Antihyperlipidemic Bioactivity Guided Isolation and Structural Elucidation of Isolated Phytoconstituents from *Convolvulus pluricaulis Choisy*. - "Choisy" must not be written in italics.

After 24 h. (exclude this punctuation) of Triton administration the ethanolic extract and its fractions were administered orally at doses of 200 and 400 mg/kg body weight in rats.

Treatment with extract and fraction showed significant decrease in triglyceride.

Elevated plasma lipid levels, mainly total cholesterol (TC), triglycerides (TG) and low density lipoproteins (LDL) along with decrease in high density lipoproteins (HDL) are known to cause hyperlipidemia which is core in initiation and progression of arteriosclerosis impasse.

Convolvulus pluricaulis Choisy. (exclude this punctuation) (Convolvulaceae) is commonly known as Shankhpushpi in Indian traditional medicine.

The aerial parts of *Convolvulus pluricaulis* L. (Choisy) were collected from Bhopal (M.P.)...

A voucher specimen No.175/Bot/Saifia/2010 is deposited in the herbarium of Botany department.

The dried drug was coarsely powdered and then exhaustively extracted with 90% ethanol in Soxhlet apparatus.

The solvent free ethanolic extract was further dissolved (in which solvent?) and extracted with chloroform.

Qualitative chemical tests were performed to assess the presence of various phytoconstituents. The preliminary phytochemical screening revealed the presence of tannins, flavonoids and alkaloids in ethanolic extract of *C. pluricaulis* while chloroform fraction revealed the presence of sterols.

Screening for hypolipidemic activity was carried out in Triton loaded albino rats of either sex, 6 - 8 weeks old and weighing 100-120 g were selected for the experiments (exclude).

Ethanolic extract and chloroform fraction were suspended in distilled water plus polyoxyethylene sorbitan monooleate (Tween 80).

The usage of animals was approved by the ethical committee of the Research Centre having followed CPCSEA Reg. No.-778/03/c/CPCSEA.

After 24 h. (exclude) of Triton administration, animals of Group III received atorvastatin at the oral dose of 50 mg/kg.

The treatment was continued for 5 days to evaluate the effect on lipid profile.

The serum concentration of total cholesterol, HDL and triglyceride were measured by standard procedure using an auto-analyzer.

It was dried, packed and chromatographed over a silica gel column.

Further elution of the column with Petroleum ether: CHCl3 (1:1) [fraction 43–60] gave colorless amorphous powder and recrystallised from acetone.

Again elution of the column with Petroleum ether: CHCl3 (1:1) [fraction 61–81] produced colorless amorphous powder which was recrystallised from acetone, 142 mg (0.008% yield);

Further elution of the column with Petroleum ether: CHCl3 (1:3) [fraction 111–128] furnished colorless amorphous powder, recrystallised from acetone;

Again elution of the column with CHCl3 (129–155) yielded a colorless amorphous powder which was further recrystallised from acetone: ethyl acetate (1:1), 203 mg (0.01% yield); R_f: 0.55 ($CHCl_3$).

Elution of the column with CHCl3: Methanol (99:1) (156–185) yielded colorless amorphous powder and recrystallised from methanol, 240 mg (0.011% yield); Rf: 0.45 (Petroleum ether: CHCl3: Methanol, 7:1:2) and Elution of the column with CHCl3:Methanol (24:1) [fraction 186–201] yielded colorless amorphous powder of which was recrystallised from methanol;

Ethanolic extract and its chloroform fraction at dose of 200mg/kg decreased serum level of triglycerides level (exclude) by 36.44 % ($p<0.05$) and 41.80% ($p<0.01$) respectively. On the other hand ethanolic extract and its chloroform fraction at dose of 400mg/kg decreased serum level of triglycerides level (exclude) by 45.80% ($p<0.01$) and 51.23% ($p<0.01$) respectively (Table-2).

Flash chromatography was done for the chloroform fraction based on bioactivity resulting in the isolation of phytoconstituents.

The structures of phytocompounds obtained from chloroform fraction of *C. pluricaulis*, (exclude punctuation) were elucidated as…

Modern pharmacological studies have shown that these phytocompounds have anti-inflammatory, antimicrobial, antioxidative, hypoglycemic, anti-tumour, and immune regulating effects and are of great nutritional and medicinal value. Phytosterols are bioactive compounds found in foods of plant origin.

They have been proposed to exert a wide number of effects like anti-obesity, antidiabetic, antimicrobial, anti-inflammatory, and immunomodulatory effects.

Triton WR – 1339 acts as a surfactant and suppresses the action of lipases to block the uptake of lipoproteins from circulation by extrahepatic tissues, resulting in increased blood lipid concentration.

The possible mechanism of activity may be due to enhancement of the activity of lecithin acyltransferase (LCAT) and inhibition of the action of hepatic TG- lipase on HDL15.

The present work characterized and isolated components from the active fraction of *C. pluricaulis*.

It may be concluded that the lowering of lipid level from active fraction is due to the presence of isolated components. - It is not possible to make this statement considering that the isolated substances were not tested. This is an assumption based on information present in the literature. The activity described may be the result of synergism between several substances or attributed to just one of them. Therefore, my suggestion is that the conclusion be rewritten, stating that the results obtained compared to literature data regarding the substances identified in the study could justify the activity observed for the chloroform fraction.