Advancing bio-based solutions through extremophile research

A project to channel biology's most resilient adaptations



Untapped potential

Extremophiles are specialised organisms that produce unique molecules to survive in challenging habitats. Their genetic traits offer valuable tools for biotech, enabling the development of stable molecules for harsh industrial conditions.



Smarter bioprospecting

XTREAM will use high-precision tools to efficiently discover resilient extremophiles and their adaptations.



Sustainable discovery

We will streamline biodiscovery with innovative methods that reduce environmental impact and accelerate innovation.

XTREAM in numbers









Find out more!



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Partners

Teesside University

GERINN















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PROZOMIX

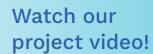








Harnessing the power of aquatic extremophiles



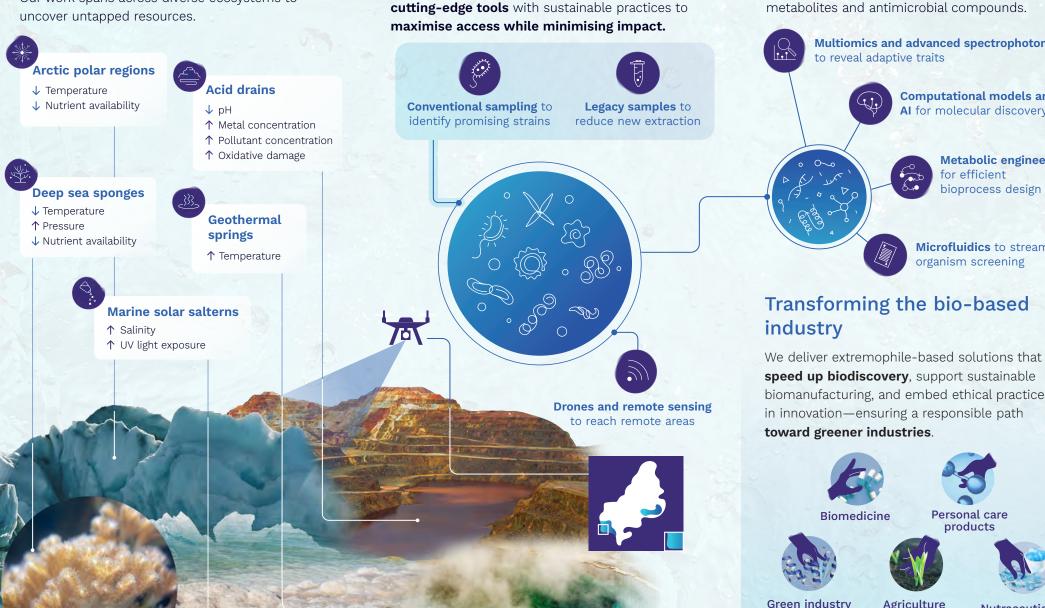




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From extreme habitats to groundbreaking discoveries

Our work spans across diverse ecosystems to uncover untapped resources.



Targeted sampling

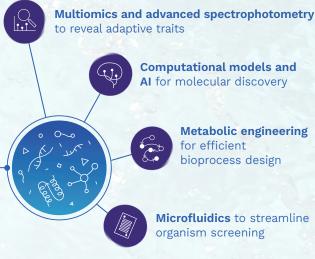
Most extremophiles live in environments that are

and environmentally disruptive. We will combine

hard to reach. This makes sampling slow, expensive,

Optimising biodiscovery

Our approach integrates innovative methodologies to identify promising molecules such as tolerant enzymes, specialised metabolites and antimicrobial compounds.



Transforming the bio-based

speed up biodiscovery, support sustainable biomanufacturing, and embed ethical practices in innovation—ensuring a responsible path



Personal care products

Green industry

Agriculture & food



Nutraceuticals