



Fabiana Aellos

Instructor, Surgery - Plastic & Reconstructive Surgery

Bio

BIO

My journey in dentistry, as a young periodontist, clinician, and researcher, has been profoundly influenced by my unwavering commitment to pushing boundaries and creating a lasting impact. Through a seamless fusion of clinical insight, translational research, and educational endeavors, I am actively engaged in reshaping the future of dentistry. My passion lies in enhancing patient care and refining surgical techniques, and introducing advanced treatments that hold the potential to revolutionize the field. I am dedicated to bridging the gap between research and clinical practice, propelling dentistry into uncharted territories while nurturing the development of future dental professionals.

My research focus takes me deep into the realm of bone-anchored percutaneous implants. This domain addresses a persistent concern: the challenge of implant failure arising from infections at the soft tissue-implant interface. This is particularly pronounced in dental implants, where complications like peri-implant mucositis and peri-implantitis impact nearly half of all cases. As a part of Helms Laboratory at Stanford University's Department of Surgery, I am unwaveringly committed to exploring the intricacies of this interface. My goal is to bolster its barrier function through innovative strategies, ensuring better outcomes for patients.

Beyond research, I'm an advocate for a more inclusive and diverse dentistry landscape. I strongly believe that by sharing knowledge we can unify forces, unlearn, learn, relearn and motivate others. My life's ultimate goal is to inspire the upcoming generation of dentists to fearlessly pursue their dreams, be courageous and entirely dedicated to the field of science, thus impacting lives through the profound influence of dentistry's beauty and limitless potential.

ACADEMIC APPOINTMENTS

- Instructor, Surgery - Plastic & Reconstructive Surgery

HONORS AND AWARDS

- Unlock your networking and leadership potential - Educational Grant, European Association of Osseointegration - Junior Committee (2023)
- Enhancing soft tissue integration of implants - Research Grant, Osteology Foundation (2022)
- A multiscale, biology-based strategic approach to optimizing cleft repair outcomes - Research Grant, AOCMF (2022)
- Educational Award, Osteology Foundation (2022)
- Summa cum laude, Pontificia Universidad Javeriana (2016)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, IADR - International Association for Dental Research (2023 - present)
- Member, Academy of Osseointegration (2022 - present)

- Member, AOCMF (2022 - present)
- Young consultant and speaker, Colgate (2019 - present)
- Membership and Credentials Committee, AO - Academy of Osseointegration Board (2023 - present)

PROFESSIONAL EDUCATION

- DDS, Pontificia Universidad Javeriana , Dentistry (2016)
- Certificate, University of Michigan , Externship Program - Periodontology (2018)
- MS, Pontificia Universidad Javeriana , Periodontology and Implantology (2019)

LINKS

- LinkedIn profile: www.linkedin.com/in/fabiana-aellos-278463136
- STaRS program: <https://plasticsurgery.stanford.edu/research/stars/mentors.html>
- ResearchGate: <https://www.researchgate.net/profile/Fabiana-Aellos>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My background in implantology and periodontology, combined with my microsurgical skills, has allowed me to tackle complex oral surgeries and intricate procedures. These skills have been instrumental in advancing the field and, more importantly, in improving the outcomes and well-being of my patients.

I've always believed in bridging the gap between fundamental research and its practical application in clinical settings. By amalgamating my clinical experiences with laboratory investigations, I've contributed to the development of surgical models that closely mimic human diseases and conditions. This approach enhances our understanding of how tissues respond to surgical interventions, paving the way for more effective treatments.

My research into mucosal integration of percutaneous implants and the role of Wnt signaling in implant osseointegration seeks to optimize the interaction between implants and surrounding tissues. This improved integration not only bolsters the stability of dental implants but also ensures their long-term success, ultimately enhancing the quality of life for our patients. My involvement in regenerative medicine research is driven by a passion for developing innovative strategies for tissue repair and regeneration. This work has the potential to revolutionize how dental professionals address challenges such as bone defects and periodontal tissue loss, leading to better patient outcomes.

One of my greatest joys is nurturing the next generation of dental professionals. Through my dedication to training and mentoring undergraduate and pre-dental students, I aim to equip them with advanced research and clinical skills. Fostering curiosity and empowering young minds to contribute to scientific advancements in dentistry is a responsibility I hold close to my heart.

I'm grateful for the international grants and collaborations that support my work. These resources not only enable my research but also contribute to the broader progress of our research laboratory. Together, we pursue innovative projects that have the potential to impact dental care on a global scale.

Recognizing the importance of effective communication, I've committed myself to enhancing my communication skills and engaging in professional development activities. Effective communication is key to translating research findings into clinical practice, influencing dental policies, and sharing knowledge within our professional community.

As I gaze into the future, I envision a dentistry landscape where my work may lead to more advanced and efficacious dental treatments, refined surgical techniques, and enhanced patient care. In the challenging realm of bone-anchored percutaneous implants, plagued by the persistent issue of implant failure due to infections at the soft tissue-implant interface, I confront this concern head-on. My mission is to meticulously investigate the biological and biophysical intricacies of this interface, with the aim of enhancing its barrier function through innovative strategies.

My journey from the confines of clinical practice to the expansive realms of research has been underpinned by a humble desire—a desire to forge a lasting impact on the field of dentistry, to ignite the flames of curiosity in future generations of dentists, and to contribute to the enhancement of dental care for all.

Publications

PUBLICATIONS

- **5-FU Weakens Defensive Functions of the Junctional Epithelium.** *Journal of periodontal research*
Aellos, F., Ramos, A., Civit-Balta, A., Grauer, J. A., Cuevas, P. L., Rao, S., Yuan, X., Liu, B., Helms, J. A.
2025
- **Non-invasive and quantitative methods for assessment of blood flow in periodontal and oral soft tissues: a systematic review.** *Frontiers in dental medicine*
Rodríguez, A., Kripfgans, O., Aellos, F., Velasquez, D., Baltazar, A., Chan, H.
2025; 6: 1587821
- **Evaluation of Postoperative Outcomes Following Early and Late Palate Repair: A Preclinical Study.** *The Journal of craniofacial surgery*
Aellos, F., Verma, I., Ly, M., Hoy, M., Quach, T., Rosbänder, I., Sandoval, A., Wolvis, E., Turkkahraman, H., Helms, J. A.
2024
- **Dynamic analyses of a soft tissue-implant interface: Biological responses to immediate versus delayed dental implants.** *Journal of clinical periodontology*
Aellos, F., Grauer, J. A., Harder, K. G., Dworan, J. S., Fabbri, G., Cuevas, P. L., Yuan, X., Liu, B., Brunski, J. B., Helms, J. A.
2024
- **Linking the Mechanics of Chewing to Biology of the Junctional Epithelium.** *Journal of dental research*
Yuan, X., Liu, B., Cuevas, P., Brunski, J., Aellos, F., Petersen, J., Koehne, T., Bröer, S., Grüber, R., LeBlanc, A., Zhang, X., Xu, Q., Helms, et al
2023: 220345231185288
- **Clinical and cone beam computed tomography outcomes of maxillary anterior implant restorations after immediate implant placement with interim restorations: A 1- to 14-year retrospective analysis.** *The Journal of prosthetic dentistry*
Bernal, G., Ruiz, L., Aellos, F., Salazar, C., Sadowsky, S. J.
2023
- **Wnt/beta-Catenin Signaling in Craniomaxillofacial Osteocytes.** *Current osteoporosis reports*
Cuevas, P. L., Aellos, F., Dawid, I. M., Helms, J. A.
2023