

Dr. Kory Grahl Joins Selective ASCEND2.0 Program to Advance Innovative Orthodontic Technology

Dr. Kory Grahl admitted to the I-RED, ASCEND2.0 cohort and will receive support in conducting essential clinical tests of his new orthodontic device.

LAS VEGAS, NV, UNITED STATES, January 27, 2025 /EINPresswire.com/ -- Dr. Kory Grahl, interim assistant dean of Clinical Sciences at the [University of Nevada](#), Las Vegas School of Dental Medicine, has been admitted to the highly-selective I-RED, [ASCEND2.0](#) 2024-2025 cohort and will receive support in conducting essential clinical tests of his new orthodontic device.

Funded by the National Institutes of Health (NIH) National Institute of General Medical Sciences (NIGMS) project, ASCEND2.0 aims to fast-track biomedical innovations by equipping researchers with entrepreneurial skills and resources to accelerate their journey from laboratory to market through the I-RED West Program.

Revolutionizing Orthodontics with Cadmus Bracket Technology

Dr. Grahl's research centers on a groundbreaking tooth-colored orthodontic device called Cadmus that is designed to function as an attachment for aligners or as a conventional bracket for arch wires. Cadmus is poised to address the aesthetic demands of patients and the efficiency of tooth movement during orthodontic treatments.

The innovation's versatility allows it to improve challenging tooth movements when used with aligners alone, a feature that sets it apart in the market. The device promises to enhance the biomechanical performance of orthodontic treatments, offering patients and clinicians a more efficient and visually-appealing solution.

ASCEND2.0: Advancing Development and Testing

With support from the ASCEND2.0 program, Dr. Grahl will conduct critical mechanical testing of



Dr. Kory Grahl

Cadmus using a purpose-built orthodontic tooth movement simulator. This state-of-the-art device measures resultant forces in six degrees of freedom, enabling an evaluation of the forces involved in tooth movements such as rotation and torquing.

The study will test the hypothesis that Cadmus, when paired with aligners, can deliver forces comparable to those generated by conventional braces. The findings will guide design improvements, support clinical trials, and lay the foundation for future funding opportunities, including Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) proposals. UNLV has committed \$10,000 to assist with grant writing services to advance these efforts.



Broader Impact and Vision



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Dr. Kory Grahl

The Cadmus technology has the potential to transform orthodontic care by offering an aesthetically-pleasing and biomechanically-efficient solution for tooth movement. By addressing key challenges in aligner-only treatments, the device could improve patient outcomes and broaden the options available to clinicians.

“The ASCEND2.0 program offers an incredible opportunity to refine and validate our technology,” said Dr. Grahl. “This funding will be instrumental in advancing Cadmus from the research phase to clinical application, ultimately benefiting patients and practitioners alike.”

Dr. Grahl is an accomplished clinician with expertise in orthodontic devices. His research includes the development of innovative orthodontic bracket designs during his Master’s in Oral Biology and the publication of a case study exploring alternative implant options for the lower jaw during dental school. His work is characterized by a strong focus on product development and practical application.

For more information about Dr. Kory Grahl’s research, please contact:

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About the ASCEND2.0 Program

ASCEND2.0, (the grant 5UT2GM148080), funded by the National Institutes of Health (NIH), is an initiative designed to accelerate the commercialization of biomedical innovations by equipping researchers with entrepreneurial skills and strategies for bringing their discoveries to market. The primary goal of this award and the IDeA Regional Entrepreneurship Development (I-RED) program is to support small business concerns in IDeA regions to develop educational products that promote entrepreneurship in underserved states through local academic institutions. Educational efforts utilizing these products are expected to build biomedical researchers' and students' entrepreneurial skills that are crucially needed to translate scientific discoveries and innovative technologies into commercial products to the benefit of the public and the patient. I-RED was designed by NIGMS for IDeA states.

The IDeA program focuses on building research capacity in states with historically low levels of NIH funding. It supports advancements in basic, clinical, and translational research, alongside faculty development and infrastructure enhancements. By strengthening institutional capabilities in biomedical research, ASCEND2.0 enhances the competitiveness of investigators in securing research funding while enabling clinical and translational research to address the needs of medically underserved communities.

IDeA-Eligible States

The program is open to institutions in the following states and territories: Alaska, Arkansas, Delaware, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Rhode Island, South Carolina, South Dakota, Vermont, West Virginia, Wyoming, and Puerto Rico.

ASCEND2.0 plays a pivotal role in empowering biomedical researchers to transform their innovations into impactful healthcare solutions, fostering excellence in underserved regions.

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