OMICS Group Conferences
Accelerating Scientific Discovery
3rd World Congress on
Cell Science & Stem Cell Research
November 20- 22, 2013 DoubleTree by Hilton Baltimore-BWI Airport, USA

Facilitating stem cell based therapies from the ground up: how the NIH CRM is advancing the field

Mahendra Rao
NIH Center for Regenerative Medicine, USA

Abstract

The field of regenerative medicine is progressing at a rapid rate, yet there still remain numerous obstacles that are precluding the realization of the anticipated breakthroughs for stem cell based therapies. The National Institutes of Health created the NIH Center for Regenerative Medicine (NIH CRM) as a community resource to provide the infrastructure, process enablement, resources and outreach to achieve two board goals. Frist, we developed the necessary forms and process to navigate the regulatory hurdles imposed by patient consent, reprograming methods, genomic engineering tools, and additional technology. This includes negotiating terms of use agreements to ensure freedom to operate and commercialize stem cell based therapies. Second, we generated valuable resources through our intramural community that consists of numerous iPSC lines (control, reference, and engineered) that will be available soon at cell repositories that will serve as gold standards in field. This talk will cover these two goals, as well as, highlight several breakthroughs that have been achieved by our intramural investigators towards developing first in human stem cell based therapies.

Biography:

Dr. Rao is internationally renowned for his research involving human embryonic stem cells (hESCs) and other somatic stem cells. He has worked in the stem cell field for more than 20 years, with stints in academia, government and regulatory affairs and industry. He received his M.D. from Bombay University in India and his Ph.D. in developmental neurobiology from the California Institute of Technology, Pasadena. Following postdoctoral training at Case Western Reserve University, Cleveland, he established his research laboratory in neural development at the University of Utah, Salt Lake City. He next joined the National Institute on Aging as chief of the Neurosciences Section, where he studied neural progenitor cells and continued to explore his longstanding interest in their clinical potential. Most recently, he spent six years as the vice president of Regenerative Medicine at Life Technologies, Carlsbad, Calif. He co-founded Q Therapeutics, a neural stem cell company based in Salt Lake City. He also served internationally on advisory boards for companies involved in stem cell processing and therapy, on committees including the U.S. Food and Drug Administration's Cellular Tissue and Gene Therapies Advisory Committee chair, and as the California Institute of Regenerative Medicine and International Society for Stem Cell Research liaison to the International Society for Cellular Therapy.