Ms Stella Kyriakides
European Commissioner for Health and Food Safety
European Commission
B-1049 Brussels - Belgium

Pesticide Action Network Europe

Brussels, October 27th 2023

Dear Commissioner Kyriakides,

With this letter PAN Europe would like to express its deep concerns following the emergence of new scientific evidence that glyphosate and glyphosate-based herbicides (GBHs) can cause leukaemia even at low doses deemed safe by EU regulatory authorities. We urge you, as the Commissioner for Health and Food Safety, to take the necessary measures to ensure the protection of the health of Europeans and withdraw the Commission's current Regulation proposal to renew the licence of glyphosate and replace it with a proposal for a non-renewal.

On the 25th of October, the first carcinogenicity data from the Global Glyphosate Study (GGS), a multi-institutional international toxicological study, was presented at an international scientific conference. The findings show that low doses of GBHs, which were wrongfully assumed to cause no effects during the EU assessment - caused cases of leukaemia in rats below 1 year of age, following prenatal and early life exposures. The data reveal that half of the leukaemia deaths seen in rats occurred between 21 weeks (comparable to about 16 years in humans) and one year of age (comparable to roughly 40 years in humans). One of the GBHs tested in the GSS was the representative formulation BioFlow (MON 52276) for which the European Food Safety Authority (EFSA) had recently concluded there were "no critical areas of concern" - meaning that it fulfils all the safety criteria for human health and the environment to be approved. As the European Commission is aware, this representative formulation is currently authorised in all EU Member States.

The findings of the GGS are extremely concerning as they add to the already existing evidence of the substance's carcinogenic potential, as we explained in our previous letter. Throughout the entire re-assessment of glyphosate, NGOs and independent scientists have repeatedly alerted about important incoherences and shortcomings in the EU scientific evaluation of glyphosate. In terms of the representative formulation "Bioflow", one impurity is carcinogenic (formaldehyde), another (glyphosine) was found to be potentially genotoxic and for one co-formulant there is no long-term toxicity data, according to EFSA. Although there is evidence that formulations can be more toxic than the active substance alone[1], and published scientific literature already indicates the genotoxic potential of the

[1] Ferguson et al, 2022. Cytotoxicity Mechanisms of Eight Major Herbicide Active Ingredients in Comparison to Their Commercial Formulations. Toxics. 10(11):71. https://doi.org/10.3390/toxics10110711

representative formulation[2], no long-term toxicity or carcinogenicity study has been carried out on the representative formulation by the applicants. Considering the GSS data, we ask once more, how can the absence of a long-term toxicity study for the representative formulation of glyphosate from the dossier be justified? This is mandatory, according to article 4(5) from regulation (EU) 1107/2009 and, as emphasised by the European Court of Justice (Case C-616/17), products and active substances must be thoroughly assessed to show they cause no long-term toxicity and/or carcinogenicity. In the light of this new scientific evidence from the GSS that GBH caused deaths from leukaemia in rats, glyphosate's licence should be immediately withdrawn from the market.

The data of the GGS underscores that glyphosate's carcinogenicity and genotoxicity potential has simply not been properly assessed. As we have already highlighted to the Commission and EFSA, there is crucial evidence[3] on glyphosate's carcinogenicity. This includes its potential to cause malignant lymphomas and other tumours in rodent studies, assessed in accordance with European and international guidelines, as well as its ability to induce oxidative stress and DNA lesions in specific organs. Two key OECD protocol *in vivo* studies on genotoxicity that would indicate whether glyphosate is genotoxic to organs other than bone marrow, have not been submitted by the applicants. Furthermore, epidemiology studies suggest that glyphosate exposure is linked to cancer, which was recently confirmed by the French Health Institute Inserm. This evidence has not been acknowledged by the Assessment Group on Glyphosate, the European Chemicals Agency or EFSA.

However, the carcinogenicity of glyphosate is only the tip of the iceberg in relation to the health impacts of glyphosate herbicides. Exposure to glyphosate and GBHs has been linked to neurotoxicity[4], autism spectrum disorders in children exposed from prenatal age[5], amyotrophic lateral sclerosis[6] and Parkinson's

[2] Mesnange et al, 2022. Comparative Toxicogenomics of Glyphosate and Roundup Herbicides by Mammalian Stem Cell-Based Genotoxicity Assays and Molecular Profiling in Sprague-Dawley Rats. Toxicol Sci. 186(1):83-101. https://doi.org/10.1093/toxsci/kfab143

[3] Robinson et al, 2020. Achieving a High Level of Protection from Pesticides in Europe: Problems with the Current Risk Assessment Procedure and Solutions. European Journal of Risk Regulation, 11(3), 450 -480. https://doi.org/10.1017/err.2020.18

[4] Costas-Ferreira et al 2022. Toxic Effects of Glyphosate on the Nervous System: A Systematic Review. *Int. J. Mol. Sci.* 2022, 23, 4605. https://doi.org/10.3390/ijms23094605

[5] von Ehrenstein, O. S., Ling, C., Cui, X., Cockburn, M., Park, A. S., Yu, F., Wu, J., & Ritz, B. (2019). Prenatal and infant exposure to ambient pesticides and autism spectrum disorder in children: Population based case-control study. BMJ, l962. https://doi.org/10.1136/bmj.l962

[6] Andrew, A., Zhou, J., Gui, J., Harrison, A., Shi, X., Li, M., Guetti, B., Nathan, R., Tischbein, M., Pioro, E. P., Stommel, E., & Bradley, W. (2021). Pesticides applied to crops and amyotrophic lateral sclerosis risk in the U.S. *NeuroToxicology*, *87*, 128–135. https://doi.org/10.1016/j.neuro.2021.09.004

disease in adults[7]. It has also been linked to endocrine disruption[8] and alternations in the microbiome[9]. Exposure to glyphosate can also lead to toxicity in a wide range of terrestrial[10] and aquatic non-target species[11], potentially causing serious impacts on biodiversity. To our concern, all these important harmful effects were not considered as critical areas of concern by EFSA in its conclusion.

The new compelling evidence presented has highlighted the important shortcomings of the EU's renewal process on glyphosate. Considering the widespread use of glyphosate-based products, neglecting these adverse effects poses an unacceptable health risk to both farm workers and the general population. Given the aforementioned evidence, glyphosate does not meet the approval criteria laid down in Regulation (EU) 1107/2009, according to which pesticide active substances, **pesticide products** and their residues placed on the market should not have any harmful effect on humans, animals and no unacceptable effects to the environment.

Up until now, the European Commission has persistently refused to apply the precautionary principle, which stands at the heart of the Treaty on the Functioning of the European Union and Regulation (EU) 1107/2009. In light of the GSS findings, it is your responsibility as Commissioner for Health to call for the withdrawal of the current proposal, given its alarming implications for human health and the environment. What the Commission decides to do next will serve as a proof of its commitment to safeguard human health and the environment. We respectfully ask you to reconsider your position and withdraw the Commission's proposal to renew glyphosate, and immediately withdraw its EU approval.

Thank you in advance for your consideration.

Yours sincerely,

Angeliki Lysimachou
Head of Science and Policy
Pesticide Action Network Europe

[7] Caballero, et al 2018. Estimated Residential Exposure to Agricultural Chemicals and Premature Mortality by Parkinson's Disease in Washington State. *Int. J. Environ. Res. Public Health*, 15, 2885. https://doi.org/10.3390/ijerph15122885

[8] Lesseur C et al, 2021. Maternal urinary levels of glyphosate during pregnancy and anogenital distance in newborns in a US multicenter pregnancy cohort *Environ Pollut.* 10.1016/j.envpol.2021.117002

[9] Mesnage R et al. 2021. Use of Shotgun Metagenomics and Metabolomics to Evaluate the Impact of Glyphosate or Roundup MON 52276 on the Gut Microbiota and Serum Metabolome of Sprague-Dawley Rats" *Environ Health Perspect.*

[10] Klátyik et al, 2023. Terrestrial ecotoxicity of glyphosate, its formulations, and co-formulants: evidence from 2010–2023. Environ Sci Eur 35, 51. https://doi.org/10.1186/s12302-023-00758-9

[11] Gonçalves et al 2020. 'Ecotoxicology of Glyphosate-Based Herbicides on Aquatic Environment'. Biochemical Toxicology - Heavy Metals and Nanomaterials. IntechOpen. 10.5772/intechopen.85157