

UGC Minor Research Project Chemistry

Title of Project: "Synthesis & Biological evaluation of some new glyoxylamide derivatives containing indole nucleus"

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Summary

Indole nucleus containing glyoxamide compounds are biologically active and they have a large number of applications in medicine and pharmacy. The compounds of this Indole-3-yl-glyoxylamide derivatives have been tested for various pharmacological activities, which have been summarized as under; Anticancer, Antitumor, Anxiolytic, Anti-HIV, Antiviral, Antimicrobial, Antileishmanial, GABA-A receptor, Antihypertensive, Cardiovascular. Apart from this the molecule has role in variety of biological processes, including calcium homeostasis, lipid metabolism, mitochondrial oxidation, cell growth and differentiation, apoptosis induction and regulation of immune functions.

Taking in view of the applicability of Indole nucleus containing glyoxamide compounds, the present work was undertaken to synthesize some new 1H-indole-2-carboxylic acid derivatives. Total of twenty new compound/derivatives were synthesized during the study which were verified using spectral analysis. Apart from this, antimicrobial properties of the derived drugs were studied.

Though, being a short term study, detailed investigation and clinical trials can give more idea to the further uses and applications of the compounds.