

## Johnson Matthey announces partnership with Basecamp Research to accelerate the adoption of biocatalysis solutions

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- The partnership combines Johnson Matthey's catalysis expertise with Basecamp's AI-enabled biodiversity genetic mapping to meet the growing demand of the pharmaceutical and chemicals industry.
- Expanding biocatalyst solutions will reduce energy use and waste in pharmaceutical and agrochemical industries.

Johnson Matthey (JM), a global leader in sustainable technologies, and Basecamp Research, a leader in mapping biodiversity for computational bio-design, today announced their partnership to accelerate the adoption of more sustainable, bio-based catalysts.

Biocatalysts are used across a vast range of synthesis processes to form complex chemical structures in the pharmaceutical, agrochemical and fine chemical industries. Biocatalysts are increasingly being adopted due to the important role they play in helping meet the more prominent sustainability goals of these industries. Compared to traditional catalysis, they can be more selective, less energy intensive and reduce the need for organic solvents.

One of the main hurdles to the widespread usage of biocatalysts in organic synthesis is the time-consuming search for suitable enzymes that deliver the desired catalytic performance. This typically involves multiple rounds of protein engineering and analysis.

The partnership between JM and Basecamp will focus on accelerating the process to find the right biocatalyst solutions that small molecule manufacturers can use for new product development. It will improve the quality and scope of biocatalysts available to the market, covering the most critical chemical transformations such as asymmetric reductions of ketones and chiral reductive amination, which are used to produce the fundamental building blocks in organic synthesis.

Basecamp Research has developed a unique knowledge graph of life on Earth with over six billion relationships between genes, genomes, environments, and other biologically relevant data. This biodiversity mapping tool, powered by AI-driven capabilities, is critical to the expansion of JM's biocatalysis portfolio. Having new and diverse biocatalyst options will help reduce the development time and broaden the scope of applications.

JM has already licensed a broad substrate-scope active enzyme which was sampled from a natural source and selected by Basecamp Research. When genetic resources are collected from nature, it is important that all parties benefit from the use. In compliance with the Nagoya Protocol, Basecamp has passed on royalties to a conservation organization near the location of where the enzyme was discovered.

Dr Elizabeth Rowsell OBE, Chief Technology Officer of Johnson Matthey said:  
"Over the last decade, Johnson Matthey has grown its biocatalysis capabilities to offer enzyme development, application, process intensification, scale-up and bioprocessing.

By partnering with Basecamp Research, we will be able to provide novel enzyme solutions that will benefit our customers in pharmaceutical drug developments and fine chemical synthesis.”

Dr Oliver Vince, co-founder of Basecamp Research said:

“Johnson Matthey is a pioneer in sustainable technologies with a strong expertise in catalysis and process chemistry. Their focus on biocatalysis speaks volumes to their forward-looking, sustainable innovation mindset. Combining Basecamp Research's unique biodiscovery and bio-design AI platform with JM's biocatalysis expertise, will help industry take novel products to market more efficiently and sustainably.”

### **About Johnson Matthey**

Johnson Matthey is a global leader in sustainable technologies. For over 200 years we've used advanced metals chemistry to tackle the world's biggest challenges.

Many of the world's leading energy, chemicals and automotive companies depend on our technology and expertise to decarbonise, reduce harmful emissions, and improve their sustainability.

In the pharmaceutical, agrochemical and fine chemical industries, our PGM catalysts are key to forming critical products used in our daily lives. Our unique end-to-end offer to customers means that while we source PGMs and use them to create these products for specialist applications, we also maximise their value by recovering and refining them, which can give our customers a sustainable low carbon supply of PGMs. Looking to the future, we're developing our capabilities in biocatalysis to expand our well-established catalyst portfolio, supporting customers in making more complex products with less energy.

For more information visit [www.matthey.com](http://www.matthey.com).

### **About Basecamp Research**

Basecamp Research is a market leader in mapping biodiversity for AI-based protein design. We match and refine novel proteins for our partners' exact industrial, therapeutic or diagnostic applications using BaseGraph™, a new-generation of AI-design that is powered by the first ever high-resolution map of global genetic biodiversity.

Understanding the full genetic, evolutionary, and environmental context of each protein allows Basecamp Research to design process-ready enzymes for specific reactions without the need for expensive and time-consuming directed evolution campaigns. We're a team of explorers, scientists and policy experts driven by our ambition to protect and learn from nature's diversity, whilst delivering life-changing breakthroughs to those who need them most. For more information, visit [www.basecamp-research.com](http://www.basecamp-research.com).

### **For further information**

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