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### The search for novel antidiabetic compounds of natural origin: Where are we now?

Numerous studies indicate that diabetes cases along with its major risk factor, obesity, are increasing with an alarming rate of epidemic proportions. These two interlinked conditions alone are also expected to bankrupt the health care system of many countries in the next few decades. A breakthrough for diabetes is not expected in the very near future, and the exiting available therapeutic options are mainly designed to target glycemic control and/or management of the associated diseases including cardiovascular complications. Ironically, thousands of compounds are reported in the scientific literature every year with a promise for diabetes and obesity therapy. The various structural classes of natural products that we and other groups show efficacy *in vitro* and *in vivo* are staggeringly high. There is also an emerging concept of diabetes/obesity control by the so called 'functional' or 'medicinal foods'. But, why then are we still not seeing a breakthrough in diabetes and/or obesity therapy by natural products? This lecture highlights the complexity of these diseases and principles of therapeutic options by natural products. It also assesses the various natural compounds that act through different mechanisms and some key hot therapeutic targets that gained interest in recent years.

### Recent Publications

1. Habtemariam S (2017) Could we really use *Aloe vera* food supplements to treat diabetes? Quality control issues. Evidence-Based Complementary and Alternative Medicine 2017:4856412.
2. Belwal T, Nabavi S F, Nabavi S M and Habtemariam S (2017) Dietary anthocyanins and insulin resistance: when food becomes a medicine. Nutrients 9(10):1111.
3. Habtemariam S (2017) could we really use *Aloe vera* food supplements to treat diabetes? International Journal of Diabetes and Clinical Research 2017(4):070.
4. Habtemariam S (2017) Going back to the good old days: The merit of crude plant drug mixtures in the 21st century. International Journal of Complementary and Alternative Medicine 6(2):1–5.
5. Habtemariam S and Varghese G K (2017) Antioxidant, anti-alpha-glucosidase and pancreatic beta-cell protective effects of methanolic extract of *Ensete superbum* Cheesm seeds. Asian Pacific Journal of Tropical Biomedicine 7(2):121–125.

### Biography

Solomon Habtemariam has completed his PhD, two years of Post-doctoral Research (Strathclyde Institute for Drug Research) and four years of Lectureship at Strathclyde University. Since then, he has been a leader of researches on bioassays & natural products-based drug development at the University of Greenwich and Founder/Owner of Herbal Analysis Services. He is an Elected Fellow of the Royal Society of Medicine, the Royal Society of Chemistry, the African Academic Institute and the African Academy of Sciences. He has published over 150 papers in peer reviewed journals and has been serving as an Academic Editor and Member of the Editorial Board for many journals.

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