

Breaking down the wall between human health and environmental testing of endocrine disruptors: EndoRine Guideline Optimisation

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THE CHALLENGE

Endocrine disrupting chemicals (EDCs) have been associated with negative impacts on human health, including cancers and altered reproductive function, as well as numerous adverse environmental impacts. They are currently regulated by the European Union through REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals). While legislative criteria to identify EDCs in biocides and pesticides has recently been established, current testing tools do not always appropriately identify effects, particularly those related to certain less studied or newly developed EDCs. Innovative approaches are urgently needed to better protect human and environmental health against the hazards of EDCs. Currently, a segregation exists between regulatory procedures for EDC identification and assessment for human health and for the environment. This has led to limited exploitation of data from non-mammalian vertebrate research tests in human health research, and vice versa.

PROJECT OBJECTIVES

ERGO aims to improve identification and hazard assessment of EDCs for the protection of human health and the environment. It will do so by breaking down the wall that currently exists between the different research fields that investigate adverse effects of EDCs in different vertebrate classes. It will demonstrate that it is feasible to extrapolate effects of EDCs from fish and amphibians (non-mammalian vertebrates) to humans (mammalian vertebrates) i.e. an adverse effect observed in a fish or amphibian will also raise concern for an adverse effect in humans.

AT A GLANCE

PROGRAMME: Horizon 2020 (H2020-SC1-BHC-27-2018)

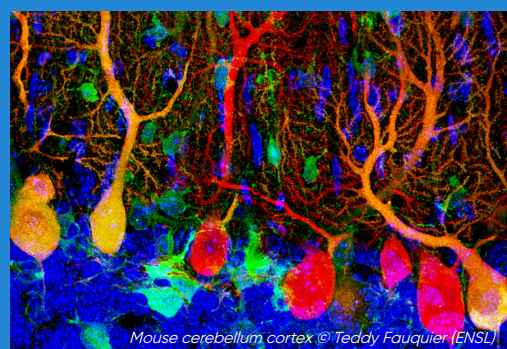
TYPE OF ACTION: Research and Innovation Action (RIA)

TOTAL BUDGET: €6.9 million

DURATION: January 2019 – December 2023 (60 months)

CONSORTIUM: 15 Partners from eight countries

COORDINATOR: Syddansk Universitet (SDU), Denmark



Mouse cerebellum cortex © Teddy Fauquier (ENSL)

EXPECTED RESULTS

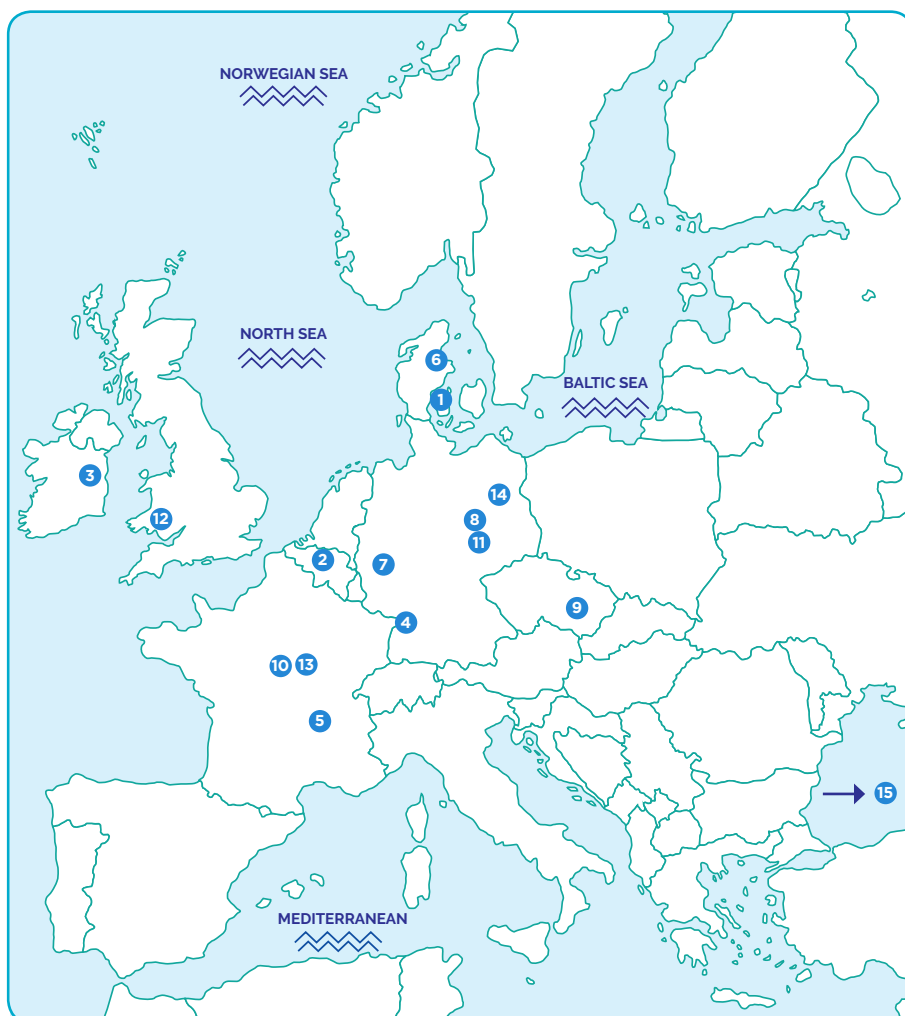
- Improved and harmonised testing and screening methods to better identify and assess EDCs;
- Novel approaches in the regulatory use of standardised test guidelines for EDCs;
- Increased quality, efficiency and effectiveness of existing methods to identify EDCs to meet demanding and evolving regulatory requirements;
- Supporting industry in the development and promotion of EDC-free products benefitting both the environment and human health;
- Publication of a guidance document on extrapolation of thyroid disrupting effects across mammalian, fish and amphibian vertebrates for the Organisation for Economic Co-operation and Development (OECD) Test Guidelines;
- Contribution to the development of an international strategy and guidelines for testing EDCs and assessing associated hazards

CONSORTIUM

The 15-partner strong **ERGO** consortium is based in eight different countries and brings together a well-balanced mix of research bodies, industry, small to medium enterprises, agencies and consultancies.

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| 1 Syddansk Universitet (SDU) | 10 Centre National de la Recherche Scientifique (CNRS) |
| 2 University of Antwerp (UA) | 11 Helmholtz Centre for Environmental Research GmbH - UFZ (UFZ) |
| 3 AquaTT UETP CLG (AquaTT) | 12 Peter Matthiessen (MATT) |
| 4 Ruprecht-Karls-Universität Heidelberg (UHE) | 13 L'Oréal (LOR) |
| 5 École Normale Supérieure de Lyon (ENSL) | 14 Forschungsverbund Berlin (IGB) |
| 6 Aarhus University (AU) | 15 Public University Corporation Yokohama City University (YCU) |
| 7 BASF SE (BASF) | |
| 8 German Environment Agency (UBA) | |
| 9 Masaryk University (MU) | |

ERGO is part of the EURION cluster of eight research projects from the Call 'New Testing and Screening Methods to Identify Endocrine Disrupting Chemicals' funded by the EU Horizon 2020 Research and Innovation programme. Each project is focusing on a different aspect of new testing and screening methods identifying EDCs.



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