



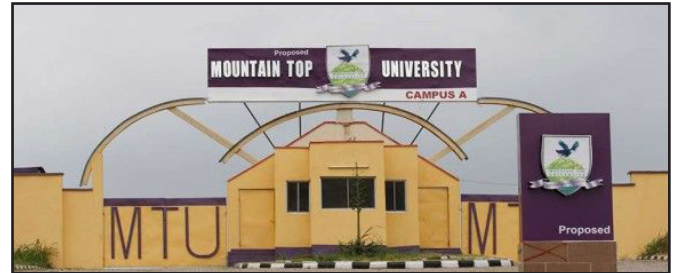
**Fatty acids and saccharides from *Costus spicatus* (Jacq.) flower exhibits binding tendency towards phosphoenolpyruvate carboxykinase and  $\alpha$ -amylase associated with insulin resistance in polycystic ovarian syndrome.**

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**Abstract:**

Polycystic Ovarian Syndrome (PCOS) is an endocrine disorder characterized by anovulation, oligomenorrhea, amenorrhea, hyperandrogenism and polycystic ovaries. PCOS affects 4-10% of women of reproductive age (15-49 years). PCOS often exhibit non-reproductive metabolic abnormalities such as obesity, elevated insulin, insulin resistance, dyslipidemia with a high propensity of cardiovascular disease and type II diabetes mellitus (DM). Insulin resistance along with its compensatory hyperinsulinemia, are hallmarks of PCOS and predisposes women with this condition to a higher risk of impaired glucose tolerance and type 2 diabetes mellitus (T2DM). Studies have reported that 30-40% of women with PCOS have impaired glucose tolerance, and as many as 10% develop T2DM by the age of 40. In diabetic patients, an altered rate of gluconeogenesis is responsible for increased hepatic glucose output (HGO) and therefore, sustained hyperglycemia observed in both insulin-dependent DM and non-insulin dependent DM. Expression of the gene for cytosolic phosphoenolpyruvate carboxykinase (PEPCK-C) is induced during diabetes, both in animals and in human patients.  $\alpha$ -Amylase is responsible for postprandial glucose levels. One of the therapeutic targets currently introduced in the management of type 2 DM is the inhibition of  $\alpha$ -amylase to decrease the reabsorption of glucose in the intestine and postprandial blood glucose levels. Medicinal plants encompass a rich source of active compounds that have anti-diabetic properties. *Costus spicatus*, commonly known as Insulin plant, whose flower has been used in folkloric medicine to treat diabetes mellitus and other associated pathological manifestations. The current therapeutic approach to treating PCOS involves the use of insulin sensitizers such as metformin, since the central core of PCOS etiology is through insulin resistance.



**Biography:**

Dr. Fehintoluwa Joy Femi-Olabisi (Nee Olawepo) is a Lecturer and Researcher working with one of the private Universities in Nigeria. She holds BSc, M.Sc and PhD. in Biochemistry and her research interest is in Reproductive Biochemistry with focus on Polycystic Ovarian Syndrome. Dr. Femi-Olabisi has 5 years of practice as an academic and researcher. She has also been involved in the investigation on the use of food-based spices as aphrodisiacs in Nigeria. She has presented many abstracts at conferences on Phyto-medicine and Reproductive disorders in Nigeria and South Africa. Dr. Femi-Olabisi grew up in the northern central part of Nigeria and she is passionate about Reproductive health.

**Publication of speakers:**

1. Yakubu, M. T., Olawepo, F. J., Olayaki L. A. and Ibrahim O. O. K. (2015). Mifepristone (RU486) induces polycystic ovarian syndrome in female Wistar rats with features analogous to humans. *Journal of Endocrinology and Reproduction*, 19(1), 40 - 51,
2. Walters, K. A., Allan, C. M. and Handelsman, D. J. (2012a). Rodent models for human polycystic ovary syndrome. *Biology of Reproduction*, 86(149), 1-12.
3. Teede, H., Hutchison, S., Zoungas, S. and Meyer, C. (2006). Insulin resistance, the metabolic syndrome, diabetes, and cardiovascular disease risk in women with PCOS. *Endocrine*, 30, 45-53

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