

UK invests in world's most advanced crystallography facility

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The UK's structural biology community will have access to the most advanced crystallography technology in the world thanks to a £5.64M investment from UK research funders.

The Biotechnology and Biological Sciences Research Council (BBSRC), the Medical Research Council (MRC) and the Wellcome Trust will contribute the funds towards the European X-ray Free Electron Lasers (XFEL) project, under construction in Hamburg, Germany.

The money will guarantee UK researchers the chance to use serial femtosecond [crystallography](#) (SFX) at the European XFEL, a cutting-edge technique to determine the three-dimensional shape of biological molecules at high resolution and incredible speeds.

A hub for scientists who wish to use SFX will also be established at the Diamond Light Source in Oxfordshire to train and prepare UK researchers.

Crystallography is used to determine the 3D structure of the molecular machines of life, and has transformed our understanding of living things. It can be used to develop new pharmaceutical drugs, antibiotics and new sources of chemicals and energy.

From 2017 the European XFEL facilities will represent a new generation of crystallography technology and will allow scientists to work at finer resolutions and faster speeds than ever before.

Colin Miles, Head of Sector in Industrial Biotechnology and Bioenergy at the Biotechnology and Biological Sciences Research Council, said:
"The European XFEL will enable cutting-edge crystallography research and it is important for world-leading structural biologists from the UK to have access to these facilities.

"By investing in the European XFEL consortium, BBSRC, MRC and the Wellcome Trust will ensure that scientists based in the UK can use these facilities and stay at the forefront of their field, conducting research that has important potential both economically and socially."

Michael Dunn, Head of Genetics and Molecular Science at the Wellcome Trust said: "The incredible power of the European XFEL will allow researchers to look at the smallest building blocks of life in new detail, from 'filming' biochemical reactions to studying drug targets of the future. Structural biology has been the basis for some of the most exciting developments in biomedical science, and investing in new technology is a vital part of the field's continuing success."

Over five years between 2014 and 2019 the UK funders will contribute £5.64M to the European XFEL project.

2014 is the United Nation's International Year of Crystallography, reflecting its global importance and contribution to human life.

You can find out more about the European XFEL project at:
<http://www.xfel.eu/>

Provided by Biotechnology and Biological Sciences Research Council

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