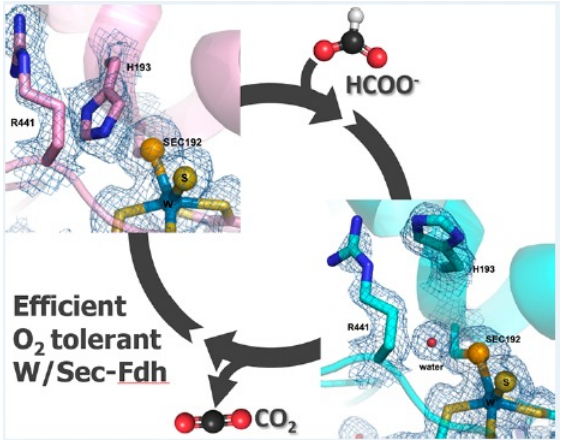
3D structure solution & interpretation



Vilela-Alves, ..., Romão & Mota, Structural Insights Into CO_2 Transport Pathways in a W-Formate Dehydrogenase: Structural Basis for CO_2 Reduction, *Angewandte Chemie International Edition* 65, no. 16 (2026): e26133

From diffraction data to a molecular model.

Data analysis

Diffraction data processing and assessment.

Model building

Structure determination, refinement and validation.

Biological interpretation

Explore enzyme mechanisms and protein interactions.

Structural insight for your research.

Let's discuss your protein target.

Tell us about your target, the material available and your research question. We can discuss the most suitable starting point.

Scientific team

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Scan to find out more

- ✓ **Protein engineering**
- ✓ **Understanding enzyme mechanisms**
- ✓ **Research in health, disease & environment**
- ✓ **Development of biosensors in environmental biotechnology**

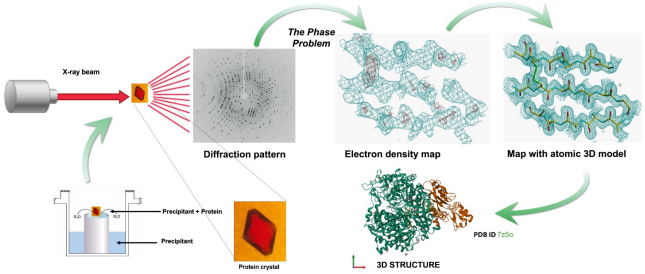
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From protein production to 3D structure

Macromolecular Crystallography at NOVA FCT



Protein production & crystallisation
Single-crystal X-ray diffraction
3D structure solution & interpretation

NOVA FACULDADE DE CIÊNCIAS E TECNOLOGIA

Protein production



Prepare your protein for structural studies.

Production

Cloning, expression and purification.

Characterisation

Biochemical and biophysical assessment, SDS-PAGE, Size Exclusion Chromatography, kinetic and thermal shift assays (thermofluor)

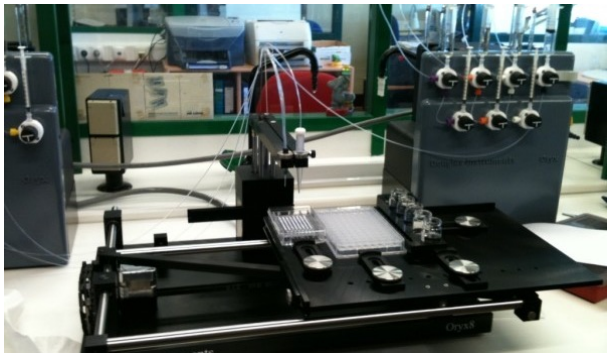


Specialised workflows

Work under anaerobic conditions when required.

Support from construct to purified protein.

Protein crystallisation



Find conditions for protein crystal growth.

Automated screening

Automated protein crystallisation to explore initial conditions.

Optimisation

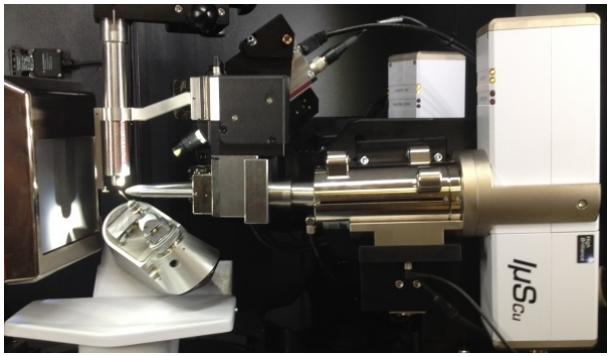
Develop promising conditions and assess crystal growth.

Preparation

Prepare suitable crystals for diffraction experiments.

A route from purified protein to crystals.

Single crystal X-ray diffraction



Assess crystals and collect diffraction data.

In-house diffraction

Local crystal screening and diffraction experiments.

Synchrotron experiments

Expertise in synchrotron X-ray crystallography.

Advanced studies

Time-resolved experiments at synchrotron facilities.

Connect crystal quality with structural data.