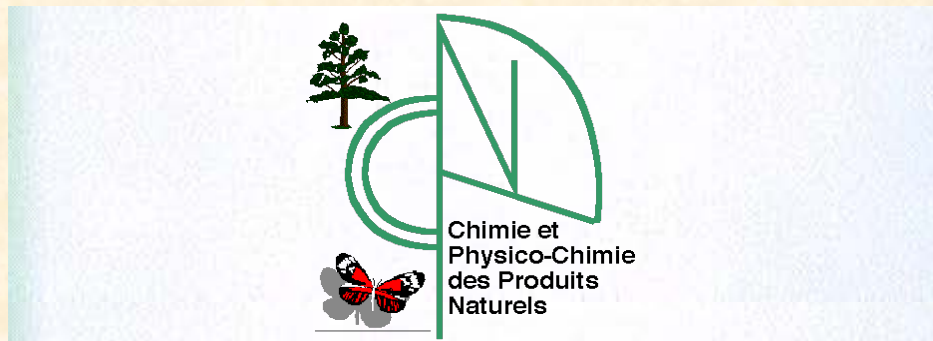
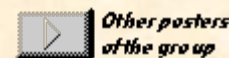


[C0007]



New Strategy toward clerodanes synthesis

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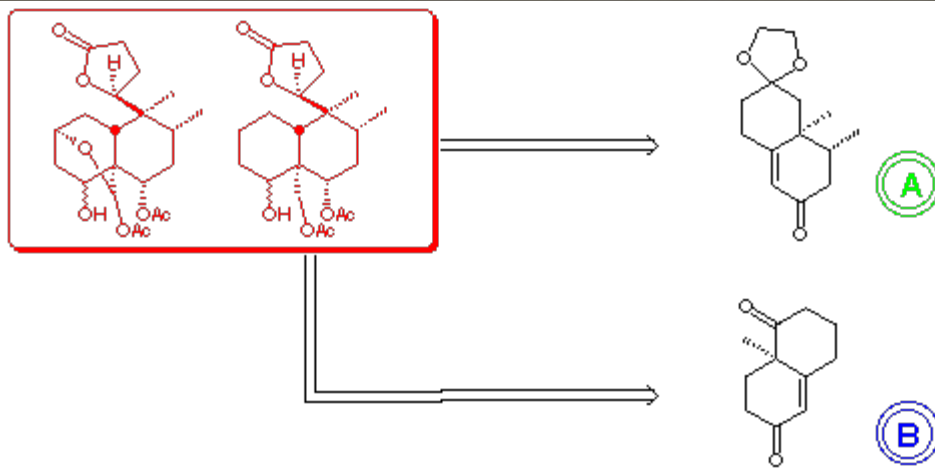
Introduction :

Clerodanes diterpenes have been considerably studied by biologists and chemists, according to their interesting antifeedant activity on insects as well as their unique structure, which make them a challenging target for total synthesis. Several problems related to their synthesis have been solved^{1,2,3}, and some natural products have been synthesised in the ajugarin's series⁴ as well as in the dehydroclerodanes ^{4c}. However, the problem of the stereoselective construction of the acyclic C-9-C-11⁵ double bond, drastically related to this of the stereochemical control of stereogenic centers C-8, C-10 and C-5 remains up to date. We have developed two strategies aimed to this goal. Both strategies consist in controlling the configurations of some of the stereogenic centers of the target molecule in an early bicyclic structure easy accessible. One of the ring of these precursors should prefigure the B ring of the clerodanes, the cleavage of the other ring giving access to functionalized side chains which should allow the further elaboration of either the decalinic moiety of the molecule or the furofuran system through well known methodologies.



[route A
retrosynthesis](#)
[route B
retrosynthesis](#)





Route B allows a rapid control of the configurations at C-9 and C-11 but needs a further elaboration of ring B of the clerodin, and especially the introduction of a methyl group at C-8 and the construction of ring A. Results obtained have already been published (Ducrot, P.-H.; Hervier, A.-C.; Lallemand, J.-Y. *Synth. Comm.* **1996**, *26*, 4447-4457).

This poster describes results obtained in route A, where the configurations at C-8, C-9 and C-10 are easily controlled.

Results :

- [Route B : summary of published results](#)
- [Route A : preparation of the synthon and ring B elaboration](#)
- [Route A : upper ring enlargement](#)
- [Route A : optical resolution of a key intermediate](#)
- [Route A : alternative to the ring enlargement](#)

References : [follow this link](#)

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