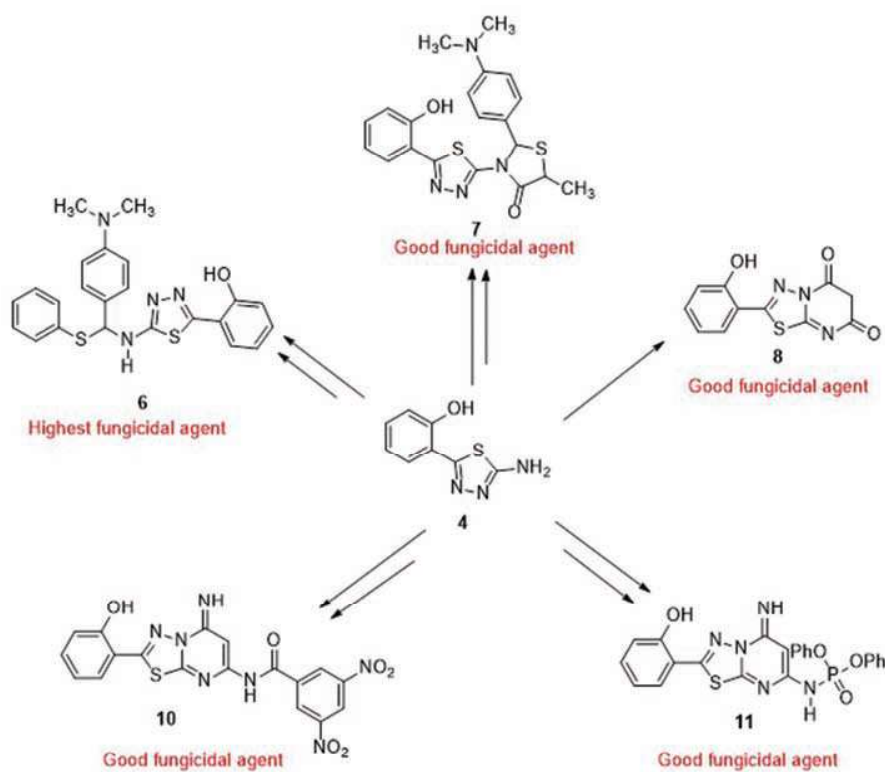


Synthesis and Chemistry of Some New 2-Amino-5-aryl-1,3,4-thiadiazole Derivatives as Fungicidal Agents

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ABSTRACT Some new isolated and/or fused heterobicyclic nitrogen systems containing 1,3,4-thiadiazole moieties have been synthesized, starting from the reaction of 2-(5-amino-1,3,4-thiadiazol-2-yl)phenol (**4**) with bifunctional compounds followed by ring closure reactions in different conditions. Structure of the new systems obtained was deduced from their elemental analysis and spectral data (Fourier-transform infrared, $^1\text{H}/^{13}\text{C}$ nuclear magnetic resonance, and mass spectrometry). Most of these systems exhibited good fungicidal activities in comparison with the fungicide carbendazim a standard, compound **6** exhibited high activity about 90% at 1000 ppm towards the tested fungi.



KEYWORDS Heterobicyclic nitrogen system, Fungicidal, Hydrazinecarbodithioic acid, 1,3,4-Thiadiazole.