



ARCHELYSE

NOVEL PROTEIN DEGRADATION PATHWAYS IN ARCHAEA

Proteins are biological molecules which may be active in very varied ways. For instance, their various functions within the cell or the organism can play a structural or hormonal role.

Targeted protein degradation, called proteolysis, directly regulates many biological functions and allows cells to shed abnormal proteins.

Proteolysis malfunctions are at the root of many degenerative diseases and cancers in humans.

The ARCHELYSE project focuses on the ubiquitin proteasome system as the main player involved in protein degradation (proteolysis) in archaea (a group of single-celled microorganisms which do not form a nucleus, akin to bacteria). One of the project's aims is to better understand the activity of the proteasome.

In particular, this project will investigate the characterisation of peptidases which may be responsible for new protein degradation routes. The studies undertaken are related to medical issues, as the proteasome is a major target for drug design.

A further possible outcome is patenting new enzyme activities.

Partners

Research centers

Laboratoire de Microbiologie des Environnements Extrêmes (UBO / CNRS / IFREMER. UMR 6197), Brest [\[Project Developer\]](#)
Institut de Biologie Structurale (CNRS-CEA-UJF. UMR5075), Grenoble

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- Agence Nationale de la Recherche

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2 639 K€