# **DC 4** | Identification of novel halogenases from metagenomic libraries of extreme marine environments

**ORGANISATION**

Established in 1973, the **University of Crete** (UoC) is a young public educational institution committed to excellence in research and teaching. Currently, over 18,000 undergraduate and 3,000 postgraduate students study in one of the 17 undergraduate programmes and 54 postgraduate programmes, through the Schools of Philosophy, Education, Social Sciences, Sciences & Technology, and Medicine. They are educated by an outward-looking academic faculty of around 450 members, as well as around 300 technical and administrative staff. UoC is ranked among the best Universities of Greece in several university rankings, especially considering the research output. Reflecting its research activity and associated initiatives, the University of Crete is the first Greek University to have signed the EU Charter and the Code for the recruitment of researchers, and forms part of the Euraxess European network for the mobility of researchers. The University participates in quality assurance mechanisms both for its academic and administrative structures. UoC offers several training activities/courses to PhD students, from transferable skills, as well as scientific skills.
The Department of Chemistry of the UoC (https://www.chemistry.uoc.gr) is the top chemistry department in Greece, according to external evaluations. Currently, there are 19 Professors appointed in the Department, specialized in organic synthesis, analytical and environmental chemistry, physical chemistry, inorganic chemistry and biochemistry. Assoc. Prof. Dr. Pavlidis' research group (https://www.chemistry.uoc.gr/pavlidis/) focuses on enzyme identification, protein engineering and biocatalysis. The group maintains strong national and international collaborations through competitive research projects and thus offers a multicultural and interdisciplinary environment.

**ROLES AND RESPONSIBILITIES**

The main part of your PhD research (4 years in total) will be carried out at **the University of Crete** (UoC, Greece) under the supervision of **Prof. Dr. Ioannis Pavlidis** in the Department of Chemistry. Within these four years, an academic research stay (of 12 months) will take place at the **University of Pavia** (UniPV, Italy) under the supervision of **Prof. Dr. Andrea Mattevi**. Additionally, an industrial secondment at the company **AstraZeneca** (Sweden) is foreseen. The Horizon Europe Marie Skłodowska-Curie Actions (MSCA) – Doctoral Network (DN) project starts in January 2026. The date of recruitment and start of the PhD project is planned for April 2026 and latest in December 2026. Your **PhD degree** (so-called double degree) will be awarded based on successful completion of the research work from **two universities (University of Crete, Greece and University of Pavia, Italy)**. You will also be required to participate in the training events and workshops organized by the DN- Joint Doctorates (JD) program. As a MSCA fellow, you are also expected to **contribute your time in the dissemination of your PhD project's result** through public engagement and other scientific platforms.

**The PhD research will focus on:**

(i) Interdisciplinary project on bioinformatics, molecular biology, biocatalysis, and chemistry
(ii) Screening of metagenomic libraries of extreme marine environments for novel halogenases, followed by sequence analysis for known motifs and comparison of structural models of the candidates with identified putative halogenases
(iii) Cloning, expression and biochemical and kinetic characterisation of selected candidates
(iv) Halide and substrate scope screening towards synthetically relevant targets, utilizing an in-house multicomponent library of N-heterocycles and benchmark substrates
(v) Structural and mechanistic investigations of selected enzymes (academic secondment)
(vi) Screening of small molecule libraries for late-stage functionalization (industrial secondment)

**Primary supervisor:** Assoc. Prof. Dr. Ioannis Pavlidis
**Secondary supervisor:** Prof. Dr. Andrea Mattevi
**Recruiting institution:** University of Crete (Heraklion, Greece)
**Double degree awarding institution:** University of Pavia (Pavia, Italy)

**QUALIFICATIONS**

- An outstanding M.Sc. degree in Chemistry, Biological chemistry, Biochemistry, Biology or related field
- Eligible as a graduate student at the University of Crete (Greece) and the University of Pavia (Italy),

- Research experience in enzyme technology (protein expression, enzyme purification and assays), molecular biology (molecular cloning), analytical methods (HPLC, GC, NMR etc.), experience in organic synthesis is a plus
- Ability to work in an international team,
- Inter- and multidisciplinary thinking,
- High motivation,
- An integrative and cooperative personality with excellent communication and social skills,
- Fluency in English – written and oral.

**CONDITIONS OF EMPLOYMENT**

The gross monthly amount receivable by the Researcher for their appointment by the University will be 4,850.68 EUR and is calculated on the following basis:
a) 3,480.68 EUR per month, as living allowance,
b) 710 EUR per month as mobility allowance and
c) 660 EUR per month, as family allowance (due if the Researcher has a family at the time of recruitment, 75% of the number of units with family, 25% without) according to unit costs set for Doctoral Networks Researchers in Greece.
The above indicated allowances include all compulsory deductions under the national legislation (income taxes and social security contributions).

The 1.0 FTE appointment is temporary for a specified period of four years. The preferred starting date is between April 1st and July 1st 2026.

**APPLICATION PROCEDURE**

To apply for the position, kindly provide:

(i) A letter of motivation including a statement of your research interests, relevant skills and experience and an explanation for the choice of position(s);
(ii) A CV including publication list (if applicable);
(iii) Names and contact details of up to three referees willing to write confidential letters of recommendation;
(iv) Copies of relevant diplomas including explanation of international grades.

**Please upload applications only according to instructions at https://haloverse.eu/recruitment/.**

**Address applications to: Assoc. Prof. Dr. Ioannis Pavlidis**

The University of Crete (UOC) was the first Greek University to sign the Charter & Code (C&C) and acted as a multiplier in successfully proposing adoption of the C&C by the Greek University Rectors Council. In 2012 UOC joined the group of European institutions entitled to use the 'HR Excellence in Research' logo in recognition of our commitment to implementing the Charter and Code principles through the HRS4R process. For more details please visit: https://euraxess.ec.europa.eu/jobs/charter/code. Open, transparent and merit-based recruitment is in the core of the C&C, ensuring equal and merit-based selection procedures. We therefore invite applicants from underrepresented groups in particular to apply. UOC puts the human factor in the forefront, and thus topics related to inclusion, diversity and equality are of utmost importance. For more information, see also our Gender Equality and Anti-Discrimination Committee webpage: https://www.eif.uoc.gr/index.php/en/.

Unsolicited marketing is not appreciated.

**APPLICATION DEADLINE**

You may apply until 31st of December 2025 11:59pm Central European Time (CET) for this position by means of the online application form (click on "Apply" below on the advertisement on the HaloVerse website).



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