

Enzyme-mediated synthesis of Molnupiravir: paving the way for the application of biocatalysis in pharmaceutical industry

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Abstract

Molnupiravir (Lagevrio®) is an orally-administered anti-COVID-19 agent. Due to the urgency to meet the worldwide demand and the growing environmental concern, there is a need for speed in the industrial implementation of novel and efficient bioprocesses for Molnupiravir synthesis. This concept paper aims to review the most relevant milestones that have guided important developments in the enzyme-mediated synthesis of Molnupiravir, including detailed comments on the advantages and drawbacks of the different synthetic routes. Finally, based on a personal perspective, new greener processes for Molnupiravir manufacturing are proposed and discussed.

Keywords: (chemo)enzymatic processes, Eco-friendly, Industrial scale-up, Molnupiravir