





Heterologous expression of oxidative enzymes in microbial cells for the bioconversion of raw materials to products of interest for the pharmaceutical industry

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Abstract: On 25 November 2020, the European Union adopted the Pharmaceutical Strategy for Europe. This initiative highlights that the delocalization of basic and fine chemicals manufacturing outside the European Union has reached a critical point, where disruptions in the supply chains are no longer mitigated by local manufacturing. Therefore, a considerable effort is being invested to develop local, innovative and more environmentally friendly routes to existing chemicals. This project follows such path as it seeks to find a biocatalytic route to obtain a key building block (5-methylpyrazin-2-carboxylic acid, or MPCA), necessary to the synthesis of molecules used for the treatment of diabetes. The project is focusing on enhancing the efficiency of the chosen pathway through the screening of various promoters and via computational screening of potential alternative enzymatic activities.