

Title: **A novel route towards mycophenolic acid**

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During the last decades, mycophenolic acid (MPA) has been well established as an essential immunosuppressant drug in the treatment prescribed following an organ transplantation. Due to the drug being in high demand, it is imperative to delve into research aiming to obtain the best results possible in the medical and biological field. However, it attracted the attention of synthetic organic chemists, not only because of its many applications, but also for its challenging structure as it presents a highly functionalized hexasubstituted benzene. Since its discovery, many different approaches have been studied in an attempt to obtain the metabolite. Nevertheless, all the accomplished syntheses so far present many steps and the resulting yields are low. The aim of this report is to review the most significant synthetic pathways towards the mycophenolic acid chronologically. Furthermore, it presents a hypothetical novel route, in which only the first steps have been conducted in the laboratory. The main characteristic of this new path is that it incorporates the side chain of mycophenolic acid in one step, which would make the synthesis adaptable to obtain some MPA derivatives.

Keywords: Mycophenolic acid, MPA, synthesis, immunosuppressant drug.