

EDCMET – project coordination

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EDCMET – objectives and methods



EDCMET

The acronym EDCMET stands for “Metabolic effects of **E**ndocrine **D**isrupting **C**hemicals: novel testing **M**ETHODS and adverse outcome pathways”.

Endocrine disruptors

Endocrine disruptors are chemical compounds that are foreign to the body and interfere with the organism's hormone signaling pathways to finally have an adverse effect on health. These substances are also suspected of being involved in the development of metabolic diseases such as obesity, fatty liver, high blood cholesterol and diabetes. Whether and how endocrine disruptors influence these metabolic processes has hardly been scientifically investigated to date. As a consequence, there are no validated methods to assess their metabolic effects.

EDCMET – intention

So far, there are no validated methods to evaluate the metabolic effects of endocrine disruptors. There is also a lack of a comprehensive understanding of the mechanisms by which these chemical compounds disrupt metabolic processes and can cause health impairments such as obesity/overweight, diabetes or fatty liver disease.

The EDCMET research project brings together experts from numerous fields of research, including systems toxicology, molecular biology and epidemiology.

The aim of EDCMET is to develop validated in silico, in vitro and in vivo methods for the identification and evaluation of metabolic effects of endocrine disruptors and for the determination of molecular triggers for metabolic diseases. The reliable proof of such effects with validated methods is necessary for legal regulatory measures. Therefore, EDCMET will develop and validate new test systems to the extent that they are suitable for routine testing of chemicals in regulatory toxicology.

EDCMET – methods

The experts in the EDCMET research project use a variety of methods, ranging from bioinformatic methods to cell culture systems and state-of-the-art animal models to the analysis of epidemiological data. The focus of research is on energy and fat metabolism with the question of how nuclear receptors regulate these processes through their interaction with foreign substances.

EDCMET – part of Horizon 2020

EDCMET is funded within the framework of the Horizon 2020 research programme of the European Union and has a duration of five years.

EDCMET is one of eight projects working in the research field “New testing and screening methods to identify endocrine disrupting chemicals”. The EDCMET project, in which scientific institutions from eight EU countries are involved, is coordinated by the A. I. Virtanen Institute of the University of Eastern Finland.

In addition to conducting experimental work, the BfR organises and coordinates the communication of scientific findings for expert circles, the national and international regulatory authorities, the stakeholders and the public at large.

EDCMET – project details

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