Utilising a Biotransformation for the preparation of high value inositol-containing compounds

- Simplified process in the synthesis of high-value myo-inositol derivatives
- Introduces asymmetry in inositol compounds directly
- Easier, faster and cheaper synthesis
- Increased scale-up of synthesis possible
The Technology Opportunity

Myo-inositol derivatives including phosphatidylinositols, phosphatidylinositol phosphates, glycosylphosphatidylinositol anchors, mycothiol etc., have myo-inositol as their structural core.

These classes of molecules have numerous important biological roles, involved in cellular signalling, protein anchoring and pathogen virulence, all of which are important areas of research in academia and industry.

Our technology utilises a biotransformation that is highly efficient at converting readily available D-glucose-6-phosphate to high value L-myoinositol-1-phosphate.

Key Benefits

This novel approach offers significant advantages over the current state-of-the-art in inositol chemistry. This biocatalytic approach drastically reduces the synthetic steps required to form differentially protected myo-inositol derivatives and more importantly introduces asymmetry from the onset.

Applications

Access to enantio-enriched inositol derivatives directly will allow the synthesis of important high value inositol containing compounds to be easier, faster, cheaper and on a scale that has been previously unimaginable, while also providing access to novel chemical probes to address numerous important biological questions.


The University research group involved continues to perform research & development in this area of chemistry. The University would welcome enquiries from commercial parties interested in developing this novel chemistry on an industrial scale.

If you would like to explore this technology transfer opportunity in more detail, please contact:

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Additional Information will be made available under a Confidentiality Agreement