

FOR IMMEDIATE RELEASE
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Advances in Regeneration of a Functional Dentin-Pulp Complex

Alexandria, VA, USA – A symposium investigating new methods of restoring injured or degenerated dental pulp was presented at the 104th General Session of the IADR, which was held in conjunction with the 55th Annual Meeting of the American Association for Dental, Oral, and Craniofacial Research and the 50th Annual Meeting of the Canadian Association for Dental Research on March 25-28, 2026 in San Diego, CA, USA.

Cell-based approaches in regeneration of the dentin-pulp complex based on pulpal mesenchymal stem cells (MSCs) in combination with advanced biomaterials or tissue engineering approaches have demonstrated promising results. Regeneration of dental pulp has become a realistic goal for clinical applications in the near future. Additionally, the development of smart, custom-made materials, model systems to mimic the organ of interest, and delivery systems for pharmaceutical applications to treat pulpal disease has moved the field forward.

This symposium focused on recent advances in understanding MSC niches in dental pulp and on new regenerative strategies and model systems to restore an injured or degenerated dental pulp. The first speaker introduced the field, provided an overview of MSC characteristics, niches, and determinants of their fate in dental pulp, and discussed their potential use in different tissue engineering applications. The second speaker introduced the state-of-the-art in terms of pulp-on-a-chip and discussed the exciting potential of this model system, but also current limitations. The third speaker reflected on the fascinating technical possibilities to generate vascular networks in tissue-engineered products and discussed the importance of such approaches for pulp regeneration. The final speaker introduced the latest advances in the development of smart biomaterials for pulp regeneration and drug delivery to the pulp-dentin-complex.

Organized by Mina Mina, University of Connecticut, Storrs, USA and Kerstin Galler, University of Erlangen, Germany, the symposium, “Advances in Regeneration of a Functional Dentin-Pulp Complex” took place on Friday, March 27 at 2 p.m. PDT (UTC-7).

About IADR/AADOOCR

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. The American Association for Dental, Oral, and Craniofacial Research (AADOOCR) is the largest division of IADR. Learn more at www.iadr.org.

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