

An *ex vivo* Evaluation of the Efficacy of Andrographolide in Modulating Differential Expression of Transcription Factors and Target Genes in Periodontal Cells and its Role in the Treatment of Periodontal Disease

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Andrographolide is a herbal extract traditionally used in South Asian countries for treating inflammatory diseases. A study was done to evaluate the efficacy of andrographolide in the management of periodontal disease. Periodontal ligament fibroblasts (PDLF) were cultured from healthy and diseased periodontium using explant culture methods. The safe dose of Andrographolide was determined using MTT assay LPS (Lipopoly Saccharide) of the most important periodontopathogen. *P. gingivalis* was used to activate NFκB and STAT 3 in PDLF. The efficacy of AG in inhibiting NFκB and STAT 3 was analysed using immunofluorescence. Down regulation of expression of target genes of these transcription factors related to inflammation and bone resorption were analysed using real time PCR. Andrographolide up to the concentration of 25 μM was found to be safe as determined by MTT assay. Statistically significant activation of NFκB and STAT 3 and down regulated expression of inflammatory and bone resorptive genes in cultured PDLF were obtained. The adjunctive use of a novel herbal drug andrographolide is a promising host modulation agent in periodontal therapy.

Biography:

Dr. Presanthila Janam former Principal, Govt. Dental College, Trivandrum, currently serving as Director of CDE, Associate Dean Research & Professor, Dept. of Periodontics, PMS College of Dental Science & Research, Trivandrum. Earned BDS from Govt. Dental College Trivandrum and MDS Periodontics from Kerala University 1986 Presented 30 scientific papers and was a presenter for the annual world congress FDI New Delhi and an invited speaker, 8th International Conference in Dentistry, Dubai. She has authored numerous peer reviewed scientific papers and has 60 international, national and state publications. She is the recipient of Best Scientific paper awards of the IDA, Kerala State Conference 2006, 2007 and 2009. She is the recipient of the State Best Doctor Award in Dentistry in 2010 and also the recipient of the Best Dentist Award 2017 by the Kerala Dental Council.