

## acib Project Offer

### Biocatalytic methylation and demethylation of phenol derivatives

A new biocatalytic method for methylating phenolic compounds and demethylating methoxy groups, respectively has been developed, representing a promising and versatile addition to the repertoire of biocatalytic transformations.

#### BACKGROUND

Selective methylation of aromatic hydroxy groups as well as demethylation reactions of methoxy groups, respectively are of considerable interest. O-methylated phenol derivatives represent an important class of chemical products involving antioxidants and stabilizers as well as building blocks for agrochemicals, dyes, flavoring agents, fragrances and pharmaceuticals (Figure 1).

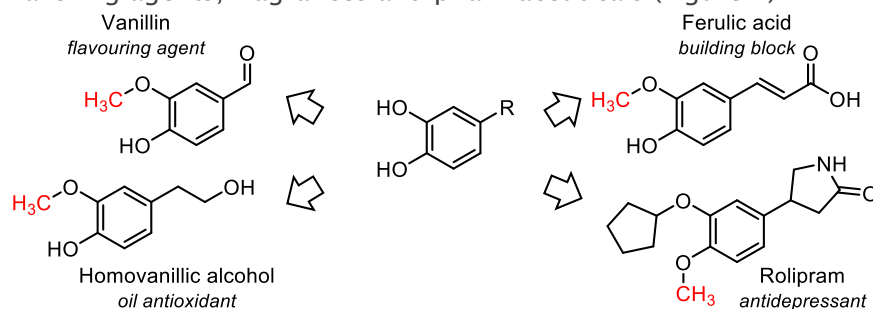


Fig. 1: O-methylated phenol derivatives as important class of chemical compounds

However, traditional chemical methods come along with highly toxic and harsh reaction conditions and currently only SAM-dependent methyltransferases are described.

#### TECHNOLOGY

We have established the basis for a biocatalytic SAM-free O-methylation and -demethylation. This process is sustainable, safer and more selective compared to chemical methods and is not restricted by cofactor recycling like the biocatalytic SAM methylation. The repertoire of important compounds, which are already producible assure a wide applicability of this innovative concept, which can be extended to related substrates using other enzymes.

#### OFFER

acib offers full expertise for this unique, novel and promising biocatalytic system, including enzyme expression, reaction optimization and substrate scope investigations. acib would transfer any IP generated within a future project exclusively to you.

#### KEYWORDS:

- biocatalysis
- methylation of phenols
- demethylation of Me-ethers
- phenols

#### acib-Experts:

Prof. Dr. Wolfgang Kroutil

#### AVAILABLE FOR:

- Joint Research Project
- Contract Research

#### Development Status:

TRL 3

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