

September 4, 2001

**Re:** Report to AAOF on Biomedical Research Award

**Title:** A cephalometric and biometric comparison of titanium on-plants and tooth-borne appliances as anchorage for maxillary orthopedics

**Funding period:** 1998 through now

**Principal investigator:** Dr. Peter Ngan

**Summary:**

Twenty patients with Class III malocclusion and maxillary deficiency was recruited at the Hubei Medical University, School of Stomatology to participate in a study. A titanium on-plants was surgically placed on the palate as anchorage for maxillary orthopedics. The onplants were allowed to heal and biointegrate for 10 weeks. A facemask with orthopedic force of 400 gm per side, was used to protract the maxilla for 8 to 12 months. So far, three patients have completed the study. Clinically, the onplants were safe to use with minimal soft tissue irritation and discomfort during treatment and removal of onplants. Cephalometric analysis showed that the onplants were stable to be used as anchorage for orthopedic force up to 400 gm per side.