

Table 1. Reaction conditions of **4**, with aldehydes.

Reagent	Catalyst	Solvent	Temp.	Time	Product	Yield
CH ₂ =CHOCH ₂ CH ₃	CSA	CH ₂ Cl ₂	40°C	1 h	5a	34%
CH ₃ CHO	BF ₃ OEt ₂	(CH ₂ Cl) ₂	25°C	2 h	5a	21%
(CH ₃) ₂ CHCHO	BF ₃ OEt ₂	(CH ₂ Cl) ₂	80°C	13 min	5b	41%
(CH ₃) ₂ CHCH ₂ CHO	BF ₃ OEt ₂	(CH ₂ Cl) ₂	80°C	13 min	5c	45%
(CH ₃) ₂ CHCH ₂ CHO	CSA	(CH ₂ Cl) ₂	60°C	20 min	5c	39%

alkaloids. Further synthetic studies on ergot alkaloids and clavicipitic acid are now in progress.

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- 5a**: mp 160.5-161.5°C; MS m/z 242(M⁺); **5b**: mp 168-169°C; MS m/z 270(M⁺). The structures of **5a,b,c** were further confirmed by acetylation of **5a-c** with Ac₂O/Py to the corresponding mono and diacetates.
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