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
- Enlisted EPA 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.”
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.
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.”
"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)”
Monsanto’s money is well spent – Kier & Kirkland paper concludes “glyphosate and typical GBF’s do not appear to present significant genotoxic risk…”

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

Kier LD¹, 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.
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…”

"We have vulnerability in the area of epidemiology … exposure, genetox, and mode of action…"
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 executive says they worry ATSDR is “VERY conservative and IARC like…”

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

**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

**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.

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 consensus 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.
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.
“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?
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.
- 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.
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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

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

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 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.

IARC’s classification system is based on an assessment of the epidemiological and laboratory evidence. The classification system is used to determine the carcinogenic potential of individual substances and is based on the level of evidence that is available.

At the time of writing, IARC had not yet published its final decision. However, it is known that IARC’s decision will impact future regulatory decision making. Regulatory Affairs is not aware of any other regulatory authority that is currently assessing the carcinogenic potential of glyphosate, although the Global Harmonized System (GHS) does classify glyphosate as a suspected carcinogen. The IARC classification system is based on the level of evidence that is available, and the GHS classification system is based on the level of evidence that is required to be available.

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. We are already seeing activists increase allegations against the Roundup brand (to glyphosate) and link those allegations directly to GM crops. We anticipate this will increase with the IARC decision. EU is seen to be following US”

Draft Feb 23, 2015

Monsanto Predicts IARC Cancer Classification for Glyphosate

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 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.

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Glyphosate is a questionable and politically charged ruling on the carcinogenicity properties of many products such as glyphosate. We should assume and prepare for the outcome of a 2B rating (possible human carcinogen) is possible but less likely.

It is clear that IARC’s decision will impact future regulatory decision making. Regulatory Affairs is not aware of any other regulatory authority that is currently assessing the carcinogenic potential of glyphosate, although the Global Harmonized System (GHS) does classify glyphosate as a suspected carcinogen. The IARC classification system is based on the level of evidence that is available, and the GHS classification system is based on the level of evidence that is required to be available.

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

Comment [wh2]: And key regulators

Comment [wh3]: No GHS doesn’t play into this. I would say “more broadly accepted” or “weight-of-evidence” approach to evaluate carcinogenic potential, which...

Comment [wh4]: and EU? Canada? Japan?

Comment [wh5]: We asked CLA to nominate an observer to the meeting, while they were supportive they were push back by some of the member companies that this action would “supporting a tangal”. we tried to make the case that this is about exposing misleading but the argument didn’t work with those companies.

TEAM

Jen Listello  
Kelly Claeys  
Linda Dudenheffer  
Richard Garrett  
Reg Affairs – US  
Issues Preparedness and Engagement  
Stakeholder Outreach  
Regulatory Affairs – Global  
LEAD

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

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
  - CLU and other associations issue press releases

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, SRob, etc) to provide Monsanto POV
  - Corporate Engagement team packages industry and Monsanto responses, then distributes via email to ~30 most influential ag media outlets across print, radio and TV
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.”

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.”

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

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.
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
David Saltmiras Boasts About Ghostwriting


August, 2015 Monsanto Email MONGLY01723742
Monsanto Uses Political Influence to Affect EPA

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

“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.”  

-Donna Farmer, August 3, 1999
Safety Evaluation and Risk Assessment of the Herbicide Roundup® and Its Active Ingredient, Glyphosate, for Humans

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

*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 ‡Centox Health Sciences International, 2233 Argentia Road, Suite 308, Mississauga, Ontario L5N 2X7, Canada

Received December 6, 1999

It was concluded that, under present and expected conditions of use, Roundup herbicide does not pose a health risk to humans. © 2000 Academic Press
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).

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

These F1 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. Burnham, 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...
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 interstitial 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
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?

"The problem with glyphosate... is that it combines readily with nitrates, 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.
Wallace Hayes Contract With Monsanto

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.

[Text continues with details regarding the services, fee, and signature]

MONGLY02185742 – September 7, 2012 consulting agreement.

Confidential - Produced Subject to Protective Order MONGLY02185742
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.