

3<sup>rd</sup> International Conference & Exhibition on

## TISSUE PRESERVATION AND BIOBANKING &

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## TISSUE ENGINEERING AND REGENERATIVE MEDICINE

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#### Prolotherapy: The first choice in regenerative medicine

Prolotherapy has been around for almost 80 years, yet is not well known in most musculoskeletal circles. Most orthopedic surgeons and neurosurgeons either have not ever heard of prolotherapy or think it does not work based on never having studied it in residency training programs, their personal bias or their general lack of knowledge about it. The author will explain his discovery of prolotherapy after some 30 years of suffering from pain and his experience and will introduce this fine medical art to the participants. Prolotherapy was the first procedure invented in Regenerative Medicine, followed by PRP-Platelet Rich Plasma injections and then Stem Cell Injections from the bone marrow and/or adipose tissue. Prolotherapy is a simple technique, much less invasive and less harmful as compared to steroid injections and high risk musculoskeletal surgery and often times, when performed by a skilled and experienced prolotherapist can alleviate the chronic pain one is suffering from. The author will explain the physiology of ligaments and tendons in response to prolotherapy and differentiate between 1<sup>st</sup> line, 2<sup>nd</sup> line and 3<sup>rd</sup> line regenerative medicine therapies. Prolotherapy is the first line of defense when it comes to regenerative medicine and should be recommended to patients prior to cortisone injections or invasive surgery. Elite athletes are already aware of its potential and utilize it when injured and or reinjured to heal their painful joints. It is time for prolotherapy to become main stream and no longer be considered alternative medicine. Author will describe the indications for prolotherapy, the techniques utilized and indications for this therapy. Prolotherapy is an extremely successful therapy in experienced hands and offers powerful pain relief and healing, especially to those who cannot afford PRP or Stem Cells and is therefore, a therapy that be part of all physicians training in third world countries and the like where large percentages of the population cannot afford or have no access to PRP or stem cells. For an indigent population, prolotherapy offers a very good treatment for healing and relief of musculoskeletal pain. Any physician doing stem cell therapy (musculoskeletal) should be well trained in prolotherapy prior to using the advanced therapies of performing platelet rich plasma injections (PRP) and bone marrow aspirates for stem cells and liposuctions for adipose derived stem cells. These procedures are very expensive as compared to prolotherapy. You need to have a major knowledge of injection techniques and know your anatomy-bones, ligaments, tendons and muscles in order to put the cells where they need to be. You need to be able to do these procedures via head, heart and hand (palpation) and via ultrasonic guidance and C-arm Fluoroscopy for more precision. Before rushing into doing stem cell therapies, prolotherapy should be tried because it is a much simpler and less invasive technique. Prolotherapy is currently being performed as a precursor to having PRP and stem cell therapy by competent regenerative medicine doctors. A discussion of what is prolotherapy and its uses and what it does is germane to this talk. It is important for physicians to know that often a simple treatment can be performed to accomplish the same result as long as one is experienced and knowledgeable as a prolotherapist.

#### Biography

Charles F Mahl is a graduate of Case Western Reserve University in Cleveland, Ohio. He has received his MD degree from the Rosalind Franklin School of Medicine in Chicago, Illinois. He did his Residency and Chief Residency in New York at Interfaith Hospital and Vitreo Retinal Fellowship at the University of Oregon. He has completed a Fellowship program in Anti-Aging and Regenerative Medicine by the American Academy of Anti-Aging Medicine, the Living Younger Preventive Aging Program and is certified in Age Management Medicine by The Cenegenics Education and Research Foundation. He is Regenestem trained in both PRP and adipose/bone marrow derived stem cells. He is Board Certified in Integrative Medicine (BCIM) and is a Certified Sports Trainer (CST) and Certified Sports Nutritionist (CSN). He is also a Member of the Advisory Board of Global Stem Cells and Regenestem.

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