Bio-scaffolds and stem cells in knees

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The use of various scaffolds, matrix materials, and stem cells in regenerative medicine and tissue engineering has proliferated in the last decade. The inter-lapping nature of regenerative medicine and tissue engineering, has explored the fundamentals of bioscience, cellular signaling, and aging. The various engineered scaffolds have included synthetic, allogenic, autologous, xenographic, natural matrix substrates and 3-D bio-printing. Cellular medicine has also explored various types of cells including autologous, allogenic, and perinatal. The animal model has yielded promising results, yet a fundamental difference in human diverse behavior and inter-patient variability, may ultimately prove impossible to extrapolate from more simplistic animal model studies. The inherent nature of degenerative osteoarthritis of the knee is a progressive phenomenon. The role of cellular medicine and bio-scaffolds may alter the nature of osteoarthritis over time, thus impacting functional level and quality of life (QoL). The future of improving quality of life (QoL) may find a common thread in preventative and regeneration medicine.

Biography

Dennis M Lox is a world renowned Sports and Regenerative Medicine Expert. He has lectured internationally with some of the most acclaimed regenerative medicine and stem cell researchers in the world. He has a special interest in Regenerative and Stem Cell Medicine as it relates to athletes, the aging population, osteoarthritis, and Avascular Necrosis (AVN). He has edited two medical textbooks, eight medical textbook chapters, authored numerous scientific articles and abstracts. He continues to maintain an active sport and regenerative medicine practice in Beverly Hills, California and Tampa Bay, Florida region. He has treated patients from around the globe. These diverse patients include professional athletes to patients in their nineties. Utilizing this experience, he incorporates an individualized approach to each patient.

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