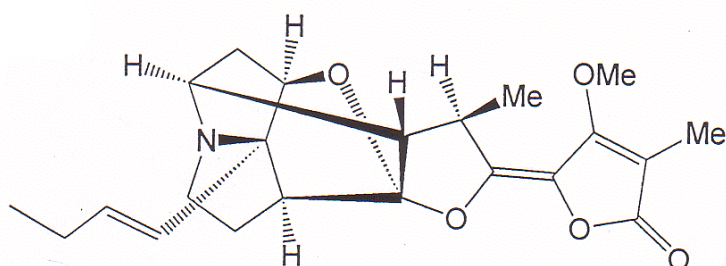


Asparagamine A

Synthesis Discussion, 28th November 1997

This new polycyclic alkaloid was isolated in 1994 from the dried roots of *Asparagus racemosus*, a small woody plant growing in southeast Asia, India, Australia and Africa.¹ It is thought to be one of two active ingredients in the crude preparation of this root, used as an anti-abortive in traditional Malaysian medicine. It has also shown anti-tumor properties *in vitro*.²



Please design an enantioselective synthesis of Asparagamine A, which has the structure shown above.³

References:

1. T. Sekine, N. Fukasawa, Y. Kashiwagi, N. Ruangrunsi and I. Murakoshi, *Chem. Pharm. Bull.*, 1994, **42**, 1360.
2. T. Sekine, F. Ikegami, N. Fukasawa, Y. Kashiwagi, T. Aizawa, Y. Fujii, N. Ruangrunsi and I. Murakoshi, *Perkin Trans. I*, 1995, p. 391.
3. There have been no syntheses of this alkaloid reported to date.