**USE OF QUINOLIN BIS-CHALCONE AS BUILDING BLOCK FOR THE SYNTHESIS OF VARIOUS HETEROPOLYCYCLIC SYSTEMS.**

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Most of the resources and the modern scientific research has as objective obtaining of new compounds motivated in find leading molecules with marked biological activity on cellular disorders or infectious diseases that affect the health of millions of people in all the world. The chalcones and Curcumin derivatives, for its already proven biological activity constitute an alternative interesting in the research of new antibiotics, antifungal and antitumor agents for the treatment of those conditions that afflict to humanity. In this sense, in this present research project it is proposed the synthesis of a series of pyrazolics compounds (5 members) and its later transformation to complex BF3.OEt2, pyridinium compounds (6 members), cyclopentenones and compounds that containing in its structure cyclohexenes derivatives of quinolin bis-chalcones non symetrics, which will be evaluated its biological activity that includes antitumor activity, antibacterial activity and antifungal activity that will be made in the National Cancer Institute from United States, the Grupo de Biotecnología e Infecciones Bacterianas of the Faculty of Health in the Universidad del Valle and the Universidad Nacional de Rosario in Argentina respectively. In addition, it will be carried out the study of photophysical properties that possibly the BF2- complex can have.

Keywords: boron complex, cyclopentenone, cyclohexene, pyrazole, pyridine, quinolin bischalcones, tricyclic systems