

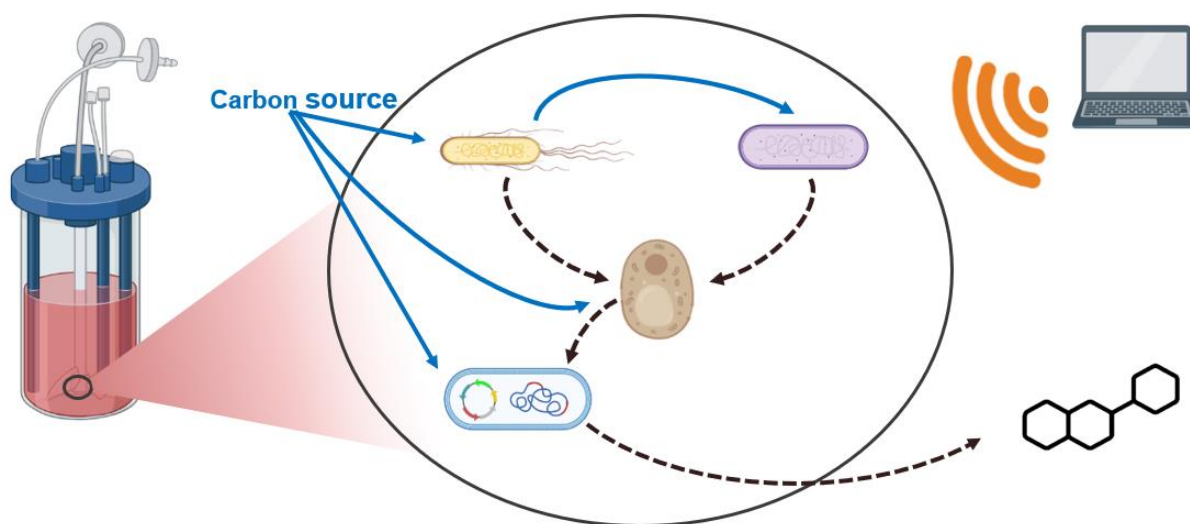
## Synbio4Flav and Beyond - Biocatalytic Modification of Flavonoids

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The SynBio4Flav project aimed to establish a standardized pipeline for the production of numerous flavonoids using synthetic microbial consortia [1]. Flavonoids, widely used in functional food, beverages, cosmetics, and pharmaceuticals, are predominantly sourced from plants due to challenges in chemical synthesis and biotechnological approaches. SynBio4Flav address this limitation by breaking down complex metabolic pathways involved in flavonoid biosynthesis and distributing catalytic functions among different microbial species within defined consortia. The main outcome is a standardized platform comprising many optimized cell systems, enabling combinatorial *de novo* production of various flavonoids.



**Figure 1.** General scheme of SynBio4Flav synthetic microbial consortia based flavonoid production.

We would like to present our work on the preparation of functionalization modules and shed some light on the final stage of the biosynthesis of various flavonoid structures. We will also present recent advances in hydroxylation, methylation, and glycosylation, with special attention to biocatalytic cascade reactions that can also be utilized *in vitro*.

### References

[1]. [www.SynBio4Flav.eu](http://www.SynBio4Flav.eu)

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