



Document Synopsis*

A Word document synopsis of your project/research/use of funds which is to include the following:

1) a short biography

Dr. Beatrice Williams is a third-year orthodontics resident at the University of North Carolina Adams School of Dentistry. Born in Ghana then raised in Northern Virginia, she migrated to the University of North Carolina at Chapel Hill where she embarked on her higher education journey as a first-generation immigrant and student. Dr. Williams graduated from UNC College of Arts and Sciences with honors and distinction as she completed her Senior Honors Thesis project titled, *The effect of oral health on quality of life in recently diagnosed and in those with long-term human immunodeficiency virus (HIV)*. Her interest in the topic became a six-year endeavor that persisted throughout her dental school education. She went on to earn her Doctor of Dental Surgery with distinction from the UNC Adams School of Dentistry. Presently, Dr. Williams' research now focuses on familial experiences with tooth autotransplantation for replacement of a missing front tooth in adolescents.

2) a brief description of the project

Approximately 178 million Americans are missing at least one tooth. Studies have shown that there are negative health, psychological, social, and financial implications associated with missing anterior teeth. Tooth autotransplantation (AT) is a viable treatment modality for early definitive treatment as children navigate critical years of physical and psychosocial development. In addition to allowing for early intervention, AT provides the unique advantage of growing like a natural tooth while also being a more cost-effective tooth replacement option.

While AT is a treatment modality with proven high success rates, limited research exists on the patient and familial perspectives of this involved interdisciplinary experience. To address this gap in knowledge, the research team will examine families' experiences, rationale for and barriers to AT (Aim 1) as well as evaluate perceptions of the esthetic and functional outcomes of AT (Aim 2) through guided interviewing and qualitative analysis. The proposed study will augment the limited evidence base on AT and provide guidance on how to improve the AT process and address barriers to care.

3) a statement of how orthodontic education will benefit from your award

While many view orthodontics as an "elective" procedure, there are patients in need of orthodontics to improve psychosocial and functional concerns. These concerns are especially pertinent in parents and patients seeking a solution for missing front teeth due to trauma or genetics. Orthodontics plays an integral role throughout the interdisciplinary AT process as orthodontics is necessary in preparing the space for AT, closing the donor site, and properly aligning the transplanted tooth.

The orthodontic profession is continuously evolving to meet the needs of our continuously evolving patient population. AT lends a patient-centered approach to address the unique concerns associated with definitive treatment in growing patients. Unfortunately, there is a gap in knowledge that exists for both providers and patients in the United States with this procedure compared to our European counterparts. Investigation into decision-making rationales for treatment and overall experiences and barriers throughout the treatment

processes, is especially important in contributing towards wide-spread acceptance of AT as a treatment option in this country.

4) why the Foundation is important to your project

Support from the AAO Foundation is essential for the success of my research endeavors. Thanks to the generosity of the Foundation, 100% of our financial needs will be met and the project is free to be carried out to its fullest potential. Since the patient pool for this nascent treatment modality is limited in the United States, robust patient enrollment is of the utmost importance for producing meaningful research outcomes. Thus, a significant portion of the Foundation monies will go towards participant compensation—limiting barriers to participation and encouraging enrollment. Moreover, the foundation has helped to ensure the feasibility of my project by funding the project's logistical needs such as interview transcriptions and data analysis.

5) how Foundation funding is expected to or has benefitted your career

My passion for complex problem-solving has served as a bridge for my love of orthodontics and my drive to find solutions for disparities in access to care. This project allows me to investigate an innovative, cost-effective option to tackle the issue of a missing front tooth while intentionally evaluating barriers to care. The findings from this project will not only help improve acceptance of this treatment but also aid in both patient and provider education. As a lifelong learner, I look forward to the expertise gained from specializing in orthodontics and I am grateful for the opportunity to further develop my craft. AT provides an invaluable addition to our clinical armamentarium, and I aspire to enrich the profession's evidence-based approach to patient care.