

NeuroDeRisk

Project ID: 821528

Funded under: [H2020-EU.3.1.7. - Innovative Medicines Initiative 2 \(IMI2\)](#)

Neurotoxicity De-Risking in Preclinical Drug Discovery

From 2019-03-01 **to** 2022-08-31, ongoing project

Project details

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| Total cost: EUR 9 752 062,50 | Topic(s): IMI2-2017-13-10 - Improving the preclinical prediction of adverse effects of pharmaceuticals on the nervous system |
| EU contribution: EUR 5 331 000 | Call for proposal: H2020-JTI-IMI2-2017-13-two-stage See other projects for this call |
| Coordinated in: Austria | Funding scheme: IMI2-RIA - Research and Innovation action |

Objective

The adverse effects of pharmaceuticals on the central or peripheral nervous systems are poorly predicted by the current in vitro and in vivo preclinical studies performed during Research and Development (R&D) process. Therefore, increasing the predictivity of the preclinical toolbox is a clear need, and would benefit to human volunteers/patients (safer drugs) and Pharmaceutical Industry (reduced attrition). By combining top level scientists in neurobiology/toxicology with successful software developers, the NeuroDeRisk | Neurotoxicity De-Risking in Preclinical Drug Discovery Consortium will aim at tackling three of the most challenging adverse effects: seizures, psychological/psychiatric changes, and peripheral neuropathies. Our approach will be global, starting with an in-depth evaluation of knowledge on mechanisms of neurotoxicity (biological pathways as well as chemical structures and descriptors, using in particular historical data). Then we will search for innovative tools, assays and studies covering in silico, in vitro and in vivo approaches. This will include in particular: molecular design platform, artificial intelligence, human induced pluripotent stem cells, blood-brain-barrier models, immunohistochemistry, transcriptomics, RNA editing biomarkers, video-monitoring and telemetry of animals, pharmacokinetics, etc. The last step will aim at combining these tools in an integrated platform for better risk-assessment and decision-points throughout R&D process, and thus better protection of human volunteers and patients.

Coordinator

UNIVERSITAT WIEN
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Austria
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Austria

EU contribution: EUR 594 450

Activity type: Higher or Secondary Education Establishments

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Participants

MEDIZINISCHE UNIVERSITAET WIEN
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Austria

EU contribution: EUR 372 200

Activity type: Higher or Secondary Education Establishments
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FARMACEUTSKI FAKULTET UNIVERZITETAU BEOGRADU
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Serbia

EU contribution: EUR 696 150

Activity type: Higher or Secondary Education Establishments
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EU contribution: EUR 341 400

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)
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Finland

EU contribution: EUR 804 900

Activity type: Higher or Secondary Education Establishments
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Italy

EU contribution: EUR 391 500

Activity type: Higher or Secondary Education Establishments
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EU contribution: EUR 403 500

Activity type: Research Organisations
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Sweden

EU contribution: EUR 307 400

Activity type: Higher or Secondary Education Establishments
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EU contribution: EUR 583 300

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)
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EU contribution: EUR 429 400

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EU contribution: EUR 406 800

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France

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EU contribution: EUR 0

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Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

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Sweden

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EU contribution: EUR 0

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Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

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FUJIFILM CELLULAR DYNAMICS INC

United States

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EU contribution: EUR 0

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Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

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MERCK SHARP & DOHME CORP

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EU contribution: EUR 0

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Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

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NOVARTIS PHARMA AG

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EU contribution: EUR 0

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Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

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EU contribution: EUR 0

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Belgium

EU contribution: EUR 0

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

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