

## **STEM CELLS & BEYOND**

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As Director of the PVA's Spinal Cord Research Foundation in the early 1990's, Dr. Johnston funded some of the first SCI-focused stem-cell research in the U.S. Since then, it has been astonishing to see how many function-restoring, stem-cell transplantation programs have emerged throughout the worldwide. Clearly, in the 21<sup>st</sup> century, stem cells are going to play an ever-increasing role in restoring function lost by disability, disease, or the entropy of aging. From conception until death, they are the cells of renewal and regeneration through which many growth and healing energies are mediated.

Based on his work for the Icelandic government to develop a database of therapies that have the potential to restore some function after SCI ([www.sci-therapies.info](http://www.sci-therapies.info)), this presentation will provide an overview of the 1) various SCI-focused, stem-cell-transplantation programs emerging throughout the world and 2) several adjunct therapies that may influence the expression and neuroprotective potential of these cells. For example, documented stem-cell influencing therapies include acupuncture, laser therapy, hyperbaric oxygen, herbal medicine (e.g. ginseng), omental transposition, electromagnetic fields, chemotherapy (adversely), and psychoneuroimmunological mechanisms. Because progress is catalyzed by pulling together seemingly disparate pieces of the puzzle, it is important to consider the augmentative neuroprotective potential of such therapies.