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Synthesis of some novel metformin Schiff's bases and its Antibacterial, Antifungal, Anti-inflammatory and Antioxidant activity

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Abstract : Some novel Schiff's bases of Metformin hydrochloride (**3a-k**) were synthesized by conventional method. Synthesized compounds were screened for antibacterial, antifungal, antiinflammatory and antioxidant activity. Compounds **3b**, **3c**, **3d**, **3g**, showed promising activity to *Bacillus subtilis*, *E. coli* and *C. albicans* whereas other samples showed mild to moderate activity. Compounds**3a**, **3b**, **3c**, **3d**, **3g**, **3j** and **3k** caused complete inhibition of *Aspergillus niger Pencillium chrysogenum* and *Aspergillus Flavus* hence these compounds can be considered as fungicidal. Anti-inflammatory activity exists for compound **3d** having fluoro substitution whereas all other shows mild to moderate activity. Compounds **3b**, **3d**, **3g** showed best antioxidant activity. Activity report of Schiff's bases of metformin showed that they can be considered as new bioactive molecules that may serves as leads in the development of new pharmaceutical drugs.

Key-words : Metformin, antibacterial, antifungal, anti-inflammatory, antioxidant activity.

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