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# The Galle Medical Journal

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## From the Editors,

With great pleasure, we present the September 2013 issue of the Galle Medical Journal. Timely publication of the journal has helped to attract the attention of medical writers and the number of submissions has increased substantially during the recent past. Inevitably, this leads to a higher proportion of rejections.

Although the GMJ is freely accessible through the Sri Lankan Journals Online website, efforts are being made to make the contents of the journal more visible and accessible. Despite major advances in the IT front, communication barriers still exist.

The majority of submissions and inquiries we receive are in the fields of original research and case reports. We would encourage readers to submit manuscripts of other types such as pictures, comments, debates and view points. They can enhance the spectrum of the content and improve the outlook of the journal.

*Sarath Lekamwasam*

*Chandrani Liyanage*

*Editors / GMJ*

## Oral Presentation – 03

**Ameliorative potential of *Coccinia grandis* on hepatic antioxidant status in STZ-diabetic rats**Attanayake AP<sup>1</sup>, Jayatilake KAPW<sup>1</sup>, Pathirana C<sup>1</sup>, Mudduwa LKB<sup>2</sup><sup>1</sup>Department of Biochemistry, <sup>2</sup>Department of Pathology, Faculty of Medicine, University of Ruhuna, Sri Lanka**Introduction**

The antihyperglycaemic activity of *Coccinia grandis* in streptozotocin induced (STZ) diabetic rats was scientifically proven by our group. However, the consideration of antihyperglycaemic activity of plant extract solely is not sufficient in retarding the full spectrum of associated cellular injuries. The present study is aimed to investigate the effect of aqueous leaf extract of *C. grandis* on liver enzymes, hepatic oxidative stress markers in STZ-diabetic rats.

**Methods**

Wistar rats were divided into four groups (n=6/group); healthy untreated rats, STZ - diabetic untreated rats, diabetic rats receiving the aqueous leaf extract of *C. grandis* (0.75 g/kg) and diabetic rats receiving glibenclamide (0.50 mg/kg). The treatment continued for 30 days. Serum activities of liver enzymes, concentration of hepatic total protein, reduced glutathione (GSH), activities of glutathione reductase (GR), glutathione peroxidase (GPx) and glutathione -S- transferase (GST) were estimated on the 30<sup>th</sup> day. Histopathological assessment of liver tissue was done on haematoxylin and eosin stained sections.

**Results**

The extract decreased the activities of liver enzymes; alanine aminotransferase, aspartate aminotransferase, alkaline phosphatase by 47%, 12%, and 12% respectively (p=0.015). The liver GSH, activities of GR, GPx and GST of plant extract treated diabetic rats increased to, 591.40 ± 12.62 µg/g liver tissue, 7.92 ± 0.75, 7.76 ± 1.21, 7.45 ± 1.67 mmol/min/mg protein respectively (p=0.020). Histopathological assessment corroborated the biochemical data.

**Conclusion**

The results revealed that administration of aqueous leaf extract of *C. grandis* markedly improves hepatic antioxidant status in (STZ)-diabetic rats.