

THERMOGENE

Novel thermostable enzymes for industrial biotechnology

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The THERMOGENE project will identify, biochemically and structurally characterize novel thermostable transferase enzymes, from newly sequenced thermostable genomes and metagenomes, which have potential applications for industrial biocatalysis.



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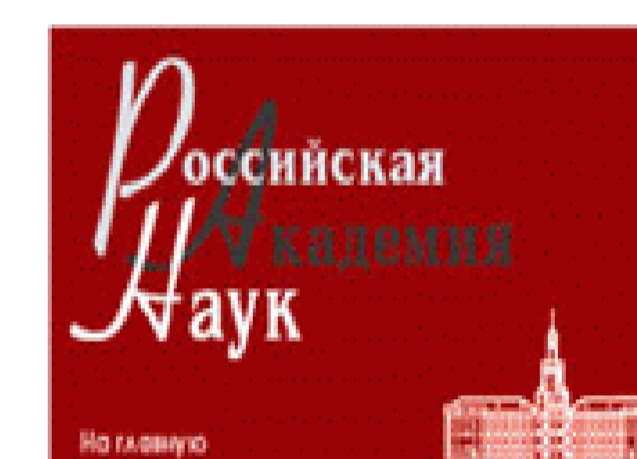
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The consortium members have complimentary expertise in the discovery of thermophilic organisms and metagenomes, the study of novel metabolic pathways, an understanding of enzyme stability and mechanism and the application of enzymes in commercial biocatalysis. They will be guided by an industrial advisory committee to ensure maximum impact and delivery of new commercial biocatalysts.

Four main groups of transferase enzymes will be targeted; the **transketolase** enzymes which can transfer a two carbon group, the **transaminases** that transfer an amine group, the soluble **prenyl transferases** that transfer a prenyl group and the **methyl** and **hydroxymethyl** transferases.

The study will ensure that a wealth of **new thermally stable** enzymes are discovered with industrially relevant applications. The new stable enzymes will be made available for academic and industrial biocatalytic applications.

The project results will also contribute to our knowledge of biodiversity, genetics and metabolic pathways of thermophilic bacteria and archaea and the structural basis of thermophilicity.