Glifosato e impactos na saúde

Apresenta-se uma lista não exaustiva de vários artigos científicos, num total de 41, que indiciam a capacidade do herbicida glifosato de causar efeitos negativos em células e espécies não-alvo, nomeadamente células e espécie humana.

Referências abreviadas

- **Malformações congénitas** e outras alterações da gestação e neonatais, nomeadamente redução do tempo de gestação e baixo peso à nascença (Benítez, 2009 e Paganelli, 2010; Antoniou, 2012; Cattani, 2014; Coullery, 2016; Seneff, 2017; Parvez, 2018)
- **Efeito desregulador endócrino** (Gasnier, 2009; Romano, 2010 e 2011; Clair, 2011; Cavalli, 2013; Cassault-Meyer, 2014; Young, 2015; Pandey, 2015; Souza, 2017).
- **Efeitos citotóxico em espécies não-alvo, nomeadamente em células humanas,** como do cordão umbilical, embrionárias e da placenta, incluindo **morte celular.** (Peixoto, 2005, Richard, 2005; Benachour, 2007e 2009; Gasnier, 2009; Mesnage, 2013; Young, 2015; Swanson, 2016).
- **Efeito cardiotóxico** (Gress, 2014)
- **Efeito nefrotóxico** (Jayasumana, 2014; Gabriel, 2018)
- **Efeito hepatotóxico** (Mesnage, 2017; Mills, 2019)
- **Efeito carcinogénico** (Marc, 2002; Marc, 2004; George, 2010; Thongprakaisang, 2013; Schinasi, 2014; Guyton, 2015; Fortes, 2016; Leon, 2019).
- **Análogo ao AA glicina** (Samsel e Seneff, 2016)
- **Aumento do risco de intolerância ao glúten e doença celíaca** (Samsel and Seneff, 2013)
- **Desregulador do microbioma** (Lozano, 2018)

- **Alteração à sensibilidade aos antibióticos** (Kurenbach, 2015)
- **Efeitos tóxicos a partir da 3ª geração (epigenética)** (Kubsad, 2019)

Referências completas:

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- **Efeito cardiotóxico**

Gress, S. et al (**2014**). *Cardiotoxic Electrophysiological Effects of the Herbicide Roundup® in Rat and Rabbit Ventricular Myocardium In Vitro*, Cardiovascular Toxicology, Epub 2 Dec 2014.

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- **Efeito hepatotóxico** (Mesnage, 2017; Mills, 2019)

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revelam o glifosato (junto com outros pesticidas organofosforados) como "**carcinogénio provável para o ser humano"**. Esta classificação significa que existem evidências suficientes de que o glifosato causa cancro em animais de laboratório e que existem também provas directas para o mesmo efeito em seres humanos, embora mais limitadas.

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- **Análogo ao AA glicina**

Anthony Samsel and Stephanie Seneff (**2016**), *Glyphosate pathways to modern diseases V: Amino acid analogue of glycine in diverse proteins,* Journal of Biological Physics and Chemistry **16** (2016) 9–46

- **Aumento do risco de intolerância ao glúten e doença celíaca**

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- **Desregulador do microbioma**

Veronica L. Lozano, f, Nicolas Defarge, e, Louis-Marie Rocque, c, Robin Mesnage, d, Didier Hennequin, Renaud Cassier, Joël Spiroux de Vendômois, Jean-Michel Panoff, Gilles-Eric Séralini (**2018**), *Sex-dependent impact of Roundup on the rat gut microbiome*, Toxicology Reports, Volume 5, 2018, Pages 96-107, https://www.sciencedirect.com/science/article/pii/S2214750017301129

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