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Evaluation of hair growth potentials of datura metel extracts using albino rat model

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This study was designed to evaluate the hair growth promoting potentials of *Datura metel* using albino rat models. The plant reportedly has a wide range of therapeutic effect on ailments and on the human hair. In this work, quality parameters of the milky fresh fruit juice extract such as yield, pH and specific gravity were determined, the leaves and flowers of *Datura metel* were extracted with hexane and methanol successively, and characterized. Sensitization tests were carried out on the skin of the albino rats. The extracts were incorporated into a paraffinic ointment base and applied topically on the shaved skin of male albino rats for 30 days. Hair growth activity was studied and compared with controls (vehicle only) and standard minoxidil. Results show the fruit juice yield, pH and specific gravity to be 34.7%, 4.76 (at 28°C) and 0.9416, respectively. Phytochemical analysis of the plant methanolic extracts revealed the presence of alkaloids, saponins, tannins, flavonoids, terpenoids, phenols and reducing sugars while those of hexane extracts revealed the presence of sterols, saponins and glycosides. The leaf extracts exhibited more pronounced effect than those of the flowers in inducing faster hair growth. A 5-day hair growth initiation period and 13-day hair growth completion period was observed with 1% methanol leaf extract compared to control which had average initiation period of 10 days and completion period of 21 days. All groups treated with hexane and methanolic extract ointments showed finer, harder and denser hairs in the denuded areas. This certifies that *Datura metel* is a potential hair growth promoter and should be included in the numerous arrays of natural hair growth products, however, with standard prescription.

Biography

Folashade O Oyedeji completed her PhD in 2003. She has served as teaching and research staff of the Department of Chemistry University of Ibadan since 1997. She has published more than 28 articles in reputable journal. She is a member of many learned Societies and has served on many boards in the University as well as in other Societies. She is an Industrial Chemist with Cosmetic chemistry as her special area of study. She is a cosmetic formulator with interest in the use of herbs as active ingredients and cosmeceuticals. Her research area is in the use of local plant materials and herbs for solving many skin based challenges. Dr Oyedeji is working hard to build a team of researchers who will provide scientific basis and proofs for the use of herbs for cosmetic challenges. Myriam O Balogun is a doctoral research student of the Department under the supervision of Dr Folashade O Oyedeji who is researching into the use of herbal plant materials for combating cancer induced and male pattern alopecia and promoting hair growth. She is a member of the team been built to provide scientific support for the use of herbal medicine for cosmetic related ailments by Dr Folashade O Oyedeji. Livingstone Udofia is one of the students in Dr Folashade O Oyedeji's team. He has completed his Masters in Industrial Chemistry degree at the Department of Chemistry, University of Ibadan. He is waiting to be admitted for the doctoral Studies at the same University. This is his first article. Livingstone is a hardworking and good research student, who will very likely become an astute academic.

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