Chapter – VII

Conclusion
**Conclusion**

*Kargania reticulata* is a medicinal shrub which has been valued for centuries in ayurvedic medicine. In view of the various medical properties and growing interest in the development of ecofriendly, biodegradable and safer herbal preparations the plant extracts and isolated compounds were screened for various pharmacological activities such as analgesic, anti-inflammatory, anti-arthritis, antimicrobial, antioxidant and anti-helminthic properties. Establishment of a pharmacognostic profile of the leaves will assist in standardization for quality, purity and sample identification. The antibacterial study not only show the scientific basis for some of the therapeutic uses of this plant in traditional medicine, but also confirms the fact that ethanobotanical approach should be considered when investigating antimicrobial properties of plants. The spread of drug-resistant strains of *Staphylococci* and the ineffectiveness of treatments in cases of biofilm-related infections can be efficiently treated with proven drug compounds and can serve as effective alternatives to antibiotic treatment.

The poyprenol has showed remarkable antibacterial activity, in assay conditions, on all microorganisms studied, whereas it has also presented to be having best antihelminthic activity. More study is required on its effects *in vivo* and to also evaluating its biosafety. The results of phytochemical analysis comprehensively validate the presence of therapeutically important and valuable secondary metabolites. Hence, the plant contains good store of antioxidants and essential metabolites to support its efficiency to be a drug. It can be recommended as dietary supplement there by the nutritive potential indulged by the plant is yet to explore. On the basis of the results obtained, potent anti arthritic effect of ellagic acid may be through maintenance of synovial membrane and vascular permeability, thereby inhibiting cytokines and leukotriene infiltration inhibition as evidenced in paw edema volume and protecting synovial membrane, destruction of cartilage and improving health status.
Conclusion

The study confirms the *in vitro*, *in vivo* and *in silico* antiarthritic activities of ellagic acid in dose dependent manner. However, experimental validation of the predicted compound in evaluating its clinical potentials is needed and the clinical trials are necessary to determine the toxicity of the active constituents, their side effects, circulating levels, pharmacokinetic properties and diffusion in different body sites, hence further investigations using more experimental paradigms (human volunteers) are essential for further confirmation of the treatment of various ailments, diseases and disorders.