

FOR IMMEDIATE RELEASE
June 29, 2025

CONTACT:
Matt Niner
+1.703.299.8084
media@iadr.org

Nitrate and the Oral Microbiome: Current Insights and Future Trials

Alexandria, VA, USA – A symposium exploring the influence of nitrate intake, the oral microbiome, and the enterosalivary pathway of nitric oxide generation on oral and systemic health was presented at the 103rd General Session of the IADR, which was held in conjunction with the IADR/Pan European Regional Congress on June 25-28, 2025 in Barcelona, Spain.

This symposium explored the emerging connection between dietary nitrate intake, the oral microbiome, and the enterosalivary pathway of nitric oxide (NO) generation, revealing their joint influence on both oral and systemic health. Substantial evidence now exists that nitrate metabolism by the oral microbiota plays a critical role in NO generation for systemic health, and modification of the oral microbiome through nitrate supplementation shows promising results for the prevention of caries and periodontal diseases.

The symposium consolidated the latest interdisciplinary research, from molecular biology to observational studies and clinical work, offering a comprehensive introduction and update to the dental research community. Attendees gained insights into the therapeutic benefits of dietary nitrate and how current advancements can shape the designs of future clinical trials to harness the potential of the oral microbiome in NO generation. Recent research was presented that has found a potential link between periodontitis, the loss of nitrate-reducing bacteria, and systemic health, and has unravelled new information about nitrate metabolism regulation.

Organized by Bob Rosier, Foundation for the Promotion of Health and Biomedical Research of the Valencian Community, Valencia, Spain; Alex Mira, Foundation for the Promotion of Health and Biomedical Research of the Valencian Community, Valencia, Spain; and Ryan Demmer, Mayo Clinic, Rochester, USA, the Symposium, “Nitrate and the Oral Microbiome: Current Insights and Future Trials” took place on Thursday, June 26 at 8 a.m. CEST (UTC+2).

About IADR

The International Association for Dental, Oral, and Craniofacial Research (IADR) is a nonprofit organization with a mission to drive dental, oral, and craniofacial research for health and well-being worldwide. IADR represents the individual scientists, clinician-scientists, dental professionals, and students based in academic, government, non-profit, and private-sector institutions who share our mission. Learn more at www.iadr.org.

T +1.703.548.0066
F +1.703.548.1883
1619 Duke Street
Alexandria, VA 22314-3406, USA
www.iadr.org • www.aadocr.org