

HORIZON 2020 IN WALES

GRowing Advanced industrial Crops on marginal lands for bioEfineries (GRACE)

Welsh partner:
Aberystwyth University

Lead partner:
Universitaet Hohenheim, Germany

Total project cost:
€15m

European partners in:
Austria, Croatia, France, Germany, Italy, Netherlands, Switzerland, UK



Aberystwyth University has been awarded over €1m of EU funds to collaborate on a Horizon 2020 project aiming to demonstrate the feasibility of large scale crop production on previously contaminated or under-utilised land.

Through the GRACE project, the University is co-operating with 21 partners across Europe to investigate the potential of crops from marginal land to develop a diverse and sustainable range of new construction or manufacturing materials and bioenergy.

Earlier EU-projects identified the potential of Miscanthus (elephant grass) and hemp as suitable crops for lower-grade agricultural lands with a variety of potential end uses. The GRACE project will build on existing research to examine the potential of these crops on a larger scale to uncover the full environmental and economic benefits they can offer to the bioeconomy.

This project has received funding from the Bio Based Industries Joint Undertaking through the European Union's Horizon 2020 research and innovation programme.

Professor Iain Donnison who leads the Agricultural and Environmental Sciences Theme at Aberystwyth University, said:

"The project represents an exciting opportunity to work with European partners and organisations involved in industrial crop R&D. It will mean that new Miscanthus crops, resulting from work at the University, will be trialled at a range of locations in Europe working with UK industrial partner Terravesta, and assessed as a feedstock for multiple and novel applications in the bioeconomy by end users throughout Europe.

"The scheme builds on past projects funded by the Biotechnology and Biological Sciences Research Council, European Commission including EU- funding for the BEACON Biorefining Centre, and the Welsh Government through the Sêr Cymru programme."

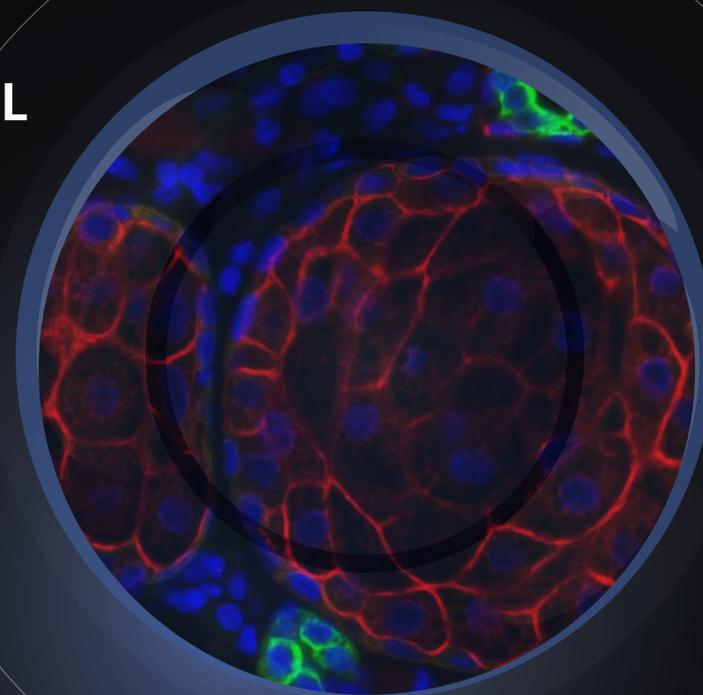
HORIZON 2020 IN WALES

Physiologically Anchored Tools for Realistic nanOmaterial hazard aSessment (PATROLS)

Lead partner:
Swansea University

HORIZON 2020 funding:
€12.7 million

European partners in:
**Belgium, Canada, Denmark, Finland, Germany, Italy,
Japan, Korea, Netherlands, Poland, Switzerland, UK,
United States**



Swansea University has secured over €12m of funding to lead an international team of scientists to produce ground-breaking new tools for nanosafety assessment.

Nanotechnology has the potential to transform many aspects of modern life. Yet the understanding of the long-term safety of engineered nanomaterials is still in its early stages. The PATROLS project aims to establish and standardise a battery of innovative, next generation safety testing tools that more accurately predict adverse effects caused by long-term exposure of engineered nanomaterial (ENM) to humans and the environment.

The project is developing state-of-the-art 3D tissue models of the human lung, gastrointestinal tract and liver, exploring advanced methods for environmental safety testing, and creating computational models that will enable more accurate predictions of human health and environmental safety. These approaches will therefore facilitate the reduction of animal testing currently required for ENM safety assessment.

As part of the project, Swansea University is collaborating with a range of global universities, government bodies, SMEs, research institutions and multinational industry.

Prof Shareen Doak of Swansea University said:

“The PATROLS project is a very exciting opportunity. Playing the lead role in this project puts Swansea at the centre of a world-wide collaborative team of experts, strengthening our relations with key players in the field of nanosafety and providing unique opportunities for future collaborative research.”

HORIZON 2020 IN WALES

INMARE: Innovative screening and expression platforms to discover and use the functional protein diversity from the sea

Lead partner:

Dr Olga Golyshina and Prof Peter Golyshin (Bangor University)

HORIZON 2020 funding:
€6 million

Partners in:

Denmark, Germany, Greece, Ireland, Italy, Lithuania, Norway, Portugal, Spain, Switzerland, UK, Canada

Bangor University has secured over €730,000 of Horizon 2020 funds to lead a €6m project to create safer, cleaner and cheaper pharmaceutical and agricultural products.

The project will involve a consortium of 24 European and North American organisations, including arrange of academic and industrial partners with research expertise in metagenomics and enzyme discovery, as well as market leaders in enzyme production and biocatalysis.

Utilising pan-European expertise, facilities and advanced technologies, the aim is to speed up the discovery of new marine enzymes and bioproducts that can support new products, processes and industrial prototypes.



Courtesy of PharmaMar S.A. (Spain)

Dr Olga Golyshina from Bangor University said:

“The funding and collaboration through Horizon 2020 has been vital to creating these opportunities in Europe and we’re delighted to be leading such a strong consortium of global partners through the INMARE project.”

**Cronfeydd yr UE:
Buddsoddi yng
Nghymru**

**EU Funds:
Investing in Wales**



UNDEB EWROPEAIDD
EUROPEAN UNION



Llywodraeth Cymru
Welsh Government

HORIZON 2020 IN WALES

The Psychology and Neurobiology of Cognitive Control Training in Humans

Lead:
Cardiff University

HORIZON 2020 value:
€1,998,305



- Professor Chris Chambers from Cardiff University has been successful in an application for research funding from the European Research Council (ERC) under Horizon 2020.

The €2 million funding will support a **five year** project to study the psychology and neurobiology of self-control training in eating behaviour.

The studies will focus particularly on weight loss in individuals with a body mass index in the overweight or obese range, who now make up more than 50% of the European population.

The project will compare seven different forms of self-control training on eating behaviour and cognition. It will be the largest study of its kind, calling for more than 35,000 participants worldwide to take part in a 90-day trial.

Professor Chambers said:

“This study will represent one of the first formal research links between a major UK university and a major media outlet in the advancement of experimental science. We will also be taking full advantage of the very latest brain imaging technology at Cardiff University’s EU-backed CUBRIC centre to explore how training changes the brain – including MRI and specialised microstructural scanning.”

“The ERC’s mission is to encourage the highest quality research in Europe and to support investigator-driven exploration across all fields, awarded on the basis of scientific excellence. It is a flagship component of the Horizon 2020 programme with a total budget of €13 billion available through its funding schemes.”

HORIZON 2020 IN WALES

Strengthening International Research Capacity in Wales (SIRCIW)

Lead:
Welsh Government

HORIZON 2020 value:
€9.6 million

In partnership with:
Welsh Universities



Strengthening International Research Capacity in Wales (SIRCIW) is a Horizon 2020 project that forms part of the Welsh Government's Sêr Cymru II programme to grow scientific research in Wales.

The project is supporting the recruitment of experienced post-doctoral researchers from outside the UK to work within research groups in Welsh Universities.

Up to 90 research fellowships will be created in areas including clinical science, engineering, physics, maths and applied social sciences.

The project is helping to develop research leaders of the future and includes a programme of bespoke training and opportunities for research fellows to spend time in different sectors.

Chief Scientific Adviser for Wales, Professor Julie Williams, said:

"Securing this funding from Horizon 2020 against stiff competition from across Europe is a massive vote of confidence in Welsh scientific research."

"The Research Excellence Framework 2014 proved Wales is delivering truly world class research but we need more of it to deliver lasting economic and social benefits."

"Welsh research is having an impact and our scientists more frequently collaborate internationally than those in other parts of the UK. This funding will ensure that excellent work can grow and deliver even more."