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## SYNTHESIS OF SOME DIHOMODRIMANE AND 14,15-DINORLABDANE TERPENOIDS WITH THE AMINO-GROUP

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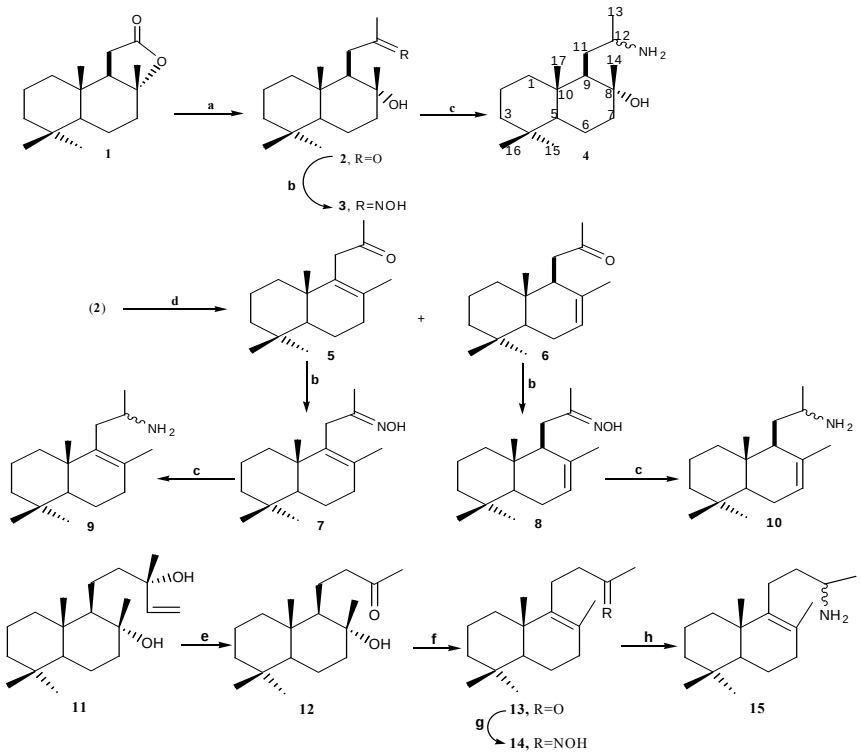
Many drimane sesquiterpenoids exhibit various types of biological activity [1]. In continuation of our investigation on the synthesis of nitrogen containing drimane and homodrimane sesquiterpenoids [2-5], we herein describe the synthesis of dihomordimane and 14,15-bis-norlabdane amines (**4, 9, 10, 15**) from commercially available norambreinolide (**1**) and sclareol (**11**), according to the scheme given below.




***Reagents and conditions*: a**. $CH_3Li$, $Et_2O$, 20°C, 15 min., 65%; **b**. $NH_2OH \cdot HCl$, EtOH-Py (1:1), 20°C, 24 h, 97-99%; **c**. $LiAlH_4$, THF, 65°C, 10h, 53-58%; **d**. Amberlyst-15, $CH_2Cl_2$, 20°C, 20h, a ratio of **5** and **6** (2.5 : 1), 95%. **e**. $KMnO_4$, $CH_3COCH_3$, 20°C, 5h, 60%; **f**. $CH_3SO_3Si(CH_3)_3$, $CH_3CN$, 18°C, 10min, 96%; **g**. $NH_2OH \cdot HCl$, EtOH-Py (1:1), 20°C, 20h, 99%; **h**. $LiAlH_4$, THF, Δ, 5h, 62%.

Reduction of the oximes (**3, 7, 8, 14**) with $LiAlH_4$ in THF is considered as the key step. The structure and stereochemistry of the newly obtained compounds were established on the basis of their spectral data. The amines (**4, 9, 10, 15**) were synthesized in order to test their biological activity.

**References:**

1. B.J.M. Jansen, A. De Groot, *Nat. Prod. Rep* **,** 2004, **21**, 449.
2. K.I. Kuchkova, A.N. Arycu, P.F. Vlad, *Chem. Nat. Comp.*, 2009, **45**, 367.
3. K.I. Kuchkova, A.N. Arycu, P.F. Vlad, K. Deleanu, A. Nikolescu, *Chem. Nat. Comp.*, 2010, **46**, 539.
4. K.I. Kuchkova, A.N. Arycu, A.N. Barba, P.F. Vlad, Ya. Lipkovskii, Yu.A. Simonov, V.Kh. Kravtsov, *Chem. Nat. Comp.*, 2011, **47**, 223.
5. K. Kuchkova, A. Aricu, A. Barba, P. Vlad, S. Shova, E. Secara, N. Ungur, G. Zbancioc, I.I. Mangalagiu, *Synlett*, 2013, **24**, 697.