

## Accepted Manuscript

Propylphosphonic anhydride (T3P®) mediated synthesis of 3-oxoisindoline-1-carboxamides from 2-formylbenzoic acid, amines, and isocyanides. Preparation of isoindolinone alkaloids

Valentina Varga, Mátyás Milen, Péter Ábrányi-Balogh

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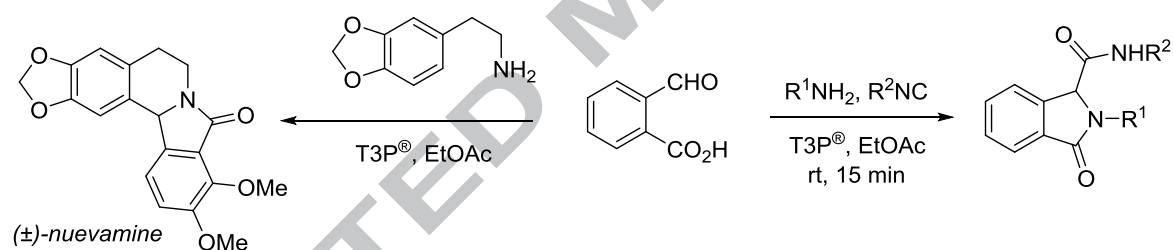
Valentina Varga,<sup>1</sup> Mátyás Milen,<sup>2</sup> Péter Ábrányi-Balogh<sup>1,\*</sup>

<sup>1</sup>Hungarian Academy of Sciences, Research Centre for Natural Sciences, 1519 Budapest, POB 286, Hungary

<sup>2</sup>Egis Pharmaceuticals Plc., Directorate of Drug Substance Development, 1475 Budapest, P.O.B. 100, Hungary

\*To whom correspondence should be addressed. Tel.: +36 1 3826961; e-mail: abransy-balogh.peter@ttk.mta.hu

**Graphical abstract**



**Abstract**

Propylphosphonic anhydride (T3P®) was successfully applied to the synthesis of an isoindolinone library by the utilization of an Ugi four-center, three-component reaction (Ugi-4C-3CR). The use of T3P® significantly shortened the required reaction time and the corresponding products were obtained in good to high yields. Moreover, a side-reaction was observed when phenylethylamine derivatives and tryptamine were used as the amine component. The latter reaction was applied to the microwave-assisted, one-pot synthesis of the isoquinoline alkaloid (±)-nuevamine. Surprisingly, the traditional Ugi four-component reaction (Ugi-4CR) was unsuccessful in the presence of T3P®. In this case an  $\alpha$ -amino amide was produced excluding the carboxylic acid from the multicomponent reaction.

**Keywords:** isoindolinones, Ugi-reaction, T3P®, natural product synthesis

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