ABSTRACT

Diabetes mellitus is a metabolic disorder in which a person has high blood sugar level because either the pancreas does not produce enough insulin or cells do not respond to it. Diabetes mellitus is of three types. Type 1 or Insulin Dependent Diabetes Mellitus (IDDM), Type 2 or Non Insulin Dependent Diabetes Mellitus (NIDDM) and Gestational Diabetes (GD). The Siddha system of medicine is the oldest traditional treatment system generated from Dravidian culture. In Siddha system of medicine, many single and polyherbal formulations and higher medicines like parpam, chendooram and chunnam have been practiced to cure or control Diabetes mellitus from time immemorial. Siddha polyherbal formulations like Seenthil Kudineer, Seenthi Choornam, Vilva kudineer, Avarai kudineer, Madhumegha choornam, Navalkottai Choornam, Silasathu parpam, Abraka chendooram, Triphala Choornam and the like are used in treatment of Diabetes mellitus. Among the Siddha anti-diabetic formulations, “Neerazhivu chooranam” is a reputed and popular polyherbal formulation scientifically under explored. This formulation suffers from patients non-compliance because of cumbersome dosage form, instability, difficulty in dose selection and administration. These disadvantages are overcome by formulating the same into a tablet and capsule dosage form. Quality control parameters such as raw material standardization, in processes and finished product quality control studies were carried out in this investigation. Sophisticated, modern instruments were used as an advanced tool in phytopharmaceutical evaluation of the selected polyherbal formulations so as to prescribe the quality standards for better therapeutic efficacy. The toxicological evaluation of herbal drug ingredients like determination of pesticide residues, heavy metal contamination and microbial contamination and their formulation Neerazhivu chooranam for acute toxicity studies using recent advanced analytical tools
have been carried out in keen interest of uplifting the herbal drug to the global markets. The extract of Neerazhivu choornam exhibited significant anti-hyperglycemic activity in Streptozotocin (STZ) induced diabetic rats. This extract showed improvement in parameters like body weight, food consumption, organ weight and biochemical parameters and might be of great valuable in diabetic treatment. Based on phytoformulation testing results of the tablets and capsules of Neerazhivu choornam and stability data of different batches, it is concluded that the advanced phytopharmaceutical studies on “Neerzhivu choornam” have resulted in designing a potential anti-diabetic, poly herbal formulation at par with modern formulations.