

Stereoselective Synthesis of Bromopiperidinones and their Conversion to Annulated Heterocycles

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N-Galactopyranosyl- and *N*-glucopyranosyl imines of aliphatic, aromatic and heteroaromatic aldehydes react with 1-methoxy-3-trimethylsilyloxy-1,3-butadiene in a domino Mannich-Michael reaction cascade to give 2-substituted 5,6-dehydro-piperidin-4-ones with high diastereoselectivity. Treatment of these cyclic enaminones with *N*-bromo-succinimide yields the corresponding 2-substituted 5-bromo-5,6-dehydropiperidinones which react with L-Selectride[®] or methylcuprate to afford the saturated bromo-piperidinones with high diastereoselectivity. Condensation reactions of these products with thioamides afford thiazolopiperidines.

Key words: Glycosylamines, Stereoselective Mannich Reactions, Bromopiperidinones, Stereoselective Michael Addition, Thiazolopiperidinones