**EU-ToxRisk**

*Project ID:* 681002  
*Funded under:* H2020-EU.3.1.6. - Health care provision and integrated care

**An Integrated European ‘Flagship’ Program Driving Mechanism-based Toxicity Testing and Risk Assessment for the 21st Century**

*From* 2016-01-01 to 2021-12-31, ongoing project | EU-ToxRisk Website

### Project details

<table>
<thead>
<tr>
<th>Total cost:</th>
<th>EUR 30 122 153,25</th>
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<tbody>
<tr>
<td>EU contribution:</td>
<td>EUR 27 798 299</td>
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<tr>
<td>Coordinated in:</td>
<td>Netherlands</td>
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<tr>
<th>Topic(s):</th>
<th>Call for proposal:</th>
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<tbody>
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<td>PHC-33-2015 - New approaches to improve predictive human safety testing</td>
<td>H2020-PHC-2015-single-stage_RTD</td>
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<th>Research and Innovation action</th>
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### Objective

The vision of EU-ToxRisk is to drive a paradigm shift in toxicology towards an animal-free, mechanism-based integrated approach to chemical safety assessment. The project will unite all relevant disciplines and stakeholders to establish: i) pragmatic, solid read-across procedures incorporating mechanistic and toxicokinetic knowledge; and ii) ab initio hazard and risk assessment strategies of chemicals with little background information. The project will focus on repeated dose systemic toxicity (liver, kidney, lung and nervous system) as well as developmental/reproduction toxicity. Different human tiered test systems are integrated to balance speed, cost and biological complexity. EU-ToxRisk extensively integrates the adverse outcome pathway (AOP)-based toxicity testing concept. Therefore, advanced technologies, including high throughput transcriptomics, RNA interference, and high throughput microscopy, will provide quantitative and mechanistic underpinning of AOPs and key events (KE). The project combines in silico tools and in vitro assays by computational modelling approaches to provide quantitative data on the activation of KE of AOP. This information, together with detailed toxicokinetics data, and in vitro-in vivo extrapolation algorithms forms the basis for improved hazard and risk assessment. The EU-ToxRisk work plan is structured along a broad spectrum of case studies, driven by the cosmetics, (agro)-chemical, pharma industry together with regulators. The approach involves iterative training, testing, optimization and validation phases to establish fit-for-purpose integrated approaches to testing and assessment with key EU-ToxRisk methodologies. The test systems will be combined to a flexible service package for exploitation and continued impact across industry sectors and regulatory application. The proof-of-concept for the new mechanism-based testing strategy will make EU-ToxRisk the flagship in Europe for animal-free chemical safety assessment.

### Related information

**Report Summaries**

Periodic Reporting for period 2 - EU-ToxRisk (An Integrated European ‘Flagship’ Program Driving Mechanism-based Toxicity Testing and Risk Assessment for the 21st Century)
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EU contribution: EUR 1 295 810

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EU contribution: EUR 0

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EU contribution: EUR 790 690

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EU contribution: EUR 626 345

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**Activity type:** Research Organisations

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**EU contribution:** EUR 64 000

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**EU contribution:** EUR 71 570

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**EU contribution:** EUR 325 000
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