



DRUGS ACTUALLY USED IN EUROPE BEFORE THE DISCOVERY OF INSULIN

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Many therapeutic agents have been used for the treatment of Diabetes mellitus before insulin was discovered and several hundred plants have shown some extent of antidiabetic activity. This study tries to explore which agents were most widely used in Europe in the pre-insulin era. In scientific literature and proprietary drug industry around 1900, more than 100 agents were considered to have hypoglycemic activity. Most of them seem to have only been used occasionally while some others were recommended and marketed to a large extent. Among the medicinal plants, *Syzygium cumini* (syn. *S. jambolanum*, *Eugenia jambolana*), *Vaccinium myrtillus* and *Phaseolus* sp. were most common, other frequently used agents were opium, opium alkaloids, other alkaloids like quinine or Belladonna alkaloids, salicylates, alkaline substances like sodium (bi)carbonate and even strong poisons like arsenic or uranium salts. *Syzygium jambolanum* seed powder belongs to the most intensively studied antidiabetic agents of plant origin. *Syzygium* came to Europe from East-India and Java in the 1880s, and the drug, in particular seed powder, has been used in the countries of origin against Diabetes and was immediately tested for that purpose in Europe. There are about 50 studies already published before 1900 including three PhD theses mostly describing one or several case studies. Altogether, more than 100 cases with patients receiving *Syzygium* preparations against Diabetes were described in scientific literature between 1883 and 1896 besides in vitro experiments and animal studies. Just recently *Syzygium* extract was shown to act as an alpha amylase inhibitor and as an insulin sensitizer by activating the human peroxisome proliferator-activated receptor gamma.