Pharmaceutical Technology Perspectives

Muhammad Taher

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Perspectives

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CHAPTER 1

SMALL ACTIVE MOLECULES WITH INSULIN MIMETIC ACTIVITY

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*Type 2 diabetes (non-insulin-dependent diabetes mellitus) is a chronic metabolic disease that results from defects in insulin secretion and insulin receptor kinase. Investigation of novel small active molecule that can potentiate insulin action or having a similar action as insulin is important in the treatment of diabetes. World ethnobotanical information on medicinal plants reports almost 800 plants used in the treatment of diabetes mellitus. However, only a small number of them have been investigated to identify their active principle in antidiabetes properties.*

1.1 Plants in Type 2 Diabetes Treatment

The plant extracts and its product play an important role in treating many symptoms. Pioneering studies on the active constituents of *Podophyllum peltatum* followed by the discovery and development of the antileukemic agents, vinblastine and vincristine from *Catharanthus roseus* provided convincing evidence that plants could be sources of novel and potential chemotherapeutic agents (Baker *et al.*, 1995).