

1. **Title of research project: Screening of Plant containing Phytates for antiobesity and antihyperlipidemic activities in experimental models of hyperlipidemia.**
2. **Name of PI:** Dr.Arulmozhi.S
3. **Funding Agency:** UGC-Minor Research Project
4. **Project Reference number/ File number:** 47-1523/10(WRO) Dated 28/09/2010
5. **Executive summary of the project along with output:**

The objectives of the project was to screen the antihyperlipidemic and antiobesity activity of phytates and validate the plants for antihyperlipidemic and antiobesity activities. Two traditionally used plants *Glycine max* and *Dolichos biflorus* were used for the study. The seeds were macerated in water overnight and the filtrates were standardized for phytates. Dose equivalent to phytic acid 5, 10 and 30 mg/kg was used for the study. There was a significant decrease in the lipid profile in the oral lipid tolerance test and triton induced hyperlipidemia in the phytate standardized extract of *Glycine max* and *Dolichos biflorus*. However, treatment with these extracts in fructose load test did not alter the lipid level, which indicates the utilization of the lipid is not affected by *Glycine max* or *Dolichos biflorus* extracts. There was also a significant decrease in lipid profile in the high fat diet induced hyperlipidemia model, which further validates the antihyperlipidemic effect of *Glycine max* and *Dolichos biflorus* extracts. There was also a significant decrease in the body weight of *Glycine max* and *Dolichos biflorus* extracts treated animals, which is a point of distinct advantage. The phytates in these extracts are proven to have chelating properties with lipids. Hence, this property of phytates in *Glycine max* and *Dolichos biflorus* is attributed to their antihyperlipidemic and antiobesity activities. The comparison suggested *Dolichos biflorus* to be more active compared to *Glycine max*.

Outputs:

- 1.** Antihyperlipidemic activity of *Dolichos biflorus* in experimental models of hyperlipidemia. *Indian Journal of Pharmacology* 2012 **44**: S131.
- 2.** Antihyperlipidemic activity of *Glycine max* in experimental models of hyperlipidemia. *Indian Journal of Pharmacology* 2012 **44**: S131.
- 3.** Presented a poster entitled “Antiobesity activity of *Dolichos biflorus* in high fat diet induced hyperlipidemia” at 46th Annual Conference of the Indian Pharmacological Society (IPSCON) and International conference on translational Pharmacology, Bangalore held between 16th and 18th December 2013.
- 4.** Presented a poster entitled “Antiobesity activity of *Glycine max* in high fat diet induced hyperlipidemia” at 46th Annual Conference of the Indian Pharmacological Society (IPSCON) and International conference on translational Pharmacology, Bangalore held between 16th and 18th December 2013.