- Quality control standardization of *Exacum lawii* has been documented for the first time to develop the scientific standardization monograph for the whole plant of *Exacum lawii*. It contributes as a referential source of valuable information that will ensure the identity and authenticity for folklore medicinal plant *Exacum lawii*.
- Qualitative and quantitative phytochemical studies revealed the phytoconstituents present in *Exacum lawii*.
- The extract of *Exacum lawii* was standardized with chemotaxonomic marker swertiamerin by using HPLC and efficiently isolated for the first time from the *Exacum lawii*.
- Swertiamerin was confirmed to be a promising inhibitor of iNOS after investigated virtually by molecular docking study for their binding interactions within the active site of iNOS.
- Ethnopharmacological use of *Exacum lawii* as nephroprotective and in ocular infection has been scientifically validated for the first time.
- *Exacum lawii* possess significant nephroprotective activity in cisplatin induced nephrotoxicity in rats by reducing ROS production, oxidant markers and inflammatory markers also protects cisplatin administered kidneys from DNA fragmentation and altered tissue architecture.
- Nephroprotective study of *Exacum lawii* in cisplatin treated human embryonic kidney cells (HEK-293 cells) contribute to pathogenesis involved in cisplatin induced nephrotoxicity. The study included iNOS expression by western blot analysis, proinflammatory cytokine level, ROS estimation and cell cycle analysis

using flow cytometry, DNA fragmentation assay by gel electrophoresis and morphology of HEK-293 cells.

- The antimicrobial study suggested that the volatile oil of *Exacum lawii* possess potent antibacterial and antifungal activity by inhibiting the growth of bacteria and fungi causing ocular infection significantly.