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# शासकीय जर्नल

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(57) Abstract :
The present invention relates to novel a-mercapto-aryl acrylic acid derivatives, specifically 3-(4-substituted aryl)-2-sulfanyl acrylic acids, synthesized through an efficient and straightforward reaction method. These compounds were structurally confirmed using HPLC, UHPLC, IR, and elemental analysis. The invention demonstrates their significant protective effects against cadmium-induced toxicity in vivo. Administration of the compounds resulted in the restoration of hematological and biochemical parameters, reduction of cadmium accumulation in blood and tissues, and enhancement of antioxidant enzyme activities. The derivatives exhibit potent chelating properties, helping to alleviate oxidative stress and tissue damage caused by cadmium exposure. These findings suggest that the synthesized compounds are promising candidates for developing safe and effective therapeutic agents against heavy metal toxicity, particularly cadmium poisoning, thereby addressing a major concern in environmental and occupational health.

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