

# Novel and Efficient Synthesis of Deuterium-Labeled Olopatadine- $d_6$

S. Endoori<sup>a</sup>, K. Ch. Gulipalli<sup>a</sup>, S. Bodige<sup>a</sup>, and N. Seelam<sup>a\*</sup>

<sup>a</sup> Department of Chemistry, K L University, Green fields, Vaddeswaram, Guntur, India

\*e-mail: nareshvarma.klu@gmail.com

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**Abstract**—A novel and highly efficient synthetic approach has been developed for the synthesis of deuterium-labeled olopatadine- $d_6$  using inexpensive and commercially available dimethyl sulfate- $d_6$  at the stage of alkylation of primary amine intermediate. The proposed synthetic path makes it possible to avoid the use of expensive labeled reagents such as dimethyl amine- $d_6$  used as labeled precursor in the traditional synthetic route. The structure of the obtained olopatadine- $d_6$  has been confirmed by  $^1\text{H}$  NMR and mass spectral data.

**Keywords:** olopatadine, olopatadine- $d_6$ , antihistamine, deuterium-labeled compounds.

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