The use of bone marrow stem cells for osteoarthritis

Osteoarthritis (OA) is the most common degenerative joint disease or arthritis that affects 250 million people globally. It is the leading cause of chronic disability in the United States. Presently, there are no specific treatments for OA only management of the symptoms of the disease. Care includes lifestyle changes, exercise and pain management. Stem cells may be a promising option for those suffering from OA. Adult stem cells may be isolated from various tissue sources. As an autologous therapy they have been demonstrated to be safe. With this in mind, the use of stem cells in various diseases is now gaining traction throughout the world. We have undertaken studies to identify a stem cell source that may be ideal for OA. Our research findings indicate that mesenchymal stem cells isolated from bone marrow may be ideal for use in OA. The cells are easily obtainable and do not need to be differentiated to chondrocytes for use. Our pilot studies indicate that administration of bone marrow stem cells into the knees of patients suffering with OA is safe, feasible and may improve their quality of life. Most importantly, this study describes an easy approach for treating patients with a debilitating disease.

Biography

Rafael Gonzalez is the VP of Research & Development, and is in-charge of the development of clinical stem cell applications for several disease/trauma states. He is responsible for the design and execution of all pre-clinical and clinical experiments involving adult and pre-natal stem cells. He also leads the biological tool based affiliate company DV Biologics which markets cells and cell based products for research and drug screening. He received his PhD in Biological Sciences from the Reeve-Irvine Research Center, University of California, Irvine. He has several scientific publications in the field of stem cells, spinal cord injury and the immune system.