATION."**<sup>37</sup>

<sup>34</sup> Campaign for Accuracy in Public Health Research, "IARC," accessed here: <http://campaignforaccuracyinpublichealthresearch.com/iarc/>.

<sup>35</sup> American Chemistry Council, "ACC Launches Campaign to Promote Credibility in Public Health Research," Jan. 25, 2017, accessed here: <https://www.americanchemistry.com/Media/PressReleasesTranscripts/ACC-news-releases/ACC-Launches-Campaign-to-Promote-Credibility-in-Public-Health-Research.html>.

<sup>36</sup> Academics Review, "Purpose," accessed here: <http://academicsreview.org/about-academic-review/purpose/>.



background so as not to harm the credibility of the information,” wrote Sachs.<sup>37</sup>

**Silence Scientists.** Monsanto and other large corporate interests use multiple tactics in their attempts to delay regulations, deter the publication of scientific findings that endanger their corporate profits, and degrade scientific institutions, such as IARC, that are independent and a

## ALL QUIET ON THE SCIENCE FRONT



threat to an industry’s influence and a challenge to their disinformation campaigns. Sometimes they also attack specific scientists who are independent and pose a potential threat to their objectives and activities as a result of their scientific studies, interests or integrity.

**Dr. Peter Infante**, a renowned and highly respected epidemiologist, has been the victim of industry attacks for four decades due to his solid scientific findings on the cancer-causing properties of chemicals such as formaldehyde

and benzene and arsenic. In the early 1980s, when he was a senior official at the Occupational Safety and Health Administration (OSHA) the House Science Committee held a hearing on the “Proposed firing of Dr. Peter Infante by OSHA” due to pressure on OSHA from the Formaldehyde Institute.<sup>38</sup> The oversight hearing was led by then Representative Al Gore, and OSHA eventually backed down from its attempt to fire Dr. Infante. More recently it has been the glyphosate industry led by CropLife America, the national trade association that represents the manufacturers, formulators and distributors of pesticides, that has gone after Dr. Infante.

In 2016, Dr. Infante was selected as a Member of the Environmental Protection Agency’s Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP) on the Evaluation of the Human Carcinogenic Potential of Glyphosate. In October 2016, CropLife sent a letter to the EPA citing concerns about the SAP,<sup>39</sup> specifically citing Dr. Infante’s participation. The CropLife letter stated that Dr. Infante had biases against industry and should therefore be removed from the Panel. Dr. Infante sent a rebuttal letter<sup>40</sup> to the EPA as did the Center for Food Safety defending Dr. Infante.<sup>41</sup> However, prior to the December 2016 meeting of the SAP, EPA officials removed Dr. Infante from the SAP on glyphosate without

<sup>37</sup> Email from Eric Sachs to Bruce Chassy, Subject: “Questions,” Nov. 30, 2010, accessed here:

<https://www.usrtk.org/wp-content/uploads/2016/01/Sachs-AR.pdf>.

<sup>38</sup> “Proposed Firing of Dr. Peter Infante by OSHA: A Case Study in Science and Regulation,” Subcommittee on Investigations and Oversight of the Committee on Science and Technology, U.S. House of Representatives, July 16, 1981, accessed here: <https://babel.hathitrust.org/cgi/pt?id=mdp.39015082337588;view=1up;seq=8>.

<sup>39</sup> Letter from CropLife to EPA, Oct. 12, 2016, accessed here: <http://191hmt1pr08amfq62276etw2.wpengine.netdna-cdn.com/wp-content/uploads/2016/01/CLA-Comments-on-SAP-Disqualification-10-12-16.pdf>.

<sup>40</sup> “Comment submitted by Peter F. Infante, Consultant, Peter F. Infante Consulting, LLC,” Regulations.gov, Oct. 21, 2016, accessed here: <https://www.regulations.gov/document?D=EPA-HQ-OPP-2016-0385-0439>.

<sup>41</sup> Comment submitted by Center for Food Safety to EPA, “RE: Scientific Advisory Panel meeting on glyphosate’s carcinogenic potential,” Dec. 12, 2016, accessed here: [http://www.centerforfoodsafety.org/files/glyphosate-sap-infante-letter--cfs-12-12-16\\_02026.pdf](http://www.centerforfoodsafety.org/files/glyphosate-sap-infante-letter--cfs-12-12-16_02026.pdf).



explanation.<sup>42</sup> This sort of industry influence has accelerated at Scott Pruitt's EPA, where he has intentionally removed independent scientists from the Agency's science advisory boards and stated that he wants them replaced with more scientists from regulated industries.

E-mail from Monsanto's Donna Farmer,  
April 17, 1999 (recipients unknown)

Subject: Meeting Minutes

**"DR. PARRY CONCLUDED ON HIS EVALUATION OF THE FOUR ARTICLES THAT GLYPHOSATE IS CAPABLE OF PRODUCING GENOTOXICITY BOTH IN VIVO AND IN VITRO... IN ORDER TO MOVE DR. PARRY FROM HIS POSITION WE WILL NEED TO PROVIDE HIM WITH THE ADDITIONAL INFORMATION AS WELL AS ASKING HIM TO CRITICALLY EVALUATE THE QUALITY OF ALL THE DATA INCLUDING THE OPEN LITERATURE STUDIES. ... MARK WILL ALSO EXPLORE HIS INTEREST (IF WE CAN TURN HIS OPINION AROUND) IN BEING A SPOKESPERSON FOR US FOR THESE TYPE OF ISSUES."**<sup>43</sup>

**Dr. James Parry.** It is important to understand that Monsanto's aggressive tactics regarding its efforts to defend glyphosate and its highly successful product Roundup have been going on for decades. Like so many chemical-based products, however, as scientific evidence of potential worry accumulate, the potential threat to the commercial viability and sustainability of the product can grow. It is clear from the substantive documents that have come to light recently that Monsanto has been fending off those sorts of threats for many years.

In the past, Monsanto has even sought to silence their own scientists, when they discovered evidence of potential adverse human health effects from exposures to glyphosate. Back in 1999, Monsanto's contracted scientist, Dr. James Parry, a geneticist at Swansea University in the United Kingdom, was one of them. Monsanto hired Parry to evaluate the genotoxicity of glyphosate, and, to their disappointment, Parry concluded that "glyphosate is capable of producing genotoxicity both in vivo and in vitro by a

mechanism based upon the production of oxidative damage."<sup>43</sup> Disturbingly, internal Monsanto e-mails show that Monsanto scientists contemplated ways to "move Dr. Parry from his position"<sup>44</sup> regarding the toxicity of glyphosate. Parry also signed a secrecy agreement with Monsanto in April 1999. The contents of the agreement are not known, but it does not appear that Dr. Parry ever published his findings regarding glyphosate's genotoxicity.

<sup>42</sup> "Panel Member Roster, Federal Insecticide, Fungicide, and Rodenticide Act Scientific Advisory Panel, Open Meeting, December 13-16, 2016," Regulations.gov, Nov. 28, 2016, accessed here: <https://www.regulations.gov/document?D=EPA-HQ-OPP-2016-0385-0454>.

<sup>43</sup> Email from Donna Farmer to unknown recipients, Subject: "Meeting Minutes 2/25," April 17, 1999, accessed here: <http://baumhedlundlaw.com/pdf/monsanto-documents/38-Email-Shows-Former-Monsanto-Expert-Confirmed-Biological-Plausibility-of-Glyphosate-as-Carcinogen.pdf>.

<sup>44</sup> Ibid.



As part of Parry's review, he suggested additional studies into the genotoxicity of glyphosate.

Monsanto was opposed to funding these additional studies, however, and Bill Heydens expressed his disappointment in the Parry review in an email to colleagues and expressed the importance of finding a pro-glyphosate advocate. This was important, he wrote, because Monsanto was "currently very vulnerable in this area" regarding the genotoxicity of glyphosate. "We want to find/develop someone who is

comfortable with the genetox profile of glyphosate/Roundup and who can be influential with regulators and scientific outreach operations when genetox issues arise," added Heydens.<sup>45</sup>

In 2001, Parry reached out to Monsanto again to obtain a sample of another herbicide, Propachlor, so he could conduct studies on it. Monsanto employees disagreed on how to handle this request. Mark Martens supported providing the samples, so as to "keep prof Parry happy which will make him a good proponent of glyphosate." Bill Heydens, however, had concerns. "Data generated by academics has always been a major concern for us in the defense of our products," he wrote.<sup>46</sup>

**Conclusion.** The incidents and tactics outlined in this report are, unfortunately, not surprising when it comes to the chemical industry. These same tactics were employed by the chemical industry with regards to lead and a host of other chemicals. They also mimic the tobacco industry's efforts to muddy the science surrounding the health effects of smoking. These efforts have been thoroughly documented, perhaps most notably in David Michaels book, "Doubt is Their Product: How Industry's Assault on Science Threatens Your Health," and in "Merchants of Doubt," by Naomi Oreskes and Erik M. Conway. These industry efforts oftentimes only come to light through disclosure of internal industry documents through the discovery process during litigation. The disclosures made during tobacco litigation revealed the inner workings of the "science for hire" industry and industry's tactics to undercut legitimate science. Likewise, this report relies heavily on documents which have been publically released in the ongoing litigation with Monsanto. That litigation is ongoing, and many documents and deposition transcripts remain under court seal. As these documents continue to be released to the public, more revelations about industry tactics and influence will undoubtedly come to light.

E-mail from Monsanto's William Heydens to Erik Jacobs, et. al., April 10, 2001

Subject: RE: Propachlor sample request

**"DATA GENERATED BY ACADEMICS HAS ALWAYS BEEN A MAJOR CONCERN FOR US IN THE DEFENSE OF OUR PRODUCTS. ... CONSIDER THE RAMIFICATIONS OF A POSITIVE RESPONSE ON EUROPEAN AND US REGISTRATIONS."** <sup>46</sup>

<sup>45</sup> Email from William Heydens to Mark Martens, Larry Kier, and Donna Farmer, Subject: "RE: Parry report," Sept. 16, 1999, accessed here: <https://www.baumhedlundlaw.com/pdf/monsanto-documents/Email-from-William-Heydens-Monsanto-Vulnerable-on-Gene-Tox-After-Parry.pdf>.

<sup>46</sup> Email from William Heydens to Mark Martens and other Monsanto employees, Subject: "RE: Propachlor sample request," April 10, 2001, accessed here: <https://www.baumhedlundlaw.com/pdf/monsanto-documents/Email-Exchange-Responding-to-Dr-James-Parry-Request-to-Test-Propachlor-Monsanto-Herbicide.pdf>.



Given the public policy implications of the IARC and EPA reviews of glyphosate (and other chemicals), staff wanted to ensure that Members had the most up to date information concerning the troubling industry led efforts to discredit the IARC process and exert undue influence at the EPA.



## Roundup litigation discovery documents: implications for public health and journal ethics

Sheldon Krimsky<sup>1</sup> · Carey Gillam<sup>2</sup>

© Macmillan Publishers Ltd., part of Springer Nature 2018

**Abstract** This paper reviews the court-released discovery documents obtained from litigation against Monsanto over its herbicide Roundup and through Freedom of Information Act requests (requests to regulatory agencies and public universities in the United States). We sought evidence of corporate malfeasance and undisclosed conflicts of interest with respect to issues of scientific integrity. The findings include evidence of ghostwriting, interference in journal publication, and undue influence of a federal regulatory agency.

**Keywords** Roundup · Monsanto · Ghost writing · Glyphosate · IARC · EPA

### Introduction

Lead [1], vinyl chloride [1], pharmaceuticals [2, 3], asbestos [4], and tobacco litigation [5, 6] cases have resulted in ‘discovery documents.’ These documents, originally internally held by parties to a lawsuit, have become public in court records from cases filed in the United States (US). Such documents have revealed important information about the actions taken by corporate defendants to withhold, distort, invalidate, ghost-write, or fabricate scientific studies of their products. Among the revelations in the cases are ghost-written articles, withholding of critical public health information, hiring contract research companies to invalidate toxicology studies, funding of nonprofit research centers to create critical

---

✉ Sheldon Krimsky  
[sheldon.krimsky@tufts.edu](mailto:sheldon.krimsky@tufts.edu)

<sup>1</sup> Department of Urban & Environmental Policy & Planning, Tufts University, 97 Talbot Avenue, Medford, MA 02155, USA

<sup>2</sup> U.S. Right to Know, Oakland, CA, USA





The 'declaration of interests' in the special issue of *Critical Reviews in Toxicology* (intended for disclosure of any potential conflict of interest) stated that the authors were "not directly contacted by the Monsanto Company," and that "Neither any Monsanto company employees nor any attorneys reviewed any of the Expert Panel's manuscripts prior to submission to the journal." However, the documents obtained through discovery indicate those statements were not true. The documents demonstrate Monsanto was engaged in organizing, reviewing, and editing the drafts, even arguing with one of the authors and overruling him about language in the manuscript. In one exchange regarding a paper being prepared for publication, Monsanto scientist William Heydens wrote to Intertek: "Here are my suggested edits to the Draft Combined Manuscript... I think I caught all the differences and made the changes in the Combined Manuscript as part of my editing." [23] In a separate email, Heydens wrote to Intertek that he had reviewed the entire draft and indicated "what I think should stay, what can go." [24] The documents also reveal Heydens' direct correspondence by email with at least one of the authors about the papers [25]. Documents also demonstrate that at least one of the authors was under direct contract with Monsanto during the drafting and publication of the paper, a fact not disclosed in the declaration of interest in *CRT* involving that author [26].

In another email exchange, Heydens stated he had written an introduction to a paper and then proceeded to discuss "who should be the ultimate author" and that he had written a second paragraph in another paper, on neither of which he was listed as an author [27].

### **Influencing the retraction of a scientific peer reviewed paper**

In 2012, G.-E. S  ralini et al. published in the journal, *Food & Chemical Toxicology*, the results of a 2-year rat feeding study that found harmful impacts for animals exposed to Monsanto's glyphosate-based Roundup and to genetically modified corn, with and without Roundup application. The paper drew international attention in the media. This provoked a storm of criticisms from industry and academic scientists demanding the journal retract the article. Internal Monsanto documents show that Monsanto officials directed and organized the call for a retraction [28], while stating internally that it should not appear as though Monsanto was behind the actions [29].

Litigation discovery documents reveal one internal Monsanto email that stated: "He [editor-in-chief] directly told us [Monsanto] to give him something to work with or else his hands are tied and we will have to deal with the consequences." [30] Also a Monsanto-funded academic spoke directly to the *FCT* Editor-in-Chief and advocated retraction of the S  ralini study. He wrote: "Failure of *JFCT* to retract the paper will force the community to be critical of the journal as well as the paper." [31, 32] And a Monsanto employee described how he "leveraged his relationship" with the *Food & Chemical Toxicology* Editor-in-Chief and became the "single point of contact between Monsanto and the journal" while he organized a letter campaign to the journal to advocate retraction of the paper [33].

The journal (*FTE*) published the criticisms and the authors' responses and ultimately withdrew the article, but not until after this journal appointed a former





employee of Monsanto to its editorial board. The *Journal of Environmental Science Europe* promptly republished the paper [34]. That former employee, a scientist named Richard Goodman, was then at the University of Nebraska and receiving funding from Monsanto and other chemical industry interests to maintain a food allergy database. Email communications obtained through Freedom of Information requests show that around the time Goodman was signing on to the *FCT* journal's editorial board and criticizing the Séralini study, he was also expressing concern to his chemical industry funders about protecting his income stream as a "soft-money professor." [35] In addition, documents reveal that the journal's editor-in-chief, A. Wallace Hayes, entered into a consulting agreement with Monsanto in 2012 for a fee of \$400 an hour [36]. Neither Goodman nor Hayes disclosed their financial ties to Monsanto when the Séralini paper was retracted in 2013. In retracting the study, Wallace stated that he found "no evidence of fraud or intentional misrepresentation of the data" and that "the results were not incorrect." There was no misconduct [37]. The paper, he said, was retracted because its results were inconclusive. *Being inconclusive* is not a reason for retraction recognized by the international Committee on Publication Ethics [38].

### Undue influence of a federal agency

The emails among discovery documents and Freedom of Information Act documents obtained from the EPA reveal that Monsanto worked very closely with at least three EPA officials to derail a review of glyphosate by the Agency for Toxic Substances and Disease Registry (ATSDR) that was underway in 2015 [39]. The ATSDR announced in February 2015 that it planned to publish a toxicological profile of glyphosate by October of that year. But by October, ATSDR had placed the review 'on hold,' and no such review has yet been published. The documents reveal this was the result of a collaborative effort between Monsanto and a group of high-ranking EPA officials. A series of emails detail how Monsanto sought assistance from EPA officials in persuading ATSDR to drop or delay the review, putting forth the argument that the ATSDR review was unnecessarily "duplicative." It should take a 'back seat' to the EPA review also underway at that time [39]. But internal documents show that Monsanto's concern was not that the review was a waste of government resources, but that it would find carcinogenicity concerns with glyphosate just as IARC had.

Documents show that Monsanto viewed ATSDR as "very conservative" [meaning too precautionary] and was too "IARC-like." [40] In a text message sent on June 21, 2015, Monsanto scientist Eric Sachs wrote to a former EPA toxicologist asking for contacts at ATSDR: "We're trying to do everything we can to keep from having a domestic IARC occur w this group may need your help." [41] Plaintiffs attorneys filed the text messages in the Federal Court docket and they became part of the court record. The full body of documents revealing the interactions of EPA officials and Monsanto executives is now publicly available [39].

The litigation discovery emails also reveal that Monsanto used its relationship with EPA regulators to influence the agency to abort convening a Scientific





Advisory Panel on glyphosate health risks. Federal regulatory agency personnel are permitted to interact with stakeholders, but they are not, by law, allowed to exhibit preferential treatment or play an advocacy role. The emails suggest that EPA did provide preferential treatment and advocacy for the Monsanto position.

### Preparing presentations for “independent” scientists

The documents additionally reveal that Monsanto officials developed presentations for academic scientists to deliver at seminars or in other public fora. In one example from 2012, Monsanto scientist David Saltmiras told colleagues he was arranging for a European scientist to present in a seminar related to glyphosate and that he, Saltmiras, would “likely prepare his presentation and send to him to change/adapt as he sees fit.” [42] Scientists who present their findings at scientific meetings are generally expected to disclose any conflicts of interest, as well as any collaborators. The documents show that in multiple instances involving multiple professors, Monsanto scientists prepared presentations for academic scientists. Nondisclosure of these relationships with Monsanto violates the accepted norms of acknowledging help from a commercial stakeholder, as well as failure to acknowledge collaborators.

### Conclusion

When vital public health reports are published in refereed journals, there is a heightened expectation that they meet professional standards of scientific integrity. Those standards include full disclosure of conflicts of interest and sources of funding, plus authenticity of authorship. The Roundup litigation disclosure documents and FOIA documents show that these standards were egregiously violated, not by accident but by plan. Journals are the gatekeepers of reliable evidence and credible knowledge. They must set the highest standards of scientific integrity. Journal editors must never manifest a bias to some individual or organization. When a journal learns that an article has been ghost written or that there were undisclosed conflicts of interest, it has an obligation to act appropriately and inform readers. Our study has shown that two journals, *Critical Reviews of Toxicology* and *Food and Chemical Toxicology* did not measure up to these standards. An editor of a journal overseeing submitted papers on a health study of a product cannot be disinterested when he is under contract with the company that manufactures that product. Public regulatory bodies as the guardians of public health cannot allow their scientists to serve one special interest group and still achieve the public trust. The Roundup discovery documents signal serious flaws in the ethics of scientific publication and regulatory processes that must be addressed. The concerns raised in this paper have been discussed in a minority staff report of the congressional Committee on Science, Space & Technology [43].





## References

1. Markowitz G, Rosner D. Deceit and denial: the deadly politics of industrial pollution. Oakland: University of California Press; 2002.
2. U.S. Department of Justice, Office of Public Affairs, GlaxoSmith Kline to plead guilty and pay \$3 billion to resolve fraud allegations and failure to report safety data. July 2, 2012. <https://www.justice.gov/opa/pr/glaxosmithkline-plead-guilty-and-pay-3-billion-resolve-fraud-allegations-and-failure-report>. Accessed 20 Oct 2017.
3. Plos Medicine Editors. Ghostwriting: the dirty little secret of medical publishing that just got bigger. *PLoS Med.* 2009;6(9):e1000156.
4. Castleman BL. Asbestos: medical and legal aspects. 5th ed. Frederick, MD: Aspen Publishers; 2004.
5. Delafontaine R. Historians as expert judicial witnesses in tobacco litigation. *Studies in the history of law and justice.* New York: Springer; 2015.
6. Oreskes N, Conway EM. Merchants of doubt: how a handful of scientists obscured the truth on issues from tobacco smoke to global warming. New York: Bloomsbury; 2010.
7. Rosner D, Markowitz G, Showkwanyun M. ToxicDocs ([www.ToxicDocs.org](http://www.ToxicDocs.org)): from history buried in stacks of paper to open, searchable archives online. *J Public Health Pol.* 2018;39:4–11.
8. Horel S. Browsing a corporation's mind. *J Public Health Pol.* 2018;39:12–4.
9. International Agency for Research on Cancer. IARC monographs, vol. 112. Evaluation of five organophosphate insecticides and herbicides. March 20, 2015 <http://www.iarc.fr/en/media-centre/iarcnews/pdf/MonographVolume112.pdf>. Accessed 12 Nov 2017.
10. U.S. Right to Know website of Monsanto litigation documents. <https://usrtk.org/pesticides/mdl-monsanto-glyphosate-cancer-case-key-documents-analysis/>. Accessed 17 May 2018.
11. Roundup Products Liability Litigation, U.S. District Court, Northern District of California, MDL No. 2741. Case No. 16-md-02741-VC. <http://www.cand.uscourts.gov/VC/roundupmdl> Accessed 20 Oct 2017.
12. [www.usrtk.org](http://www.usrtk.org) is a publicly accessible Internet site.
13. Foucart S, Horel S. Monsanto papers: les agences sous l'influence de la firm. *La Monde* April 10, 2017; May 10, 2017.
14. <https://www.huffingtonpost.com/author/carey-gillam>; <http://careygillam.com/articles>.
15. Gillam C. Ch. 6, Spinning the science. In: Whitewash. Washington DC: Island Press; 2017.
16. UCSF Industry Documents Library <https://www.industrydocumentslibrary.ucsf.edu/>.
17. Williams GM, Kroes R, Munro IC. Safety evaluation and risk assessment of the herbicide roundup and its active ingredient, glyphosate, for humans. *Reg Tox Pharm.* 2000;31:117–65.
18. Roundup Products Liability Litigation, U.S. District Court, Northern District of California, MDL No. 2741. Case No. 16-md-02741-VC Document 187-12 Filed 03/14/17 <https://usrtk.org/wp-content/uploads/2017/03/187series.pdf> p. 203. Accessed 12 Nov 2017.
19. Environmental Protection Agency, Glyphosate issue paper: evaluation of carcinogenic potential, September 12, 2016. [https://www.epa.gov/sites/production/files/2016-09/documents/glyphosate\\_issue\\_paper\\_evaluation\\_of\\_carcinogenic\\_potential.pdf](https://www.epa.gov/sites/production/files/2016-09/documents/glyphosate_issue_paper_evaluation_of_carcinogenic_potential.pdf). Accessed 12 Nov 2017.
20. Roundup products liability litigation, document ID MONGLY01723742 <https://usrtk.org/wp-content/uploads/2017/08/18-Monsanto-Scientist-Admits-to-Ghostwriting-Cancer-Review-Paper.pdf>. Accessed 12 Nov 2017.
21. Williams GM, Aardema M, Acquavella J, Berry SC, Brusick D, Burns MM, de Camargo JLV, Garabrant D, Greim HA, Kier LD, Kirkland DJ, Marsh G, Solomon KR, Sorahan T, Roberts A, Weed DL. A review of the carcinogenic potential of glyphosate by four independent expert panels and comparison to the IARC assessment. *Crit Rev Tox.* 2016;46:3–20.
22. Email. Ashley Robert, Intertek to Roger McClellan, editor of *Crit Rev Tox*, July 5, 2016. <http://baumhedlundlaw.com/pdf/monsanto-documents/0C-Challenged-Documents-Chart.pdf>. Accessed 18 May 2018.
23. Email. William F. Heydens, Monsanto to Ashley Roberts, Intertek, January 13, 2016. <http://baumhedlundlaw.com/pdf/monsanto-documents/3-Internal-Emails-Show-Monsanto-Made-Substantia-Contributions-to-Published-Expert-Panel-Manuscript.pdf>. Accessed 13 Nov 2017.
24. Email. William F. Heydens, Monsanto to Ashley Roberts, Intertek, February 9, 2016. <http://baumhedlundlaw.com/pdf/monsanto-documents/1-Monsanto-Executive-William-Heydens-Edits-and-Comments-on-Expert-Consultant-Manuscript.pdf>. Accessed 13 Nov 2017.





25. Email. William F. Heydens, Monsanto to consultant Larry Kier, January 9, 2016. <http://baumhedlundlaw.com/pdf/monsanto-documents/3-Internal-Emails-Show-Monsanto-Made-Substantial-Contributions-to-Published-Expert-Panel-Manuscript.pdf>. Accessed 13 Nov 2017.
26. Consulting agreement between Larry D. Kier and Monsanto Company, Project Amendment Letter, August 17, 2015. <https://usrtk.org/wp-content/uploads/2017/08/23-Email-Regarding-Monsanto-Paid-Consultant-and-Expert-Panel-of-Independent-Scientists.pdf>. Accessed 13 Nov 2017.
27. Email. William F. Heydens, Monsanto to Ashley Roberts, Intertek, February 4, 2016. <http://baumhedlundlaw.com/pdf/monsanto-documents/4-Internal-Email-Further-Demonstrating-Heydens-Involvement-Drafting-Expert-Panel-Manuscript.pdf>. Accessed 13 Nov 2017.
28. Email. Email string between Monsanto employees September 26, 2012. <http://baumhedlundlaw.com/pdf/monsanto-documents/7-Monsanto-Personnel-Discusses-Plan-Seeking-Retraction-of-Serlani-Glyphosate-Study.pdf>. Accessed 13 Nov 2017.
29. Email. Email string between Eric Sachs, Monsanto and other Monsanto employees, September 28, 2012. <http://baumhedlundlaw.com/pdf/monsanto-documents/14-Monsanto-Emails-Confirming-Undisclosed-Involvement-in-Successful-Retraction-of-Serlani-Study.pdf>. Accessed 13 Nov 2017.
30. Email. William Heydens, Monsanto to Eric S. Sachs, Monsanto. Sept. 26, 2012. <http://baumhedlundlaw.com/pdf/monsanto-documents/7-Monsanto-Personnel-Discusses-Plan-Seeking-Retraction-of-Serlani-Glyphosate-Study.pdf>. Accessed 13 Nov 2017.
31. Email. Bruce Chassy, University of Illinois, Monsanto Consultant to Wallace Hayes, September 26, 2012.
32. Lipton E. Food industry enlisted academics in G.M.O. lobbying war, Emails show, *New York Times* September 2, 2015. [https://www.nytimes.com/2015/09/06/us/food-industry-enlisted-academics-in-gmo-lobbying-war-emails-show.html?\\_r=1](https://www.nytimes.com/2015/09/06/us/food-industry-enlisted-academics-in-gmo-lobbying-war-emails-show.html?_r=1).
33. Email. Monsanto Email chain. September 26, 2012; Business Goals of David Saltmiras, Monsanto, August 20, 2013. <http://baumhedlundlaw.com/pdf/monsanto-documents/8-Monsanto-Scientist-Admits-to-Leveraging-Relationship-with-Food-and-Chemical-Toxicology-Journal.pdf>. Accessed 13 Nov 2017.
34. Séralini G, Clair E, Mesnage R, Gress S, Defarge N, Malatesta M, Hennequin D, Spiroux de Vendômois J. Republished study: long-term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize. *Environ Sci Eur*. 2014;26(14):1–17.
35. <https://www.usrtk.org/wp-content/uploads/2016/07/GoodmanRG-000126-000001.pdf>. Accessed 13 Nov 2017.
36. <http://baumhedlundlaw.com/pdf/monsanto-documents/10-Monsanto-Consulting-Agreement-with-Food-and-Chemical-Toxicology-Editor.pdf>. Accessed 13 Nov 2017.
37. Wallace Hayes A. Retraction notice to “Long term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize”. *Food ChemTox*. 2014;63:244.
38. <https://publicationethics.org/files/retraction%20guidelines.pdf>. Accessed 13 Nov 2017.
39. Gillam C. Collusion or coincidence? Records show EPA efforts to slow herbicide review came in coordination with Monsanto. *Huffington Post*. August 18, 2017. [https://www.huffingtonpost.com/entry/collusion-or-coincidence-records-show-epa-efforts\\_us\\_5994dad4e4b056a2b0ef02f1](https://www.huffingtonpost.com/entry/collusion-or-coincidence-records-show-epa-efforts_us_5994dad4e4b056a2b0ef02f1). Accessed 13 Nov 2017.
40. Emails. Daniel Jenkins (Monsanto) to William Heydens (Monsanto), Jennifer Listello, (Monsanto). June 24, 2015. <http://baumhedlundlaw.com/pdf/monsanto-documents/56-Email-Showing-Communications-Between-Monsanto-and-EPA-in-Furtherance-of-Avoiding-Roundup-and-Glyphosate-Testing.pdf>. Accessed 13 Nov 2017.
41. <https://usrtk.org/wp-content/uploads/2017/08/Text-Messages.pdf>. Accessed 13 Nov 2017.
42. Email. David Saltmiras, Monsanto to Monsanto colleagues, August. 13, 2012 <http://baumhedlundlaw.com/pdf/monsanto-documents/11-Email-Confirming-Monsantos-Intention-to-Pay-Wallace-Hayes.pdf>. Accessed 13 Nov 2017.
43. U.S. House of Representatives. Minority staff report prepared for members of the Committee on Science, Space & Technology. Spinning science & silencing scientists: a case study in how the chemical industry attempts to influence science. February 2018. <https://www.baumhedlundlaw.com/pdf/monsanto-documents/Final-minority-report-glyphosate-spinning-science-silencing-scientists.pdf>.





**Sheldon Krinsky** is Lenore Stern Professor of Humanities and Social Sciences in the Department of Urban & Environmental Policy & Planning in the School of Arts & Sciences and Adjunct Professor in Public Health and Community Medicine in the School of Medicine at the Tufts University. He received his B.S. and M.S. in physics from Brooklyn College, CUNY and Purdue University, respectively, and an M.A. and Ph.D. in philosophy at the Boston University. He is the author of 14 books including *Science in the Private Interest*.

**Carey Gillam** is a veteran journalist, researcher, and writer. She is former senior correspondent for Reuters' international news service, member of the Society of Environmental Journalists, and author of *Whitewash: The Story of a Weed Killer, Cancer and the Corruption of Science*. She is a Research Director for the U.S. Right to Know, a consumer group whose mission is "Pursuing Truth and Transparency in America's Food System."







Oficina del Decano  
*Office of the Dean*

Dirección postal:  
*Mailing address:*

PO Box 365067  
San Juan, PR  
00936-5067

Dirección física:  
*Physical address:*

Edificio Dr. Guillermo  
Arbona Irizarry  
Oficina A-403, 4to Piso  
Área Centro Médico  
Río Piedras, PR 00935

Teléfono:  
*Telephone:*

787-758-2525  
Exts. 1401, 1403

Fax: 787-759-6719

Página WEB:  
*Website:*

sp.rcm.upr.edu

Patrono con Igualdad  
de Oportunidad en el  
Empleo M/M/V/I

Equal Employment  
Opportunity Employer  
M/W/V/H

Certificación Núm. 10  
2018-2019

YO, CAROL SALAS PAGÁN, Secretaria del cuerpo de facultad de la Facultad de Ciencias Biosociales y Escuela Graduada de Salud Pública, Recinto de Ciencias Médicas de la Universidad de Puerto Rico, CERTIFICO:

Que el cuerpo de Facultad de la Escuela Graduada de Salud Pública, en reunión ordinaria celebrada el 24 de mayo de 2019, aprobó la siguiente Resolución:

**Resolución para solicitarle al Gobierno de Puerto Rico que prohíba la venta y el uso de herbicidas a base de glifosato y la producción de semillas genéticamente modificadas en nuestro país**

**Por cuanto:** Promovido como "seguro" por Monsanto/Bayer y la Environmental Protection Agency (EPA), el glifosato es el ingrediente activo en muchos herbicidas comercializados en todo el mundo desde 1974, incluyendo la conocida formulación "Roundup" de la multinacional Monsanto/Bayer, ampliamente utilizado para el control de malezas en la agricultura, limpieza de carreteras y jardinería.

**Por cuanto:** El herbicida se ha detectado en los alimentos, el agua y en el aire según un Informe de la Organización Mundial de la Salud (OMS).

**Por cuanto:** La presencia de glifosato ha sido denunciada en numerosas ocasiones en alimentos que consumen los niños: cereales, avena, barras, galletas, e incluso PediaSure para fórmulas de alimentación entera a niños hospitalizados.

**Por cuanto:** La Agencia Internacional para la Investigación sobre el Cáncer (IARC, por sus siglas en inglés, dependencia de la OMS), en marzo 2015 emitió un informe incorporando el glifosato a la lista de sustancias probablemente carcinógenas para humanos (grupo de sustancias 2A de la IARC).

**Por cuanto:** Recientemente salió a relucir en un Tribunal Federal de los Estados Unidos, en una de las más de 13,000 demandas contra Monsanto, que oficiales de la Oficina de Plaguicidas de la EPA y la alta gerencia de Monsanto/Bayer se pusieron de acuerdo para aguantar la liberación del informe de la agencia federal Agency for Toxic Substances and Disease Registry (ATSDR) titulado "Toxicological profile of glyphosate", que apoya y fortalece la opinión de la IARC.



**Por cuanto:** En un artículo científico titulado "Exposure to Glyphosate-Based Herbicides and Risk for Non-Hodgkin Lymphoma: A Meta-Analysis and Supporting Evidence" publicado recientemente en el Journal "Mutation Research", se indica que el riesgo relativo de desarrollar un linfoma no Hodgkin es de un 41% más en personas expuestas al glifosato que en las no expuestas.

**Por cuanto:** Varias organizaciones han solicitado sin éxito alguno a la EPA que disminuya los niveles de glifosato aceptados en cereales a 0.1 ppm, el cual era el límite estipulado en 1993 y que fue aumentado a 300 ppm a solicitud unilateral de la empresa Monsanto/Bayer, demostrando el poder de influencia que posee la Compañía.

**Por cuanto:** La exposición de los seres humanos al glifosato ha sido vinculada a varios efectos crónicos reproductivos (defectos de nacimiento), cáncer, neurológicos (incluso implicado en causar el mal de Parkinson), renales, cardíacos, diabetes, colitis, enfermedades respiratorias y disrupción en el aparato reproductivo, y efectos agudos por la exposición directa de agricultores o habitantes cercanos a las plantaciones donde se utiliza.

**Por cuanto:** Esta clasificación provocó litigios en masa en los Estados Unidos contra Monsanto/Bayer, y en el año 2018 un Tribunal en San Francisco condenó a la multinacional a indemnizar con 289 millones de dólares a un jardinero estadounidense de 46 años, por no haber sido informado sobre la peligrosidad del glifosato para contraer linfoma no Hodgkin. En la demanda más reciente, la tercera de forma consecutiva, un jurado estadounidense encontró que el herbicida "Roundup" es carcinogénico y le otorgó una compensación de más de 2,000 millones a una pareja de septuagenarios que utilizaron por años el herbicida en su propiedad y que como resultado de dicha exposición desarrollaron linfoma no Hodgkin.

**Por cuanto:** El glifosato y los alimentos modificados genéticamente se asocian además a enfermedades como: Alzheimer (cuarta causa de muerte en nuestro país) y el autismo que presenta un alarmante aumento en Estados Unidos y Puerto Rico.

**Por cuanto:** Los cultivos transgénicos han sido desarrollados para un modelo de agricultura industrial y están, por lo tanto, intrínsecamente vinculados a prácticas agrícolas no sostenibles que dañan los recursos naturales en los que se basa la producción de alimentos.

**Por cuanto:** El modelo actual de producción industrial de alimentos es insostenible y hace que los agricultores crezcan dependientes de recursos y capital externos. Esta producción industrializada es comúnmente muy intensa y no ligada a la tierra, siendo orientada hacia la exportación. No están pues,



diseñados para mejorar condiciones ecológicas o para cumplir con los requisitos de la alimentación local.

**Por cuanto:** Monsanto/Bayer controla el 31% de las tierras con mayor potencial para la agricultura en el municipio de Juana Díaz. Además de norte a sur y del este al oeste de Puerto Rico, las semilleras ya dominan alrededor de 10,000 cuerdas públicas y privadas. Esto equivale al área destinada a la siembra de plátanos, que el Departamento de Agricultura identifica como el cultivo vegetal de principal importancia económica para el país.

**Por cuanto:** También dichas compañías acaparan el 14% del área de las fincas públicas de la Autoridad de Tierras con mayor potencial para producir alimentos en el corredor agrícola de Guayama a Juana Díaz.

**Por cuanto:** Los empleados de las semilleras caminan con trajes protectores blancos cubiertos de pies a cabeza, en clara señal del trabajo intensivo con sustancias químicas peligrosas para su salud.

**Por cuanto:** Puerto Rico solo produce el 15% de sus propios alimentos y este acaparamiento de tierras productivas agrava la dependencia que se tiene del exterior.

**Por cuanto:** Entre 2006 y 2015 la Isla se convirtió en la localidad con más permisos para hacer experimentos con transgénicos en todo Estados Unidos y sus territorios.

**Por cuanto:** Para conseguir la transición global a la alimentación y a la agricultura sostenible, es imprescindible mejorar la protección ambiental, la resiliencia de los sistemas, y la eficiencia en el uso de los recursos.

**Por tanto:** Reclamamos que las agencias del Gobierno cuyo primordial fin es la protección del ambiente, los recursos naturales y la salud pública que se fiscalice la implantación y plena vigencia del principio precautorio, que se prohíba la experimentación con transgénicos y el uso de herbicidas a base de glifosatos en Puerto Rico y que la investigación sea dirigida hacia políticas sostenibles que aseguren la sobrevivencia de los ecosistemas y que protejan a la población de los agrotóxicos que suponen un grave riesgo irreversible para la salud de todos los habitantes de nuestro país.

**Por tanto:** Resuélvase por la Facultad de la Escuela Graduada de Salud Pública, reunida en Asamblea hoy viernes, 24 de mayo de 2019:

1. Que el Gobierno de Puerto Rico prohíba la venta y el uso de herbicidas a base de glifosato y la producción en la Isla de semillas genéticamente modificadas.



2. Para proteger la salud pública resulta necesario que el Gobierno de Puerto Rico publique la lista de los lugares o fincas en Puerto Rico donde se están llevando a cabo experimentos con organismos genéticamente modificados, así como indicar las especies o variedades de los organismos que se están utilizando.
3. Que el Gobierno de Puerto Rico abandone la práctica de proveerle incentivos económicos y de cualquier otra índole a estas compañías que degradan, contaminan y envenenan nuestros recursos naturales, incluyendo los suelos y los cuerpos de agua superficiales y subterráneos del país.
4. Enviar copia de esta Resolución a los siguientes funcionarios de los Gobiernos estatal y Federal en Puerto Rico: Gobernador de Puerto Rico, Presidente de la Cámara de Representantes de Puerto Rico, Presidente del Senado de Puerto Rico, Presidente de la Junta de Calidad Ambiental, Secretario de Agricultura de Puerto Rico, Secretario del Departamento de Salud, Secretaria del Departamento de Recursos Naturales y Ambientales y a la Directora de la EPA para Puerto Rico y el Caribe.
5. Enviar copia de esta Resolución al Presidente de Monsanto/Bayer en Puerto Rico, al CEO y al Presidente de la Junta de Directores de dicha compañía en los Estados Unidos.
6. Enviar copia de esta Resolución a todos los medios noticiosos del país para su más amplia divulgación.

Y para que así conste, expido y remito la presente Certificación bajo el sello de la Escuela Graduada de Salud Pública del Recinto de Ciencias Médicas de la Universidad de Puerto Rico, hoy 24 de mayo de 2019.

  
Dra. Carol Salas Pagán  
Secretaria del cuerpo de Facultad

