

OUR VISION

The vision of the ONTOX project is to provide a functional and sustainable solution for advancing human risk assessment of chemicals without the use of animals in line with the principles of 21st century toxicity testing and next generation risk assessment.

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**ONTOX is part of the ASPIS
project cluster**

 aspis-cluster.eu



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**ONTOX
PROJECT**

**ONTOLOGY-DRIVEN AND
ARTIFICIAL INTELLIGENCE-
BASED REPEATED DOSE
TOXICITY TESTING OF
CHEMICALS FOR NEXT
GENERATION RISK
ASSESSMENT**

OBJECTIVE

ONTOX will deliver a strategy to create innovative new approach methodologies (NAMs) in order to predict systemic repeated dose toxicity effects that, upon combination with tailored exposure assessment, will enable human risk assessment.

FOCUS

The focus will be put on 6 specific NAMs to predict systemic repeated dose toxicity in the developing brain, liver and kidneys:



...➔ **neural tube closure**

...➔ **cognitive function defects**



...➔ **steatosis**

...➔ **cholestasis**



...➔ **tubular necrosis**

...➔ **crystallopathy**

TARGET

Various chemicals will be studied, including, but not limited to:



pharmaceuticals



cosmetics



food



biocides

Each NAM will consist of an ontology-driven and artificial intelligence-based computational system linked with a battery of *in vitro* assays and *in silico* tools for hazard prediction combined with customized exposure assessment.



IMPACT

ONTOX will have a deep and long-lasting impact at many levels, in particular by consolidating Europe's world-leading position regarding the development, exploitation, regulation and application of animal-free methods for human risk assessment of chemicals.

17.2 million Euro

17,211,050 € granted by the European Commission

5 years

1 May 2021 - 30 April 2026

18 partners

7 academic institutions
6 SMEs
1 large company
3 research institutions
1 public health institution

9 countries

Belgium, Denmark, Germany, Italy, Norway, Slovakia, Spain, The Netherlands, USA