

6th International Conference on Regenerative Orthopaedics and Tissue Engineering Successfully Held at Croatian Academy of Sciences and Arts

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The 6th International Conference on Regenerative Orthopaedics and Tissue Engineering (iCRO 2025) brought together distinguished clinicians and researchers at the Library of the Croatian Academy of Sciences and Arts on November 27, 2025, marking a significant milestone in advancing regenerative medicine across Europe. Zagreb hosts leading European Forum on Musculoskeletal Innovation and Tissue Regeneration

Held under the theme “Frontiers in Regenerative Orthopaedics: Innovations Across Disciplines,” this prestigious event was organized by the Department of Medical Sciences of the Croatian Academy of Sciences and Arts (CASA) in cooperation with the Croatian Orthopaedic Society and supported by the Global Regenerative Academy.

CONFERENCE OPENING AND SESSIONS

The conference opened with welcoming addresses from Marko Pećina (Honorary President), Vida Demarin (Head of the Department of Medical Sciences of CASA), Džihan Abazović (President

of the Global Regenerative Academy), and Alan Ivković (Conference President).

The morning program featured the **Orthobiologics State of the Art** session, co-organized by the Global Regenerative Academy and moderated by Giuseppe Filardo (Switzerland). Key presentations included the ESSKA ICRS consensus on orthobiologics, the rationale for different orthobiological preparations ranging from platelet exosomes to PRP with adipose tissue and BMAC, and the current clinical application status of bone marrow aspirate concentrate.

The **Joint Preserving Surgery** session, co-organized by the Croatian Orthopaedic Society and moderated by Mislav Jelić and Tomislav Smoljanović, showcased presentations on Nose2Knee cartilage repair technique, corrective osteotomies around the knee joint, and a novel articulated device for knee joint distraction in treating knee osteoarthritis.

The afternoon program included the **Regenerative Medicine Modalities in Pain Treatment** session moderated by Višnja Neseck



Adam and Ivan Radoš, focusing on acute pain control following elective surgery and its role in preventing chronic pain complications.

The final session, **Cells, Proteins in Regenerative Medicine and Tissue Engineering**, moderated by Inga Urlič and Džihan Abazović, presented research on bone morphogenetic proteins and carriers in novel bone regenerative therapies, personalized one-stage cartilage regeneration using 3D bioprinting, and exosome-based approaches.

INTERNATIONAL SIGNIFICANCE

The conference also highlighted Croatia's leading role in EU-funded regenerative medicine research initiatives, including the ENCANTO trial investigating engineered nasal chondrocyte tissue for patellofemoral osteoarthritis, the BIO-CHIP project for cartilage repair, and the LUMINATE initiative developing minimally invasive bioprinting technology for osteochondral regeneration.

The multidisciplinary program brought together orthopaedic surgeons, tissue engineers, pain management specialists, and researchers from across Europe, reinforcing Zagreb's position as a dynamic center for regenerative medicine innovation and clinical translation.

