Decades of Deceit

HOW CORPORATE INFLUENCE HAS MANIPULATED SCIENCE & SAFETY ASSESSMENTS

REVELATIONS FROM THE MONSANTO PAPERS & OTHER RESEARCH

Carey Gillam
Research Director, U.S. Right to Know
Author of *Whitewash – The Story of a Weed Killer, Cancer and the Corruption of Science*

What the Documents Show

Examples of Monsanto Efforts to Influence Regulators

- Ghostwritten research papers that assert glyphosate safety for publication & regulatory review
- Provided alternative assessments for studies that Indicate harm; convinced regulators to discount evidence of safety problems
- Developed network of European & U.S. scientists to push glyphosate safety message to regulators and lawmakers while appearing to be independent of industry
- Utilized public relations teams to ghostwrite articles and blogs that are posted using names of scientists who appear to be independent
- Formed front groups that work to discredit journalists and scientists who publicize safety concerns
- Provided EPA "talking points" to use if questioned by press about IARC classification
- Successfully pushed EPA to remove top independent epidemiologist from EPA SAP
- EnlistedEPA officials to block a 2015 Glyphosate Review by the U.S. Agency for Toxic Substances and Disease Registry that Monsanto said would likely agree with IARC

Examples of Monsanto influence in key papers cited by EPA as informing its glyphosate cancer review

- Greim et al, 2015

Monsanto's David Saltmiras, in Aug. 4, 2015 internal report states he: "*ghost wrote cancer review paper Greim et al. (2015)"*

EPA CARC Evaluation of the Carcinogenic Potential of Glyphosate, Final Report, October 1, 2015, page 8

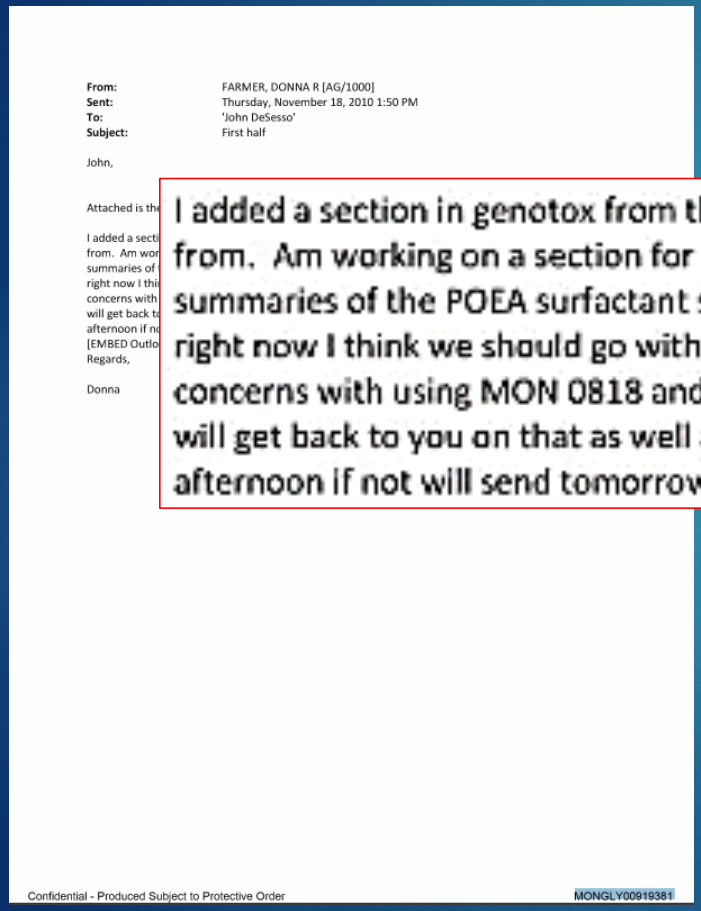
Another cited by EPA in its review:

- Williams et al, 2000

Monsanto's William Heydens in February 2015 email: *"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."*

EPA CARC Evaluation of the Carcinogenic Potential of Glyphosate, Final Report, October 1, 2015, page 8

Monsanto's Donna Farmer Drafts, Cuts and Pastes Paper Supporting Glyphosate Safety Regarding Reproductive Outcomes



From: FARMER, DONNA R [AG/1000]
Sent: Thursday, November 18, 2010 1:50 PM
To: 'John DeSesso'
Subject: First half

John,

Attached is th

I added a secti
from. Am wor
summaries of
right now I thi
concerns with
will get back t
afternoon if n
[EMBED Outlo
Regards,

Donna

I added a section in genotox from the Gasnier study...see a attached a critique we did that I took that from. Am working on a section for gasiner in the mechanistic section. Also we cut and pasted in summaries of the POEA surfactant studies. Attached are more detailed summaries – see Knapp. For right now I think we should go with POEA surfactants. I am checking to find out if there are any concerns with using MON 0818 and MON 8109 as well as indicating they are tallow and coco-derived – will get back to you on that as well as sending the remaining pages. Hope to have them done this afternoon if not will send tomorrow.

Confidential - Produced Subject to Protective Order MONGLY00919381

November 2010 email from Monsanto Toxicologist Donna Farmer

DRAFT

Developmental and Reproductive Outcomes in Humans and Animals after Glyphosate Exposure: A Critical Analysis ~~of the Available Literature~~

Amy Lavin Williams[1, 2]
Rebecca E. Watson[1, 3]
~~Donna R. Farmer[4]~~
John M. DeSesso[1, 2, 5]

[1]Noblis
Falls Church, VA

[2]Exponent, Inc.
Menlo Park, CA

[3]SNBL USA
Everett, WA

[4]~~The Monsanto Company~~
~~St. Louis, Missouri~~

[5]~~Georgetown~~ [4]Georgetown University School of Medicine
Washington, District of Columbia

Reference to Monsanto and its scientist deleted from published version

Journal
Journal of Toxicology and Environmental Health, Part B › Critical Reviews
Volume 15, 2012 - Issue 1

Enter keywords, authors, DOI etc.

Original Articles

Developmental and Reproductive Outcomes in Humans and Animals After Glyphosate Exposure: A Critical Analysis

Amy Lavin Williams, Rebecca E. Watson & John M. DeSesso

Pages 39-96 | Published online: 27 Dec 2011

Download citation http://dx.doi.org/10.1080/10937404.2012.632361

Full Article | Figures & data | References | Citations | Metrics | Reprints & Permissions

Ghostwriting another "independent" review

Internal Monsanto emails show company scientists were heavily involved in organizing, editing, drafting language for published version

Sept. 2016 - Critical Reviews in Toxicology "A review of glyphosate carcinogenic potential by four independent expert panels…."

"Neither any Monsanto company employees nor any attorneys reviewed any of the Expert Panel's manuscripts prior to submission to the journal."

1/6/2016 – Email from Heydens (Monsanto) Regarding the Review:

"I had already written a draft Introduction chapter back in October/November, but I want to go back and re--read it to see if it could benefit: from any 're-freshing' .. I will do that in the next few days. Then I was thinking I would run it by you for your comments/edits. And then comes the question of who should be the ultimate author ... you or Gary? I was thinking you for the Introduction chapter and Gary for the Summary chapter, but I am totally open to your suggestions."

From: HEYDENS, WILLIAM F [AG/1000]
Sent: Monday, May 11, 2015 5:36 PM
To: KOCH, MICHAEL S [AG/1000]; FARMER, DONNA R [AG/1000]; HODGE-BELL, KIMBERLY C [AG/1000]; SALTMIRAS, DAVID A [AG/1000]
Subject: RE: Post-IARC Activities to Support Glyphosate

All,

Here is what I think I heard (and 1 question) in our meeting today – please send any corrections/additions

Conduct & publish Meta-analysis

- We will recommend proceeding with this

Publish updated AHS study data

- We will recommend proceeding with this
- David will check at HARC meeting next week if there is interest in CLA requesting data for all chemistries

Genetox/MOA

- Set-up 1 hr meeting with Gary Williams & Larry Kier to better understand what could be done (who had this action item?) I think this was Donna's action item.

Publication on Animal Data Cited by IARC

- It was noted that this is only other idea that could be done prior to IA
- Manuscript to be initiated by MON as ghost writers
- It was noted this would be more powerful if authored by non-Monsanto scientists (e.g., Kirkland, Kier, Williams, Greim and maybe Keith Solomon)
- Decide within 1-2 weeks if we will recommend going forward with this

Other Action Item

- Donna to talk with Elizabeth about value in sending letter to editor on Meta-analysis

- Check with Richard on status of Elizabeth's dietary exposure manuscript – Bill send email to Richard

Thanks,

Bill

"Manuscript to be initiated by MON as ghost writers" … "this would be more powerful if authored by non-Monsanto scientists (e.g., Kirkland, Kier, Williams, Greim and maybe Keith Solomon" **- internal Monsanto email May 11,2015**

Judge in U.S. cancer cases cites "Monsanto drafting reports for allegedly independent experts" & questions how Monsanto can say that is "irrelevant" to the "question of whether there's evidence that glyphosate causes non-Hodgkin's lymphoma."

MR. HOLLINGSWORTH: -- internal e-mails are not --

THE COURT: But --

MR. HOLLINGSWORTH: -- reliable scientific data.

THE COURT: But the internal e-mails reflect that Monsanto has been ghostwriting reports. And those reports have been portrayed as independent. And you -- I mean, your whole presentation thus far has been about how all the independent science supports a conclusion that glyphosate doesn't cause non-Hodgkin's lymphoma.

So, you know, I don't understand how you could have taken the position that the issue of Monsanto drafting reports for allegedly independent experts on whether glyphosate causes non-Hodgkin's lymphoma could be irrelevant to the question of whether there's evidence that glyphosate causes non-Hodgkin's lymphoma. I just don't understand how you could take that position.

Another noted by EPA in its review:

- Kier & Kirkland 2013

Monsanto's Saltmiras July 2012 email:
"David Kirkland's expertise comes at a premium… his efforts will be less than 10 days at £1,400/day… so we are effectively doubling the cost of the combined projects, but reaping significant value/credibility from David Kirkland's involvement. Given the growing number of questionable genotoxicity publications, in my mind this is worth the addition cost. I have subsequently coordinated an open master contract between Monsanto and David Kirkland (we may need his services in the future)"

EPA CARC Evaluation of the Carcinogenic Potential of Glyphosate, Final Report, October 1, 2015, page 8

Monsanto's money is well spent – Kier & Kirkland paper concludes "glyphosate and typical GBF's do not appear to present significant genotoxic risk…"

Crit Rev Toxicol. 2013 Apr;43(4):283-315. doi: 10.3109/10408444.2013.770820. Epub 2013 Mar 12.

Review of genotoxicity studies of glyphosate and glyphosate-based formulations.

Kier LD[1], Kirkland DJ.

⊕ **Author information**

Abstract

An earlier review of the toxicity of glyphosate and the original Roundup™-branded formulation concluded that neither glyphosate nor the formulation poses a risk for the production of heritable/somatic mutations in humans. The present review of subsequent genotoxicity publications and regulatory studies of glyphosate and glyphosate-based formulations (GBFs) incorporates all of the findings into a weight of evidence for genotoxicity. An overwhelming preponderance of negative results in well-conducted bacterial reversion and in vivo mammalian micronucleus and chromosomal aberration assays indicates that glyphosate and typical GBFs are not genotoxic in these core assays. Negative results for in vitro gene mutation and a majority of negative results for chromosomal effect assays in mammalian cells add to the weight of evidence that glyphosate is not typically genotoxic for these endpoints in mammalian systems. Mixed results were observed for micronucleus assays of GBFs in non-mammalian systems. Reports of positive results for DNA damage endpoints indicate that glyphosate and GBFs tend to elicit DNA damage effects at high or toxic dose levels, but the data suggest that this is due to cytotoxicity rather than DNA interaction with GBF activity perhaps associated with the surfactants present in many GBFs. Glyphosate and typical GBFs do not appear to present significant genotoxic risk under normal conditions of human or environmental exposures.

PMID: 23480780 DOI: 10.3109/10408444.2013.770820

MANY FORMS OF GHOST WRITING

- Drafts, edits, and/or alters research papers published without disclosure of Monsanto's involvement
- Drafts and/or outlines articles and "policy briefs" promoting product safety & Monsanto strategies, arranges for friendly scientists to publish under their names so they appear independent
- Edits, outlines presentations and communications for academic professors to deliver to regulators, lawmakers, other audiences - without mention of Monsanto involvement

Monsanto emails show concern BEFORE review about IARC connecting glyphosate to cancer

"What we have long been concerned about has happened. Glyphosate is on for IARC review…"

-----Original Message-----
From: FARMER, DONNA R [AG/1000] [redacted]
Sent: Thursday, September 18, 2014 12:19 PM
To: Acquavella, John
Subject: Long time...

John,

I do hope this finds you and your family [redacted]. After being the stewardship group for 5 years I am back in toxicology and once again supporting glyphosate.

Just wanted to let you that what we have long been concerned about has happened. Glyphosate is on for an IARC review in March of 2015.
http://monographs.iarc.fr/ENG/Meetings/index.php

Meeting 112: Some Organophosphate Insecticides and Herbicides: Diazinon, Glyphosate, Malathion, Parathion, and Tetrachlorvinphos
(3-10 March 2015)

Call for Data (closing date 3 February 2015)
Call for Experts (closing date 30 July 2014)
Request for Observer Status (closing date 3 November 2014)
WHO Declaration of Interests for this volume

Glyphosate had been listed as a medium priority for 2015-2016 but clearly something happened and it got moved up to an ultra priority.

Monsanto has continued to work with Tom Sorahan and developed a relationship with Sir Colin Barry after the loss of Sir Richard. I have sent Tom an email asking for his help as we move forward.

Again do wish you well and really will miss your expertise and leadership on this issue!!

Warmest regards,

Donna

Message

From: HEYDENS, WILLIAM F [AG/1000] [redacted]
Sent: 10/15/2014 9:08:37 PM
To: GARNETT, RICHARD P [AG/5040] [redacted]
CC: GUSTIN, CHRISTOPHE [AG/5040] [redacted] FARMER, DONNA R [AG/1000] [redacted] SALTMIRAS, DAVID A [AG/1000] [redacted] KOCH, MICHAEL S [AG/1000] [redacted]
Subject: IARC Evaluation of Glyphosate

Richard,

It is my recollection that you notified the EU-GTF of this IARC evaluation, but I am not aware that there has been any talk of approaching the GTF about providing funding to fight this because it is not considered in the remit of achieving Annex I renewal. If so, is this really the case? I thought the EU evaluation could go well into the summer of 2015, and wouldn't an adverse IARC evaluation have the real potential to impact the results of the Annex I renewal?

I really started thinking about this after our phone call yesterday with the outside epidemiology experts that Donna lined up. The bottom line of the call was that there really is no meaningful publication that we can complete prior to the February submission to positively impact the epidemiology discussion outcome in March. One has to consider that this situational timing did not happen by chance and that more than just pure bad luck is working against glyphosate.

And while we have vulnerability in the area of epidemiology, we also have potential vulnerabilities in the other areas that IARC will consider, namely, exposure, genetox, and mode of action (David has the animal onco studies under control). If there is a force working against glyphosate, there is ample fodder to string together to help the cause even though it is not scientifically justified in its [redacted]. Putting all this in the proper perspective will be quite resource intensive, so can't we consider approaching [redacted] that the PAG already agreed to fund the onco publication 2+ years ago for this exact reason.

"We have vulnerability in the area of epidemiology … exposure, genetox, and mode of action…"

Thanks.

Bill

June 21, 2015 Monsanto executive on fear of ATSDR review: "*We're trying to do everything we can to keep from having a domestic IARC occur w this group*."

June 24, 2015: A different Monsanto executives says they worry ATSDR is "*VERY conservative and IARC like…*"

Carey Gillam, Contributor
I am a veteran journalist and research director for U.S. Right to Know, a non-profit consumer education group.

Collusion Or Coincidence? Records Show EPA Efforts To Slow Herbicide Review Came In Coordination With Monsanto

08/17/2017 10:02 am ET | **Updated** Aug 18, 2017

Newly released government email communications show a persistent effort by multiple officials within the Environmental Protection Agency (EPA) to slow a separate federal agency's safety review of Monsanto's top-selling herbicide. Notably, the records demonstrate that the EPA efforts came at the behest of Monsanto, and that EPA officials were helpful enough to keep the chemical giant updated on their progress.

The communications, most of which were obtained through Freedom of Information Act

TRENDING


Rush Limbaugh Says Hurricane Irma Is Consp Evacuates Anyway


Ann Coulter Gets Wallo Again By Lesbian Ex-Ma Houston


Bernie Sanders Ruthles Sums Up 'What Happen Hillary Clinton

Two-year study (1980-1982) of 400 mice submitted to EPA re: glyphosate.

Feb. 1984 - EPA toxicologist says study indicates "glyphosate is oncogenic" due to rare tumors seen in mice dosed with glyphosate but not in control group mice

Monsanto objects, arguing tumors are not due to glyphosate

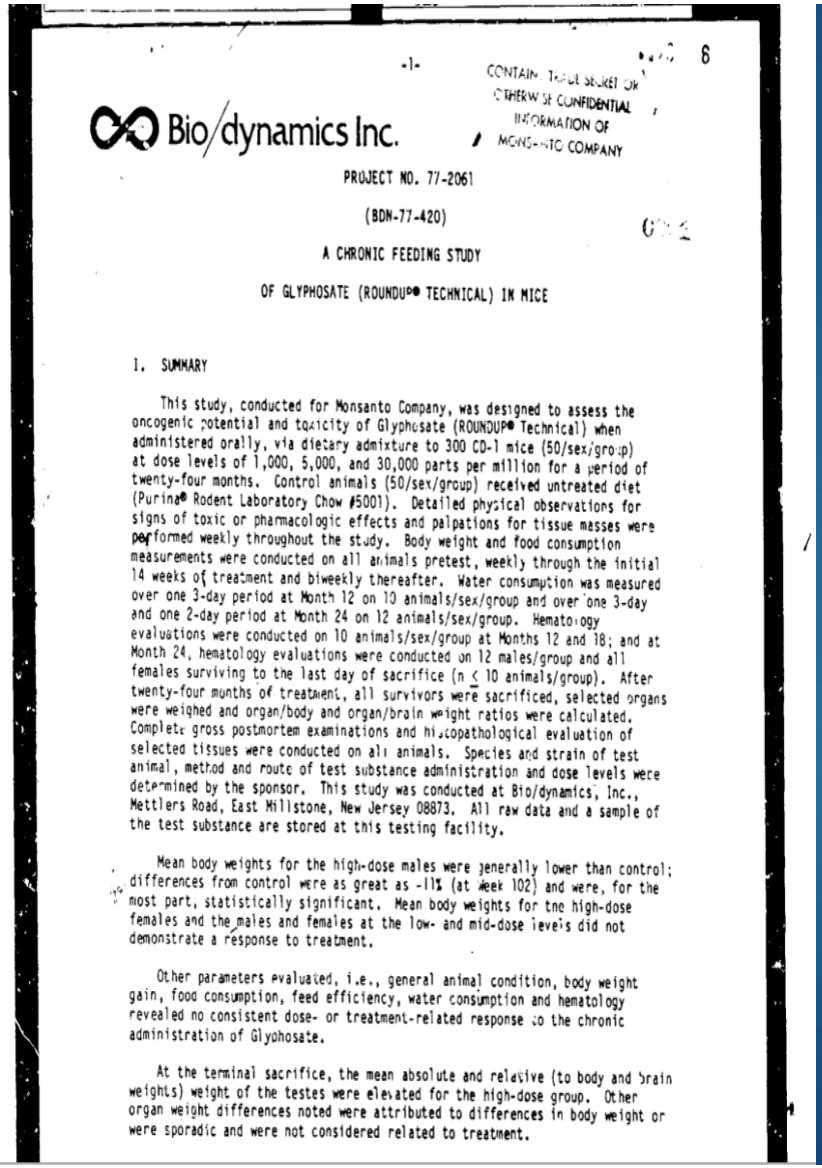
Feb. 1985 Different EPA toxicology expert says "prudent person would reject the Monsanto assumption… Glyphosate is suspect. Monsanto's argument is unacceptable."

March 1985 EPA toxicology branch classify glyphosate as "possibly carcinogenic to humans"

April 1985 Monsanto hires pathologist to "persuade" EPA tumors not due to glyphosate

Dec. 1985 EPA scientists still disagree with Monsanto's claims of no glyphosate harm

Monsanto continues to press EPA



-1-

CONTAIN TRADE SECRET OR OTHERWISE CONFIDENTIAL INFORMATION OF MONSANTO COMPANY

Bio/dynamics Inc.

PROJECT NO. 77-2061

(BDN-77-420)

A CHRONIC FEEDING STUDY

OF GLYPHOSATE (ROUNDUP® TECHNICAL) IN MICE

1. SUMMARY

This study, conducted for Monsanto Company, was designed to assess the oncogenic potential and toxicity of Glyphosate (ROUNDUP® Technical) when administered orally, via dietary admixture to 300 CD-1 mice (50/sex/group) at dose levels of 1,000, 5,000, and 30,000 parts per million for a period of twenty-four months. Control animals (50/sex/group) received untreated diet (Purina® Rodent Laboratory Chow #5001). Detailed physical observations for signs of toxic or pharmacologic effects and palpations for tissue masses were performed weekly throughout the study. Body weight and food consumption measurements were conducted on all animals pretest, weekly through the initial 14 weeks of treatment and biweekly thereafter. Water consumption was measured over one 3-day period at Month 12 on 10 animals/sex/group and over one 3-day and one 2-day period at Month 24 on 12 animals/sex/group. Hematology evaluations were conducted on 10 animals/sex/group at Months 12 and 18; and at Month 24, hematology evaluations were conducted on 12 males/group and all females surviving to the last day of sacrifice (n ≤ 10 animals/group). After twenty-four months of treatment, all survivors were sacrificed, selected organs were weighed and organ/body and organ/brain weight ratios were calculated. Complete gross postmortem examinations and histopathological evaluation of selected tissues were conducted on all animals. Species and strain of test animal, method and route of test substance administration and dose levels were determined by the sponsor. This study was conducted at Bio/dynamics, Inc., Mettlers Road, East Millstone, New Jersey 08873. All raw data and a sample of the test substance are stored at this testing facility.

Mean body weights for the high-dose males were generally lower than control; differences from control were as great as -11% (at Week 102) and were, for the most part, statistically significant. Mean body weights for the high-dose females and the males and females at the low- and mid-dose levels did not demonstrate a response to treatment.

Other parameters evaluated, i.e., general animal condition, body weight gain, food consumption, feed efficiency, water consumption and hematology revealed no consistent dose- or treatment-related response to the chronic administration of Glyphosate.

At the terminal sacrifice, the mean absolute and relative (to body and brain weights) weight of the testes were elevated for the high-dose group. Other organ weight differences noted were attributed to differences in body weight or were sporadic and were not considered related to treatment.

Feb. 1986 EPA scientific advisory panel examines Monsanto's claims and says findings of study are "equivocable." Recommends study be repeated.

EPA asks Monsanto to repeat study, Monsanto refuses. Discussions between EPA & Monsanto drag on for years

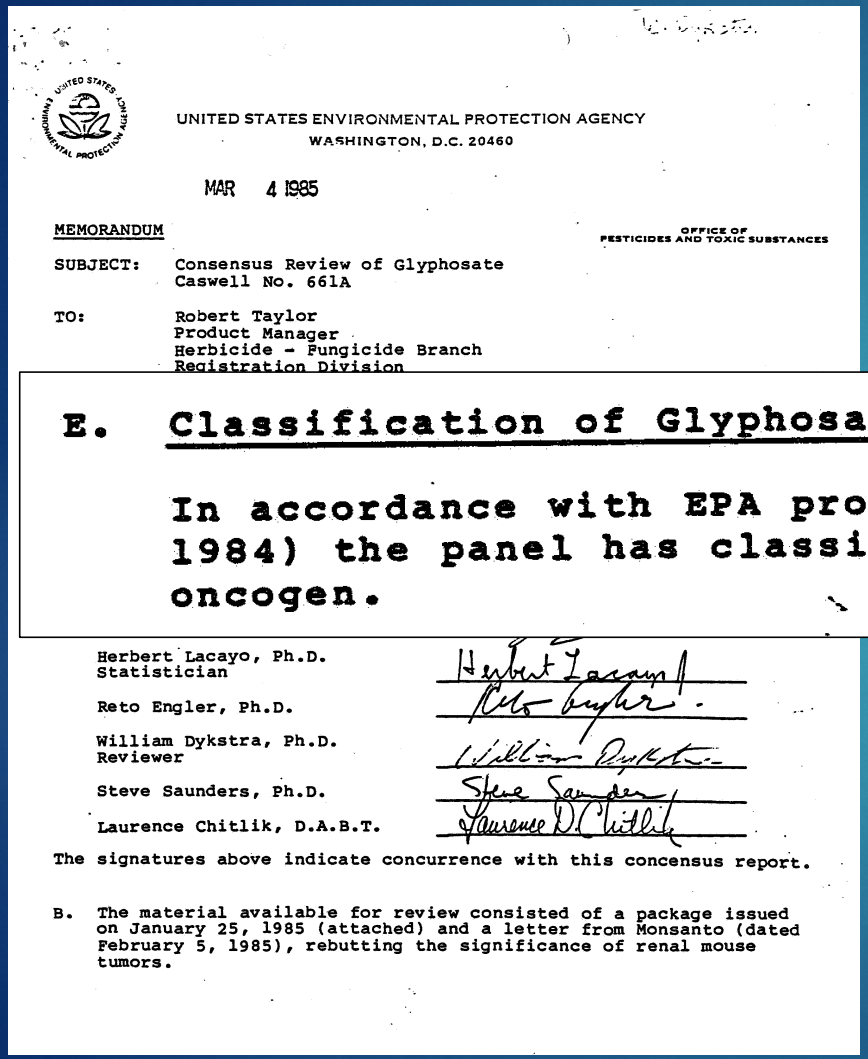
Nov. 1988 EPA toxicologist continue to doubt validity of Monsanto position of no harm but Monsanto continues to press EPA on its position that tumors not dose related to glyphosate

June 1989 EPA drops request for repeat of study

June 1991 EPA review committee meeting decides there is a "lack of convincing carcinogenicity evidence" and classifies glyphosate Group E "evidence of non-carcinogenicity for humans"

Some members of EPA committee refuse to sign, saying they do not concur.

EPA scientists saw cancer concerns before Monsanto intervention



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 4 1985

MEMORANDUM

OFFICE OF PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: Consensus Review of Glyphosate
Caswell No. 661A

TO: Robert Taylor
Product Manager
Herbicide - Fungicide Branch
Registration Division

E. Classification of Glyphosate:

In accordance with EPA proposed guidelines (FR of Nov. 23, 1984) the panel has classified Glyphosate as a Category C oncogen.

Herbert Lacayo, Ph.D.
Statistician

Reto Engler, Ph.D.

William Dykstra, Ph.D.
Reviewer

Steve Saunders, Ph.D.

Laurence Chitlik, D.A.B.T.

The signatures above indicate concurrence with this concensus report.

B. The material available for review consisted of a package issued on January 25, 1985 (attached) and a letter from Monsanto (dated February 5, 1985), rebutting the significance of renal mouse tumors.

March 4, 1985 EPA Memo

False Fronts – Intentional Manipulation of Public Opinion

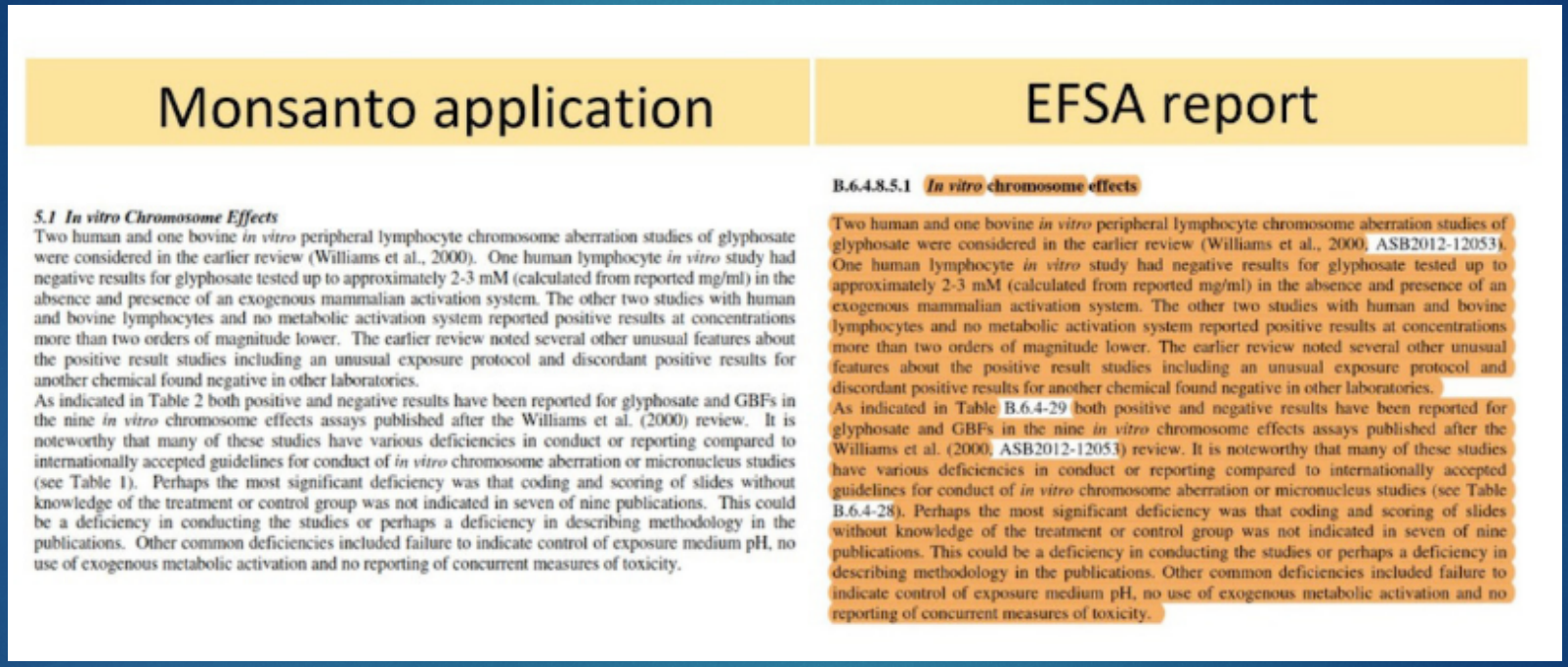
- Websites set up to promote Monsanto agenda, appearing to have independent content
- Nonprofits established to promote "science" actually designed as corporate PR groups but without funding or Monsanto involvement
- Social media manipulation: PR experts working on behalf of Monsanto seek bloggers to post pro-industry articles that appear to be independent on consumer & health websites.
- Journalist manipulation through groups set up as "science media" centers who push pro-Monsanto sources and story ideas

"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." Monsanto chief of global scientific affairs Eric Sachs in a November 2012 email to University of Illinois Prof. Bruce Chassy.

MONSANTO HAS INFLUENCE OVER EUROPEAN REGULATORS

- German BfR prepares evaluation of glyphosate relying on industry's Glyphosate Task Force
- EFSA follows BfR lead, basing a recommendation on glyphosate safety on copied and pasted analyses from a Monsanto study.
- EFSA follows guidance of EPA official Jess Rowland in disregarding 2001 study showing link between glyphosate exposure and mouse tumors. Rowland shown to have close ties to Monsanto in documents and now part of OIG probe into agency collusion with company.
- Joint FAO/WHO Meeting on Pesticide Residues (JMPR) that disagreed with IARC included several scientists who were members of, or worked for, chemical industry interests. An institute co-run by the chairman of JMPR received a six-figure donation from Monsanto. Co-chair was board member of same organization receiving Monsanto funds.

Regulatory Cut and Paste



Monsanto application

5.1 In vitro Chromosome Effects

Two human and one bovine *in vitro* peripheral lymphocyte chromosome aberration studies of glyphosate were considered in the earlier review (Williams et al., 2000). One human lymphocyte *in vitro* study had negative results for glyphosate tested up to approximately 2-3 mM (calculated from reported mg/ml) in the absence and presence of an exogenous mammalian activation system. The other two studies with human and bovine lymphocytes and no metabolic activation system reported positive results at concentrations more than two orders of magnitude lower. The earlier review noted several other unusual features about the positive result studies including an unusual exposure protocol and discordant positive results for another chemical found negative in other laboratories.

As indicated in Table 2 both positive and negative results have been reported for glyphosate and GBFs in the nine *in vitro* chromosome effects assays published after the Williams et al. (2000) review. It is noteworthy that many of these studies have various deficiencies in conduct or reporting compared to internationally accepted guidelines for conduct of *in vitro* chromosome aberration or micronucleus studies (see Table 1). Perhaps the most significant deficiency was that coding and scoring of slides without knowledge of the treatment or control group was not indicated in seven of nine publications. This could be a deficiency in conducting the studies or perhaps a deficiency in describing methodology in the publications. Other common deficiencies included failure to indicate control of exposure medium pH, no use of exogenous metabolic activation and no reporting of concurrent measures of toxicity.

EFSA report

B.6.4.8.5.1 *In vitro* chromosome effects

Two human and one bovine *in vitro* peripheral lymphocyte chromosome aberration studies of glyphosate were considered in the earlier review (Williams et al., 2000, ASB2012-12053). One human lymphocyte *in vitro* study had negative results for glyphosate tested up to approximately 2-3 mM (calculated from reported mg/ml) in the absence and presence of an exogenous mammalian activation system. The other two studies with human and bovine lymphocytes and no metabolic activation system reported positive results at concentrations more than two orders of magnitude lower. The earlier review noted several other unusual features about the positive result studies including an unusual exposure protocol and discordant positive results for another chemical found negative in other laboratories.

As indicated in Table B.6.4-29 both positive and negative results have been reported for glyphosate and GBFs in the nine *in vitro* chromosome effects assays published after the Williams et al. (2000, ASB2012-12053) review. It is noteworthy that many of these studies have various deficiencies in conduct or reporting compared to internationally accepted guidelines for conduct of *in vitro* chromosome aberration or micronucleus studies (see Table B.6.4-28). Perhaps the most significant deficiency was that coding and scoring of slides without knowledge of the treatment or control group was not indicated in seven of nine publications. This could be a deficiency in conducting the studies or perhaps a deficiency in describing methodology in the publications. Other common deficiencies included failure to indicate control of exposure medium pH, no use of exogenous metabolic activation and no reporting of concurrent measures of toxicity.

https://www.ecowatch.com/eu-glyphosate-monsanto-2485590981.html

"I just wanted to express my displeasure with the way my testimony was given to the press and then misrepresented, ***so stop with the fake news.***" – **Dr. Charles William Jameson, member of IARC working group on glyphosate, addressing Monsanto attorney in deposition taken September 21, 2017.**

Asking the obvious:

If what Monsanto says is true, that glyphosate is so very safe, and that there is no evidence it causes cancer or other health problems:

- **Why** would the company need to ghostwrite research papers to present to regulators?
- **Why** would Monsanto need to establish networks of scientists in Europe and the United States to promote glyphosate safety?
- **Why** has Monsanto secretly recruited academics to promote glyphosate safety without disclosing Monsanto backing?
- **Why** would the company need to bring in hired pathologists to re-interpret scientific studies that show dose-response tumors in lab animals?
- **Why** would Monsanto work to kill a review of glyphosate by a key US agency health agency?
- **Why** would Monsanto try to block a review of the EPA's work on glyphosate by independent scientific experts?

Working to improve our world by standing up for transparency, accountability and the integrity of science …

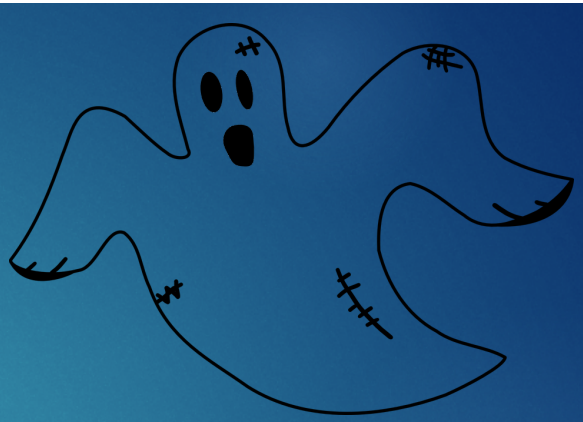
We stand up for the right to know what's in our food, and what goes on behind the scenes in political decisions about our food.

We investigate the risks associated with the corporate food system and the food industry's influence on public policy.

We promote the free market principle of transparency as crucial to building a better, healthier food system

Pursuing Truth and Transparency in America's Food System
https://usrtk.org/

GHOST WRITING



- Drafts, edits, and/or alters research papers published without disclosure of Monsanto's involvement
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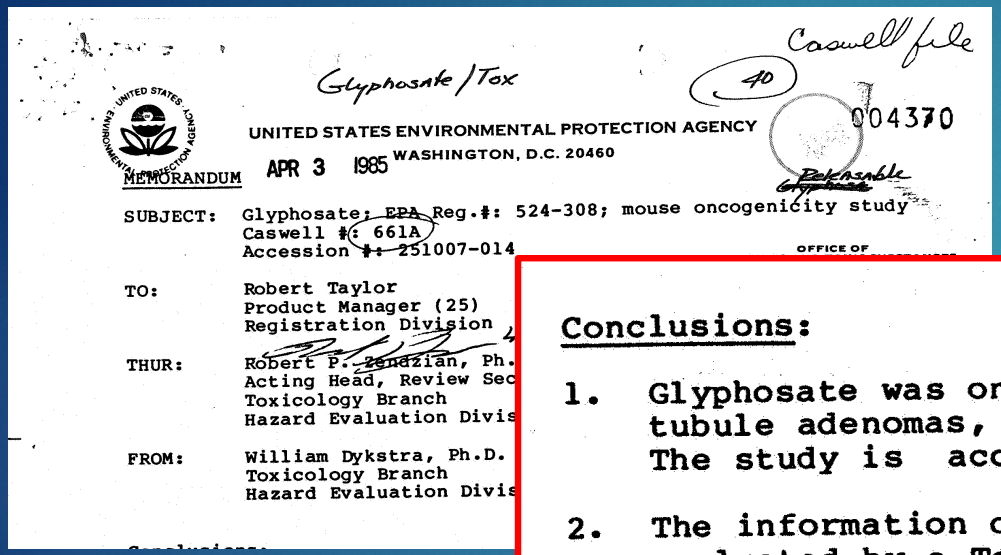
"An option would be to add Greim and Kier or Kirkland to have their names on the publication, but we would be keeping the cost down by us doing the writing and they would just edit & sign their names so to speak. Recall that is how we handled Williams Kroes & Munro, 2000."

Monsanto scientist William Heydens, email Feb. 19, 2015

1985 - 2-Year Mouse Oncogenicity Study Glyphosate is Oncogenic



Glyphosate/Tox

Caswell file

40

004370

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MEMORANDUM APR 3 1985

SUBJECT: Glyphosate; EPA Reg.#: 524-308; mouse oncogenicity study
Caswell #: 661A
Accession #: 251007-014

OFFICE OF

TO: Robert Taylor
Product Manager (25)
Registration Division

THUR: Robert P. Zendzian, Ph.
Acting Head, Review Sec
Toxicology Branch
Hazard Evaluation Divis

FROM: William Dykstra, Ph.D.
Toxicology Branch
Hazard Evaluation Divis

Conclusions:

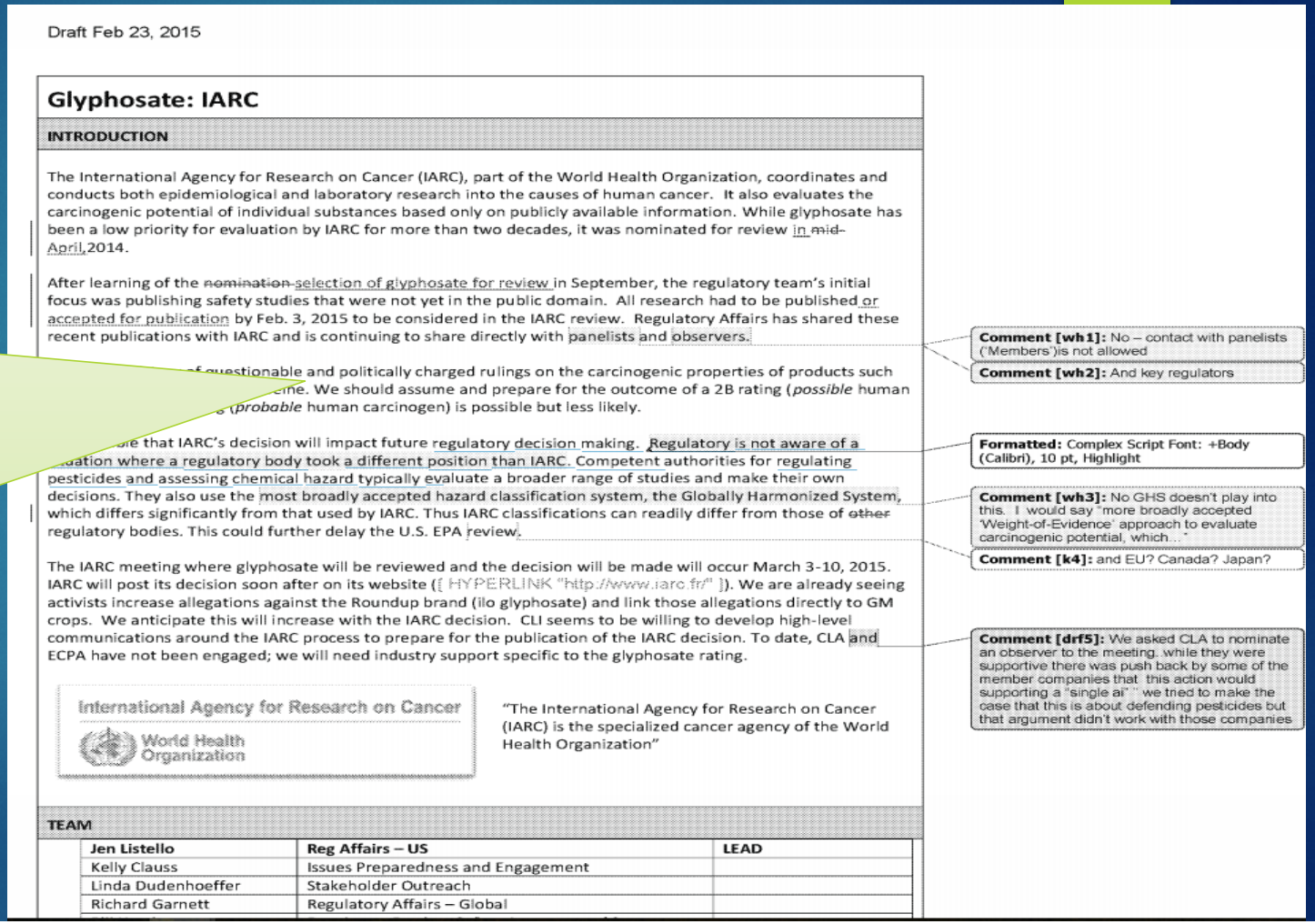
1. Glyphosate was oncogenic in male mice causing renal tubule adenomas, a rare tumor, in a dose-related manner. The study is acceptable as core-minimum data.

2. The information on the oncogenicity of glyphosate was evaluated by a Toxicology Branch AD Hoc Committee which concluded that this was an oncogenic response. A copy of the consensus report of the committee is attached.

April 3, 1985 EPA memo

Monsanto Predicts IARC Cancer Classification for Glyphosate

"We should assume and prepare for the outcome of a 2B rating (*possible* human carcinogen); a 2A rating (*probable* human carcinogen) is possible…"



Draft Feb 23, 2015

Glyphosate: IARC

INTRODUCTION

The International Agency for Research on Cancer (IARC), part of the World Health Organization, coordinates and conducts both epidemiological and laboratory research into the causes of human cancer. It also evaluates the carcinogenic potential of individual substances based only on publicly available information. While glyphosate has been a low priority for evaluation by IARC for more than two decades, it was nominated for review in ~~mid-~~April,2014.

After learning of the ~~nomination~~ selection of glyphosate for review in September, the regulatory team's initial focus was publishing safety studies that were not yet in the public domain. All research had to be published or accepted for publication by Feb. 3, 2015 to be considered in the IARC review. Regulatory Affairs has shared these recent publications with IARC and is continuing to share directly with panelists and observers.

…questionable and politically charged rulings on the carcinogenic properties of products such …ine. We should assume and prepare for the outcome of a 2B rating (*possible* human …(*probable* human carcinogen) is possible but less likely.

…ble that IARC's decision will impact future regulatory decision making. Regulatory is not aware of a …uation where a regulatory body took a different position than IARC. Competent authorities for regulating pesticides and assessing chemical hazard typically evaluate a broader range of studies and make their own decisions. They also use the most broadly accepted hazard classification system, the Globally Harmonized System, which differs significantly from that used by IARC. Thus IARC classifications can readily differ from those of ~~other~~ regulatory bodies. This could further delay the U.S. EPA review.

The IARC meeting where glyphosate will be reviewed and the decision will be made will occur March 3-10, 2015. IARC will post its decision soon after on its website ({ HYPERLINK "http://www.iarc.fr/" }). We are already seeing activists increase allegations against the Roundup brand (ilo glyphosate) and link those allegations directly to GM crops. We anticipate this will increase with the IARC decision. CLI seems to be willing to develop high-level communications around the IARC process to prepare for the publication of the IARC decision. To date, CLA and ECPA have not been engaged; we will need industry support specific to the glyphosate rating.

International Agency for Research on Cancer
World Health Organization

"The International Agency for Research on Cancer (IARC) is the specialized cancer agency of the World Health Organization"

TEAM

Jen Listello	**Reg Affairs – US**	**LEAD**
Kelly Clauss	Issues Preparedness and Engagement	
Linda Dudenhoeffer	Stakeholder Outreach	
Richard Garnett	Regulatory Affairs – Global	

Comment [wh1]: No – contact with panelists ('Members')is not allowed

Comment [wh2]: And key regulators

Formatted: Complex Script Font: +Body (Calibri), 10 pt, Highlight

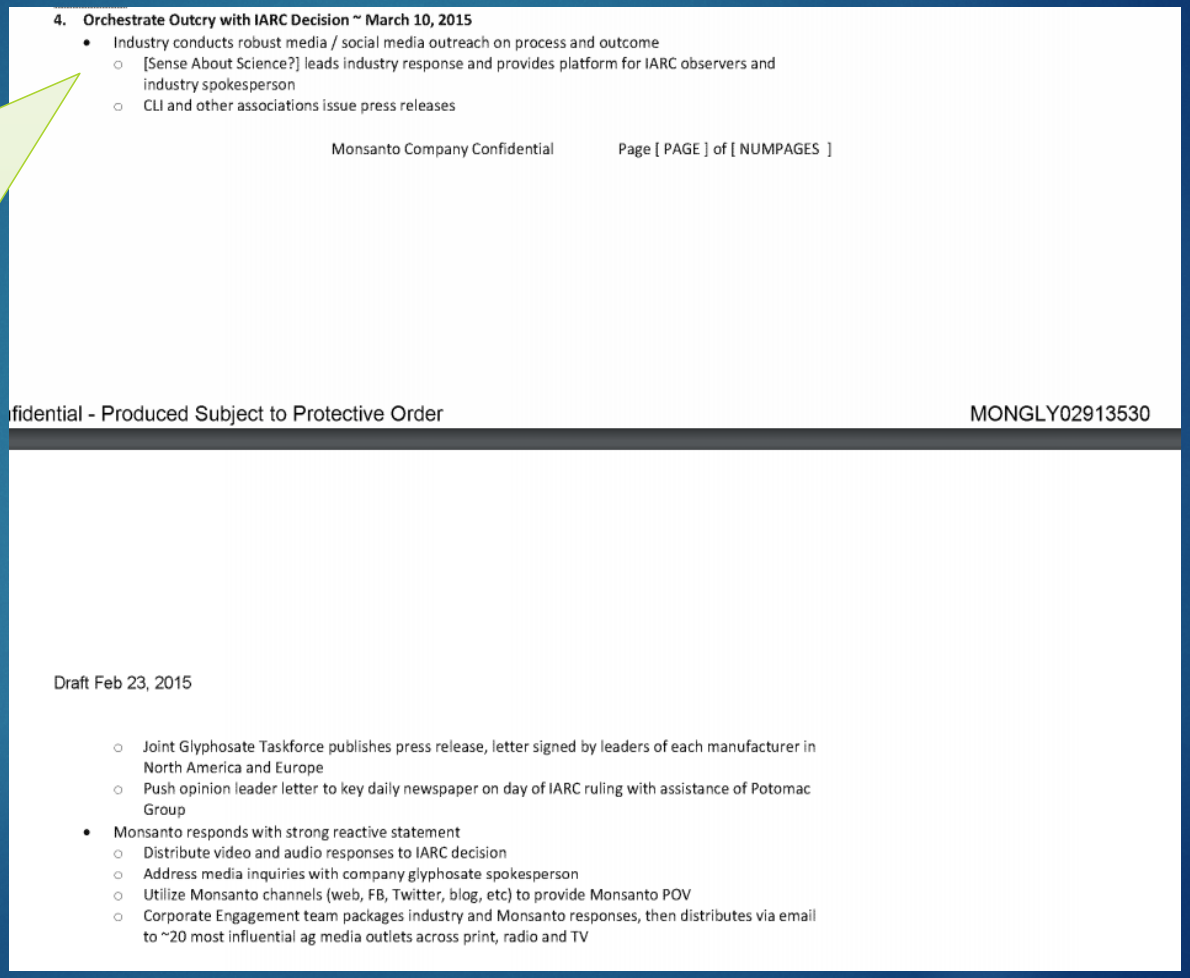
Comment [wh3]: No GHS doesn't play into this. I would say "more broadly accepted 'Weight-of-Evidence' approach to evaluate carcinogenic potential, which…"

Comment [k4]: and EU? Canada? Japan?

Comment [drf5]: We asked CLA to nominate an observer to the meeting. while they were supportive there was push back by some of the member companies that this action would supporting a "single ai" " we tried to make the case that this is about defending pesticides but that argument didn't work with those companies

Monsanto document titled "PREPAREDNESS AND ENGAGEMENT PLAN FOR IARC CARCINOGEN RATING OF GLYPHOSATE"

Feb. 23, 2015 (month before IARC decision) Monsanto action plan: "Orchestrate Outcry with IARC Decision"



4. **Orchestrate Outcry with IARC Decision ~ March 10, 2015**
   - Industry conducts robust media / social media outreach on process and outcome
     - [Sense About Science?] leads industry response and provides platform for IARC observers and industry spokesperson
     - CLI and other associations issue press releases

Monsanto Company Confidential Page [PAGE] of [NUMPAGES]

ıfidential - Produced Subject to Protective Order MONGLY02913530

Draft Feb 23, 2015

   - Joint Glyphosate Taskforce publishes press release, letter signed by leaders of each manufacturer in North America and Europe
   - Push opinion leader letter to key daily newspaper on day of IARC ruling with assistance of Potomac Group
- Monsanto responds with strong reactive statement
   - Distribute video and audio responses to IARC decision
   - Address media inquiries with company glyphosate spokesperson
   - Utilize Monsanto channels (web, FB, Twitter, blog, etc) to provide Monsanto POV
   - Corporate Engagement team packages industry and Monsanto responses, then distributes via email to ~20 most influential ag media outlets across print, radio and TV

A FEW EXPERT VOICES ON GLYPHOSATE

Dr. Peter Infante, Retired U.S. govt. epidemiology expert: There is– "*impressive evidence*" of ties between NHL and glyphosate, and glyphosate is a "likely" human carcinogen. "*There is clearly the evidence for the risk of non-Hodgkin lymphoma related to glyphosate exposure. Is it conclusive? No, I don't think so. But I think that EPA is concluding that there is no evidence. And that's exactly wrong.*"

Brian G.M. Durie, MD Cedars-Sinai, Chairman of the International Myeloma Foundation (IMF) & the International Myeloma Working Group: "*I'm pretty convinced that glyphosate is dangerous. I don't have any doubts about that.*"

Dr. Thierry Vrain, Canadian biologist and genetic scientist: "*Glyphosate… should be extremely restricted. The stupidity of having it in the crops is madness and the level of exposure to people is unacceptable. The residues in the food are probably responsible for a lot more damage to humans than anything else.*"

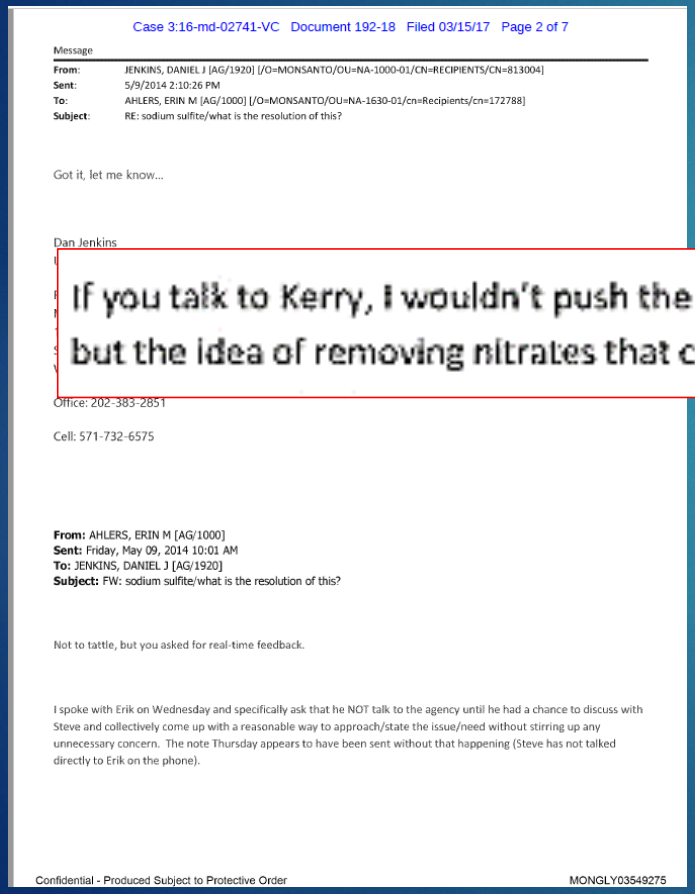
Dr. Lin Fritschi, epidemiologist, IARC member & "distinguished professor" at Curtin University in Australia: "We should all minimize our use as much as possible. The people most at risk are people who use glyphosate a lot, such as farmers and gardeners, and they are the ones who should try and reduce their use."

Dr. Christopher Portier, former director of the Environmental Toxicology Program at the U.S. NIEHS: "*This chemical is a probable human carcinogen by any reasonable definition.*"

"If, having endured much, we have at last asserted our "right to know," and if by knowing, we have concluded that we are being asked to take senseless and frightening risks, then we should no longer accept the counsel of those who tell us that we must fill our world with poisonous chemicals; we should look about and see what other course is open to us."

— Rachel Carson, Silent Spring

Monsanto Does Not Want to Draw Attention to the NNG in its Products



Case 3:16-md-02741-VC Document 192-18 Filed 03/15/17 Page 2 of 7

Message

From: JENKINS, DANIEL J [AG/1920] [/O=MONSANTO/OU=NA-1000-01/CN=RECIPIENTS/CN=813004]
Sent: 5/9/2014 2:10:26 PM
To: AHLERS, ERIN M [AG/1000] [/O=MONSANTO/OU=NA-1630-01/cn=Recipients/cn=172788]
Subject: RE: sodium sulfite/what is the resolution of this?

Got it, let me know…

Dan Jenkins

Office: 202-383-2851

Cell: 571-732-6575

From: AHLERS, ERIN M [AG/1000]
Sent: Friday, May 09, 2014 10:01 AM
To: JENKINS, DANIEL J [AG/1920]
Subject: FW: sodium sulfite/what is the resolution of this?

Not to tattle, but you asked for real-time feedback.

I spoke with Erik on Wednesday and specifically ask that he NOT talk to the agency until he had a chance to discuss with Steve and collectively come up with a reasonable way to approach/state the issue/need without stirring up any unnecessary concern. The note Thursday appears to have been sent without that happening (Steve has not talked directly to Erik on the phone).

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If you talk to Kerry, I wouldn't push the NNG issue too hard – don't want to draw attention to the toxicity of our product, but the idea of removing nitrates that could be transformed into nitroso compounds should be of interest to EPA.

MONGLY03549275 – May 9, 2014 Monsanto Email

Message

From: HEYDENS, WILLIAM F [AG/1000] [/O=MONSANTO/OU=NA-1000-01/CN=RECIPIENTS/CN=230737]
Sent: 2/9/2016 11:43:08 PM
To: Ashley Roberts Intertek [ashley.roberts@intertek.com]
Subject: RE: summary article
Attachments: Summary Manuscript Draft 2 0 Feb 5 2016_jfa_wfh.docx

Ashley,

OK, I have gone through the entire document and indicated what I think should stay, what can go, and in a couple spots I did a little editing. I took a crack at adding a little text on page 10 to address John's comments about toxicologists' use of Hill's criteria – see what you think; it made sense to me, but I'm not sure if it will to others - please feel free to further modify and/or run by Gary.

After you have looked through this, let's discuss.

Thanks,

Bill

From: Ashley Roberts Intertek [mailto:ashley.roberts@intertek.com]
Sent: Monday, February 08, 2016 3:15 PM
To: HEYDENS, WILLIAM F [AG/1000]
Subject: FW: summary article

Hi Bill,

Please take a look at the latest from the epi group!!!!

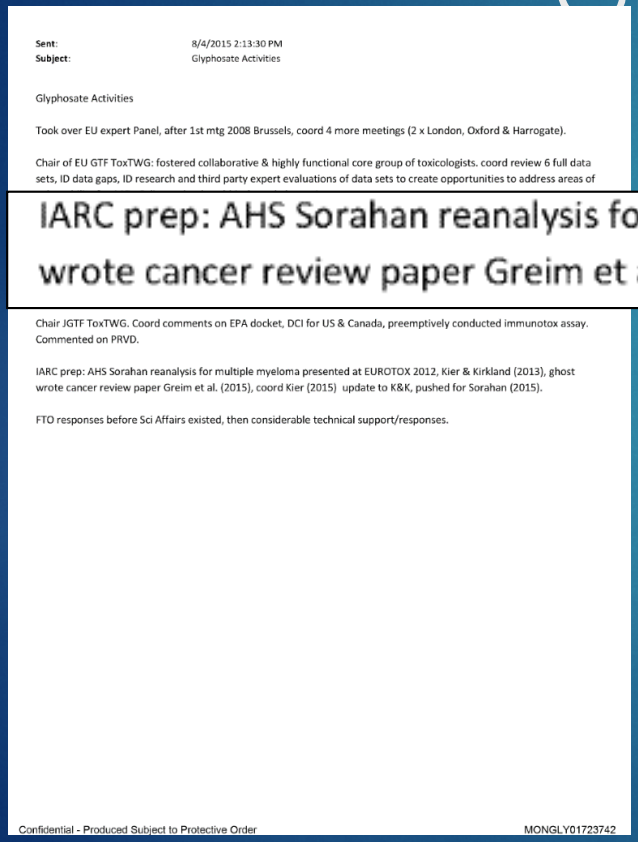
Can you call me once you have digested this.

2/9/2016 Email from Heydens to Roberts re: Expert Summary Manuscript

"I have gone through the entire document and indicated what I think should stay, what can go, and in a couple spots I did a little editing."

MONGLY01000676

David Saltmiras Boasts About Ghostwriting



Sent: 8/4/2015 2:13:30 PM
Subject: Glyphosate Activities

Glyphosate Activities

Took over EU expert Panel, after 1st mtg 2008 Brussels, coord 4 more meetings (2 x London, Oxford & Harrogate).

Chair of EU GTF ToxTWG: fostered collaborative & highly functional core group of toxicologists. coord review 6 full data sets, ID data gaps, ID research and third party expert evaluations of data sets to create opportunities to address areas of

IARC prep: AHS Sorahan reanalysis for multiple myeloma presented at EUROTOX 2012, Kier & Kirkland (2013), ghost wrote cancer review paper Greim et al. (2015), coord Kier (2015) update to K&K, pushed for Sorahan (2015).

Chair JGTF ToxTWG. Coord comments on EPA docket, DCI for US & Canada, preemptively conducted immunotox assay. Commented on PRVD.

IARC prep: AHS Sorahan reanalysis for multiple myeloma presented at EUROTOX 2012, Kier & Kirkland (2013), ghost wrote cancer review paper Greim et al. (2015), coord Kier (2015) update to K&K, pushed for Sorahan (2015).

FTO responses before Sci Affairs existed, then considerable technical support/responses.

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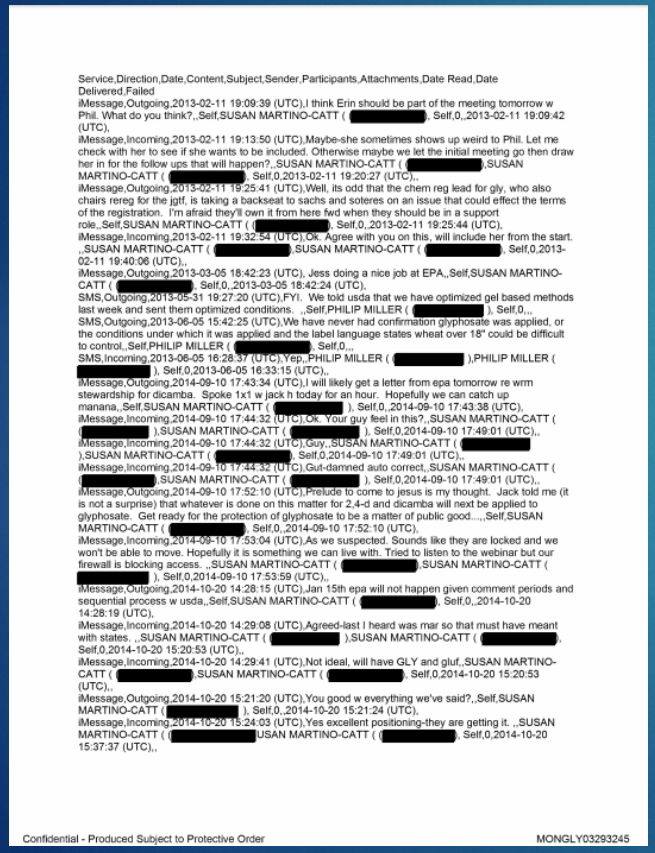
August, 2015 Monsanto Email MONGLY01723742

Monsanto Uses Political Influence to Affect EPA



Service,Direction,Date,Content,Subject,Sender,Participants,Attachments,Date Read,Date Delivered,Failed
iMessage,Outgoing,2013-02-11 19:09:39 (UTC),I think Erin should be part of the meeting tomorrow w Phil. What do you think?,,Self,SUSAN MARTINO-CATT ([redacted], Self,0,,2013-02-11 19:09:42 (UTC),
iMessage,Incoming,2013-02-11 19:13:50 (UTC),Maybe-she sometimes shows up weird to Phil. Let me check with her to see if she wants to be included. Otherwise maybe we let the initial meeting go then draw her in for the follow ups that will happen?,,SUSAN MARTINO-CATT ([redacted],SUSAN MARTINO-CATT ([redacted], Self,0,2013-02-11 19:20:27 (UTC),,
iMessage,Outgoing,2013-02-11 19:25:41 (UTC),Well, its odd that the chem reg lead for gly, who also chairs rereg for the jgtf, is taking a backseat to sachs and soteres on an issue that could effect the terms of the registration. I'm afraid they'll own it from here fwd when they should be in a support role,,Self,SUSAN MARTINO-CATT ([redacted], Self,0,,2013-02-11 19:25:44 (UTC),
iMessage,Incoming,2013-02-11 19:32:54 (UTC),Ok. Agree with you on this, will include her from the start. ,,SUSAN MARTINO-CATT ([redacted],SUSAN MARTINO-CATT ([redacted], Self,0,2013-02-11 19:40:06 (UTC),,
iMessage,Outgoing,2013-03-05 18:42:23 (UTC), Jess doing a nice job at EPA,,Self,SUSAN MARTINO-CATT ([redacted], Self,0,,2013-03-05 18:42:24 (UTC),,
SMS,Outgoing,2013-05-31 19:27:20 (UTC),FYI. We told usda that we have optimized gel based methods last week and sent them optimized conditions. ,,Self,PHILIP MILLER ([redacted]), Self,0,,,
SMS,Outgoing,2013-06-05 15:42:25 (UTC),We have never had confirmation glyphosate was applied, or the conditions under which it was applied and the label language states wheat over 18" could be difficult to control,,Self,PHILIP MILLER ([redacted], Self,0,,,
SMS,Incoming,2013-06-05 16:28:37 (UTC),Yep,,PHILIP MILLER ([redacted]),PHILIP MILLER ([redacted]), Self,0,2013-06-05 16:33:15 (UTC),,
iMessage,Outgoing,2014-09-10 17:43:34 (UTC),I will likely get a letter from epa tomorrow re wrm stewardship for dicamba. Spoke 1x1 w jack h today for an hour. Hopefully we can catch up manana,,Self,SUSAN MARTINO-CATT ([redacted]), Self,0,,2014-09-10 17:43:38 (UTC),
iMessage,Incoming,2014-09-10 17:44:32 (UTC),Ok. Your guy feel in this?,,SUSAN MARTINO-CATT ([redacted]),SUSAN MARTINO-CATT ([redacted]), Self,0,2014-09-10 17:49:01 (UTC),,
iMessage,Incoming,2014-09-10 17:44:32 (UTC),Guy,,SUSAN MARTINO-CATT ([redacted]),SUSAN MARTINO-CATT ([redacted], Self,0,2014-09-10 17:49:01 (UTC),,
iMessage,Incoming,2014-09-10 17:44:32 (UTC),Gut-damned auto correct,,SUSAN MARTINO-CATT ([redacted],SUSAN MARTINO-CATT ([redacted]), Self,0,2014-09-10 17:49:01 (UTC),,
iMessage,Outgoing,2014-09-10 17:52:10 (UTC),Prelude to come to jesus is my thought. Jack told me (it is not a surprise) that whatever is done on this matter for 2,4-d and dicamba will next be applied to glyphosate. Get ready for the protection of glyphosate to be a matter of public good...,,Self,SUSAN MARTINO-CATT ([redacted], Self,0,,2014-09-10 17:52:10 (UTC),
iMessage,Incoming,2014-09-10 17:53:04 (UTC),As we suspected. Sounds like they are locked and we won't be able to move. Hopefully it is something we can live with. Tried to listen to the webinar but our firewall is blocking access. ,,SUSAN MARTINO-CATT ([redacted],SUSAN MARTINO-CATT ([redacted]), Self,0,2014-09-10 17:53:59 (UTC),,
iMessage,Outgoing,2014-10-20 14:28:15 (UTC),Jan 15th epa will not happen given comment periods and sequential process w usda,,Self,SUSAN MARTINO-CATT ([redacted], Self,0,,2014-10-20 14:28:19 (UTC),
iMessage,Incoming,2014-10-20 14:29:08 (UTC),Agreed-last I heard was mar so that must have meant with states. ,,SUSAN MARTINO-CATT ([redacted]),SUSAN MARTINO-CATT ([redacted], Self,0,2014-10-20 15:20:53 (UTC),,
iMessage,Incoming,2014-10-20 14:29:41 (UTC),Not ideal, will have GLY and gluf,,SUSAN MARTINO-CATT ([redacted],SUSAN MARTINO-CATT ([redacted], Self,0,2014-10-20 15:20:53 (UTC),,
iMessage,Outgoing,2014-10-20 15:21:20 (UTC),You good w everything we've said?,,Self,SUSAN MARTINO-CATT ([redacted]), Self,0,,2014-10-20 15:21:24 (UTC),
iMessage,Incoming,2014-10-20 15:24:03 (UTC),Yes excellent positioning-they are getting it. ,,SUSAN MARTINO-CATT ([redacted]USAN MARTINO-CATT ([redacted], Self,0,2014-10-20 15:37:37 (UTC),,

Confidential - Produced Subject to Protective Order MONGLY03293245

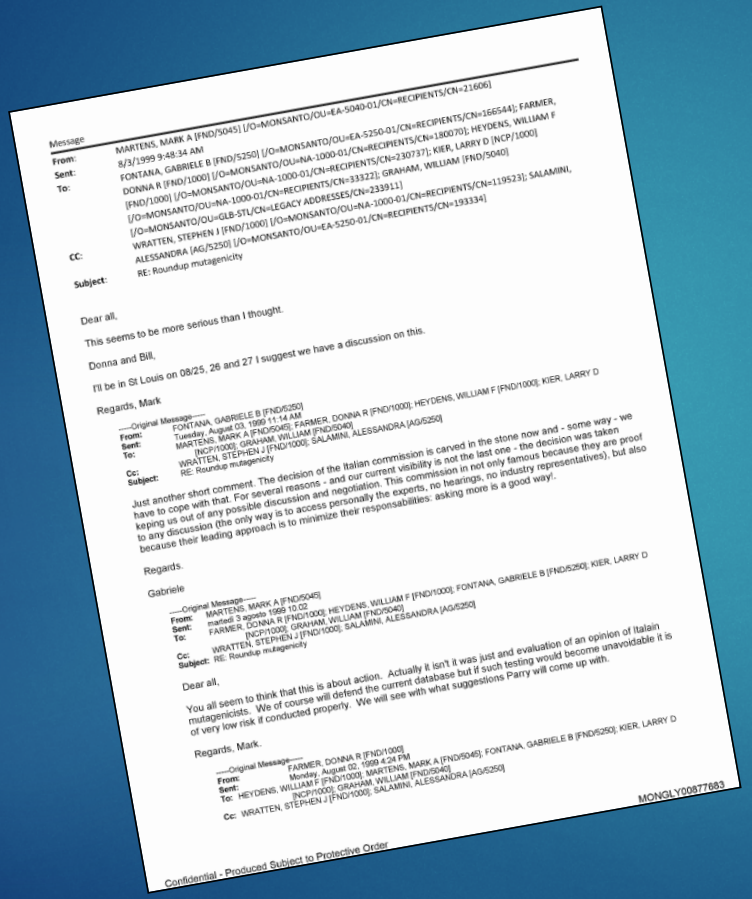
"I think we need to talk about a political level EPA strategy and then try to build a consensus plan w Michael on several fronts: crw3, Dicamba, glyphosate, resistance mgt ... we're not in good shape and we need to make plan..."

"What we need to do is get some key Democrats on the hill to start calling jim [EPA official]. This helps in several ways: focuses on gly and gets him to move; shoots across his bow generally that he's being watched which is needed on several fronts and finally sets the stage for possible hearings"

"Spoke to EPA re gly: ...They feel they aligned efsa on phone call... Pushed them to make sure atsdr is aligned, said they would."

MONGLY03293245 – Internal Monsanto Text Messages

Monsanto Refuses to Test Glyphosate Formulations As Recommended by Dr. Parry



Message

From: MARTENS, MARK A [FND/5045] [/O=MONSANTO/OU=EA-5040-01/CN=RECIPIENTS/CN=21606]
Sent: 8/3/1999 9:48:34 AM
To: FONTANA, GABRIELE B [FND/5250] [/O=MONSANTO/OU=EA-5250-01/CN=RECIPIENTS/CN=166544]; FARMER, DONNA R [FND/1000] [/O=MONSANTO/OU=NA-1000-01/CN=RECIPIENTS/CN=180070]; HEYDENS, WILLIAM F [FND/1000] [/O=MONSANTO/OU=NA-1000-01/CN=RECIPIENTS/CN=233322]; GRAHAM, WILLIAM [FND/5040] [/O=MONSANTO/OU=NA-1000-01/CN=RECIPIENTS/CN=233911]
CC: /O=MONSANTO/OU=GLB-STL/CN=LEGACY ADDRESSES/CN=233911]
Subject: WRATTEN, STEPHEN J [FND/1000] [/O=MONSANTO/OU=NA-1000-01/CN=RECIPIENTS/CN=230737]; KIER, LARRY D [NCP/1000] [/O=MONSANTO/OU=EA-5250-01/CN=RECIPIENTS/CN=119523]; SALAMINI, ALESSANDRA [AG/5250] [/O=MONSANTO/OU=EA-5250-01/CN=RECIPIENTS/CN=193334]
RE: Roundup mutagenicity

Dear all,

This seems to be more serious than I thought.

Donna and Bill,

I'll be in St Louis on 08/25, 26 and 27 I suggest we have a discussion on this.

Regards, Mark

-----Original Message-----
From: FONTANA, GABRIELE B [FND/5250]
Sent: Tuesday, August 03, 1999 11:14 AM
To: MARTENS, MARK A [FND/5045]; FARMER, DONNA R [FND/1000]; HEYDENS, WILLIAM F [FND/1000]; KIER, LARRY D [NCP/1000]; GRAHAM, WILLIAM [FND/5040]; SALAMINI, ALESSANDRA [AG/5250]
Cc: WRATTEN, STEPHEN J [FND/1000]
Subject: RE: Roundup mutagenicity

Just another short comment. The decision of the Italian commission is carved in the stone now and - some way - we have to cope with that. For several reasons - and our current visibility is not the last one - the decision was taken keping us out of any possible discussion and negotiation. This commission in not only famous because they are proof to any discussion (the only way is to access personally the experts, no hearings, no industry representatives), but also because their leading approach is to minimize their responsabilities: asking more is a good way!.

Regards.

Gabriele

-----Original Message-----
From: MARTENS, MARK A [FND/5045]
Sent: martedì 3 agosto 1999 10.02
To: FARMER, DONNA R [FND/1000]; HEYDENS, WILLIAM F [FND/1000]; FONTANA, GABRIELE B [FND/5250]; KIER, LARRY D [NCP/1000]; GRAHAM, WILLIAM [FND/5040]; SALAMINI, ALESSANDRA [AG/5250]
Cc: WRATTEN, STEPHEN J [FND/1000]
Subject: RE: Roundup mutagenicity

Dear all,

You all seem to think that this is about action. Actually it isn't it was just and evaluation of an opinion of Italain mutagenicists. We of course will defend the current database but if such testing would become unavoidable it is of very low risk if conducted properly. We will see with what suggestions Parry will come up with.

Regards, Mark.

-----Original Message-----
From: FARMER, DONNA R [FND/1000]
Sent: Monday, August 02, 1999 4:24 PM
To: HEYDENS, WILLIAM F [FND/1000]; MARTENS, MARK A [FND/5045]; FONTANA, GABRIELE B [FND/5250]; KIER, LARRY D [NCP/1000]; GRAHAM, WILLIAM [FND/5040]; SALAMINI, ALESSANDRA [AG/5250]
Cc: WRATTEN, STEPHEN J [FND/1000]

MONGLY00877683

Confidential - Produced Subject to Protective Order

"I will not support doing any studies on glyphosate formulations or other surfactant ingredients at this time with the limited information we have on the situation."

MONGLY00877683

-Donna Farmer, August 3, 1999

Instead of Publicizing Dr. Parry Report, Monsanto Publishes

Ghostwritten Article

Regulatory Toxicology and Pharmacology **31,** 117–165 (2000)
doi:10.1006/rtph.1999.1371, available online at http://www.idealibrary.com on IDEAL®

Safety Evaluation and Risk Assessment of the Herbicide Roundup[1] and Its Active Ingredient, Glyphosate, for Humans

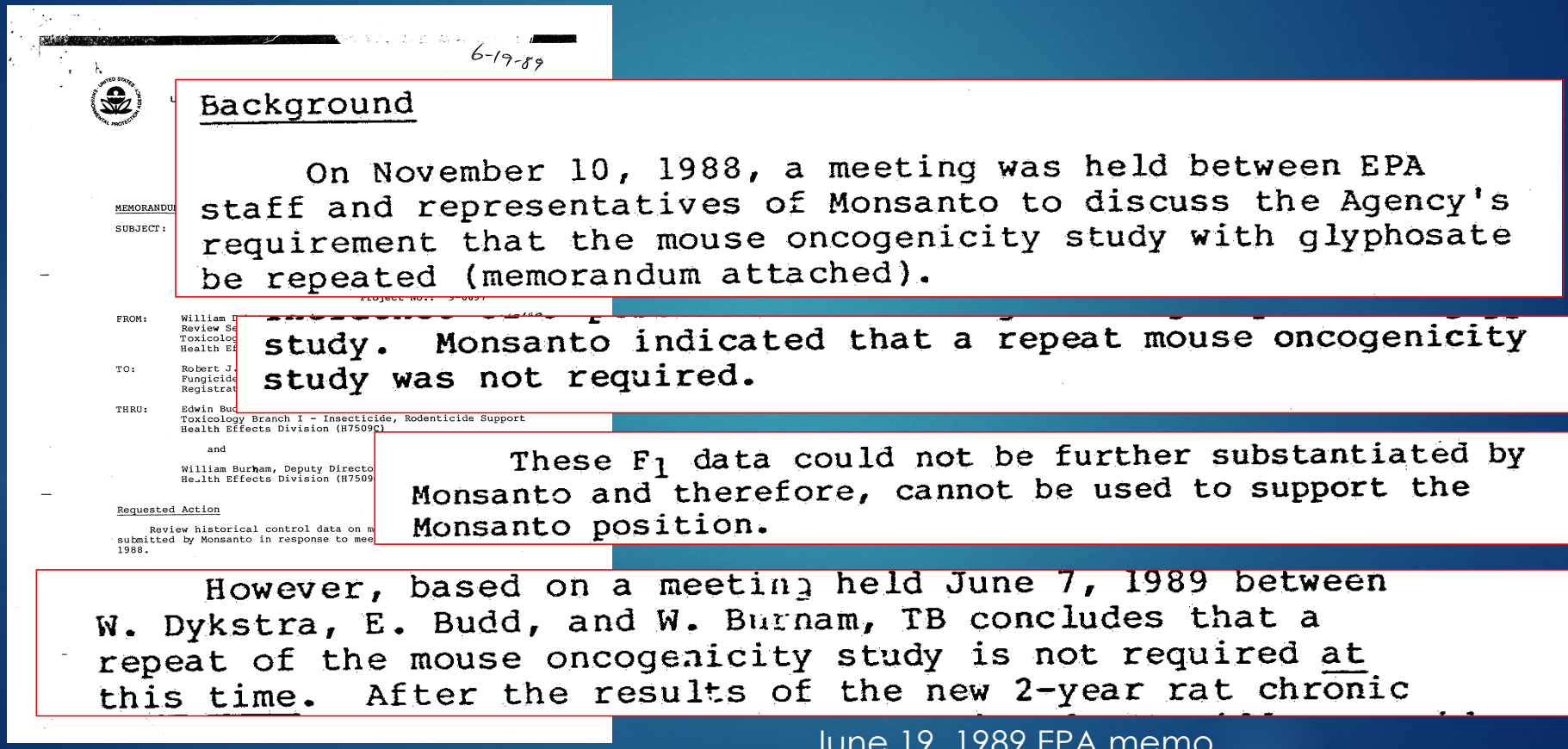
Gary M. Williams,* Robert Kroes,† and Ian C. Munro‡,[2]

**Department of Pathology, New York Medical College, Valhalla, New York 10595; †RITOX, Universiteit Utrecht, P.O. Box 80176, NL-3508 TD Utrecht Yalelaan 2, The Netherlands; and ‡Cantox Health Sciences International, 2233 Argentia Road, Suite 308, Mississauga, Ontario L5N 2X7, Canada*

Received December 6, 1999

values to estimated maximum acute human exposure. It was concluded that, under present and expected conditions of use, Roundup herbicide does not pose a health risk to humans.

1988-1989 - EPA Asks Monsanto To Conduct Another Mouse Study- Monsanto Refuses - EPA Backs Down



6-19-89

MEMORANDU

SUBJECT:

FROM: William D
Review Sc
Toxicolog
Health Ef

TO: Robert J.
Fungicide
Registrat

THRU: Edwin Bud
Toxicology Branch I - Insecticide, Rodenticide Support
Health Effects Division (H7509C)

and

William Burnam, Deputy Directo
Health Effects Division (H7509

Requested Action

Review historical control data on m
submitted by Monsanto in response to mee
1988.

Background

On November 10, 1988, a meeting was held between EPA staff and representatives of Monsanto to discuss the Agency's requirement that the mouse oncogenicity study with glyphosate be repeated (memorandum attached).

study. Monsanto indicated that a repeat mouse oncogenicity study was not required.

These F_1 data could not be further substantiated by Monsanto and therefore, cannot be used to support the Monsanto position.

However, based on a meeting held June 7, 1989 between W. Dykstra, E. Budd, and W. Burnam, TB concludes that a repeat of the mouse oncogenicity study is not required at this time. After the results of the new 2-year rat chronic

June 19, 1989 EPA memo.

1982 Rat Study- Statistically Significant Increases in lymphocytic hyperplasia and testicular interstitial tumors

Microscopic examination revealed lymphocytic hyperplasia of the thymus occurring at statistically significant incidences in the mid- and high-dose female rats.

Another non-neoplastic lesion occurring at increased incidence was focal vacuolation of the liver in high-dose male rats.

Other microscopic findings in male and female treated rats were comparable to their respective controls.

Neoplastic lesions were comparable between the controls and treated groups.

However, the interestitial cell tumor in the testis of male rats was observed in the following groups as showed below:

Group I (control) 0/50
Group II (low-dose) 3/50
Group III (mid-dose) 1/50
Group IV (high-dose) 6/50

The occurrence of testicular interstitial tumors of 12% (6/50) in the high-dose group is statistically significant (p = 0.013).

"The significance, if any, of the 12% incidence of interstitial cell tumor in the testis in the high dose group of male rats in this study in comparison to the control group is not known.

February 18, 1982 EPA memo

Dr. Parry Recommends Further Testing on Formulations and To Determine Whether Humans Are Endangered

Actions Recommended

a) Provide comprehensive *in vitro* cytogenetic data on glyphosate formulations.

c) Evaluate the induction of oxidative damage *in vivo* and determine the influence of the antioxidant status of the animals. Determine the exposure concentrations of

f) In view of the increasing appreciation of the value of the COMET assay as marker of tissue-specific damage I recommend the consideration of its use in any *in vivo* studies

oxidative damage mechanism is proved then it may be necessary to consider the possibility of susceptible groups within the human population.

If the genotoxic activity of glyphosate and its formulations is confirmed it would be advisable to determine whether there are exposed individuals and groups within the human population. If such individuals can be identified then the extent of exposure should be determined and their lymphocytes analysed for the presence of chromosome aberrations. In

MONGLY01314233

Aaron Blair Testified that the AHS analysis was Incomplete and that it Would be Irresponsible to Use the Data:

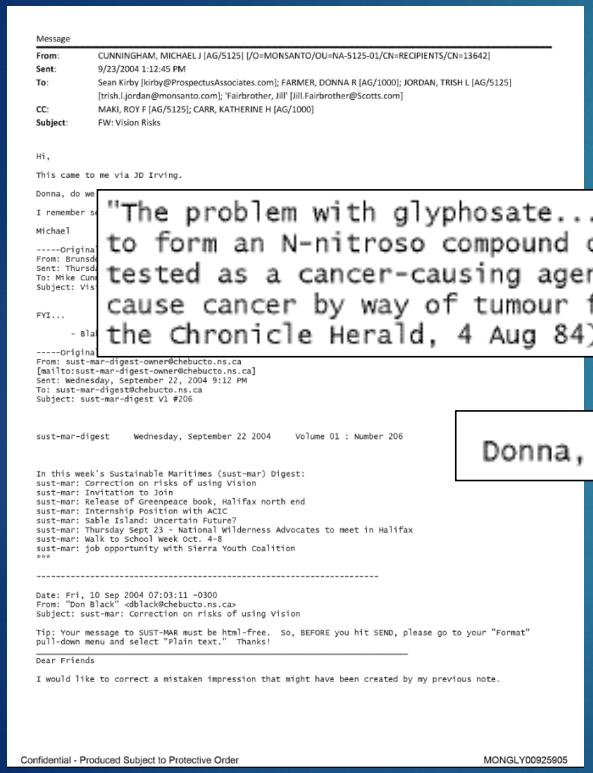
were completed. Analyses were done, manuscripts were in description, but the work wasn't finished, which means it's incomplete, and that you don't want to be reporting on. And we didn't.

timetable. And what is irresponsible is to rush something out that's not fully analyzed or thought out.

Q Let me ask you --

A That's irresponsible.

What is N-nitroglyphosate?



Message

From: CUNNINGHAM, MICHAEL J [AG/5125] [/O=MONSANTO/OU=NA-5125-01/CN=RECIPIENTS/CN=13642]
Sent: 9/23/2004 1:12:45 PM
To: Sean Kirby [kirby@ProspectusAssociates.com]; FARMER, DONNA R [AG/1000]; JORDAN, TRISH L [AG/5125] [trish.l.jordan@monsanto.com]; 'Fairbrother, Jill' [Jill.Fairbrother@Scotts.com]
CC: MAKI, ROY F [AG/5125]; CARR, KATHERINE H [AG/1000]
Subject: FW: Vision Risks

Hi,

This came to me via JD Irving.

Donna, do we

I remember s

Michael

-----Origina
From: Brunsd
Sent: Thursd
To: Mike Cun
Subject: Vis

FYI...

- Bla

-----Origina
From: sust-mar-digest-owner@chebucto.ns.ca
[mailto:sust-mar-digest-owner@chebucto.ns.ca]
Sent: Wednesday, September 22, 2004 9:12 PM
To: sust-mar-digest@chebucto.ns.ca
Subject: sust-mar-digest V1 #206

sust-mar-digest Wednesday, September 22 2004 Volume 01 : Number 206

In this week's Sustainable Maritimes (sust-mar) Digest:
sust-mar: Correction on risks of using Vision
sust-mar: Invitation to Join
sust-mar: Release of Greenpeace book, Halifax north end
sust-mar: Internship Position with ACIC
sust-mar: Sable Island: Uncertain Future?
sust-mar: Thursday Sept 23 - National Wilderness Advocates to meet in Halifax
sust-mar: Walk to School Week Oct. 4-8
sust-mar: Job opportunity with Sierra Youth Coalition
***

Date: Fri, 10 Sep 2004 07:03:11 -0300
From: "Don Black" <dblack@chebucto.ns.ca>
Subject: sust-mar: Correction on risks of using Vision

Tip: Your message to SUST-MAR must be html-free. So, BEFORE you hit SEND, please go to your "Format" pull-down menu and select "Plain text." Thanks!

Dear Friends

I would like to correct a mistaken impression that might have been created by my previous note.

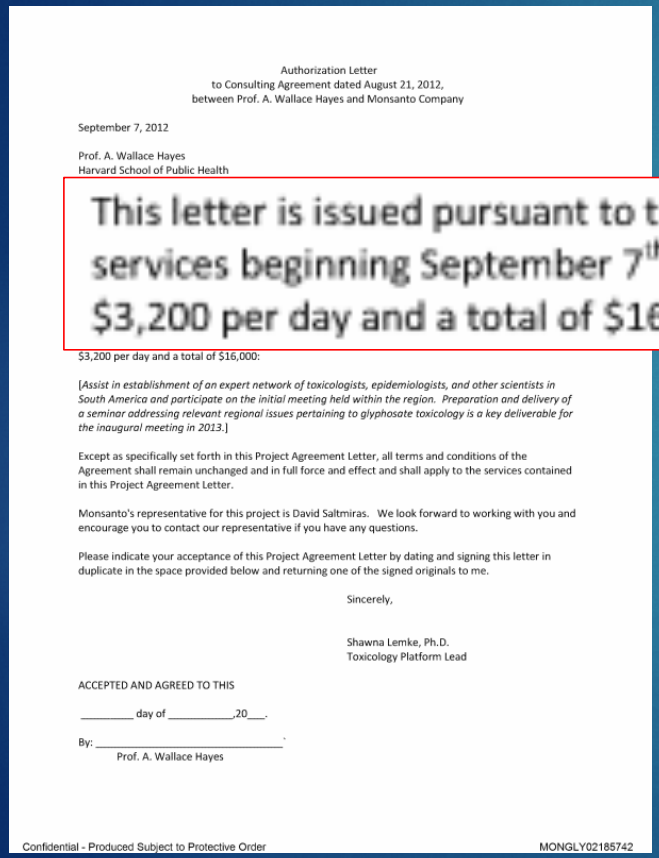
Confidential - Produced Subject to Protective Order MONGLY00925905

"The problem with glyphosate...is that it combines readily with nitrites, found in normal human saliva, to form an N-nitroso compound called N-nitrosoglyphosate. Although that particular compound has not been tested as a cancer-causing agent, over 75% of all other N-nitroso compounds so tested have been shown to cause cancer by way of tumour formation." (Dr. Ruth Shearer, consultant in genetic toxicology, quoted in the Chronicle Herald, 4 Aug 84).

Donna, do we have the counter argument for the N-nitro angle.

Internal Email September 2004

Wallace Hayes Contract With Monsanto



Authorization Letter
to Consulting Agreement dated August 21, 2012,
between Prof. A. Wallace Hayes and Monsanto Company

September 7, 2012

Prof. A. Wallace Hayes
Harvard School of Public Health

This letter is issued pursuant to the Agreement and authorizes you to provide the following consulting services beginning September 7th, 2012 for the agreed upon fee of $400.00 per hour, not to exceed $3,200 per day and a total of $16,000:

$3,200 per day and a total of $16,000:

[*Assist in establishment of an expert network of toxicologists, epidemiologists, and other scientists in South America and participate on the initial meeting held within the region. Preparation and delivery of a seminar addressing relevant regional issues pertaining to glyphosate toxicology is a key deliverable for the inaugural meeting in 2013.*]

Except as specifically set forth in this Project Agreement Letter, all terms and conditions of the Agreement shall remain unchanged and in full force and effect and shall apply to the services contained in this Project Agreement Letter.

Monsanto's representative for this project is David Saltmiras. We look forward to working with you and encourage you to contact our representative if you have any questions.

Please indicate your acceptance of this Project Agreement Letter by dating and signing this letter in duplicate in the space provided below and returning one of the signed originals to me.

Sincerely,

Shawna Lemke, Ph.D.
Toxicology Platform Lead

ACCEPTED AND AGREED TO THIS

_____ day of _____,20___.

By: _____

Prof. A. Wallace Hayes

Confidential - Produced Subject to Protective Order MONGLY02185742

MONGLY02185742 – September 7, 2012 consulting agreement.

March 2015 – World Health Organization's cancer experts classify glyphosate as a "probable human carcinogen"

The International Agency for Research on Cancer (IARC), said a review of many scientific studies showed that glyphosate had a positive association for non-Hodgkin lymphoma.(Rates of NHL have risen sharply over the last several decades, making NHL the tenth most common cancer worldwide, with nearly 386,000 new cases diagnosed in 2012. The statistics show incidence rates highest in Northern America.)

IARC conclusions were based on "sufficient evidence of carcinogenicity" seen in studies using experimental animals, and evidence that glyphosate also "caused DNA and chromosomal damage in human cells." Research has indicated that heavy use of Roundup could be linked to a range of health problems and diseases, including Parkinson's, infertility, kidney disease and cancers.

http://www.iarc.fr/en/media-centre/iarcnews/pdf/MonographVolume112.pdf
http://www.mdpi.com/1099-4300/15/4/1416/htm
Ferlay J, Soerjomataram I, Ervik M, et al. GLOBOCAN 2012 v1.0, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 11 [Internet]. Lyon, France: International Agency for Research on Cancer; 2013.