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Biological profiling and hepatorehabilitative potential of Mucuna pruriens in male albino rats

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The present research was conducted to study the biological profile and hepato rehabilitative potential of Mucuna pruriens (MP) seeds using male albino rats as animal model. For the study, methanolic extract of Mucuna pruriens seeds was prepared and antioxidant potential was determined. The seeds extract was screened for antimicrobial activity using well diffusion method. Results showed significant antioxidant potential and antimicrobial activity of extract. For hepato rehabilitative potential, the animals were divided into six groups intoxicated with carbon tetrachloride (CCl4) except the normal controls. The test group animals were treated with different doses of methanolic seeds extract. Significant ($p<0.05$) improvement in liver enzymes like alanine aminotransferase (ALT), aspartate aminotransferase (AST) activity was observed in dose dependent manner of seeds extract, while no significant improvement in ALP activity was observed as compared to control group animals. Significant ($p<0.05$) variation in serum total protein, albumin and globulin concentration was observed. Histopathology of liver tissue was also performed. Serious damage in liver cells (hepatocytes) structures in the CCl4 intoxicated group of animals was observed, while an improvement in the histoarchitecture of liver was observed in the positive control group animals treated with Silymarin and in the extract treated group animals. The study concluded that the mucuna seeds possess antioxidant and antimicrobial activity with therapeutic potential and may be used for the preparation of hepatoprotective medicines.

Biography

Muhammad Riaz has completed his PhD from University of Agriculture, Faisalabad, Pakistan and part of his PhD research work was conducted at University of Glasgow, Scotland, UK. He is working as Lecturer at University of Sargodha, Pakistan. He has published more than 20 reserch papers in reputed journals and presented his research in various international conferences in United Kingdom, Japan and Pakistan. He has been serving as Reviewer of reputed journals.

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