

ICT2022

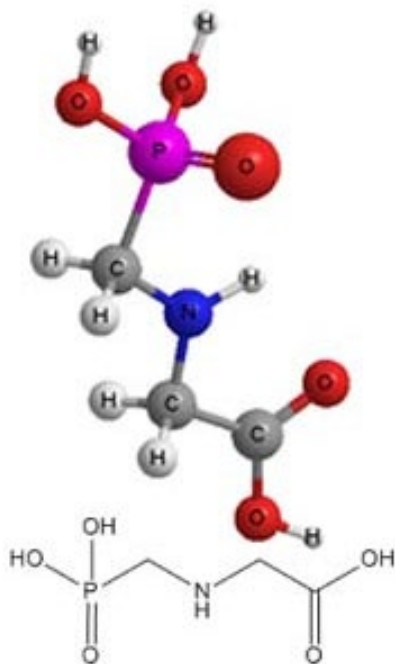
THE XVITH INTERNATIONAL
CONGRESS OF TOXICOLOGY
MAASTRICHT, THE NETHERLANDS



Glyphosate Neurotoxicology Evaluation: Systematic Reviews of Epidemiology and Animal Studies for Risk Assessment

INTRODUCTION

Chair: Abby A. Li, Exponent Inc. San Francisco, CA, USA
Monday, September 19, 2022



Disclosure

- The peer-reviewed papers and presentations were funded by the Glyphosate Renewal Group
- The sponsor did not review or comment on the manuscripts at any stage during preparation or submission
- The conclusions presented in the papers and these presentations are those of the authors alone

Why Glyphosate and Neurotoxicity?

- Neurological outcomes are of concern for pesticides
- Glyphosate products are used widely in agriculture and horticulture
- New literature on glyphosate and neurological outcomes have been published

Human Health Risk Assessment (RA) Focus

- Accuracy of methods and results were assessed so that the reviews are based on the more reliable, interpretable studies for risk assessment purposes
 - EPA OPP Guidance on Evaluating Literature Studies for Risk Assessment purposes
 - OECD/USEPA Guidelines for Neurotoxicity Studies and Neurotoxicology Risk Assessment
- Exposure to glyphosate is clearly defined and not excessive acute poisonings or case reports

Background Risk Assessment Information

- EU current acceptable daily intake: 0.5 mg/kg/day
- Potential human exposures: high estimates 0.004 – 0.006 mg/kg
- Exposure pathways¹
 - Agricultural and close bystanders
 - Residential
 - Dietary
- Glyphosate is excreted in the urine mainly as glyphosate within 24 hr

¹Acquavella et al. (2004), Gillezeau et al. (2019), McQueen et al. (2012), Kougias et al. (2021), Stephenson and Harris (2017)

Speakers

- Application of US EPA Office of Pesticide Programs (OPP) Framework for Evaluation of Human Epidemiological Literature on Glyphosate Neurotoxicity
 - Dr. Ellen Chang, Exponent Inc. Menlo Park, CA, USA
 - University of California, San Francisco. Department of Epidemiology and Biostatistics
- Expert Panel Review of the Neurotoxicology of Glyphosate in Mammalian Systems for Risk Assessment Purposes
 - Dr. Virginia Moser, Independent Neurotoxicology Consultant, Apex, North Carolina, USA
 - Previously Research Scientist in Neurotoxicology for 34 years, Office of Research and Development, US Environmental Protection Agency