Unified Approach to the Icetaxane and nor-Icetaxane Diterpenoids *via* a Key Formylation-Aldol-Condensation Cascade

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Abstract: Nor-icetaxane (**1**), icetaxane diterpenoids (**2a-e**) and related complex prenoid, hydrangenone **3** have been isolated from a variety of terrestrial plant sources. Reportedly, few members of icetexanes exhibit an array of interesting biological properties, such as hypotensive activity, cytotoxicity against P388 murine leukemia cells, anthelmintic and antileishmanial activities.[1] Therefore, only a few strategy for the construction of these structural scaffolds are reported in the literature.[1b, 2]

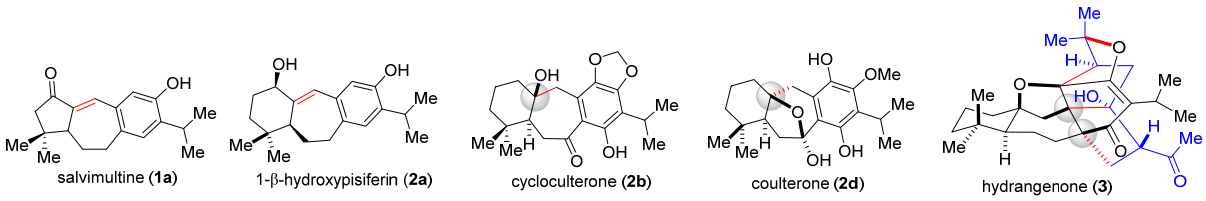
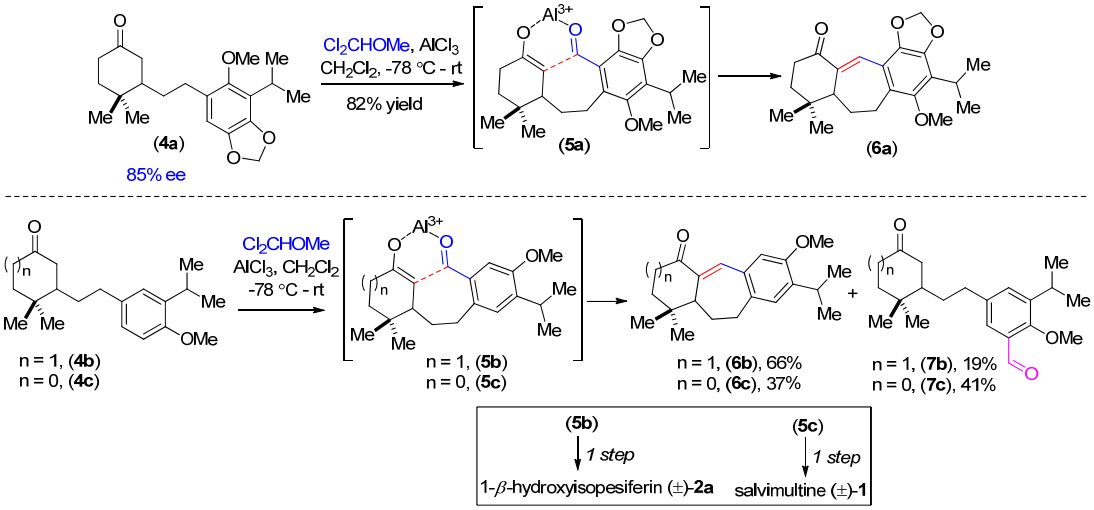


Figure 1. Selected nor-icetaxane (**1**) and icetexane (**2a-e**) diterpenoids and complex terpenoid **3**.

We envisioned that 5/7/6-not-icetaxane core **1**, 6/7/6-icetaxane core **2a-d**, and the core structure of hydrangenone **3** (Figure 1) can be accessed from a tricyclic core **6** (Scheme 1), which in turn could be synthesized from 3-substituted cycloalkalones **4**.[3] In this poster, I will discuss about the benzo-heptanulation as unified strategy for core structures of nor-icetaxane (**1**), icetaxane diterpenoids (**2a-e**).[4]



Scheme 1. Key formylation followed by aldol condensation.

References and Notes:

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4. Parida, A.; Nair, V. N.; Das, M. K.; Ghosh, S.; Bisai, A. *Manuscript under preparation.*