

EXHIBIT C

DECLARATION OF GEORGE C. RODGERS

1
2
3 **UNITED STATES DISTRICT COURT**
NORTHERN DISTRICT OF CALIFORNIA

4) MDL No. 2741
5	IN RE: ROUNDUP PRODUCTS LIABILITY LITIGATION) Case Number: 3:16-md-02741-VC
6	This Document Relates to:) DECLARATION OF GEORGE C. RODGERS, M.D., PH.D.
7	<i>Ramirez, et al.</i>)
8	Plaintiff(s),) IN OPPOSITION TO MOTION FOR PRELIMINARY APPROVAL OF PROPOSED CLASS SETTLEMENT, APPOINTMENT OF INTERIM CLASS AND SUBCLASS COUNSEL, DIRECTION OF NOTICE UNDER FED. R. DIV P. 23(e), SCHEDULING OF A FAIRNESS HEARING, AND STAY OF THE FILING AND PROSECUTION OF ROUNDUP-RELATED ACTIONS BY SETTLEMENT CLASS MEMBERS
9	vs.)
10	<i>Monsanto Co.</i>)
11	Defendant(s).)
12	Case No. 3:19-cv-02224)
13)
14)
15)

16
17
18 I, George C. Rodgers, M.D., Ph.D. declare:

19
20 1. I have personal knowledge concerning the matters addressed herein and submit
21 this declaration in opposition to the Motion for Preliminary Approval of Proposed Class
22 Settlement, Appointment of Interim Class and Subclass Counsel, Direction of Notice Under Fed.
23 R. Civ P. 23(e), Scheduling of a Fairness Hearing, and Stay of the Filing and Prosecution of
24 Roundup-Related Actions by Settlement Class Members. If called as a witness, I would testify
25 to the opinions set forth in this declaration. I hold all of the opinions in this declaration to a
26 reasonable degree of scientific and medical certainty.

1 2. I received my Ph.D. in Organic Chemistry from Yale University and my M.D.
2 from the State University of New York. I hold board certifications in Pediatrics and Medical
3 Toxicology.

4 3. I currently hold the following positions at the University of Louisville School of
5 Medicine: Professor of Pediatrics/Pharmacology/Toxicology, and International Pediatrics; Chief,
6 Section of International Pediatrics; and Humana Chair in International Pediatrics.

7 4. I have been the Associate Medical Director of the Kentucky Regional Poison
8 Center from 2003 to the present.

9 5. Since 1998, I have been on the board of the Committee on Pesticide Exposures in
10 Children at the EPA. Since 2000, I have been on the board of the CDC Advisory Committee on
11 Childhood Lead Poisoning. Since 2000 I have been on the board of the American Academy of
12 Clinical Toxicology's Pediatric Poisoning committee. I have been on the board of the National
13 Academy of Sciences' Committee on Acute Exposure Guidelines since 2009. I was on the board
14 of the National Committee to Develop Acute Exposure Guideline Levels for Hazardous
15 Substances at the Environment Protection Agency (EPA) from 1996 to 2007.

16 6. This declaration is written regarding certain instructions given to a five-person
17 science panel. It is my understanding that they may be charged with finding that there is a
18 positive causal association between the environmental toxin glyphosate and the medical endpoint
19 non-Hodgkin's lymphoma with an affirmation "that such positive association is not due to
20 chance, confounding, or bias." In my opinion, this can never be said with the absolute certainty
21 the instruction to the science panel requires.

22 7. "Chance, confounding, and bias" are terms used in epidemiology. Even though
23 the results of an epidemiological study may reflect the true effect of an exposure to a toxic
24 substance under investigation and conclude that there is a positive association between exposure
25 to that toxic substance and a medical endpoint, given the nature of epidemiology, this conclusion
26 cannot completely eliminate chance (random error), bias, or confounding factors. Any study of
27 environmental toxins, no matter how well conducted, cannot entirely eliminate these. This is
28

1 particularly true in the case of observational studies, because all confounding factors depend on
2 available data which can never be completely controlled for.

3 8. In concluding that there is an association, we rely on the convention of statistical
4 significance. However, even this convention does not entirely rule out chance, bias, or
5 confounding factors. Statistical significance is an accepted mathematical determination where
6 we agree chance is very unlikely, but it cannot be completely eliminated.

7 9. I have also been asked to opine on the second charge to the panel where this
8 same group must decide on a single minimum internal dose before a primarily airborne
9 environmental toxin can cause a specific human cancer. It is my opinion that it would not be
10 within the medical or scientific standard of care to answer this question.

11 10. First, studies of environmental toxins are not interventional, meaning we do not
12 give measured doses of a toxin to a human as is done in pharmaceutical trials. Certainly, there
13 would not be any studies where humans were given glyphosate to see if it caused them to get
14 non-Hodgkin's lymphoma or any other type of cancer.

15 11. It appears that the panel is being instructed to calculate an internal dose before a
16 specific cancer endpoint can occur in humans relying solely on non-human experimental data.
17 However, definitively extrapolating this data to a non-Hodgkin's endpoint or any specific cancer
18 endpoint cannot be done given the difficulties of quantifying dose and the huge variability in
19 human reactions among other things. This is particularly true with a latent disease such as
20 cancer.

21 12. Even if this were possible, it would still not be possible to then calculate an
22 internal dose based on past exposure in a trial setting, as is assumed by the science panel's
23 exercise. The best that can be done is to estimate the frequency, duration and proximity of
24 exposure. But this only explains what an individual might have been exposed to; it does not
25 measure what actually entered that individual's body which is what internal dose means.
26

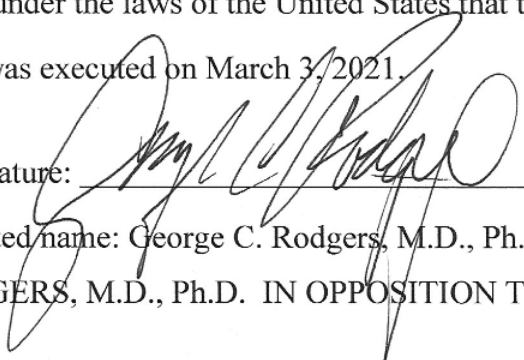
27 13. Furthermore, even estimating past exposure to try to come up with some
28 calculation is fraught with the difficulties of relying on memories, often poor record-keeping, a

1 lack of knowledge regarding environmental conditions, etc. To put it bluntly, it is scientifically
2 impossible to calculate the internal dose someone going to trial might have had when they were
3 exposed to an airborne toxin often long in the past, which I am informed and believe would be
4 argued as necessary to prove if the science panel came to a conclusion of the minimum internal
5 dose required before someone could get non-Hodgkin's lymphoma.

6 14. Furthermore, I have been asked whether in my medical and scientific practice I
7 have seen or heard of this methodology to determine whether a substance causes cancer. The
8 answer is that I have not. In science and medicine, there are accepted standards for assessing
9 whether a substance causes cancer in humans. In my opinion, conclusions of the International
10 Agency for Research on Cancer Working Groups that has been convened to make such
11 determinations would be far more reliable than a five-person private and secret group as
12 contemplated by the settlement. The proposed science panel does not follow the scientifically
13 accepted methodologies that an IARC Working Group follows nor is it being selected from
14 experts relevant to all of the pertinent fields necessary to draw such conclusions. Indeed, the
15 questions being asked of the science panel here are questions that are generally contemplated by
16 large working groups skilled in epidemiology, toxicology, oncology and biostatistics to list just a
17 few of the necessary disciplines.

18
19 15. Finally, I am unaware of any medical professionals who require a calculated
20 internal dose of a substance before being able to opine on whether the substance can cause
21 cancer in a specific person. This is not a generally accepted practice required to determine
22 whether a substance can cause a cancer in humans.

23
24
25 I declare under penalty of perjury under the laws of the United States that the foregoing is
26 true and correct and that this declaration was executed on March 3, 2021.

27 Signature: 

28 Printed name: George C. Rodgers, M.D., Ph.D.

DECLARATION OF GEORGE C. RODGERS, M.D., Ph.D. IN OPPOSITION TO MOTION
FOR PRELIMINARY APPROVAL