Steroids

Volume 200, December 2023, 109323

A novel and easy protocol to obtain 6-alkoxy-$\Delta^{4,6}$-diene-3-one derivatives from available sterols

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https://doi.org/10.1016/j.steroids.2023.109323

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Highlights

- Simple methodology to access 6-alkoxy-$\Delta^{4,6}$-diene-3-one derivatives has been achieved.
- Molecular iodine as a catalyst for a keto/enol ether transformation was used.
- Molecular iodine induced Michel additions in a 16-dehydropregnenolone derivative.

Abstract

Herein we report an unprecedented and efficient methodology for accessing 6-alkoxy-$\Delta^{4,6}$-diene-3-one derivatives. Such scaffolds were serendipitously obtained in the course of the study of the reaction of Δ^4-3-keto steroids with catalytic amounts of iodine in refluxing methanol. A series of 6-