

SHIKIFACTORY100 is a H2020 aiming towards the production of a universe of more than 100 high-added value compounds from the shikimate pathway.



4 years



8 million euros



11 partners



7 countries



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Shikifactory100

PROJECT COORDINATOR



PROJECT PARTNERS



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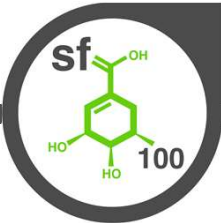


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SHIKIFACTORY100

Modular cell factories for the production of 100 compounds from the shikimate pathway.





ShikiFactory100 – Modular cell factories for the production of 100 compounds from the shikimate pathway

In this project, three major vectors will be innovatively and synergistically integrated:

DISCOVERY

- ShikiFactory100 will enrich the pool of reactions and compounds using modern retrosynthesis methods for widely applied bacterial and yeast hosts: *E.coli* and *S.Cerevisiae*
- The project will create a vast portfolio of pathways for the production of desired targets using enumeration approaches ranked by a variety of metrics.

DESIGN AND IMPLEMENTATION

- We will design chassis strains for maximum yield of precursor with state-of-the-art computational strain optimisation algorithms.
- ShikiFactory100 will implement the new pathways in the chassis strains of the two hosts using rapid prototyping systems and synthetic biology methods.
- The application of *in silico* and *in vivo* protein engineering will help overcoming enzymatic bottlenecks for the selected strategies via.

VALIDATION

- The project will demonstrate the validity of these strategies by:
 - Producing most of the 100 compounds plus at least 3 novel compounds at mg/L.
 - Preparing the top 10 molecules at g/L.
 - Producing 100 g of the final 2 products.

100 molecules
300 – 500 pathways

100 molecules
> mg/L
1000 strains

10 mol.
>g/L 2 mol.
10 – 100 g

