16.41±0.41 and gram negative bacterial activity have the significance inhibition of *E. coli* and *P. aeruginosa* 17.21±0.03 and 16.51±0.41.

Sitgmasterol showed the significance zone of inhibition against the gram positive activity of *S. aureus* and *S. pyogenes* 15.01±0.05 and 15.24±0.02 and gram negative bacterial activity have the significance inhibition of *E. coli* and *P. aeruginosa* 19.6±0.3 and 17.51±0.17. Ursolic acid showed the significance zone of inhibition against the gram positive activity of *S. aureus* and *S. pyogenes* 18.50±0.003 and 20.61±0.04 and gram negative bacterial activity have the significance inhibition of *E. coli* and *P. aeruginosa* 19.70±0.34 and 19.52±0.31.

The result of the present study indicate that Gram positive (-) of the all components have strong antibacterial activity 15.24±0.02-21.18±0.47 mm (lowest to highest) inhibition the growth of *S. pyogenes* and compare to the spices of *S. aureus* 14.30±0.14 – 19.41±0.04 mm. Excluding Quercetin show the strongest Gram positive activity on the spices of *S. pyogenes* 18.52±0.01 mm than compare to another spices of *S. aureus* showed 19.41±0.04 mm.

The Gram negative (-) activity of all the components have the strongest antibacterial inhibition growth on *E. coli* 17.21±0.03 -22.0±0.02 mm (lowest to highest) than compare to another spice of *P. aeruginosa* 16.16±0.02-20.22±0.02 mm. Excluding Quercetins show the strongest inhibition activity of Gram negative spices of *P. aeruginosa* 21.82±0.26 mm than compare to another spice of *E. coli* 21.53±0.12 mm.

5. SUMMARY AND CONCLUSION

According to World Health Organization (WHO), more than 80% of the world’s population relies on traditional medicines for their primary health care needs. The medicinal value of plants lies in some chemical substances that produce a definite
physiologic action on the human body. The most important of these bioactive compounds of plants are alkaloids, flavonoids, tannins and phenolic compounds. The phytochemical research based on ethno-pharmacological information is generally considered an effective approach in the discovery of new anti-infective agents from higher plants (Duraipandiyan, Ayyanar and Ignacimuthu, 2006).

Methodology

Aim of the study was to find nutritional quality and to isolate, identify and interpretation of the active compounds present in GLV flowers. First the selected two GLV flowers were dried at room temperature and powdered for further analysis. The nutrient analysis such as carbohydrate, amino acid, vitamin B-complex, total fat, ash and fibre and macro and micro element analysis was done using ICP-OES. The volatile compounds present in the GLV flowers were analyzed by using solvent distillation method. Then the screening of phytochemical constituents was carried out in fresh GLV flowers. Afterwards extraction and isolation of polyphenolic compounds were carried out. The 80% methanolic extracted sample was performed the isolation by varies solvent techniques based on the compounds solubility were exchanged the polarity on column chromatography. After the isolated compounds was purification were used by preparative HPLC and Flash chromatography system. Then the active compounds were identified, interpreted and the purified compounds are conformed to the structure elucidation using on LC-MS, GC-MS, HPLC, DSC, $^1$H NMR and $^{13}$C NMR. Quantitative determination of primary metabolite was found such as total phenol, total flavonoid and total anthocyanin and then biological activity (antioxidant (FRAP assay) and antimicrobial) of GLV flowers were analyzed.

Results and Discussion

The obtained results confirmed the benefits given by the medicinal plants. In fact, some flavonoids present in them demonstrated a big antibacterial activity and low acute toxicity effect.

It is surprising that although the ten antioxidant compounds present in this two species were successfully isolated, the anti-microbial activity of the crude extract was not that much less than the anti-microbial activity of the main antioxidant compounds. This may mean that there are synergistic antioxidant activities between different components of the crude extract.
To estimation of Fructose, Dextrose and Sucrose content of both flowers have same value. The total fat, Total fiber and ask content estimated among the two flowers Drumstick flower was richest sources compare to coriander flower. Six essential amino acids was quantified by Drumstik flower and coriander flower in that phenylalanine occurring 17.81% and 11.2% remaining five amino acid are presenting less than 1.0% only for drumstick flower and Valine and lysine are presenting less than 2.0% remaining amino acids are less than 0.5% for coriander flower. Among the selected two GLV flowers drumstick flower have 11.2ppm of nicotinic acid and 3.2ppm of nicotanamide. Vitamin B2 was more in coriander flower and drumstick flower showed a high amount of pyridoxine ie 13.8ppm.

During the examination of poly phenolic compounds our aim was to determine the main components of the species examined. In the case of two species, Coriander flower and Drumstick flower, the polyphenolic components of fractionated and aqueous extracts were isolated and determined parallel. Then the main polyphenolic components of GLV flowers were detected with LC-MS, GC-MS, FTIR, DSC, $^1$H NMR and $^{13}$CNMR and HPLC methods. It was found that in the species examined Apigenin, Luteolin, Quercetin, Kaempferol, Rutin, Chlorogenic acid, beta-sitosterol, Sitgmasterol, Ursolic acid and Lutein present as main components. This result is in agreement with literature data in the case of all ten compounds, but no sterol could be detected from coriander flower.

The present process of isolation of poly phenolic components was different and simple because the organic components are more than 4000 compounds very difficult to separate. The flavonoids like, apigenin, luteolin, Quercetin, kaempferol, rutin were purified before the isolation by different solvent system. The results suggested that apigenin, purified by RP-HPLC had the maximum purity (98.86%) as compared with luteolin (95.895), Quercetin (98.8%), Kaempferol (95.1%) and rutin (97.46%).

As to the pharmacological effects of the species examined, antioxidant and Anti-bacterial activity were investigated. The antioxidant effect was examined in methanolic crude sample an FRAP method. The antioxidant effect of the methanolic extracts of the species was studied with the use of ascorbic acid as control materials. Based on the examinations, antioxidant was found to be responsible for the effect. The study of antibacterial activity (gram positive and gram negative) was carried out and comparing with stand two standard of Chloramphenicol and Ciprofloxacan. All the isolated components showed significant zone of inhibition of \textit{S.aureus and S.pyogenes} (Gram
positive) and *E. coli* and *P. aeruginosa* (Gram negative). This showed that these components may have great potential as remedy for infection/disease caused by *S.aureus* and *S.pyogenes* and *E. coli* and *P. aeruginosa*.

**CONCLUSION**

Green leafy vegetables are routinely used in day today life as a compulsory ingredient of food. Their use in strengthening current community-based health services due to multifactorial usages and potential. They are designated as healthy foods of the millennium or Nutraceutical foods of the century. The current information on the nutritive and medicinal value of leafy vegetables is only the tip of the iceberg. A better understanding of green leafy vegetables along with their perspectives including of microbiological, pharmaceutical, environmental, processing and food handling factors is the need of the hour. All of these facilitate in development of methods, technologies and policies aimed at reducing the risk of contamination of fresh produce and sustaining there potent nutraceuticals, medicinal and pharmacological values. In this study 10 active compounds were isolated such as apigenin, luteolin, quercetin, chlorogenic acid, urolic acid, kaempferol, beta-sitrosetrol, sigmasterol, lutein and rutin. These compounds were categorized under Flavonoids, Phenolic, Triterpene, Steroid and Carotinoids. These active nutraceutical compounds were having wide range of biological and pharmacological activities in *in vitro* studies. Examples include anti-allergic, anti-inflammatory, antioxidant, anti-microbial (antibacterial, antifungal and antiviral), anti-cancer, and anti-diarrheal activities. Finally, the researcher think that natural, active compounds alone or in combination with other preventive and/or therapeutic strategies will become effective future drugs against the most common degenerative diseases such as cancer, diabetes and cardiovascular complications.

**Future recommendations**

- Active compounds have been found to possess antioxidant properties which have increased its use in the Nutraceutical Industry.
- Active compounds possess anti cancer properties thus they can be used in the manufacturing of medicines for treatment of cancer.
- Being a natural source, it can be consumed directly or with some food products but in small doses.
- Health drinks can also be made using these active compounds an ingredient.