

RAGAS DENTAL COLLEGE & HOSPITAL (Unit of Ragas Educational Society) Recognized by the Dental Council of India, New Delhi Affiliated to The Tamilnadu Dr. M.G.R. Medical University, Chennai 2/102, East Coast Road, Uthandi, Chennai - 600 119. INDIA. Tele : (044) 24530002, 24530003 - 06. Principal (Dir) 24530001 E-mail : principal@rdc.ac.in, web : www.rdc.ac.in

## **Institutional Distinctiveness**

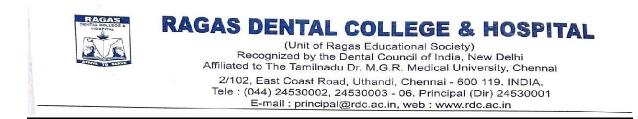
## **Department of Periodontics**

We incorporate the knowledge in basic sciences and molecular biology into the clinical aspects of Periodontology. In our department, the latest molecular methods of analysis like Next Generation Sequencing (NGS) and Cell Based Regenerative approaches have been applied in the clinics. These have been included in the dissertations, research projects and clinical cases of the post graduate curriculum.

As evidence to it, there has been multiple dissertations done on the analysis of the salivary microbiome using NGS which has been submitted and approved by the University. Its clinical implications are being currently analyzed.

Tissue engineering is a relatively new therapeutic approach, designed to apply engineering principles in controlled tissue production. Cell-based tissue engineering approach consists of utilizing cells with reparative/regenerative capacity. One such application is the use of gingival fibroblast which after being isolated, cultivated and seeded onto a three-dimensional scaffold, could present as an alternative to soft tissue autografts. In our department, we have adopted this technique and have done both the invitro study of the characteristics of the gingival fibroblast and the subsequent seeding of the fibroblast in a scaffold and was brought to the clinics.

In the clinics, the fibroblast seeded membrane/ scaffold was brought back to the patient for the treatment of gingival recession. This was attempted on a few patients and the treatment outcomes were found to be satisfactory and superior to the conventional approaches.



In another study, the biocompatibility of two different types of biodegradable collagen membranes seeded with human gingival fibroblasts were evaluated in terms of proliferation and viability and found to be better than the conventional / commercially available membranes. This technique attempts to utilize the molecular mechanisms involved in soft tissue regeneration and hence create a unique product which would enhance the treatment outcomes.

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