

Table showing major differences between Séralini et al. and OGM90+ studies.

Publications	Séralini et al., 2014 <sup>1</sup> Mesnage et al., 2015 <sup>2</sup> Mesnage et al., 2016 <sup>3</sup> Mesnage et al., 2017a <sup>4</sup> Mesnage et al., 2017b <sup>5</sup> Lozano et al., 2018 <sup>6</sup>	OGM 90+ <sup>7</sup>
Rat strain	Sprague-Dawley (recommended by US National Toxicology Program)	Wistar (much less sensitive to mammary tumors including the prolactinomas recorded in Séralini et al., 2014)
Duration (in days)	720	90 and 180
Roundup alone	YES	NO
Omics:		
• Transcriptomics	Kidneys, Liver (in females, 2 years old) <sup>2</sup> <i>Findings: Multiple genes differentially expressed (claimed as evidencing chronic damage)</i>	
• Proteomics	Kidneys, Liver (in females, 2 years old) <sup>4</sup> <i>Findings: non alcoholic fatty liver disease</i>	
• Metabolomics	Kidneys, Liver (in females, 2 years old) <sup>4</sup> <i>Findings: Metabolic disturbances in liver, evidence of non alcoholic fatty liver disease</i>	
• Gut microbiota	<i>Findings: sex-dependant dysbiosis</i> <sup>6</sup>	
GMO treated with Roundup	YES (but both treated with levels well below agricultural uses in Argentina and Brazil <sup>8</sup> )	
GMO not treated with Roundup	YES	

Location of the fields	One location for all GM plants	Several locations; GM plants and their close isogenics were grown in different locations
Roundup residues in the diets	No glyphosate nor AMPA detected in control diet	Glyphosate and AMPA in all diets (including control diets) at equivalent levels
Omics:		
• Transcriptomics	Kidneys, Liver (in females, 2 years old) <sup>5</sup> <i>Findings: Several genes differentially expressed (below the False Discovery Rate)</i>	Kidneys, Liver (both sexes, 3 and 6 months old) <i>Findings: Several genes differentially expressed (claimed as non biologically relevant)</i>
• Metabolomics	Kidneys, Liver (in females, 2 years old) <sup>5</sup> <i>Findings: Several statistical differences (below the False Discovery Rate)</i>	Blood and Urine* <i>Findings: Statistical differences (claimed as non biologically relevant)</i>

\* in both cases blood and urine parameters were analyzed in PLS-DA; statistical differences were observed in both cases, but claimed as biologically relevant in one case, not biologically relevant in the other case.

Comment: Nowadays herbicide tolerant GMOs grown in North and South America and entering Europe are more and more stacked events. They were rendered tolerant to mixtures of herbicides based on glyphosate, glufosinate ammonium, isoxaflutole, 2,4-D... The effects of these mixture of residues lacks investigation.

## References

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