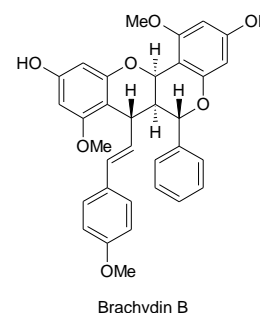


## Synthesis of Brachydins

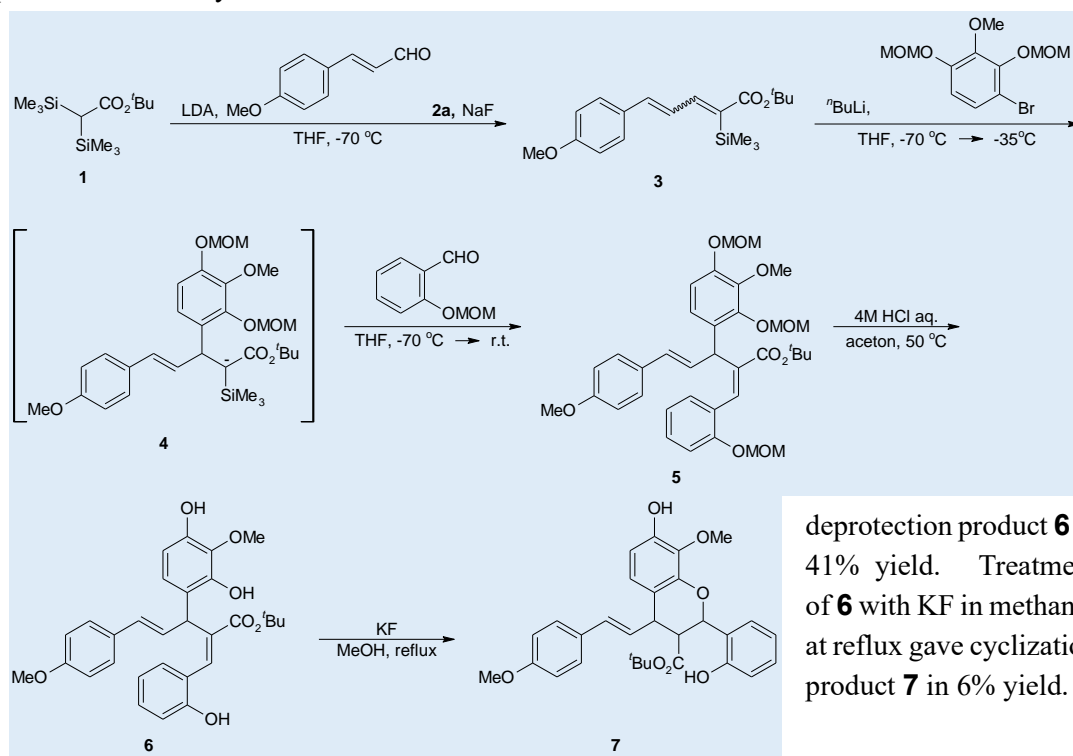
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**Keywords:** Brachydin B; Butadienylsilane; *tert*-Butyl Bis(trimethylsilyl)acetate; Peterson Reaction

The brachydin B, was isolated from *Arrabidaea brachypoda* roots, have high activity against *Trypanosoma cruzi* which is protozoan parasite causing Chagas disease [1]. On the other hand, the vinylsilanes bearing dimethylphosphono or *tert*-butoxycarbonyl groups at  $\alpha$ -position were versatile synthetic intermediates for the synthesis of natural products. In this study, we investigated the synthesis of brachydin B and its analogues with continuous Michael addition and Peterson reaction as key reaction from *tert*-butyl 5-(4-methoxyphenyl)-2-trimethylsilyl-2,4-pentadienoate.



Reaction of **3** with 3-methoxy-2,4-di(methoxymethoxy)phenyllithium prepared from 1-bromo-3-methoxy-2,4-di(methoxymethoxy)benzene and  $n$ BuLi, and subsequent Peterson reaction with 2-methoxymethoxybenzaldehyde gave the corresponding tandem reaction product **5** in 42% yield. Treatment of **5** with 4M HCl solution in acetone was afforded all



[1] C. Rocha, *et al.*, *J. Nat. Prod.*, 2014, 77, 1345-1350.