

The novel platform will enable regulators and industry to identify, quantify and prevent cardiotoxic co-exposures to industrial chemicals and pharmaceuticals in a cost-effective way.

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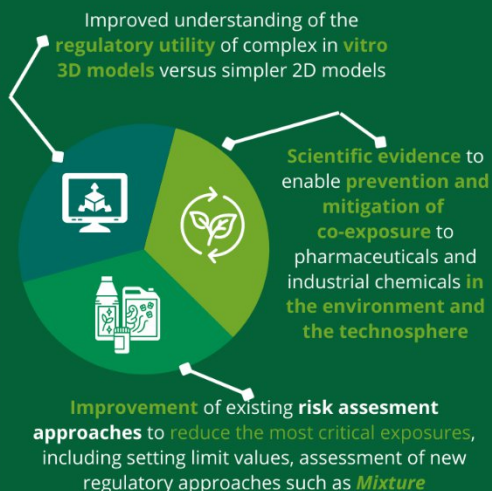
BUILDING THE INNOVATIVE
PLATFORM FOR DETECTING THE
CARDIOTOXICITY OF CHEMICALS

<https://alternative-project.eu/>

Environmental toxicity
chemical mixtures through
an innovative platform
based on aged cardiac
tissue model



PROJECT RESULTS



CONTACT DETAILS



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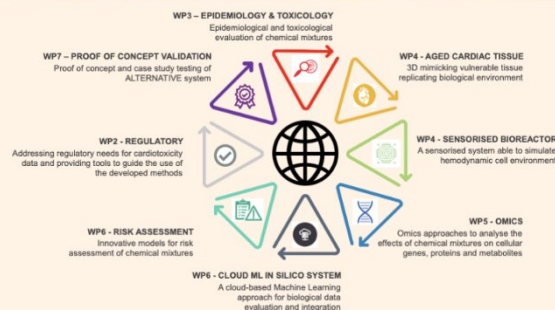


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Building the Innovative Platform to Assess the Cardiotoxicity of Chemicals and their bio-transformation products

NOVEL PLATFORM

ALTERNATIVE novel platform will enable regulators and industry to identify, quantify and prevent cardiotoxic co-exposures to industrial chemicals and pharmaceuticals in a cost-effective way.



MACHINE LEARNING

The platform will be coupled with a reliable, high-throughput monitoring system based on multi-omics analyses, and integrated into a Machine Learning (ML) risk assessment tool.



The platform will consist of a three-dimensional tissue engineering in-vitro model mimicking the human cardiac tissue.



In addition, ALTERNATIVE will modify the tissue model to reproduce the aged myocardial tissue and elucidate the adverse effects of chemicals on older people.



DECISION-HELPER

ALTERNATIVE will also provide systematic reviews of high-quality epidemiological studies to support integrated in-vitro and in-silico data, giving a more robust basis for regulatory decisions.

ALTERNATIVE's proof-of-concept validation will be performed on well-known mixtures of pollutants, affecting different environmental compartments, and selected via epidemiological, toxicological and modelling expertise.



ALTERNATIVE platform will be an Innovative tool

for complying with the current regulation associated with the assessment of chemical compounds. It will be a new instrument to evaluate unpredictable toxicity due to synergistic effects of different chemicals, additionally worsened by the human ageing process.

