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Alternative synthesis of intubation drugs propofol and etomidate

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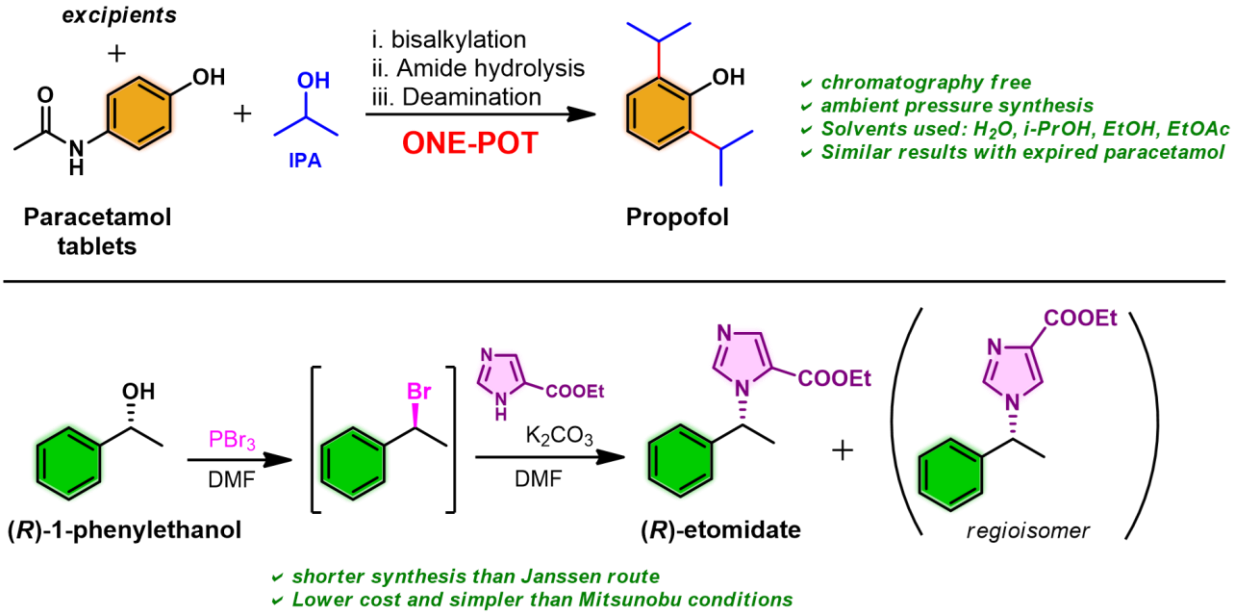
ABSTRACT

The COVID-19 pandemic has affected millions of people in the entire world and temporarily caused a shortage of several intubation drugs, including propofol and etomidate.[1] Herein, we present alternative synthesis of both sedative drugs with different approaches. The propofol was synthesized in a one-pot protocol starting from paracetamol, a very common and abundant active pharmaceutical ingredient. This presented process afford propofol in 47% isolated yield with high purity.[2] In the case of etomidate, a shorten route in comparison to the Janssen group[3] was developed. Starting from the commercially available (*R*)-1-phenylethanol, (*R*)-etomidate was synthesized by two SN_2 reactions. Substitution of the alcohol to the corresponding bromide followed by addition of ethyl imidazole-4-carboxylate in the presence of K_2CO_3 afforded etomidate in 30% overall yield.[4] Studies to minimize the regioisomer formation are in progress.



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