

AAO Foundation Award Final Report

Principal Investigator	Thyagaseely Premaraj
Co-Investigator	
Secondary Investigators	
Award Type	Orthodontic Faculty Development Fellowship Award
Project Title	
Project Year	2013
Institution	University of Nebraska Medical Center
Summary/Abstract (250 word maximum)	<p>The award was used to supplement my salary. Activities during the award period:</p> <p>Grant Support obtained:</p> <ol style="list-style-type: none"> 1. Shift in Species Composition of Sub gingival Microbiome as a Risk factor in periodontal disease – a comparative study with braces/ Invisalign® treatment: Principal investigator: T. Premaraj. Funding: Align Tech Inc.®, \$ 25,000.00 for July 2013. 2. Biofilm formation on two orthodontic primers -an in vitro study PI: T. Premaraj; Funding: UNMC college of dentistry summer research grant, \$ 2250.00 for May 2013 <p>Mentorship:</p> <p>Master student thesis advisor</p> <ol style="list-style-type: none"> 1. MS Medical Sciences Interdepartmental Area, Nima Rohani, DDS, Section of orthodontics, Evaluation of enamel decalcification effects on orthodontic primers with varying filler contents, degree expected 12/2014 2. MS Medical Sciences Interdepartmental Area, Jason Scott, DDS, Section of orthodontics, 3-dimensional airway space analysis on patients treated with “splint appliance” for Sleep apnea, degree expected 12/2015 3. MS Medical Sciences Interdepartmental Area, Christopher Schultz, DDS, Section of orthodontics, 3-dimensional airway space analysis on patients treated with surgical removal of adenoids/tonsils for Sleep apnea, degree expected 12/2015 <p>Master student thesis committee member</p> <ol style="list-style-type: none"> 1. MS Medical Sciences Interdepartmental Area, Jared Schottger, DDS, section of orthodontics, evaluation of cone beam radiographs in image distortion, degree expected 12/2014

	<p>Dental student research advisor Jaicee Post – 2014 Summer research program, UNMC, College of dentistry Jacob Zitterkopf – 2013 summer research program, UNMC, College of Dentistry</p> <p>Teaching: 2013-2014 ORT 576 Ortho Concepts I Course director ORT 588 Orthodontic Concepts II Course director ORT 590 Orthodontic lab techniques Course director PG 844 Cephalometrics Instructor Dentofacial Clinical Conference Instructor Critical Review of Current Literature Instructor Craniofacial Growth and Development OBIO 840 – Instructor Craniofacial Growth and Development OBIO 841- Instructor</p> <p>Service: 2013-2014 College and University Committees: 1. Executive Faculty Committee, College of Dentistry 2. Curriculum Committee, College of dentistry 3. Admission committee, Post-doctoral residency in Orthodontics, UNMC 4. Admission Committee, Undergraduate dental student admission, UNMC, College of Dentistry</p>
<p>Were the original, specific aims of the proposal realized?</p>	<p>yes</p>
<p>Were the results published? If not, are there plans to publish? If not, why not?</p>	<p>Published Abstracts: 1. T. Premaraj, C. Anderson, S. Premaraj and S. Fernando, “Bacterial community structure in endodontic infections”, J Dent Res., 93 (Spec Iss B): 2014 2. N. Rohani, H. Watanabe, D. Covey and T. Premaraj, “Evaluation of Mechanical and Esthetic Properties of Orthodontic Sealants”, J Dent Res 93 (Spec Iss B): 2014 3. S. Premaraj and T. Premaraj, “Orthodontic Loading and SOST/Sclerostin Expression in Rat Alveolar Osteocytes “, J Dent Res 93 (Spec Iss B): 2014</p>

	4.B. kim, T. Premaraj and F. Namavar, “ Cell response to Nano structured Zirconium Oxide Coated Titanium”, J Dent Res., 93 (Spec Iss B): 2014
Have the results of this proposal been presented? If so, when and where? If not, are there plans to do so? If not, why not?	The paper has been accepted for publication: 1. Premaraj.T, Rohani.N, Covey.D, Premaraj.S and H. Watanabe, An <i>in-vitro</i> evaluation of mechanical and esthetics properties of orthodontic sealants, European Journal of Dentistry (EJD), 2014; 8(4)- will be published between Oct-Dec. 2014.
To what extent have you used, or how do you intend to use, AAOF funding to further your career?	I was able to accomplish most of the goals that I have planned for 2013-2014 for the academic development. Grant submission, mentoring students in research, teaching activities and service activities. The grant helped me to work towards promotion and tenure to be a successful academic. The paper on the proposed research has been accepted for publication.