

OXYFUNCTIONALIZATION

HYDROXYLATION,
EPOXIDATION or
DEALKYLATION of

API

FLAVOUR & FRAGRANCES

AGROCHEMICALS

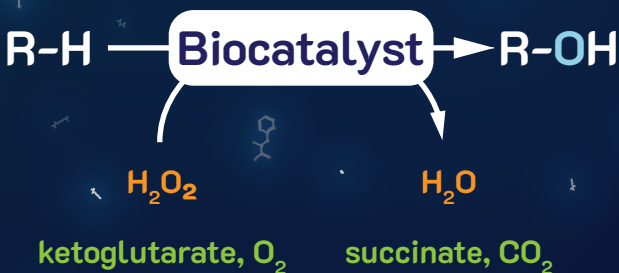
COSMETICS



 **AMINOVERSE**
EXPLORING ENZYME INNOVATION

BIOCATALYSTS

OUR COLLECTION SPANS
> 100 BIOCATALYSTS



UPO

Unspecific PerOxygenases

naturally broad substrate
spectrum

KGO

**Fe(II)- α -KetoGlutarate-
dependent Oxygenases**

naturally broad on
intracellular compounds

UPO

REACTIONS on

fatty acids

steroids

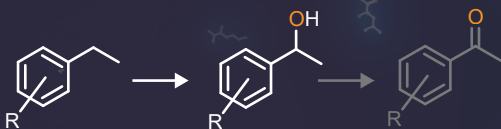
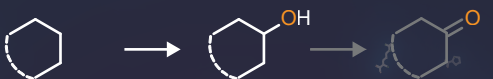
alkenes

heterocycles

alkanes

terpenes

Hydroxylation (/Ketone formation)



Epoxidation



Demethylation



SPECIAL FEATURE

Sulfoxydation

KGO

REACTIONS on

metabolites

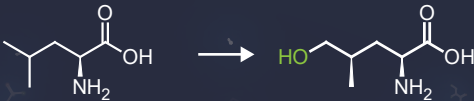
antibiotics

nucleotides

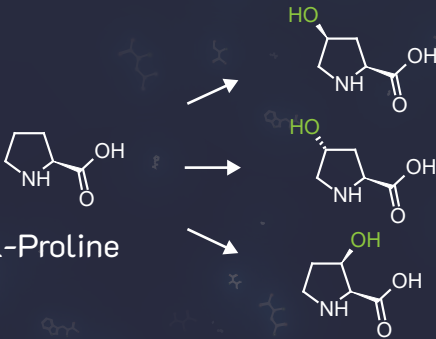
amino acids

nucleosides

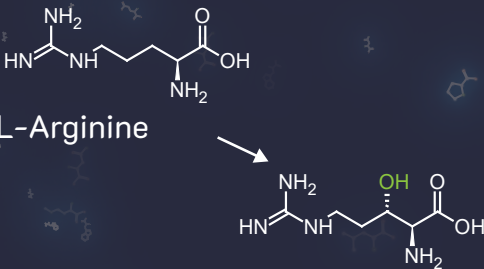
Hydroxylation



L-Leucine



L-Proline



L-Arginine

SPECIAL FEATURE

Halogenation

YOUR BENEFITS



SPECIFIC

Reactions are regio- and stereoselective

SCALABLE

Biocatalysts are available up to kg scale



UNRESTRICTED

Biocatalysts included in the kits are free of third-party IP

EXPERIENCED

Benefit from our expertise in enzyme and process development



CONTACT

Integrate **BIOCATALYSIS**
into your
SYNTHESIS ROUTE!



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Made possible thanks to
our partner

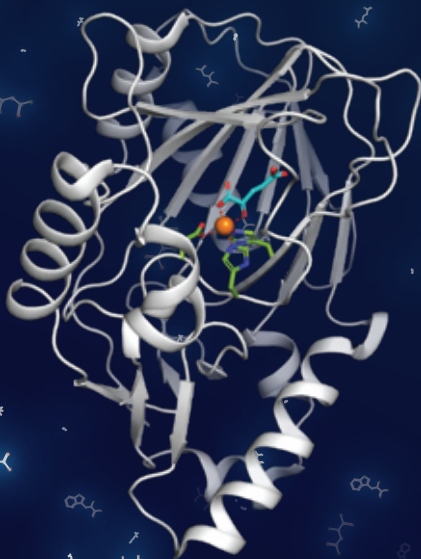
bisy

bisy GmbH

www.bisy.at

BIOCATALYSIS

**SAVE COSTS,
INCREASE YIELDS and
SYNTHESIZE SUSTAINABLY**



Integrate **BIOCATALYSIS**
into your
SYNTHESIS ROUTE!

 **AMINOVERSE**
EXPLORING ENZYME INNOVATION

WHY AMINOVERSE

BIOCATALYSIS maximizes product yields, shortens synthesis routes and reduces overall production costs.

It is ideally suited for **COMPLEX** and **CHIRAL MOLECULES** or chemically **DIFFICULT-TO-OBTAIN TARGETS**, and may allow to start from cheaper starting material.

AMINOVERSE is a **CRO** specialized on enzymes. We find and design the **RIGHT BIOCATALYST** for your target reaction to achieve up to **99% YIELD**, remove side products/impurities, ensure **COST-EFFICIENT** biocatalyst supply, etc.

Considerations of costs and **FEASIBILITY** at scale are taken into account as well as **IP** aspects and timelines vs. synthetic chemistry approaches.

To date, **>10** of the **TOP20 GLOBAL** Pharma/F&F/AgroTech companies already **BENEFIT** from our products and services.

YOUR REACTIONS

PHARMA

- API + intermediate synthesis
- Derivatization
- Nucleoside modification



FLAVOUR & FRAGRANCES

- Sustainably synthesized fragrances
- Novel flavours



AGROTECH

- Metabolite synthesis
- Derivates for toxicity studies



GREEN CHEMISTRY

- Carbon capture
- Future fuels
- Resource recycling



ANY INDUSTRY

OUR EXPERTISE

- Transaminases
- Imine reductases (IRED)
- Unspecific Peroxygenases
- Keto/Ene Reductases
- P450 Monooxygenases

- Methyltransferases
- Sugar isomerases
- Proteases
- Amylases
- Lyases

- Phytases
- (Hemi)Cellulases
- Xylanases
- Oxynitrilases
- KGO

- PETases
- Alcohol dehydrogenases
- Fatty acid synthases
- Carbonic Anydrase
- Lipases

+ MANY MORE

THE WORKFLOW

TARGET REACTION

1. **FIND** enzyme



2. **TEST** enzyme



3. **DESIGN** enzyme
+ process



TECH TRANSFER:
scalable biocat process

+ ENZYME SUPPLY

YOUR PARTNER



Aminoverse is a **CRO** specialized in
APIs, AGRO-CHEMICALS,
COSMETIC INGREDIENTS
and **FRAGRANCES.**

We enable **COST-EFFICIENT** and
SUSTAINABLE manufacture of desired
CHEMICALS by finding and designing
the **RIGHT ENZYME** for a desired
chemical reaction.

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