1995 alkaloids

alkaloids U 0600 01 - 236

A Short and New Synthesis of Optically Pure (+)-Retronecine. — The 4-hydroxyproline derived pyrrolidine (I) is converted into the bistrimethylsilyl derivative (IV). On treatment with silver fluoride, an azomethine ylide is generated which undergoes a cycloaddition reaction with methyl propiolate to yield the pyrrolizidines (VI) and (VII). The latter is reduced, producing the alkaloid mentioned in the title. — (PANDEY, G.; LAKSHMAIAH, G.; Synlett (1994) 4, 277-278; Div. Org. Chem. (Synth.), Natl. Chem. Lab., Pune-411008, India; EN)

$$\begin{array}{c} \text{OH} \\ \text{N} \\ \text{N} \\ \text{Boc} \\ \text{I*} \\ \text{I*} \\ \\ \text{II} \\ \text{N} \\ \text{SiMe}_3 \\ \text{SiMe}_3 \\ \text{SiMe}_3 \\ \text{OH} \\ \text{O$$

$$\begin{array}{c} \text{OH} \\ \text{N} \\ \text{O} \\ \text{Me} \end{array} \qquad \begin{array}{c} \text{(iBu)}_2\text{AlH, } \text{CH}_2\text{Cl}_2 \\ \\ -78^{\circ}\text{C, } [3 \text{ h}] \end{array} \qquad \begin{array}{c} \text{OH} \\ \text{H} \\ \text{OH} \end{array}$$

1