



These projects have received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 963845 (ONTOX), No. 965406 (PrecisionTox), No. 964537 (RISK-HUNT3R)

This output reflects only the author's view and the Directorate-General for Research and Innovation (DG RTD) cannot be held responsible for any use that may be made of the information contained therein.

# Open **2-3 July 2026** Symposium

Maastricht  
The Netherlands

## **RISK-HUNT3R: Innovations and test methods for IATA-based NGRA**

Author's name: Bob van de Water

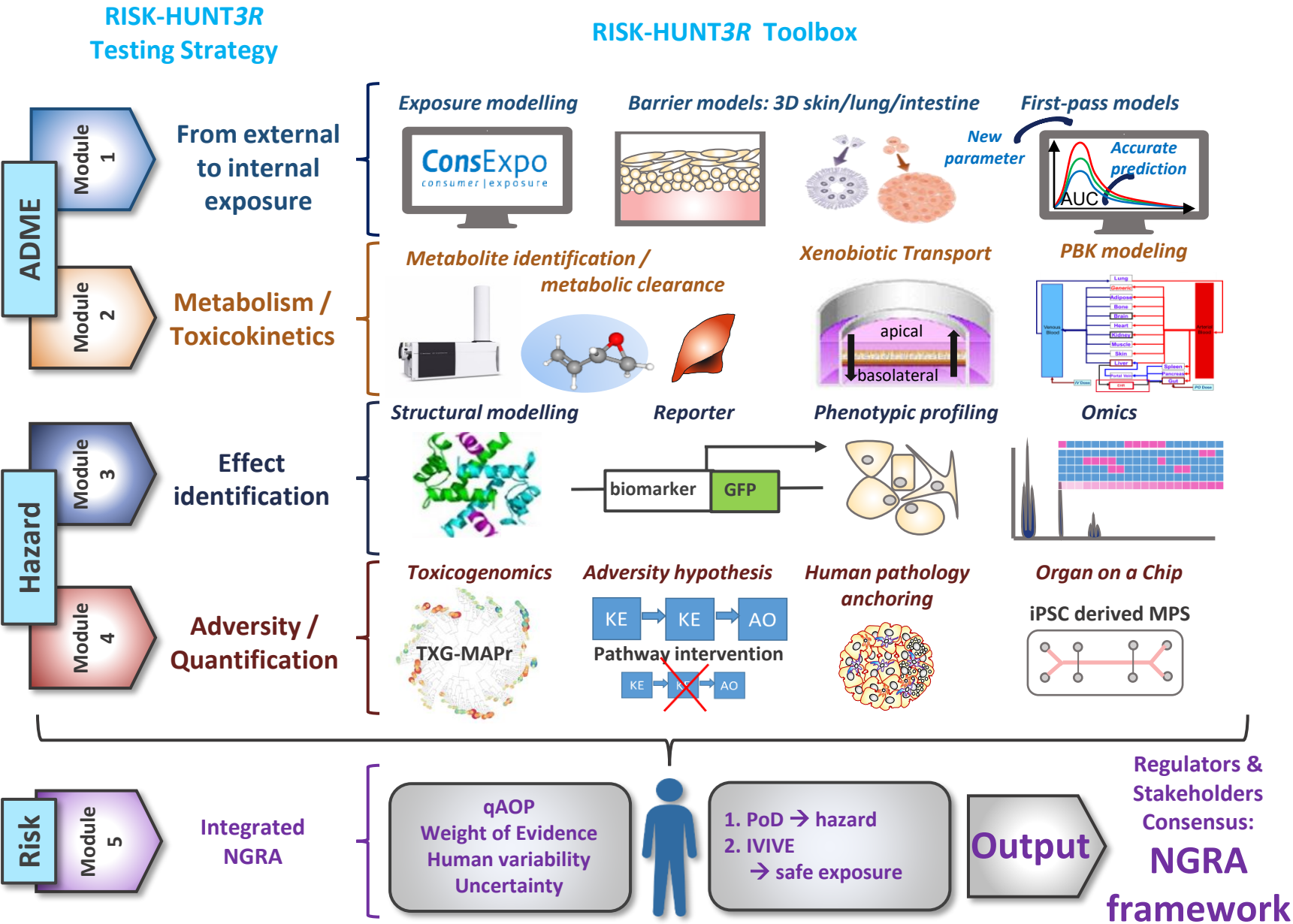
Author's affiliation: Leiden University

Project: RISK-HUNT3R



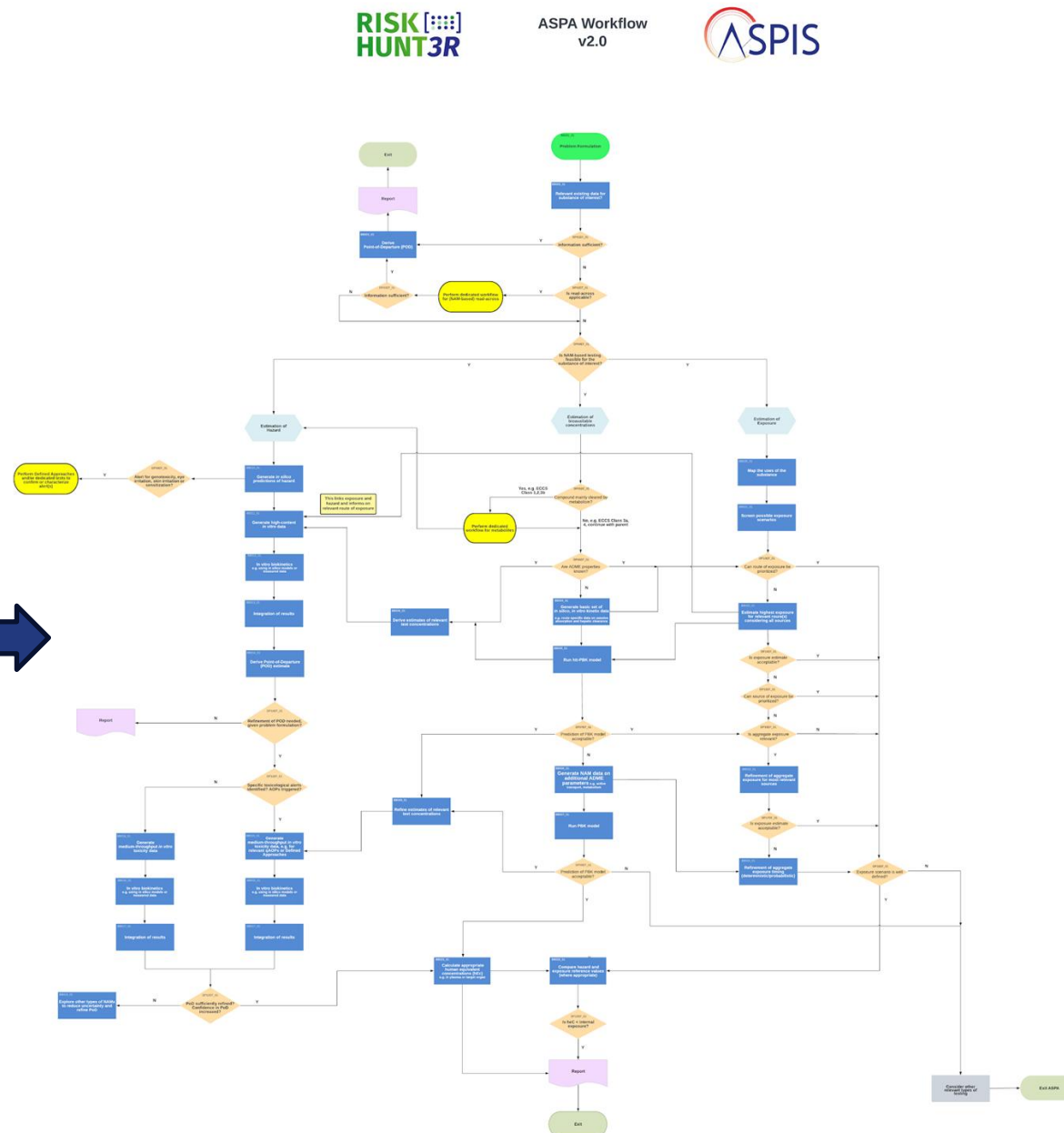
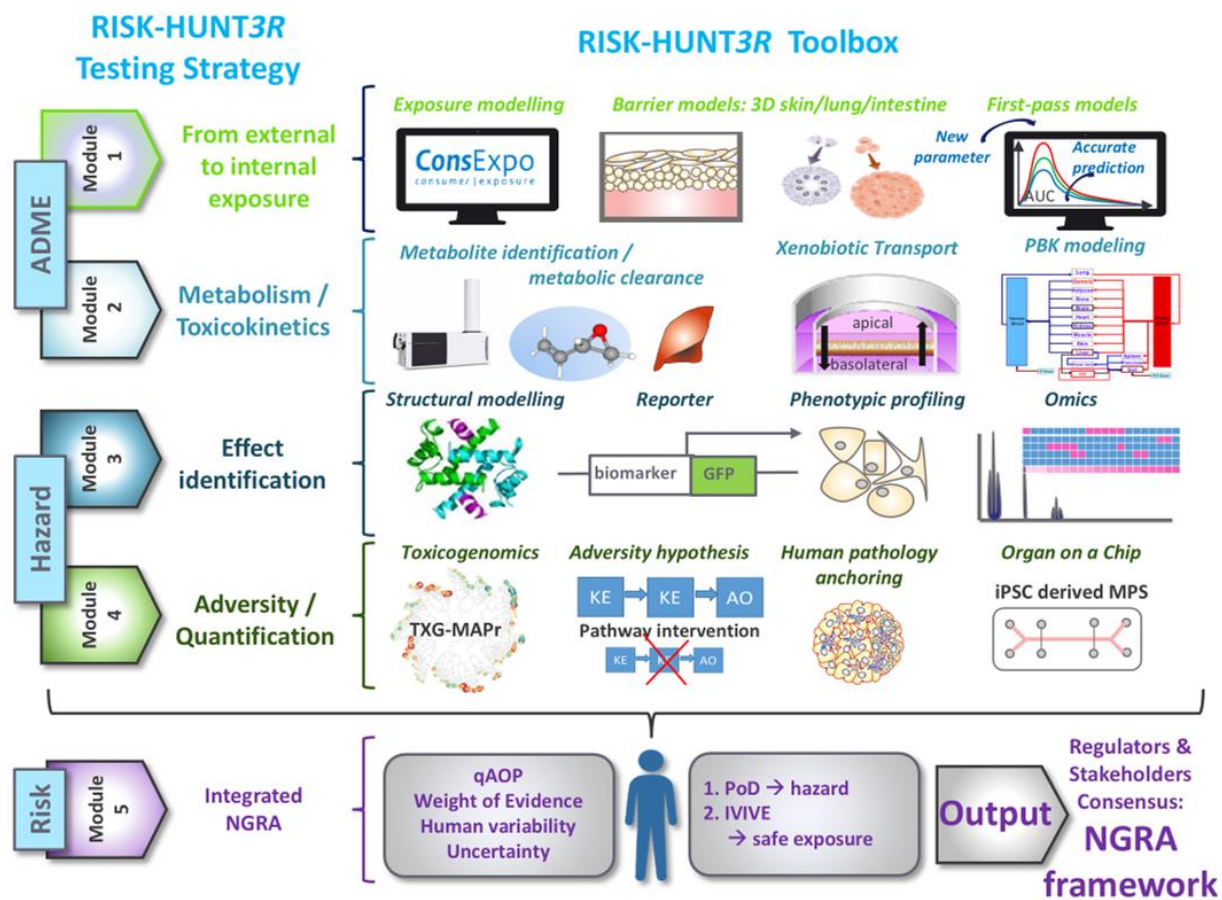
# RISK-HUNT3R toolbox for NGRA

Open Symposium 2-3 July 2026  
Maastricht The Netherlands





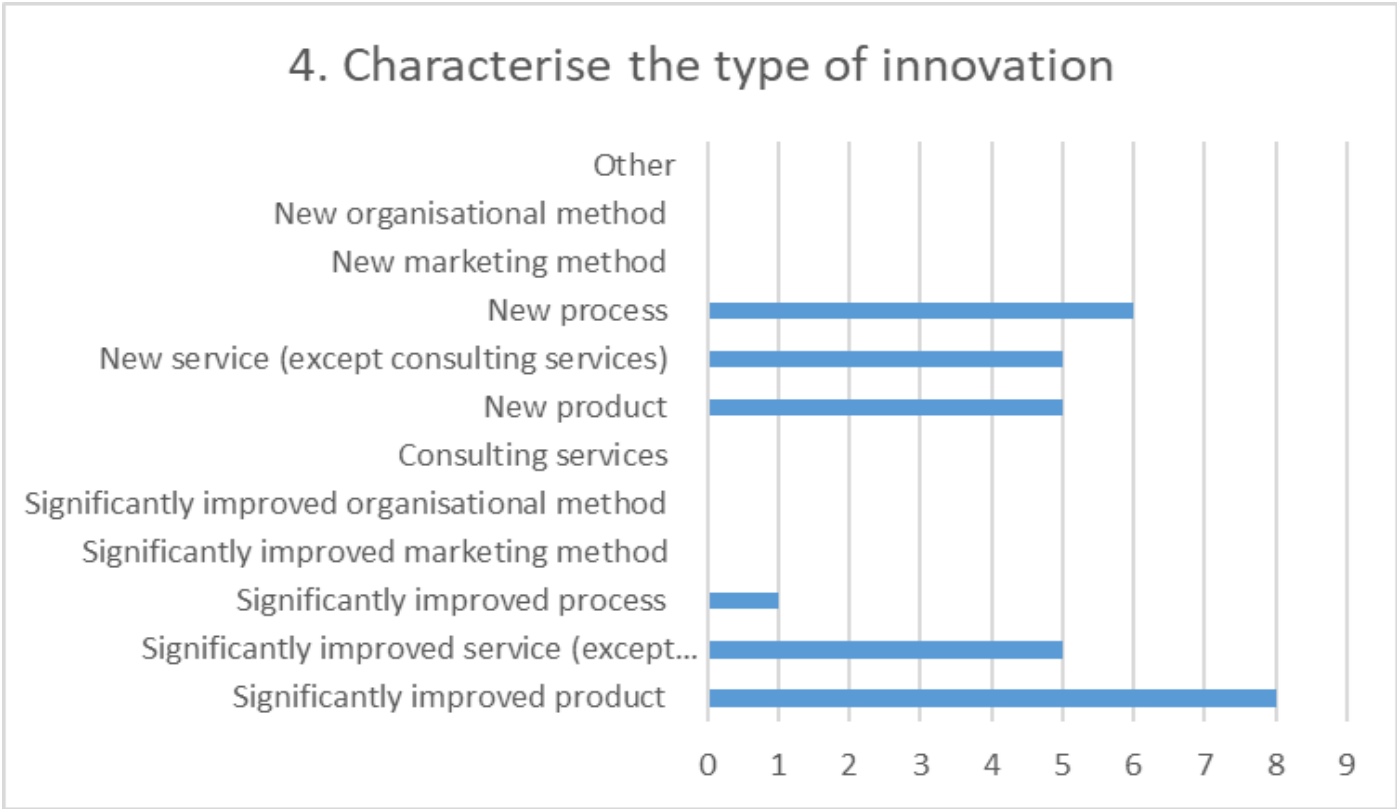
# NGRA toolbox for ASPA



Ensure flexible and sustainable availability of NGRA toolbox components

Market for cell-based technologies is projected to reach EUR 26.5 billion by 2028

➤ 25 RISK-HUNT3R innovations identified and described





## Toxicokinetics

- In silico model to predict **cellular distribution** of chemicals in in vitro test systems (Certara)
- **Primary human enterocytes** for intestinal metabolism. (Uppsala Univ/SciLifeLab)

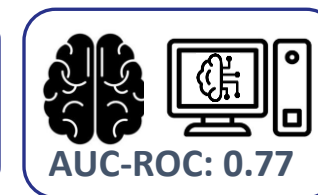
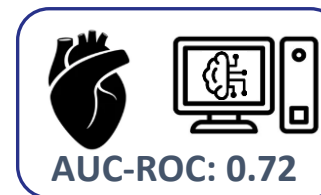
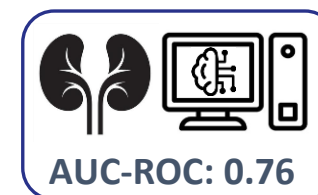
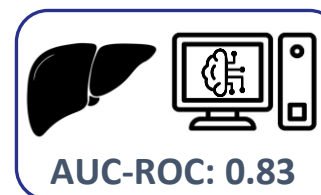
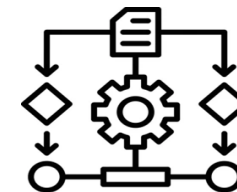
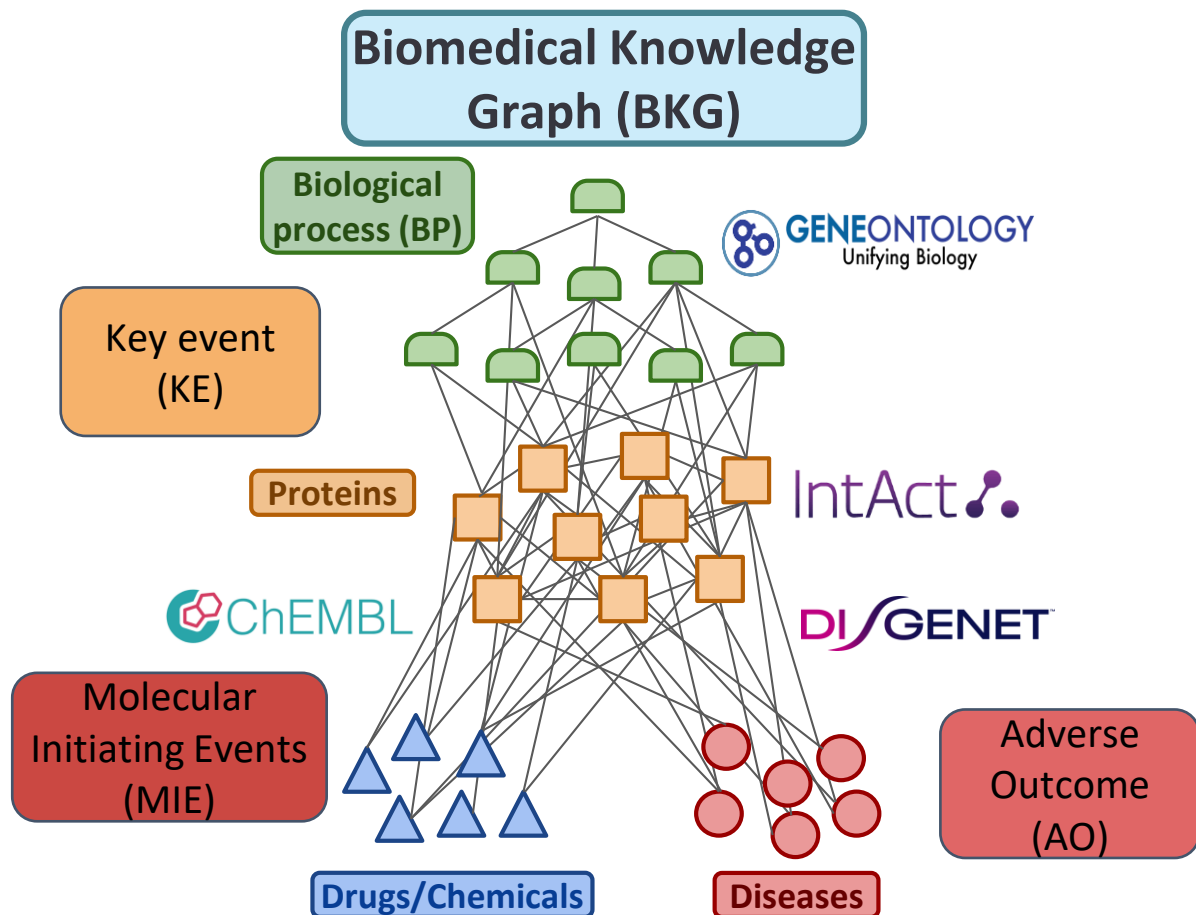
## Toxicodynamics - In silico

- **MolCompass**: Software for the Visual Analysis of QSAR/QSPR Models (Univ Vienna)
- **Chemical Effect Predictor**: an *in silico* tool to predict health hazard of chemicals (MedBioinformatics Solutions)
- **ToxPHACTS** - Hazard analysis and AOP driven read across (Univ Vienna)

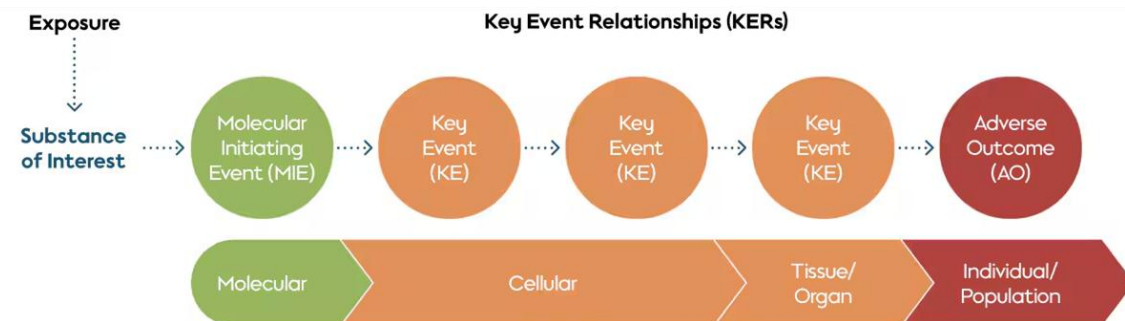


# Chemical Effect Predictor (CEP)

Open Symposium 2-3 July 2026  
Maastricht The Netherlands



## Adverse Outcome Pathway (AOP)

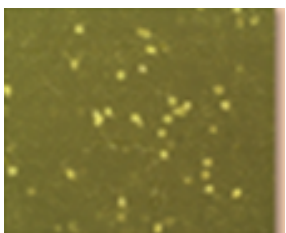




## Toxicodynamics – HTTr in vitro

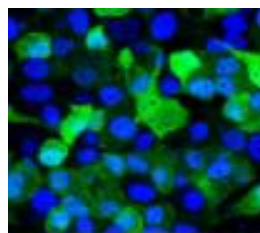
- **Cell Painting PLUS** assay for increased specificity in MoA prediction (BfR)
- **CALUX-assay battery** → MIE prediction (BDS)
- **ToxProfiler** - Image based fluorescent reporter technology to quantify chemically induced stress (Toxys)
- iPSC fluorescent protein **cell stress response reporter** platform (Univ Leiden)
- **HT Metabolomics** for hepatotoxicity hazard characterization (BASF)
- **TXG-MAPr** toolbox (Univ Leiden)

## U2OS CALUX reporter assays



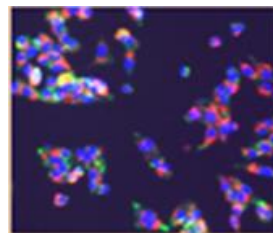
*30 nuclear  
receptors and  
signaling pathways*

## HepG2 ToxProfiler assays



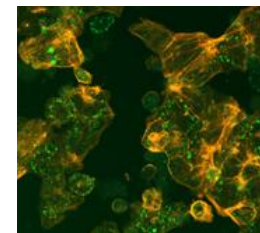
*Cell stress  
reporters*

## HepG2 Cell Painting PLUS



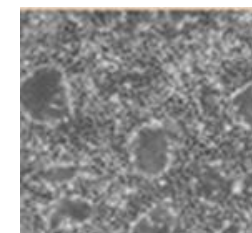
*Cell Painting PLUS*

## PHH

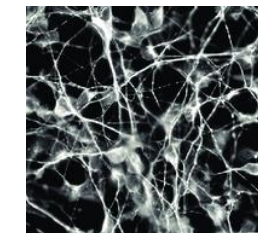


*Whole Transcriptome TempO-Seq-based toxicogenomics*

## RPTEC

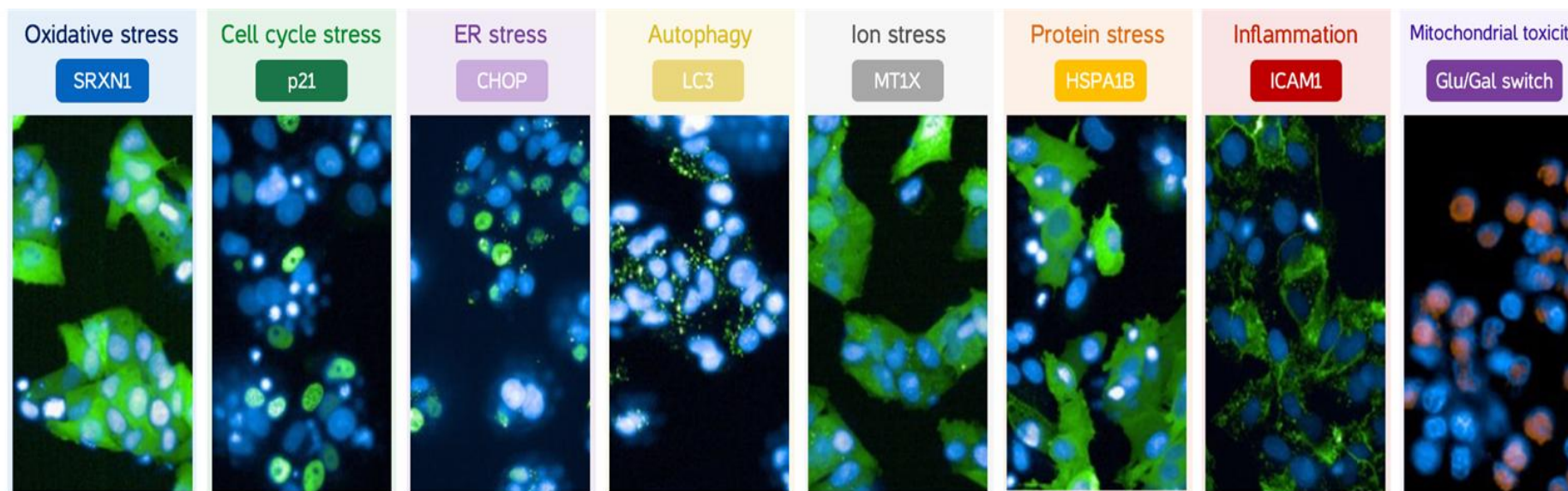


## LUHMES





- Panel of seven fluorescent reporter cell lines cellular stress response pathways for MoA assessment
- Applications domains:
  - Early-phase *in vitro* safety screening.
  - Read-across.
  - Weight-of-evidence approach.
  - Mechanistic interpretation of *in vivo* toxicity.

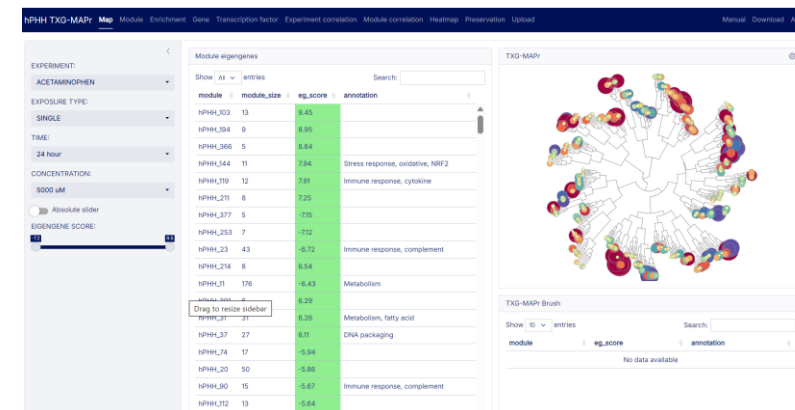




## Qualitative and quantitative interpretation of toxicogenomics data for mechanism-supported NGRA

- *Hazard identification and characterization*
- *AOP mapping*
- *Transcriptional POD*
- *Automated reports*

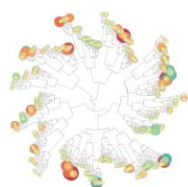
### Web-based interactive application



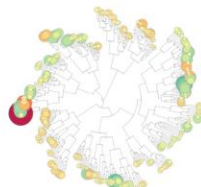
TXG-MAPr - login  
LACDR - Leiden University  
Welcome Bob



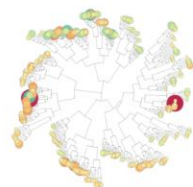
TG human PHH TXG-MAPr



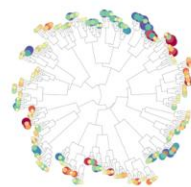
TG rat liver TXG-MAPr



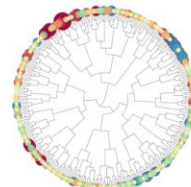
TG rat kidney TXG-MAPr



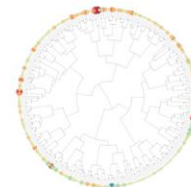
Human RPTEC/TERT1 TXG-MAPr



Human iPSC PTLC TXG-MAPr



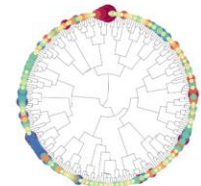
DM rat heart TXG-MAPr



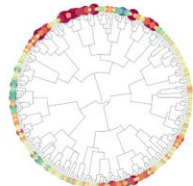
Human HepG2 TXG-MAPr



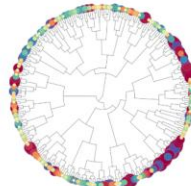
Human iPSC HLC-2D TXG-MAPr



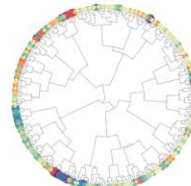
Human LiMT TXG-MAPr



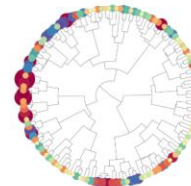
Human LUHMES day 2 TXG-MAPr



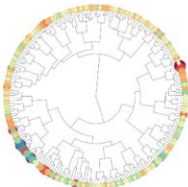
EPA Human HepaRG TXG-MAPr



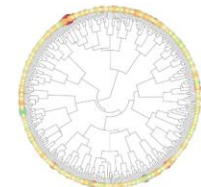
EPA Human MCF7 TXG-MAPr



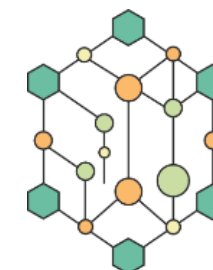
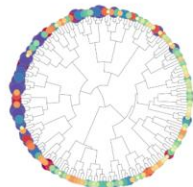
Human PBMC TXG-MAPr



Human PBMC donors TXG-MAPr



Human kidney TXG-MAPr



IT4TOX

candidate spinoff



## Toxicodynamics – Advanced testing

- Expanded read-outs for **H295R steroidogenesis assay** (BDS)
- hiPSC multicellular **liver organoids** (KU Leuven)
- **hiPSC-based kidney models** for kidney injury assessment (Free Univ Amsterdam)
- Integrated **Liver-Kidney Microperfusion System** Using iPSC-Derived Cells from a Single Donor (Free Univ Amsterdam/TissUse)
- Test method for modulation of **neuroinflammation** using iPSC-derived human microglia (Univ Konstanz)

## Integrated assessment – Quantitative Systems Toxicology

- A **Quantitative Systems Toxicology** Predictive Framework for Mitochondrial Toxicity (Certara)
- Quantitative Adverse Outcome Pathway (**qAOP**) for **Liver Injury** Leading to Fibrosis Following Chemical Insult (Certara)



# DNT battery

Open 2-3 July 2026  
Symposium Maastricht  
The Netherlands



t4 Workshop Report\*

## Recommendation on Test Readiness Criteria for New Approach Methods in Toxicology: Exemplified for Developmental Neurotoxicity

Anna Bal-Price<sup>1</sup>, Helena T. Hogberg<sup>2</sup>, Kevin M. Crofton<sup>3</sup>, Mardas Daneshian<sup>4</sup>, Rex E. FitzGerald<sup>5</sup>, Ellen Fritsche<sup>6</sup>, Tiina Heimonen<sup>7</sup>, Susanne Hougard Bennekou<sup>8</sup>, Stefanie Klima<sup>9</sup>, Aldert H. Piersma<sup>10</sup>, Magdalini Sachana<sup>11</sup>, Timothy J. Shafer<sup>3</sup>, Andrea Terron<sup>12</sup>, Florianne Monnet-Tschudi<sup>5,13</sup>, Barbara Viviani<sup>14</sup>, Tanja Waldmann<sup>9</sup>, Renzo H. S. Westerink<sup>15</sup>, Martin F. Wilks<sup>5</sup>, Hilda Witters<sup>16</sup>, Marie-Gabrielle Zurich<sup>5,13</sup> and Marcel Leist<sup>4,8</sup>



## Template for the Description of Cell-Based Toxicological Test Methods to Allow Evaluation and Regulatory Use of the Data

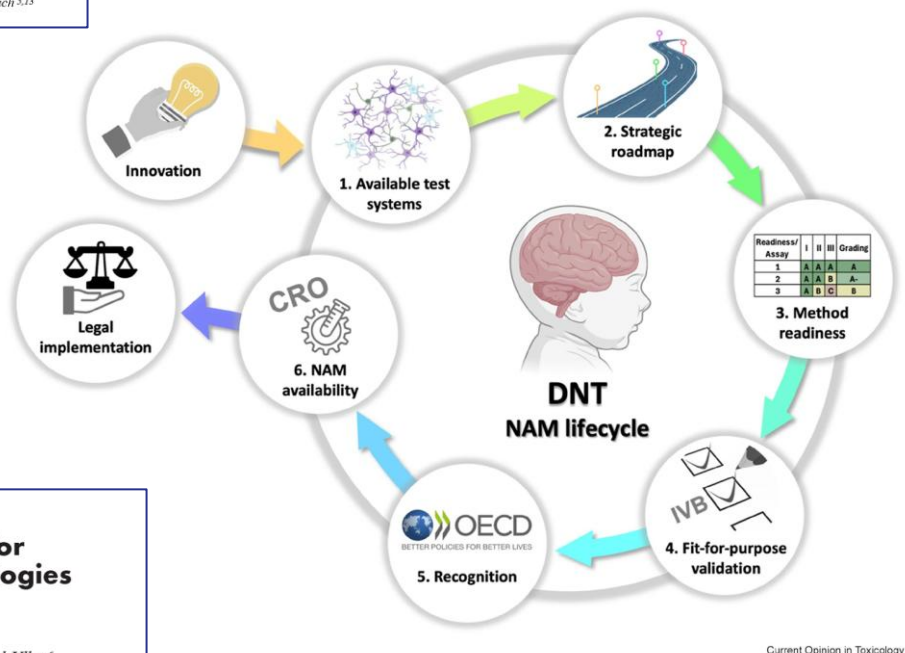
Alice Krebs<sup>1,2</sup>, Tanja Waldmann<sup>1</sup>, Martin F. Wilks<sup>3</sup>, Barbara M. A. van Vegt-Luxenburg<sup>4</sup>, Bart van der Burg<sup>4</sup>, Andrea Terron<sup>5</sup>, Thomas Steger-Hartmann<sup>6</sup>, Joelle Ruegg<sup>7</sup>, Costanza Rovida<sup>8</sup>, Emma Pedersen<sup>9</sup>, Georgia Pallocca<sup>10</sup>, Mirjam Luyten<sup>11</sup>, Sofia B. Leite<sup>12</sup>, Stefan Kustermann<sup>13</sup>, Henricke Kamp<sup>14</sup>, Julia Hoeng<sup>15</sup>, Philip Hewitt<sup>16</sup>, Matthias Herzer<sup>17</sup>, Jan G. Hengstler<sup>18</sup>, Tiina Heimonen<sup>19</sup>, Thomas Hartung<sup>20,21</sup>, Barry Hardy<sup>22</sup>, Florian Gantner<sup>23</sup>, Ellen Fritsche<sup>24</sup>, Kristina Fant<sup>25</sup>, Janine Ezendani<sup>26</sup>, Thomas Exner<sup>27</sup>, Torsten Dunkern<sup>28</sup>, Daniel R. Dietrich<sup>29</sup>, Sandra Coecke<sup>30</sup>, Francois Busquet<sup>31,32</sup>, Albert Brauning<sup>33</sup>, Olesja Bondarenko<sup>34</sup>, Susanne H. Bennekou<sup>35</sup>, Mario Beilmann<sup>36</sup> and Marcel Leist<sup>1,2,8</sup>



## The Long Way from Raw Data to NAM-Based Information: Overview on Data Layers and Processing Steps

Jonathan Blum<sup>1</sup>, Markus Brüll<sup>1</sup>, Jan G. Hengstler<sup>2</sup>, Daniel R. Dietrich<sup>3</sup>, Andreas J. Gruber<sup>4</sup>, Michele Dipalo<sup>5</sup>, Udo Kraushaar<sup>6</sup>, Iris Mangas<sup>7</sup>, Andrea Terron<sup>8</sup>, Ellen Fritsche<sup>9</sup>, Philip Marx-Stoelting<sup>10</sup>, Barry Hardy<sup>11</sup>, Andreas Schepky<sup>12</sup>, Sylvia E. Escher<sup>13</sup>, Thomas Hartung<sup>14,20</sup>, Robert Landsiedel<sup>15</sup>, Alex Odermatt<sup>16,18</sup>, Magdalini Sachana<sup>17</sup>, Katharina Koch<sup>18,19</sup>, Arif Dönmez<sup>18,19</sup>, Stefan Masjosthusmann<sup>21</sup>, Kathrin Bothe<sup>21</sup>, Stefan

W. Edwards Deming



Current Opinion in Toxicology



Chemosphere

Chemosphere 311 (2023) 137035



Establishment of a human cell-based in vitro battery to assess developmental neurotoxicity hazard of chemicals

Jonathan Blum<sup>a,1</sup>, Stefan Masjosthusmann<sup>b,1</sup>, Kristina Bartmann<sup>b</sup>, Farina Bendt<sup>b</sup>,



Article

## PeriTox-M, a Cell-Based Assay for Peripheral Neurotoxicity with Improved Sensitivity to Mitochondrial Inhibitors

Anna-Katharina Holzer<sup>1</sup>, Mira Dürr<sup>1</sup>, Selina Multus<sup>1</sup>, Laura Dangel<sup>1</sup>, Viktoria Magel<sup>1</sup> and Marcel Leist<sup>1,2,\*</sup>

- Technological development
- Battery assembly
- Assay robustness and quality control for defined services (lab certifications etc.)



DNT Battery reached TRL 6

## Conference Report Developmental Neurotoxicity (DNT): A Call for Implementation of New Approach Methodologies for Regulatory Purposes: Summary of the 5<sup>th</sup> International Conference on DNT Testing

Ivana Celardo<sup>1,2</sup>, Michael Aschmer<sup>3</sup>, Randolph S. Ashton<sup>4</sup>, Kelly E. Carstens<sup>5</sup>, Andrea Cediell-Ulloa<sup>6</sup>, Eike Cölln<sup>1,7</sup>, Kevin M. Crofton<sup>8</sup>, Susan J. Debad<sup>9</sup>, Nadine Dreser<sup>4</sup>, Suzanne Fitzpatrick<sup>10</sup>, Ellen Fritsche<sup>11,12,13</sup>, Sebastian Gutsfeld<sup>14</sup>, Barry Hardy<sup>15</sup>, Thomas Hartung<sup>16</sup>, Ellen Hesselt<sup>17</sup>, Harm Heusinkveld<sup>18</sup>, Helena T. Hogberg<sup>18</sup>, Jui-Hua Hsieh<sup>19</sup>, Yasumari Kanda<sup>20</sup>, Gavin T. Knight<sup>4</sup>, Thomas Knudsen<sup>21</sup>, Katharina Koch<sup>13,22</sup>, Eliska Kuchovska<sup>22</sup>, Iris Mangas<sup>23</sup>, M. Sue Marty<sup>24</sup>, Stephanie Melchior-Kollmann<sup>25</sup>, Iris Müller<sup>26</sup>, Patrick Müller<sup>1,27</sup>, Odd Magdalini Sachana<sup>32</sup>, Kevin Schlipp<sup>28</sup>, Tamara Tall<sup>14</sup>, Yaroslav Tanaskov<sup>1,7</sup>, Maurice Whelan<sup>31</sup> and Marcel Leist<sup>1,2,8</sup>

Article

## Differential Responses of Human iPSC-Derived Microglia to Stimulation with Diverse Inflammogens

Chiara Wolfbeisz<sup>1</sup>, Julian Suess<sup>1</sup>, Nadine Dreser<sup>1</sup>, Heidrun Leisner<sup>1</sup>, Markus Brüll<sup>1</sup>, Madeleine Fandrich<sup>2</sup>, Nicole Schneiderhan-Marra<sup>2</sup>, Oliver Poetz<sup>2,3</sup>, Thomas Hartung<sup>4,5,6</sup> and Marcel Leist<sup>1,4,\*</sup>



## Method documentation

- **ToxTemp** Web-accessible template and database for the documentation of in vitro methods (Univ Konstanz)

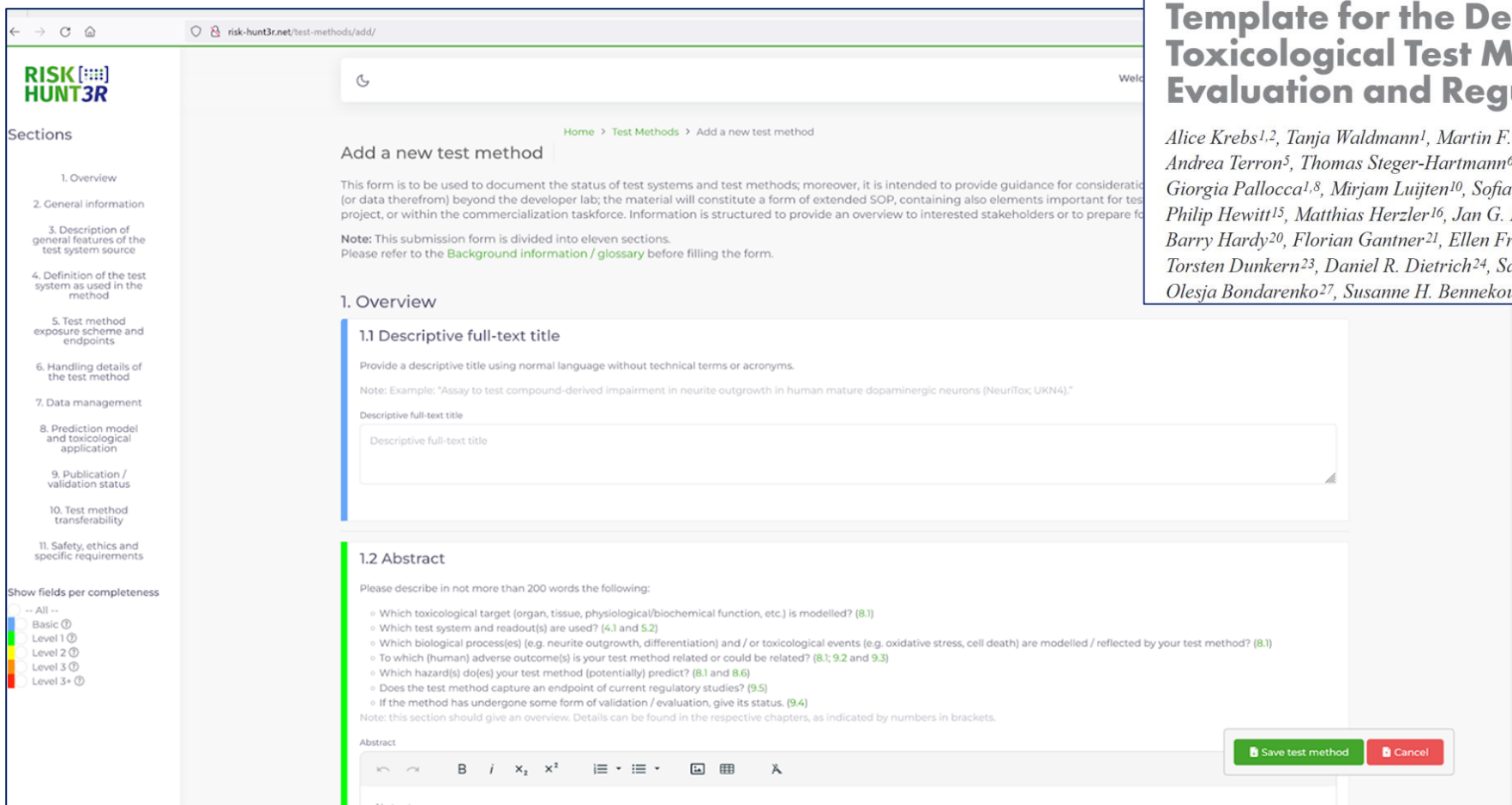
## Data integration and safety assessment

- Web-accessible dashboard for supporting the practical use of Next Generation Risk Assessment workflows (**ASPA-assist**) (UPF)
- An **Uncertainty Framework** for Chemical Safety Assessment Using the ASPA Implementation (Univ Lund)
- **Knowledge Infrastructure** for Next Generation Risk Assessment (EWC)

## Sustainability of integrated testing

- **SaferWorldbyDesign** – Platform for the Delivery of Next Generation Product Design and Risk Assessment Solutions (EWC)

- ToxTemp: established as an **online tool** to report method description of (RISK-HUNT3R) test systems including performance and color coding for readiness level.
- ToxTemp NAM documentation is essential for all nodes of the ASPA workflow to relate data to the method



The screenshot displays the 'Add a new test method' page in the ToxTemp web application. The browser address bar shows 'risk-hunt3r.net/test-methods/add/'. The left sidebar contains a 'Sections' menu with 11 items, and a 'Show fields per completeness' section with radio buttons for 'All', 'Basic', and 'Level 1', 'Level 2', 'Level 3', and 'Level 3+'. The main content area is titled 'Add a new test method' and includes a breadcrumb trail 'Home > Test Methods > Add a new test method'. Below the title, there is a paragraph explaining the form's purpose and a 'Note' stating that the form is divided into eleven sections. The '1. Overview' section is currently active, containing two sub-sections: '1.1 Descriptive full-text title' and '1.2 Abstract'. The '1.1 Descriptive full-text title' section includes a text input field and a 'Save test method' button. The '1.2 Abstract' section includes a text input field and a 'Cancel' button.

## Template for the Description of Cell-Based Toxicological Test Methods to Allow Evaluation and Regulatory Use of the Data

Alice Krebs<sup>1,2</sup>, Tanja Waldmann<sup>1</sup>, Martin F. Wilks<sup>3</sup>, Barbara M. A. van Vugt-Lussenburg<sup>4</sup>, Bart van der Burg<sup>4</sup>, Andrea Terron<sup>5</sup>, Thomas Steger-Hartmann<sup>6</sup>, Joelle Ruegg<sup>7</sup>, Costanza Rovida<sup>8</sup>, Emma Pedersen<sup>9</sup>, Giorgia Pallocca<sup>1,8</sup>, Mirjam Luijten<sup>10</sup>, Sofia B. Leite<sup>11</sup>, Stefan Kustermann<sup>12</sup>, Henricke Kamp<sup>14</sup>, Julia Hoeng<sup>14</sup>, Philip Hewitt<sup>15</sup>, Matthias Herzler<sup>16</sup>, Jan G. Hengstler<sup>17</sup>, Tuula Heinonen<sup>18</sup>, Thomas Hartung<sup>8,19</sup>, Barry Hardy<sup>20</sup>, Florian Gantner<sup>21</sup>, Ellen Fritsche<sup>22</sup>, Kristina Fant<sup>9</sup>, Janine Ezendam<sup>10</sup>, Thomas Exner<sup>20</sup>, Torsten Dunkern<sup>23</sup>, Daniel R. Dietrich<sup>24</sup>, Sandra Coecke<sup>11</sup>, Francois Busquet<sup>8,25</sup>, Albert Braeuning<sup>26</sup>, Olesja Bondarenko<sup>27</sup>, Susanne H. Bennekou<sup>28</sup>, Mario Beilmann<sup>29</sup> and Marcel Leist<sup>1,2,8</sup>



Home

Compounds DB

Test Methods DB

Test Methods DB

RGM admin page

Ongoing Test Meth...

Case Studies

Data Analysis

Refresh

Select your organisation

Welcome, [ebawe@food.dtu.dk](#)

Ongoing Test Methods

Home > Test Methods

TEST METHOD STATUS:

IN PROGRESS

PENDING REVIEW

RETRACTED

REJECTED

ACCEPTED

MIGRATION NEEDED

How many Test Methods:

117

57

10

1

0

125

READINESS LEVEL:

BEFORE BASIC

BASIC LVL

1 LVL

2 LVL

3 LVL

FINAL - ALL FILLED UP

How many Test Methods:

122

164

9

12

3

0

Save reviewers

Reset view

Export to Excel

| TEST METHOD                       | DESCRIPTION                                                            | CREATED BY               | CREATED ON / UPDATED ON                                | ORGANISATION | STATUS / READINESS LVL | CONTACT PERSON     | OTHER PERSONS                                                                                                              |
|-----------------------------------|------------------------------------------------------------------------|--------------------------|--------------------------------------------------------|--------------|------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------|
| BASF1a_Liver_HepG2_Metabolomics_1 | Assay to analyze endogenous metabolite levels in HEPG2 cells ("µMIV"). | Franziska-Maria Zickgraf | March 27, 2024, 12:09 p.m.<br>June 2, 2026, 12:35 p.m. | BASF         | Pending review / 2     | Franziska Zickgraf | <ul style="list-style-type: none"><li>Hennicke Kamp (Managing Director)</li><li>Philipp Ternes (Lab Team Leader)</li></ul> |

Ongoing Test Methods

Home > Test Methods

TEST METHOD STATUS:

IN PROGRESS

PENDING REVIEW

RETRACTED

REJECTED

ACCEPTED

MIGRATION NEEDED

TOTAL

How many Test Methods:

117

57

10

1

0

125

310

READINESS LEVEL:

BEFORE BASIC

BASIC LVL

1 LVL

2 LVL

3 LVL

FINAL - ALL FILLED UP

How many Test Methods:

122

164

9

12

3

0



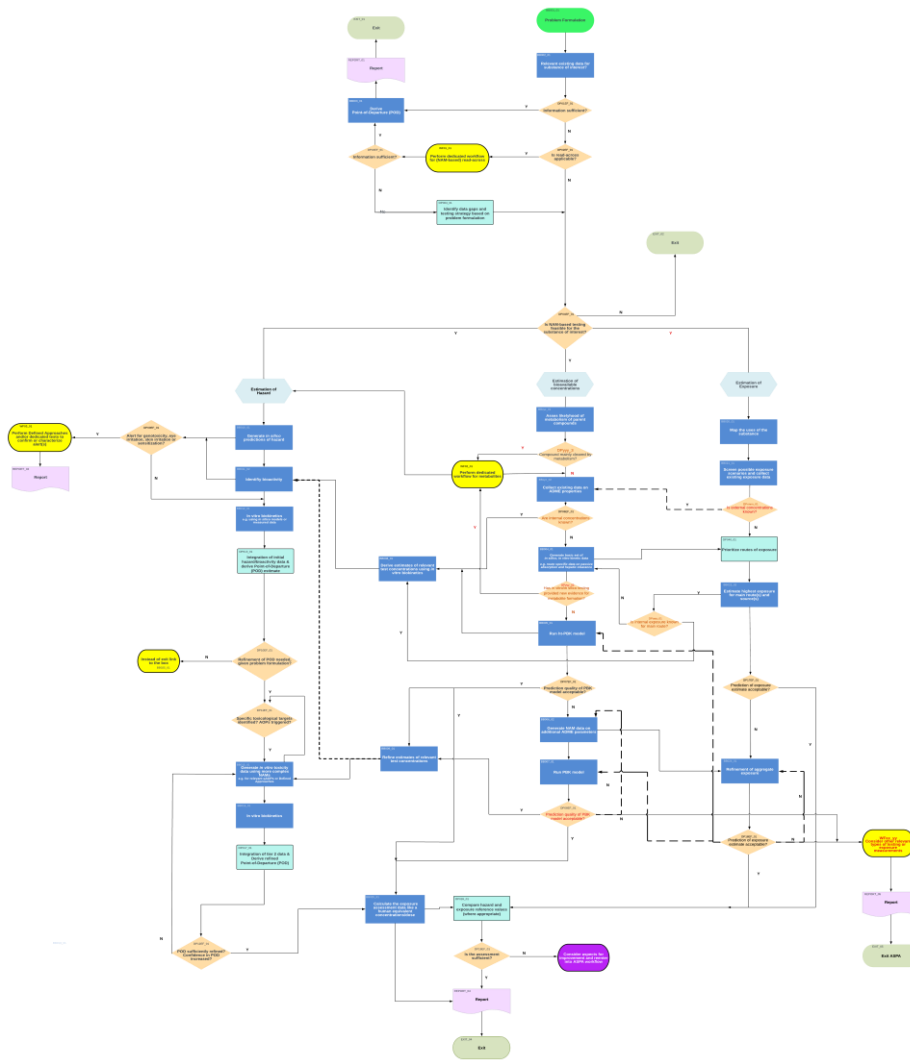
# ASPIS-assist to support data integration and assessment based on ASPA workflow

Open 2-3 July 2026  
Symposium Maastricht The Netherlands

RISK HUNT3R

Draft ASPA Workflow v3.0

ASPIS



OverviewGeneral informationTasksDecisionsNotesReport

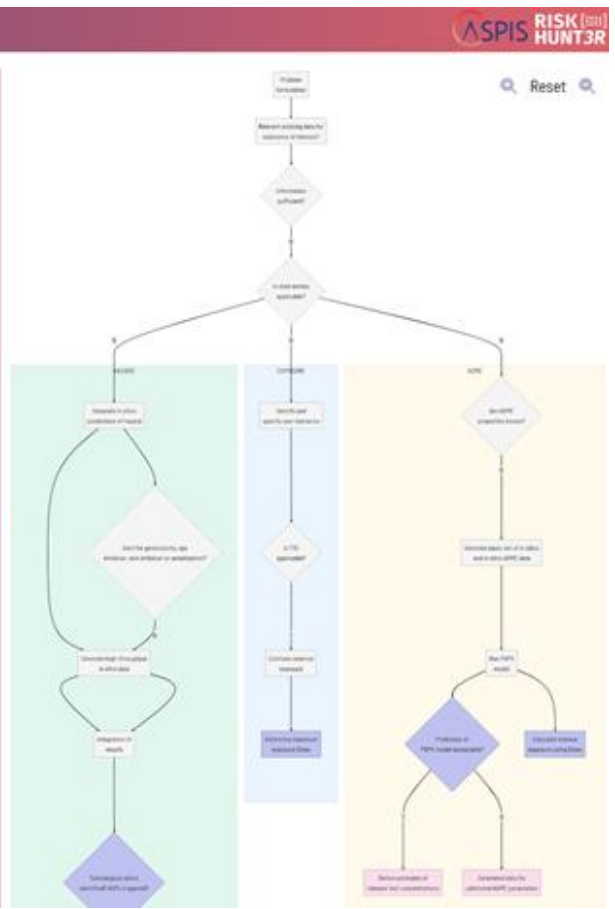
RA CS2-02

CS2-02 (XD4X1GRGY)

Case study CS2-02 from D2.3

|           |           |                                                              |
|-----------|-----------|--------------------------------------------------------------|
| Substance | Name      | 4-Hydroxy-2,2,6,6-tetramethylpiperidin-1-yl(oxidanyl, tempol |
|           | ID        | dtxcid:DTXCID2021280,dtxsid:DTXSID4041280,pubchemid:1375     |
|           | CAS-RN    | 2226-96-2                                                    |
|           | Structure |                                                              |

|           |                                                                                                                                                                                         |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Endpoint  | Systemic repeated dose toxicity                                                                                                                                                         |
| AR        | Oral                                                                                                                                                                                    |
| Species   | Human                                                                                                                                                                                   |
| Framework | Regulation (EC) No 178/2002 for Food and Feed (EFSA)                                                                                                                                    |
| Summary   | The regulatory context of the scenario in case study 2-02 (CS2-02) focused on food contaminants and therefore an emergency response using relevant population-based consumer exposures. |
| Status    | Workflow Step Active nodes                                                                                                                                                              |
|           | workflow.csv 16                                                                                                                                                                         |
|           | DP04EF_01 Prediction of PBPK model acceptable?                                                                                                                                          |
|           | BB028_01 Calculate internal exposure using Emax                                                                                                                                         |
|           | BB024_01 Determine maximum exposure Emax                                                                                                                                                |
|           | BB010_01 Integration of results                                                                                                                                                         |
|           | DP08EF_01 Toxicological alters identified? AOPs triggered?                                                                                                                              |





Development of SaferWorldbyDesign platform including a web portal, content management system, solution provision, consulting desk and online shop and financial transaction management system.

SaferWorldbyDesign  
**SOLUTIONS**  
HANDBOOK



Powered by:  
  
Created with  


**SaferSkin™**

SaferSkin is an integrating application which supports the determination of key safety properties of skin, including irritation, toxicology, permeation, metabolism and sensitization.

**SaferNeuron**

With SaferNeuron we provide solutions to characterize compounds for neurotoxicity or its absence, thus supporting the design of safer products for both adults and children.

**SaferEndocrine**

With SaferEndocrine we offer integrated approaches to assess compounds for endocrine-disruptive concerns. We offer solutions including in vitro assays, computational toxicology, metabolism and regulatory toxicology assessments.

**SaferLiver**

With the SaferLiver solution package we provide services in the field of hepatotoxicity, including integrated in vitro models and in vivo assays that are based on latest developed cell and tissue models.

**SaferLung**

Our Lung solution integrates in vitro and in silico methods to support the determination of key safety properties of lungs, such as irritation, cytotoxicity, permeation, metabolism and sensitization.

**SaferKidney**

This package offers in vitro and in vivo models to evaluate nephrotoxicity based on recent research in kidney toxicology. It includes new cell and tissue models to better understand the molecular mechanisms underlying kidney toxicity.

## Safer-Expertise

In addition to our cutting-edge organ-specific solutions, we offer a range of comprehensive services including risk assessment, data analysis, characterisation, and toxicogenomics to help your business stay ahead of the game.

**Risk assessment**

During the research and development phase of new products, the early identification of possible concerns can help in significant downstream resource savings, both in go-to-market and post-market launch situations.

**Toxicogenomics**

With the toxicogenomics solution package we offer services in the fields of transcriptomics, proteomics, metabolomics, lipidomics, epigenetics and bioinformatics.

**Data services**

We excel in the field of Data Science by adopting a holistic approach that combines technical expertise with strategic thinking.

**Characterisation**

With our Characterisation solution package we provide new approach methods for characterisation of compounds, advanced materials and nanomaterials in the field of toxicology and new approach risk assessment.

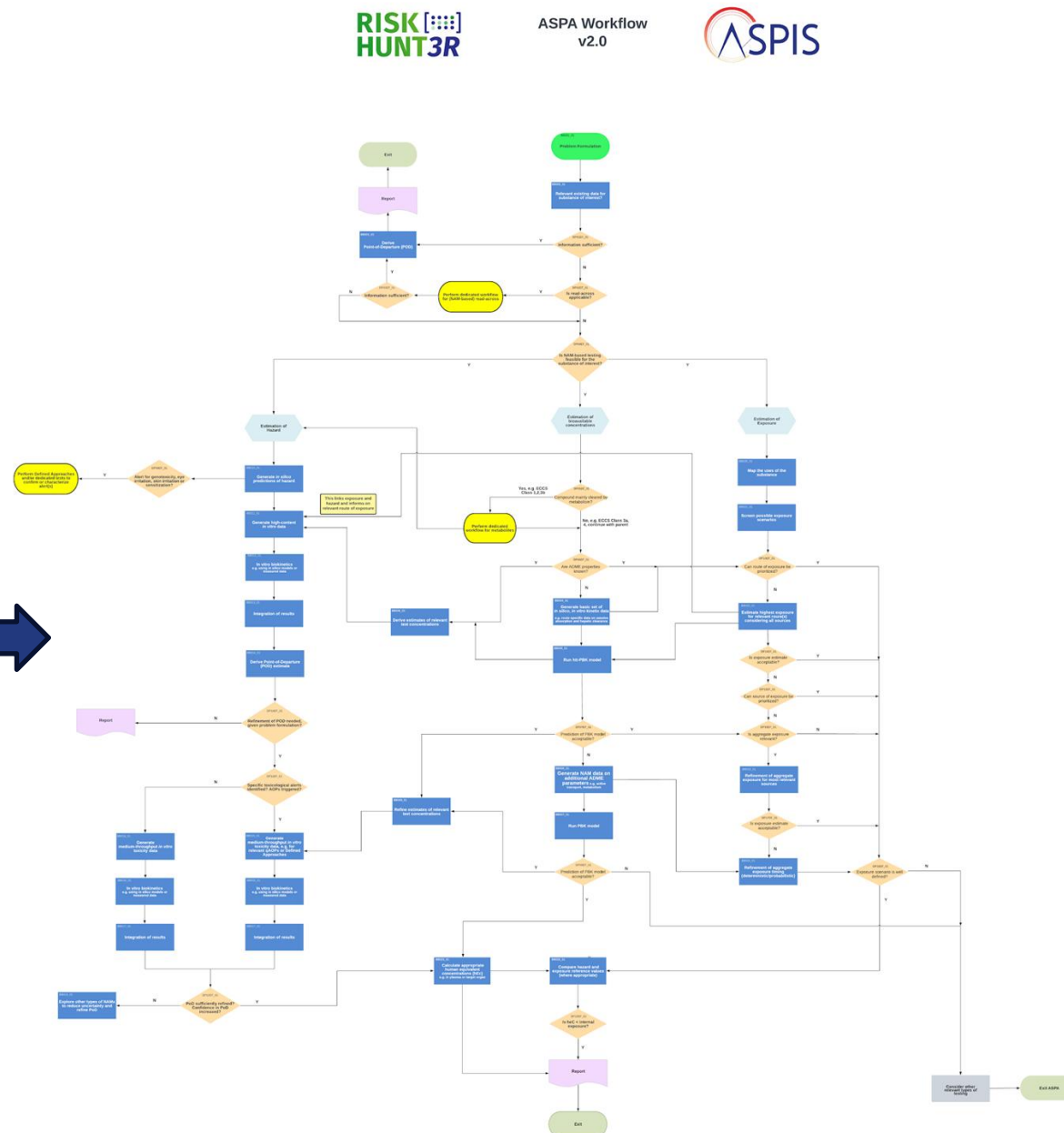
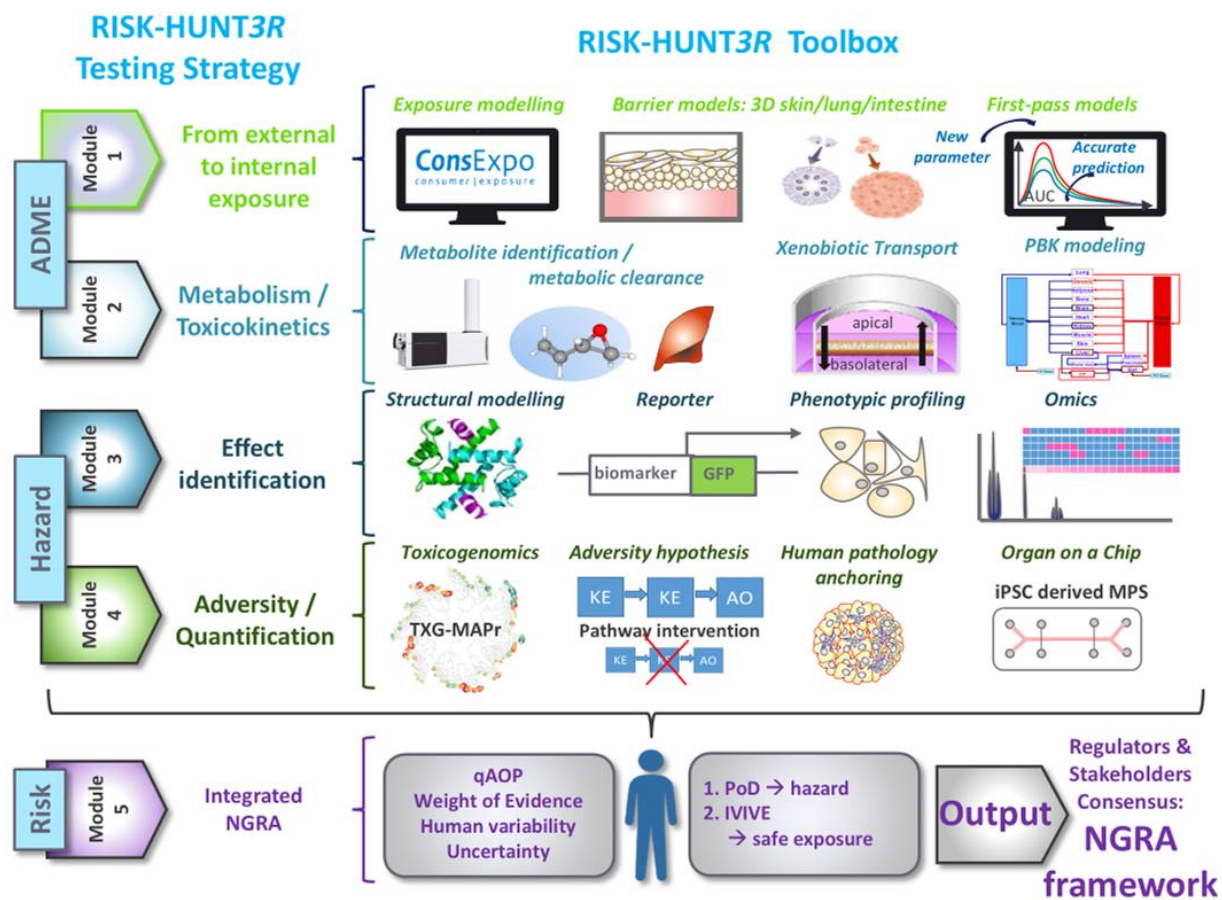
| Innovation                                                                                                                                                                                           | Experimental | PoC | Spin-off | Market  | TRL | Key organisation(s)                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----|----------|---------|-----|---------------------------------------------------------------------------------------------------|
| Toxprofiler – Image based fluorescent reporter technology to quantify chemically induced stress for toxicological potency ranking, mode-of-action assessment and to facilitate chemical read-across. |              |     |          |         | 7   | Toxys                                                                                             |
| Expanded read-outs for H295R steroidogenesis assay to improve enzyme inhibition detection                                                                                                            |              |     | NA       |         | 7   | BioDetection Systems (BDS)                                                                        |
| Knowledge Infrastructure for Next Generation Risk Assessment                                                                                                                                         |              |     |          | 2025-27 | 6   | Edelweiss Connect (EwC)                                                                           |
| Web-accessible dashboard for supporting the practical use of Next Generation Risk Assessment workflows (ASPA)                                                                                        |              |     |          | 2025-27 | 6   | Universitat Pompeu Fabra (UPF)<br>Edelweiss Connect (EwC)                                         |
| SaferWorldbyDesign – Platform for the Delivery of Next Generation Product Design and Risk Assessment Solutions                                                                                       |              |     |          | 2025-27 | 6   | Edelweiss Connect (EwC)                                                                           |
| ToxTemp Web-accessible template and database for the documentation of in vitro methods coupled to different readiness levels and review workflow                                                     |              |     | NA       | 2025-27 | 6   | Konstanz Universität (UKN)<br>Edelweiss Connect (EwC)<br>Bundesinstitut für Risikobewertung (BfR) |
| TXG-MAPr tool                                                                                                                                                                                        |              |     |          | 2025-27 | 5   | Leiden University (UL)                                                                            |
| In silico model to predict cellular distribution of chemicals in in vitro test systems                                                                                                               |              |     | NA       | 2025-27 | 5   | Certara (CER)<br>University of Uppsala (UU)                                                       |
| Enhanced Cell Toxicity Testing by Mode of Action Analysis using Targeted Protein and Phospho Protein Profiling                                                                                       |              |     |          | 2025-27 | 5   | SIGNATOPE (SIG)                                                                                   |
| Improving Safety of Chemicals and Drugs - Translational Protein Biomarker to Detect Chemically Induced Liver and Kidney Damage in Cell Co-Culture Models to Reduce Animal Testing                    |              |     |          | 2025-27 | 5   | SIGNATOPE (SIG)                                                                                   |
| Test method for modulation of neuroinflammation and triggering of neurotoxicity, based on iPSC-derived human microglia (brain macrophages) functionalities                                           |              |     | NA       | 2025-27 | 5   | Konstanz University (UKN)<br>Signatope (SIG)<br>CAAT-Europe (CAAT)                                |
| Integrated Liver-Kidney Microperfusion System Using iPSC-Derived Cells from a Single Donor                                                                                                           |              |     | NA       | 2025-27 | 5   | Vrije Universiteit Amsterdam (VU)<br>TissUse (TU)<br>Katholieke Universiteit Leuven (KUL)         |
| Chemical Effect Predictor: an in silico tool to predict health hazard of chemicals                                                                                                                   |              |     | NA       | 2025-27 | 5   | Medbioinformatics Solutions SL (MBIS)                                                             |
| Development of hiPSC-based kidney organoids as an advanced in vitro test system for kidney injury assessment                                                                                         |              |     | NA       | 2027-29 | 4   | Leiden University (UL)                                                                            |

Before/in RH3R

After RH3R



# NGRA toolbox for ASPA



Ensure flexible and sustainable availability of NGRA toolbox components



**RISK [:::]**  
**HUNT3R**

**Thank you**



*This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 964537.*

