

Principal Investigator	Keith Sherwood DDS
Co-Investigator	
Secondary Investigators	
Award Type	Faculty Development Fellowship
Project Title	Faculty Development Fellowship
Project Year	2001
Institution	Nova Southeastern University
Summary/Abstract	<p><u>Specific Aims/Goals</u></p> <ol style="list-style-type: none"> 1. Complete work on an open bite research project using titanium miniplates for skeletal anchorage. Develop other research projects. Present research. 2. Complete delivery of a one year interdisciplinary course on Orthodontics and Oral surgery. 3. Create a research facility at Nova Southeastern for craniofacial anomalies. 4. Working toward board certification by creating an orthodontic faculty practice from which to generate board cases. 5. Develop my teaching and presentation skills. 6. Learn the administrative responsibilities associated with full time academics as part working toward my goal of becoming a department chairman. <p style="text-align: center;">Final Report</p> <p><u>Studies and Results: This study was accented by the AJODO and will be published later this year.</u></p> <p>Closing Anterior Open Bites by Intrusion of Molars using Titanium Miniplate Anchorage</p> <p>Keith Sherwood DDS</p> <p>Abstract</p> <p>The intent of this study was three fold: a) to validate true intrusion of molars in adults, b) to test stability of mini-plates as anchorage for intrusion of posterior teeth in the maxilla, and c) to record the skeletal and dental changes of open-bite closure. Four adult patients who</p>

presented an anterior open-bite malocclusion were selected to undergo posterior intrusion with the use of mini-plate anchorage in order to close the open-bite. True intrusion of maxillary molars occurred in all cases. Mean molar intrusion was 1.99 mm in a range of 1.45-3.32 mm. No movement of mini-plates occurred at any time during their use or before intentional clinical removal. Open-bite closure was achieved for all four patients. Mean closure of incisors was 3.62 mm (range 3.0-4.5 mm) as the mandibular plane closed 2.62 (range = 1.5-4.5 degrees) and the occiusal plane decreased 2.25 degrees (range = 1.0-3.5). Anterior *facial* heights decreased as the mandible closed and “B” point rotated anteriorly and upward.

A. *Progress to date:*

1. **Research:**

- The open bite - miniplate skeletal anchorage (above) study will be published in the AJODO possibly in December.
This project will be expanded pending funding.
- A side study is testing the use of the miniplates to intrude supererupted unopposed teeth and is undergoing final editing before submission.
- I have secured approval from the Nova Internal Review Board for a study looking at the palatal implant for orthodontic anchorage.
This study is underway.
- I have received approval for a submission to the Internal Review Board that investigates the laser Doppler device to determine the vascularization of anterior teeth in orthodontic patients.

2. My course in orthodontics and oral surgery has been successful and I am working on printing a manual for the course.
3. I have participated in developing a state approved craniofacial team at Nova. We have an orthodontic research fellow who is a member of the orthodontic department.
4. I have created an orthodontic practice from scratch in *faculty* practice. This is up and running and I am collecting board cases.
5. I have been improving my teaching and presentation skills by taking formal courses on this at the University.
6. I have the graduate directors responsibilities for the orthodontic department and continue to advance my administrative knowledge and skills.

B. *Plans for the next six months of support:*

	<ul style="list-style-type: none"> • A second publication on the miniplate project. • Continuation of the palatal implant project. • Begin the laser Doppler project. • Research presentation at the national meeting. • An upcoming presentation at the Southern Regional meeting. • Continuing work on curriculum development for the residency. • I have started courses at Nova leading towards a masters of education degree for health professionals. <p><i>C. Publications/presentations:</i> See above.</p> <p><i>D. Request/Justification for extension of present cycle:</i> The pilot study for the open bite project has been completed. However we would like to expand it to enlarge the sample, and further to do long term evaluations of the stability of the clinical results. The palatal implant study is ongoing. The laser doppler study will require funding to buy the laser doppler device (\$8,000)</p>
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