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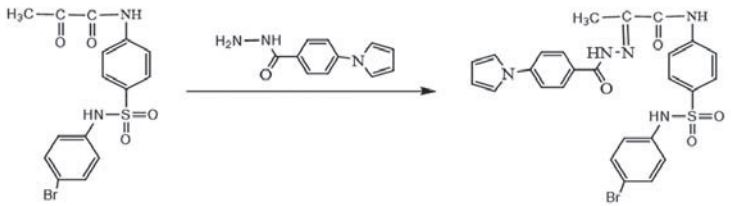
Synthesis and Antitubercular Activity of Some Novel *N′*-Substituted Benzenesulfonamide Derivatives

Shrinivas D. Joshi*, Devendra Kumar, S. R. Prem Kumar

Novel Drug Design and Discovery Laboratory, Department of Pharmaceutical Chemistry, Soniya Education Trust's, College of Pharmacy, Sangolli Rayanna Nagar, Dharwad-580 002, Karnataka, India

ABSTRACT 2-Oxo-*N*-(4-(*N*-substituted phenylsulfamoyl)phenyl)propanamides **2(a-e)**/4-oxo-*N*-(4-(*N*-substituted phenylsulfamoyl)phenyl)pentanamides **4(a-c)** were prepared by refluxing 4-amino-*N*-substituted phenylbenzenesulfonamides **1(a-e)/1(a-c)** with pyruvic acid/levulinic acid in the presence of thionyl chloride for about 1 h. The synthesis of *N*-(4-(*N*-(4-bromophenyl) sulfamoyl) phenyl)-2-(2-(4-1*H*-pyrrol-1-yl) benzoyl) hydrazineylidene) propanamide **3a**/4-(2-(4-(1*H*-pyrrol-1yl) benzoyl) hydrazineylidene)-*N*-(4-(*N*-substituted phenylsulfamoyl) phenyl) pentanamides **5(a-b)** was achieved by refluxing compound **2a/4(a-b)** with 4-(1*H*-pyrrol-1-yl) benzohydrazide in alcohol in the presence of acetic acid. All the newly synthesized compounds were screened for *in vitro* antitubercular activity against *Mycobacterium tuberculosis* $H_{37}Rv$ and exhibited significant minimum inhibitory concentration values.



2a **3a**

KEY WORDS *N'*-Substituted benzenesulfonamides, 1*H*-(pyrrol-1-yl)benzohydrazide, *Mycobacterium tuberculosis* $H_{37}Rv$, Antitubercular activity.