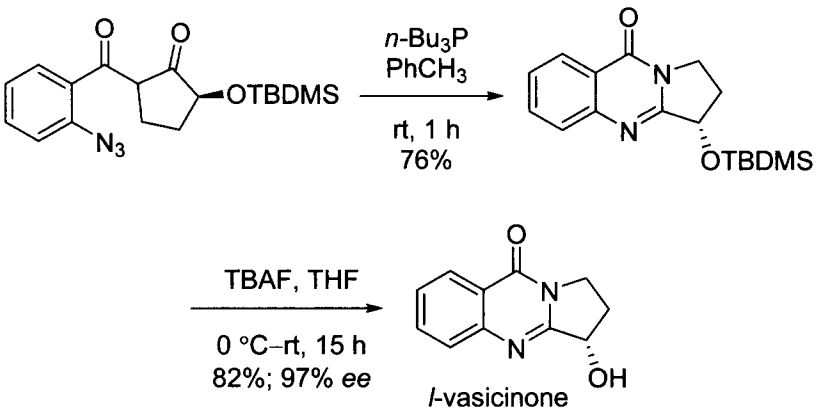
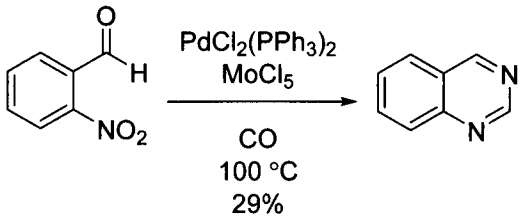


14.3.4 Transition Metal-Promoted Reactions

Transition metal-promoted reactions have recently become important in the synthesis of the basic core structures of quinazolines and quinazolinones. While many of the examples below are not necessarily biologically relevant in and of themselves, they highlight important areas of development in the synthesis of these ring classes that can be employed in the future synthesis of compounds with greater biological significance.

Wantanabe and co-workers used an intermolecular reductive *N*-heterocyclization approach to generate quinazoline.[38] Treatment of 2-nitro benzaldehyde with palladium(II) and molybdenum(V) complexes as catalysts in the presence of carbon monoxide under high pressure generated quinazoline in 29% yield.



Quinazoline derivatives were prepared by Fu and co-workers using an Ullmann-type coupling.[39] Treatment of (2-bromophenyl)methylamine with benzamide in the presence of potassium carbonate and a copper(I) catalyst under thermal conditions in isopropanol gave the corresponding quinazoline in 87% yield. The authors also reported modest to good yields using several substituted (2-bromophenyl)methylamine and benzamide derivatives (not shown).