

New Paths and Potential Game Changers for the Future Osteoarthritis Management and Treatment



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Abstract

Osteoarthritis (OA) is increasingly recognized as a complex, heterogeneous disease involving not only mechanical wear and cartilage degradation but also inflammation, metabolic dysfunction, and altered immunological responses. Despite its growing prevalence and burden on individuals and healthcare systems, there remains a significant gap in effective disease-modifying treatments. In this presentation, I will outline new paths and potential game changers in the management and treatment of OA, with a focus on translational research and personalized medicine. I will highlight emerging classes of disease-modifying osteoarthritis drugs (DMOADs), regenerative and cell-based therapies, and the promise of targeted approaches guided by clinical phenotyping and molecular endotyping. Our recent work has contributed to this evolving landscape by identifying molecular signatures and immune-metabolic alterations in osteoarthritic tissues. These findings support the development of biomarker-driven strategies to stratify patients, monitor disease progression, and tailor therapies more effectively. The talk will also address the integration of digital biomarkers, artificial intelligence, and imaging data to enhance patient profiling and predict therapeutic responses.

Biography

Ali Mobasheri is Professor of Musculoskeletal Biology at the University of Oulu, Finland, where he leads a research team focusing on cartilage biology and osteoarthritis biomarkers. He also serves as Chief Researcher and International Adviser at the State Research Institute Centre for Innovative Medicine in Lithuania, and collaborates with the WHO Collaborating Center for Musculoskeletal Health at the Université de Liège. He is a former President of OARSI and Scientific Advisory Board Member of ESCEO. Ali has published over 400 articles, his h-index is 78, and is recognized for his contributions to translational osteoarthritis research.

***** ALL ARE WELCOME *****

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