



ONLINE WEBINAR, 18. JAN 2022, 2:00 – 3:30 PM (CET)

Enzymatic cascades in well-coordinated one-pot systems – HOTZYMES

The enzymatic production of chemical compounds for different industrial applications allows a more efficient and less energy-intensive process, compared to chemical synthesis. Bringing several biocatalytic steps into a cascadic reaction in one-pot offers a clear benefit in terms of time efficiency, resources and yields because processing steps can be significantly reduced. So far, biocatalytic cascade reactions turned out to be challenging, because each enzyme has its specific requirements in terms of environmental conditions in the bioreactor (e.g. temperature optima). The H2020 FETOPEN project HOTZYMES works on an innovative concept to overcome this barrier. By coupling enzymes with magnetic nanoparticles, temperature conditions can be adjusted locally and therefore, create the optimum environment for each enzyme participating on the cascade of interest. The application of an alternate magnetic field (AMF) in the bioreactor allows to control the local heating process remotely.

In this webinar, we want to show the suitability of magnetic nanoparticles for biocatalytic cascades and present our development steps of an AMF bioreactor. Furthermore, we will comment on application fields of this novel and groundbreaking technology.

You are also working on biocatalytic cascade reactions and look for good solutions to meet your challenges? You are planning to use magnetic nanoparticles for bioapplications or also have experiences with AMF bioreactors? We cordially invite you to join our discussion about the future of enzymatic cascades in well-coordinated one-pot systems.

Webinar agenda

Time	Presentation title	Speaker
2:00	HOTZYMES at a glance: - Introduction to the project concept & objectives	Valeria Grazu (HOTZYMES Coordinator, CSIC)
2:15	Magnetic nanoparticles as a tool for biocatalytic cascades	Puerto Morales (CSIC)
2:25	Development of an AMF bioreactor	Nico Cassinelli (nB nanoscale Biomagnetics)
2:35	Application fields: - sucrose conversion - TIHQ production	Valeria Grazu (HOTZYMES Coordinator, CSIC)
2:45	Potential of the technology and perspectives from an external view	Pablo Dominguez (Sustainable Momentum)
3:00	Q/A session	

Register here: https://zoom.us/webinar/register/WN_eF2hhnl9Ti2GL8WrHL-fJg

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