

## Enolate-Mediated Palladium Cross-Coupling Methodology Applied to the Synthesis of Subincanadine E

Progress towards a concise total synthesis of Subincanadine E, also known as Pericine, is reported. In light of the formation of an unavoidable dimeric isomer, the 7-step synthesis was modified accordingly. A revised 8-step synthesis has been underway, stemming from the condensation of tryptamine with  $\gamma$ -butyrolactone followed by a Bischler-Napieralski reaction to provide ( $\pm$ )-Harmacine. Release of this tetracycle to its 9-membered ring analog allowed concurrent placement of a protecting group on the tryptamine arm as well as a hydroxide functionality at C-16. Deprotection, alkylation, and oxidation smoothly present an intermediate set-up for an innovative enolate-driven palladium cross-coupling reaction. Currently, investigations are still underway and rest upon the screening of various Heck-like coupling conditions. Contingent on its success, a Wittig olefination will be required to complete the final molecule in an overall asymmetric fashion.