

## AAO Foundation Award Final Report

Principal Investigator	Andrew C. Lidral
Co-Investigator	
Secondary Investigators	
Award Type	Teaching Enhancement Award/Loan Program (TELP)
Project Title	Teaching Enhancement Award/Loan Program (TELP)
Project Year	1995
Institution	University of Iowa
Summary/Abstract	<p>The goal of the AAOF/TELP award that I received in 1995 was to provide a mechanism to fund the final year of my clinical Orthodontic and genetic research training at the University of Iowa with the ultimate goal that this training would provide the foundation to launch a successful academic career in Orthodontics.</p> <p>This award has been highly successful in that I have been involved full-time as an Orthodontic Educator since 1996. Initially, my career began at the Ohio State University with Dr. Kate Vig as my Department Chair and Dr. Henry W. Fields, Jr as the College Dean. During my 5 years at OSU, I was able to successfully establish a research program focused on finding genes for cleft lip and palate, build a teaching profile, mentor students from the undergraduate through the PhD level, and provide patient care in both faculty practice and hospital Orthodontic specialty settings.</p> <p>The most difficult aspect of an academic career is establishing and funding an independent research program. The AAOF/TELP award and two subsequent AAOF faculty development awards were invaluable in obtaining sufficient funding to have a solid program. Specifically, I was able to leverage the AAOF funds to obtain a March of Dimes Basil O'Connor Award which subsequently was renewed as a Research Award. Furthermore, I was able to obtain NIH funding, initially at the R03 (small grant) level and subsequently at the R01 (independent grant) level. Upon obtaining the R01 funding, I was able to spin that to obtain an NIH K02 – Independent Scientist Career Development Award. The NIH R01 has just been renewed for an additional 5 years. Meanwhile, having NIH funding qualified my research to compete to have genetic analyses completed by an NIH subcontract to the Center for Inherited Disease Research at John Hopkins. This was a collaborative effort I built with Drs.</p>

Jeffrey Murray at the University of Iowa, Mary Marazita at the University of Pittsburgh and Mauricio Arcos-Burgos at the University of Antioquia, Medellin, Colombia – individuals who have been key mentors as well as solid collaborators. Through this award we were able to obtain a genome scan on over 4500 individuals from almost 600 families to identify genes for cleft lip. This has been a highly successful project with the identification of new regions that contain genes for cleft lip and our current efforts are to identify these genes.

Recently, I have moved to the University of Iowa as a member of the Orthodontic Department with Dr. John Casko and now Dr. Tom Southard as Department Chairs. Also, I was able to move my lab into the Craniofacial Anomalies Research Center to have the necessary critical mass to move the project forward and establish new arms to my research portfolio – specifically the development and study of animal models for facial development. Currently, I am writing grants to obtain funding for the animal projects with the immediate goal to gain a further understanding of the genetic basis for facial development and the long term goal of using these animal models to develop preventive therapies.

Teaching has been a constant theme throughout my academic career. This includes directing courses, lecturing, research mentoring and clinical teaching. This area has been the most fun and rewarding as just like watching young orthodontic patients grow up and express themselves, teaching students and watching them bud and gain independence is a phenomenal process to participate in. I have had the great fortune of working with excellent students, making the process more fun than work. One of the greatest pleasures has been working with undergraduate students and having them pursue careers in dentistry, orthodontics and basic science. My ultimate goal is to convince a number of them to ignore the glitter of private practice and pursue careers in academic Orthodontics to address the dire shortage of teachers and in doing so amplify the impact of this initial AAOF/TELP award.