







Predict nanomaterial toxicity on brain health and prevent it



iCare aims to develop a model system to characterize and predict how nanomaterials affect brain health and offers advanced imaging technologies and procedures to assess the physical-chemistry characteristics of advanced characterisation of neuro-nanotoxicity in complex matrices.







The primary aim is to develop an integrated model system that can characterize and predict the potential impact of nanomaterials on brain health, thereby preventing nanomaterial toxicity.



The project provides industry-relevant tools and procedures for evaluating changes in the shape, chemical composition, and reactivity of nanomaterials.



Using high-resolution imaging methods to evaluate changes in the morphology, chemical composition, and reactivity of nanomaterials when exposed to complex homogeneous matrices that mimic relevant environmental and biological exposures.





Partners

The consortium includes 11 partners from diverse backgrounds, including RTOs, SMEs, industries, and universities from different EU and non-EU countries, with expertise in nanotechnology, toxicology, advanced materials, and imaging.



























The consortium will establish several initiatives during the 48-month project to accomplish the following goals:



Novel imaging procedures that result in new high-resolution approaches and new super-resolution imaging procedures.



Creating guidelines for toxicological testing and filling the present gaps in nanotoxicology.



Creation of instruments and procedures that bridge the gap between *in vitro* and *in vivo* testing.



Product and material development efficiency.



The provision of reliable data, enhanced data reporting, and, eventually, the creation of standardised, harmonised test procedures for use in regulatory frameworks.





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