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Ahda, M.^{a c d}, Jaswir, I.^{b e}, Khatib, A.^d, Ahmed, Q.U.^d, Mahfudh, N.^a, Ardini, Y.D.^f

A review on selected herbal plants as alternative anti-diabetes drugs: chemical compositions, mechanisms of action, and clinical study

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^a Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Universitas Ahmad Dahlan, Yogyakarta, Indonesia

^b Department of Pharmaceutical Technology, Faculty of Pharmacy, Universitas Ahmad Dahlan, Yogyakarta, Indonesia

^c Ahmad Dahlan Halal Center, Universitas Ahmad Dahlan, Yogyakarta, Indonesia

^d Department of Pharmaceutical Chemistry, International Islamic University Malaysia, Kuantan, Malaysia

^e INHART, International Islamic University Malaysia, Kuala Lumpur, Malaysia

^f Paediatric Dentistry and Dental Public Health Department, Kulliyyah of Dentistry, International Islamic University Malaysia, Kuantan, Malaysia

Abstract

Herbal utilization, as an antidiabetes agent, is an interesting topic to find acceptable herbal drugs to decrease blood glucose levels. The aim of this review is to evaluate the potency of selected herbal medicines to reduce blood glucose levels and to identify the chemical compounds responsible for reducing glucose. The mechanisms of action of different herbal medicines used might be also different. The reduction of blood glucose levels by Aloe vera, Andrographis paniculata, and Trigonella foenum-graecum through minimum 3 mechanisms of action, such as increased GLP-1 secretion and inhibited amylase, glucosidase, and SGLT 2. While Andrographis paniculata has more than 4 mechanisms of action, such as increasing GLP secretion, activating PPAR γ -receptor, and also inhibiting amylase, glucosidase, and SGLT 2 but it did not inhibit DPP 4 in diabetic patients. © 2023, Published with license by Taylor & Francis Group, LLC. © 2023 Mustofa Ahda, Irwandi Jaswir, Alfi Khatib, Qamar Uddin Ahmed, Nurkhasanah Mahfudh and Yunita Dewi Ardini.

Author Keywords

Anti-diabetes; clinical study; herbal medicines; mechanisms of action

Index Keywords

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AHDA ET AL

Correspondence Address

Ahda M.; Department of Pharmaceutical Chemistry, Indonesia; email: mustofa_ahda@yahoo.com

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