Abstract:
The family Papaveraceae offers a unique opportunity to study coordinated evolution of traits, with three characteristic and widespread floral syndromes that link inflorescence determinacy and flower symmetry, and some interesting “rule-breaker” taxa with unusual syndromes. We tested the amenability of Cysticapnos vesicaria to the functional molecular biology technique of virus-induced gene silencing (VIGS). This provided a zygomorphic-flowered model plant to contrast the actinomorphic-flowered emerging model Eschscholzia californica. We discussed traits evolution in the light of the phylogeny and the history of single gene, whole-genome duplication events and genome reshuffling in Papaveraceae.