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| (51) International classification             | :A61P0003060000,<br>A61P0009000000,<br>A61P0003100000,<br>A61K0031050000,<br>A61P0003040000 | (71)Name of Applicant :<br>1)Dr. Gayyurul Islam<br>Address of Applicant :Professor, Faculty of Pharmacy, IFTM University<br>Moradabad, Uttar Pradesh, India. Uttar Pradesh India<br>2)Dr. Navneet Verma<br>3)Rabiullah |
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(57) Abstract :

The present invention relates to a pharmaceutical composition comprising ethyl acetate extract of Cassia fistula leaves demonstrating significant hypolipidemic and antioxidant properties for treatment of cardiovascular diseases. The extract, administered at doses of 100-300 mg/kg body weight, effectively reduces serum lipid levels, including total cholesterol, triglycerides, and low-density lipoproteins while increasing high-density lipoproteins in high-fat diet induced hyperlipidemic animal models. The composition exhibits remarkable antioxidant activity by reducing malondialdehyde levels and enhancing activities of antioxidant enzymes including superoxide dismutase, catalase, and glutathione peroxidase in cardiac and hepatic tissues. The invention provides a safe, cost-effective natural alternative to synthetic hypolipidemic drugs with minimal adverse effects, validated through histopathological examination showing reduced adipose tissue lipid accumulation. The optimal therapeutic effect is achieved at 300 mg/kg dose, demonstrating efficacy comparable to standard atorvastatin therapy.

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