



**Synthesis, Corrosion inhibition, and Pharmacological Activities and docking studies of (3-(4-halophenyl)-5-(4-halophenyl)-1H-pyrazol-1-yl) (2-(4-halophenyl) quinolin-4-yl) methanone hybrids**

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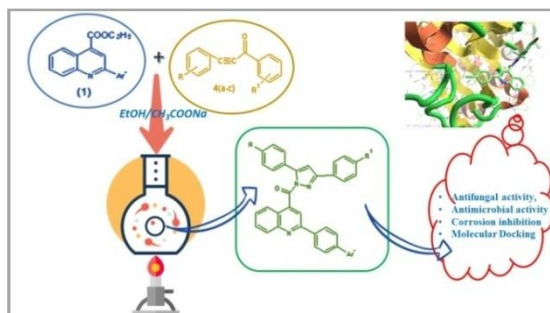
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**ABSTRACT**

A novel series of 3,5-diaryl-1-(2-aryl-4-quinolinoyl) pyrazoline are synthesized by the reaction of 2-aryl-quinolinoylhydrazide (1) with 1,3-diaryl-2-propyne-1-one (3). The structures of the newly synthesized compounds are confirmed by analytical and spectral data. The biological activity study of the compounds indicated that most of the newly synthesized compounds showed good antibacterial activity. Further the docking experiments indicated that compound 5h showed good binding property with Glucosamine fructose-6-phosphateamino transferase. Similarly, the corrosion inhibition property as evaluated by potentiodynamic polarization technique. In the medium tested, the tested compound 5a demonstrated excellent inhibitory action against corrosion.

**Graphical Abstract:**



Bioactive Pyrazole derivative

**Keywords:** Pyrazolines, Quinoline derivatives, antifungal activity, antimicrobial activity, corrosion inhibition.

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