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ROLE OF FERMENTATIVE BIOTRANSFORMATION IN DEVELOPMENT OF NEW POLYHERBAL ANTIDIABETIC FORMULATION**Praveen Kumar Gaur***Metro College of Health Sciences & Research, India*

Diabetes is a critical metabolic syndrome which reduces quality of life due to serious side effects of current line of treatment. Polyherbal formulations present a viable alternative however larger doses may result in patient in compliance. Potentiation of polyherbals with the insight of long standing traditional knowledge might be a great strategy. *Woodfordia fruticosa* flowers has been famed for being the source of inoculum in traditionally fermented formulations. Advanced microbial studies revealed presence of biocontrol fungi *Wickerhamomyces anomalus* in *Woodfordia fruticosa* flowers. Ayurveda has been a reputed source of therapeutically active antidiabetic herbs. The application of Ayurvedic microbial biotransformation to the combination of antidiabetic herbs will result in potentiation of their antidiabetic potential. The extraction of plants provided a composite extract rich in phytoconstituents. This composite extract was biofermented and when tested in-vivo, was proved to be safe. This composite fermented extract was fabricated into a nanoformulation which was evaluated for physical parameters and stability. Further it was compared with standard antidiabetic treatment. The developed nanoformulation showed significant effect on blood sugar level and reinstated the enzyme levels in pancreas, liver and kidney. The histopathological studies confirmed the restoration of cell structure. The composite extracts are rich in phytocompounds which have their own pharmacological activities. Microbial biotransformation has the potential to chemically modify these phytocompounds and make them more bioavailable, thereby enhancing their therapeutic potential.

Biography

An academician with a keen interest in applied research in the fields of novel drug delivery, Dr. Praveen Kumar Gaur is currently Principal and Professor at Metro College of Health Sciences & Research (MCHSR-Pharmacy), Greater Noida. His research work has resulted in more than 57 international journals of high repute (i.e. Elsevier, Springer, Wiley, Bentham Science, Hindawi etc) along with two books as well as two indian patents. He is serving as editorial board member in various international journals in the field of Nanotechnology, Transdermal drug delivery and Novel drug delivery.