(3) and an unidentified triterpenoid Z confirmed the synergistic nature of the constituents. Also, insulin stimulation was reported as a hitherto unreported mechanism of action of this plant. The identification of these plants’ insulinotropic active constituents, comparable (p > 0.05) to glibenclamide, conclusively justified their antidiabetic claims. Additional six medicinal plants with better antihyperglycaemic activities than glibenclamide gave the hope of discovery of new templates for drug development. Antidiabetic activity of Murraya koenigii leaf was slow acting and suggested best for type 2 diabetes of insulin resistant aetiology, due to the insulin inhibitory activity of its extract and constituents. Murrayaquinone-A was the most active constituent with significant contributions from girinimbine and koenimbine. This shows that plants may help better in the management of type 2 diabetes due to insulin resistant or its insufficiency. The co-occurrence of antihyperglycaemic and hyperglycaemic, insulinotropic and insulin inhibiting fractions and constituents in these plants may confirm the safety margins of herbal drugs and the need to identify the active constituents. Additional hepatoprotective, anti-microbial, -parasitic, -infective, -hypertensive, -inflammatory and -malarial, etc properties of these herbs may account for the reduced death of the African diabetic patients using herbal drugs singly or co-administered with orthodox drugs. Stem and root juices of Musa paradisiaca “prevented/delayed” onset of diabetes in glucose loaded rats. Conclusion: Implications of these results in the management of diabetes and drug development will be presented.

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P 29: Insulinotropic constituents and evaluation of ethnomedical claim of gongronema latifolium root and stem

A.C. Adebajo1,2,3, M.D. Ayoola1, S.A. Odediran1, A.J. Aladesanmi1, T.J. Schmidt2, E.J. Verspohl3
1 Department of Pharmacognosy, Faculty of Pharmacy, Obafemi Awolowo University, Ile Ife, Nigeria; 2 Institute of Pharmaceutical Biology and Phytochemistry, Westfälische Wilhelms-Universität (W.W.U.), Munster, Germany; 3 Department of Pharmacology, Institute of Pharmaceutical and Medicinal Chemistry, W.W.U., Munster, Germany

Background and aims: The insulinotrophic activity of the combined root and stem of Gongronema latifolium was evaluated to justify its African ethnomedical use in the management of diabetes. Materials and Methods: A methanolic extract of the combined root and stem and its vacuum liquid chromatographic fractions (A1-A6) were tested for glucose reducing and in vitro insulin stimulating abilities, using glucose loaded rats and INS-1 cells, respectively. In vivo insulin releasing activities for the significantly in vivo anti-hyperglycaemic active A5 and A6 were similarly determined, using glucose loaded rats. In vitro insulin stimulating potentials of column chromatographic fraction C1 and its isolated constituents were also determined.

Results: The extract (100 mg/kg) had higher in vivo anti-hyperglycaemic activity than A1-A6, indicating a synergistic effect of the plant constituents. Higher in vivo insulin release given by A5 (100 mg/kg) than that of A6, agreed with their in vivo anti-hyperglycaemic activities and confirmed insulin as a hitherto unreported mechanism of action of the plant. Extract, A3, A6 and C1 (100.0 µg/ml) elicited significantly high in vitro insulin release similar (p>0.05) to gliben clamide (1.0 µg/ml). Fraction C1 gave a 1:1 mixture of α-amyrin and β-amyrin cinnamates (1a/1b), lupenyl cinnamate (2), lupenyl acetate (3) as well as two unidentified triterpenoids, Y and Z. The 1a/1b was an addition to the chemistry of the plant. The highest insulinotropic activity of 178.3 % given by 1a/1b (100.0 µg/ml) was similar (p>0.05) to that of glibenclamide (1.0 µg/ml). The 1a/1b, with contributions from 2, 3 and Z were the insulinotropic constituents. Some fractions and isolates demonstrated synergistic activity.

Conclusion: The results confirmed pancreatic activity as a mechanism of antidiabetic action of G. latifolium and justified this ethnomedical use.

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P 30: Cardiovascular risk factors in type 2 diabetes along 3 years of follow-up

HU Ramon y Cajal, Nutrition metabolic Obesity, Madrid, Spain

Background & Aims: The clinical evolution and cardiovascular risk factors and complications of type 2 diabetes (DM2) have not been well studied. Therefore, the aim of our study was to analyze the clinical and cardiovascular chronic complications evolution of this DM2 population in clinical practice, along three years of following, in the daily practice of primary care. We aimed to evaluate the outcomes of DM2 focusing on metabolic control and incidence of complications.

Methods: From 2007 to 2010 we prospectively included 3268 patients with DM2, followed by 153 primary care physicians from 51 health centers, and an epidemiological, observational, prospective cohort study with annual cuts over 3 years to the same population being analyzed baseline data from the cross section of patients diagnosed with DM2 for measure the control of cardiovascular risk and the incidence of diabetic complication along the time.

Results: A decrease of glucose levels (143.3 mg / dl versus 137 mg / dl, p>0.00), levels of 7.09% HA1c to 7.02%, p<0.003, total cholesterol levels of 191.4 mg / dl to 181.5, levels of LDL cholesterol from 114.7 to 105.5, as well as the baseline triglyceride levels 144.5 mg / dl to 138.8 was observed along the follow up period of 3 years. Featuring an elevation of HDL cholesterol levels significantly 49.2 versus 49.9 mg / dl. The incidences of diabetic complications along the follow-up was a low coronary heart disease 6.2%, peripheral disease 3%, ischemic stroke 2.8%, diabetic foot 11.2%, nephropathy 5.9%, retinopathy 4.5%, and neuropathy 3%.

Conclusion: The incidence of DM2 in clinical practice along the follow-up in the Community of Madrid is low, and a best control is achieved along the years with a favorable control of glucose, HbA1c, lipid and blood pressure, all cardiovascular risk factors.

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P 31: Medication intensification strategies and outcomes in patients with type 2 diabetes (T2DM) who have A1C ≥ 7% on ≤ 2 oral anti-diabetes agents (OAD)

M. Korytowski (MD)1, M.S. Lombardero (MS)2, M. Saul (MS)3, M. Mori Brooks (PhD)4, T.J. Orchard (MD, M Med Sci, FAHA, FACE)5, V.G. Magaji (MD)2, J. Kanter2, L. Siminero (PhD)2
1 University of Pittsburgh, Division of Endocrinology and Metabolism, Pittsburgh, PA 15213; 2 Data Coordinating Center, University of Pittsburgh, GSPH, Pittsburgh, PA 15261; 3 University of Pittsburgh, Department of Biomedical Informatics, Pittsburgh, PA 15260; 4 University of Pittsburgh, GSPH, Pittsburgh, PA 15261; 5 Dept. of Epidemiology, GSPH, University of Pittsburgh, Pittsburgh, PA 15213; 6 LVPG-Diabetes & Endocrinology, Allentown, Pennsylvania 18103-6268; 7 University of Pittsburgh Diabetes Institute, Pittsburgh, PA 15203