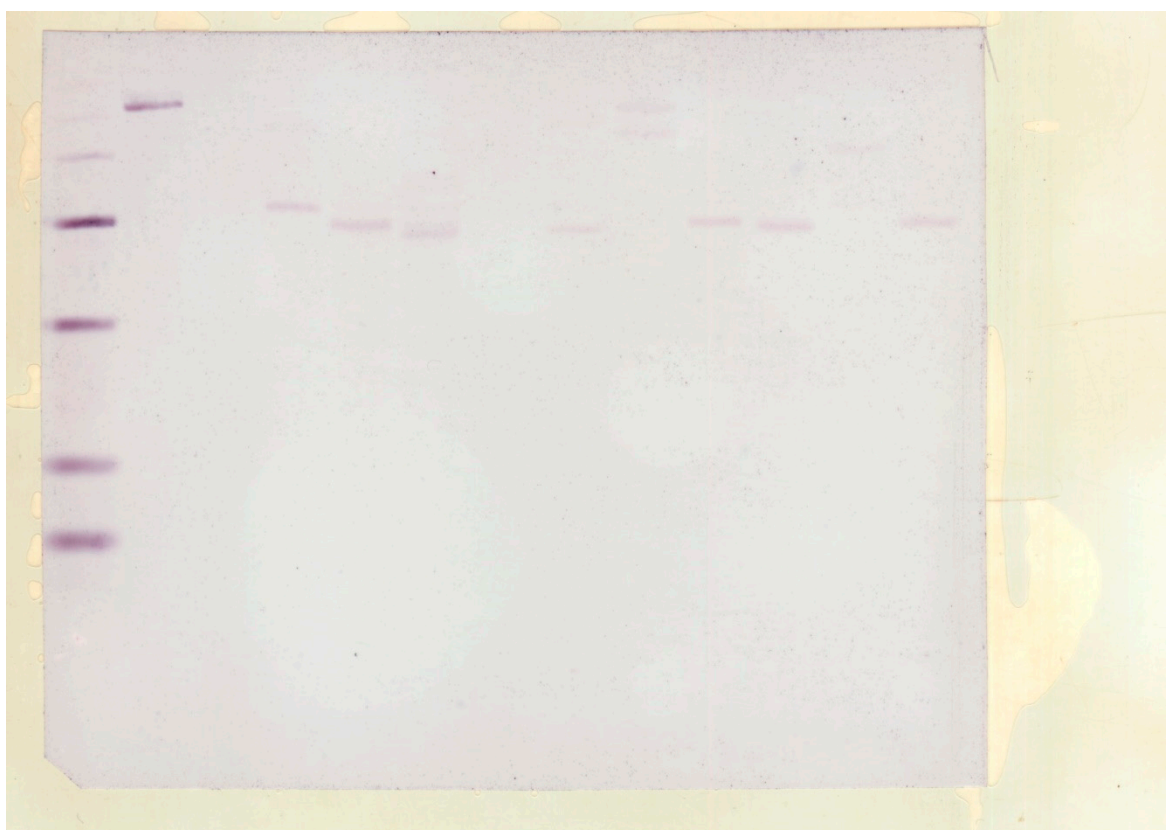


# Supplementary Material:

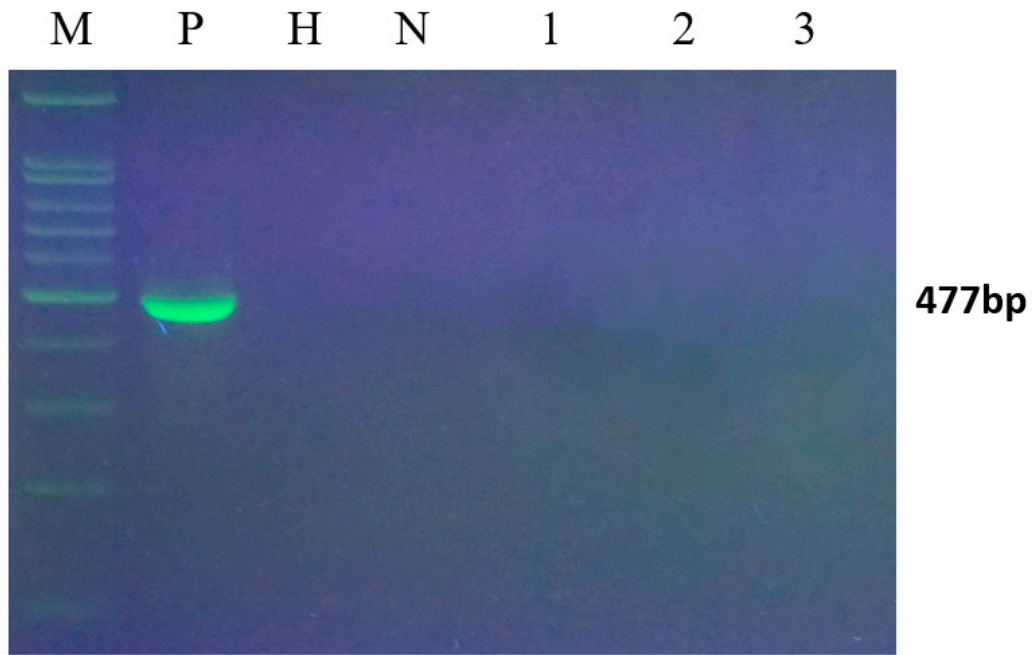
## Rui Ma et al. *Agrobacterium*-mediated Genetic Transformation of the Medicinal Plant *Veratrum dahuricum*

Supplementary Table S1. Primers for PCR and RT-PCR.

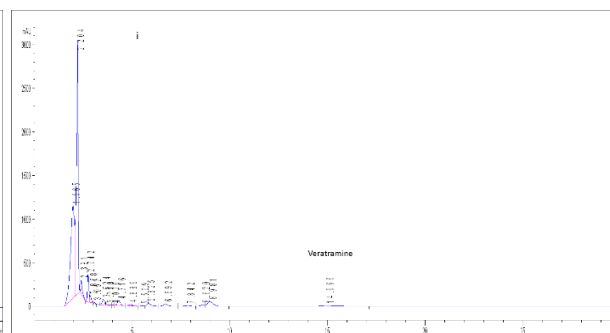
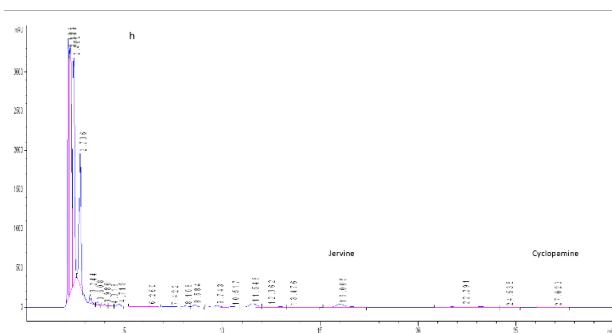
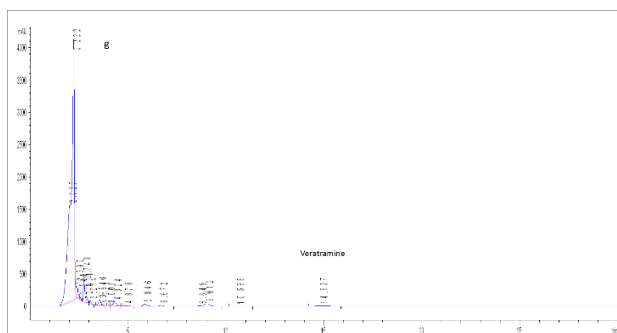
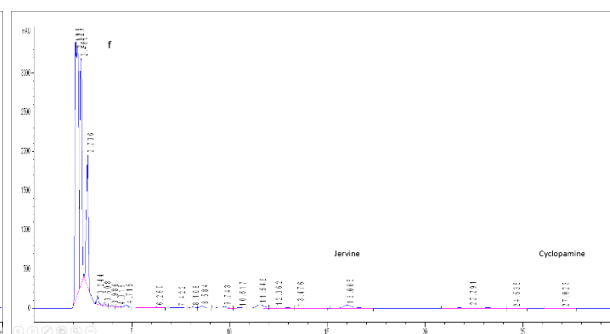
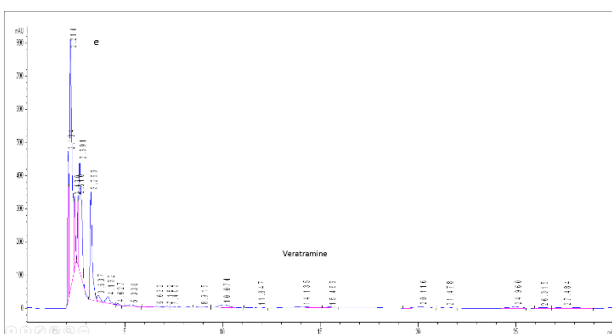
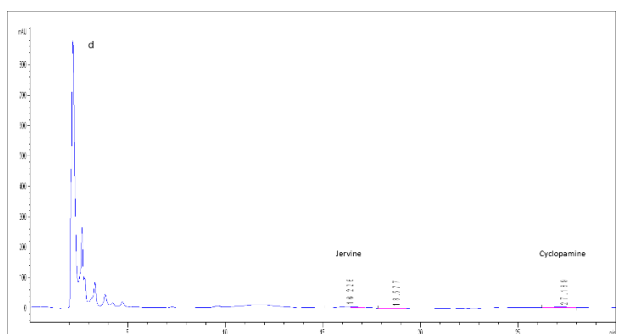
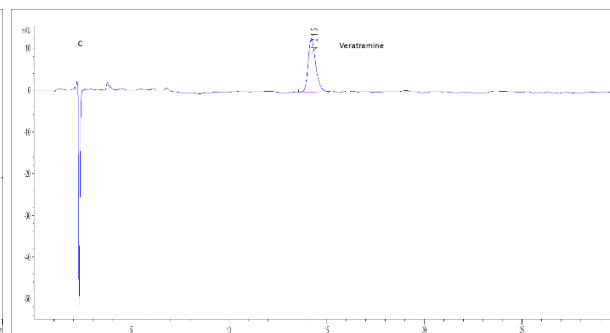
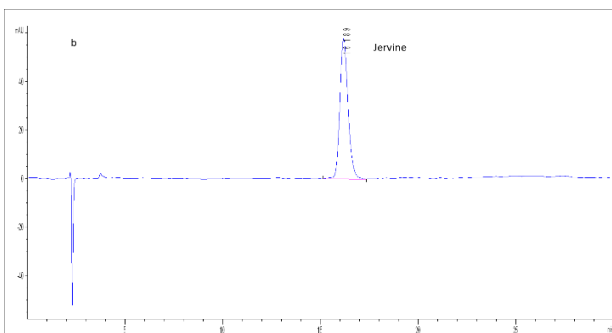
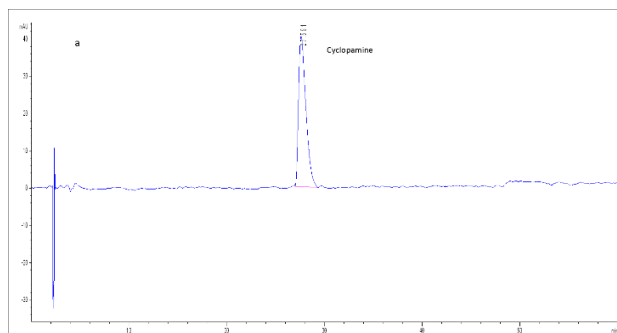
Gene	Primers	Expected Size
bar (for PCR and RT-PCR)	BarF: 5'-GCACCATCGTCAACCACTACATCGAG-3' BarR: 5'-TGAAGTCCAGCTGCCAGAAACCCAC-3'	441 bp
VirD	VirDF: 5'-TAGCAGAGCGACCAATCACA-3' VirDR: 5'-GACCTGCCTCCTCGTCATTA-3'	477 bp

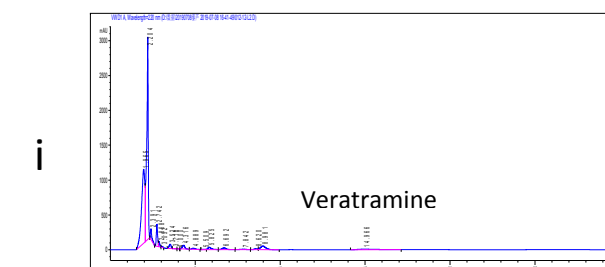
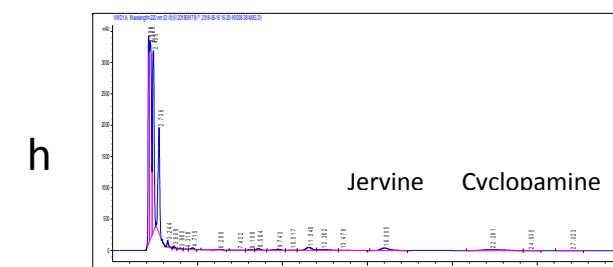
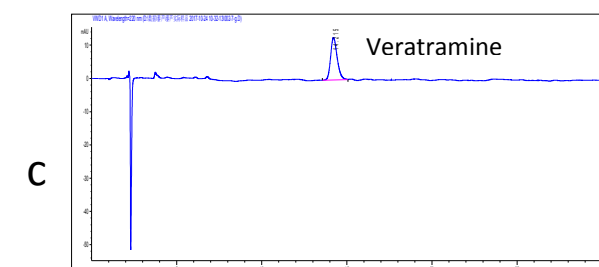
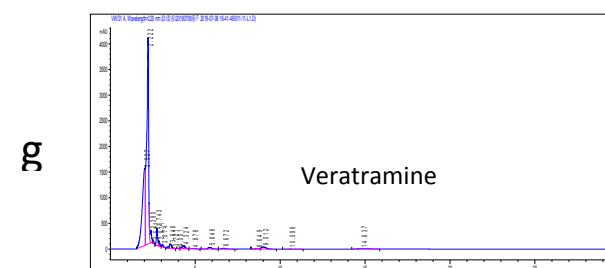
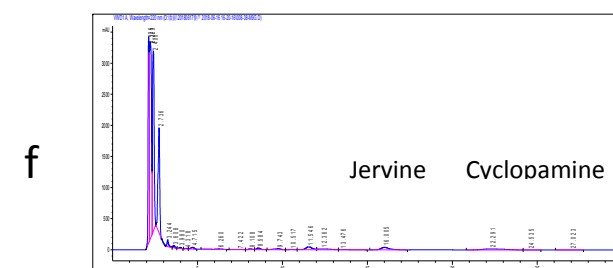
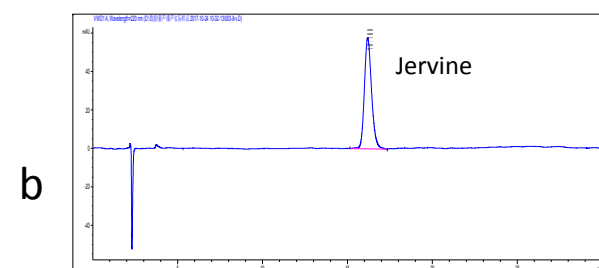
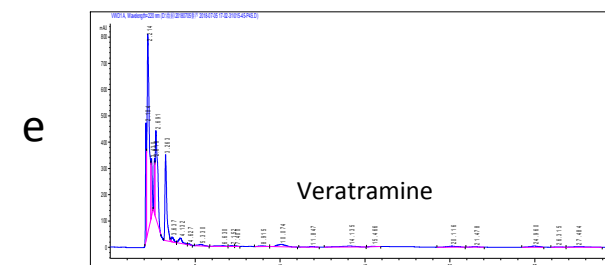
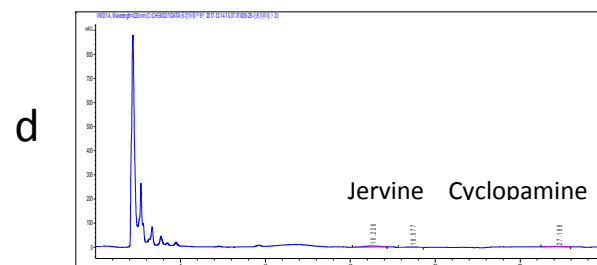
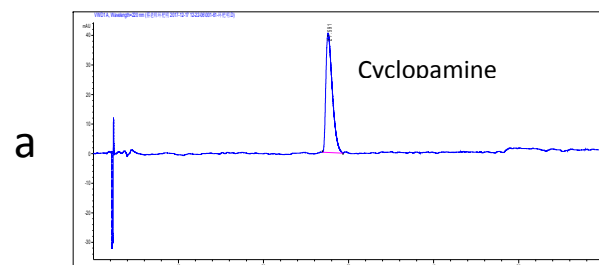


Supplementary Figure S2. Southern blot analysis showing 1-3 hybridized bands.



**Supplementary Figure S3.** PCR detection of *virD* gene of *Agrobacterium* strain LBA4404, showing the expected 477bp band in the positive control and no bands for negative water control, non-transformed control plant and transgenic plants. M: DNA molecular weight marker, P: positive control of plasmid pAL4404, H: negative water control, N: non-transformed control plant, 1- 3: transgenic plants. PCR analysis.





**Supplementary Figure S4.** HPLC analysis of steroid alkaloids cyclopamine, jervine and veratramine in transgenic plant, non-transformed control plant and wild collected plant of *Veratrum dahuricum* at wavelength 220 nm. (a), (b), (c) Chromatograms of commercial reference alkaloids cyclopamine, jervine and veratramine; (d), (e) Chromatograms of crude alkaloid extracts derived from transgenic plants (transgenic plant 1 and 2). Jervine, cyclopamine and veratramine were detected at retention time 16.22, 27.18 and 14.13min, respectively; (f), (g) Chromatograms of crude alkaloid extracts derived from non-transformed control plant. Jervine, cyclopamine and veratramine were detected at retention time 16.05, 27.02 and 14.83min, respectively; (h), (i) Chromatograms of crude alkaloid extracts derived from wild collected plant. Jervine, cyclopamine and veratramine were detected at retention time 16.00, 27.02 and 14.98min, respectively.