

**Question for written answer E-000599/2023  
to the Commission**

Rule 138

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**Subject:** Promoting toxicogenomic studies as a solution to replace animal testing

Toxicogenomics can be used to assess the effects of chemical substances, including medicinal ones, on genes. The process involves applying a substance at different concentrations and for different durations to in vitro-grown human or plant cells to observe what changes occur in them.

Toxicogenomic studies thus make it possible to assess the toxicological impact of a substance, over both the short and long term, on any animal or plant species.

They also offer an opportunity to improve production safety standards. Manufacturers could use this technique to better demonstrate the safety of the substances they are placing on the market while also benefitting from other advantages:

1. Cheaper testing, as toxicogenomic studies are less expensive than animal testing;
2. Shorter time frames for developing substances and obtaining marketing authorisation.

Will the Commission, in the context of the revision of the Regulation for Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), put the advances in toxicogenomics to good use and partially replace animal testing?

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