Stempeutics Scientists work on finding cure for Parkinson’s Disease

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In a pilot study done at Bangalore in collaboration with Stempeutics Research, Parkinson’s disease patients underwent therapy with mesenchymal stem cells derived from their own bone marrow and implanted into a specific part of the brain through a small needle (stereotaxy). One patient who has completed two years of follow-up showed significant improvements like reduction in tremors, rigidity and bradykinesia and has been gradually weaned off medications. Other patients are in the early stages of follow-up and 65-70% of them are showing signs of improvement. Researchers from Stempeutics, are working to develop “progenitor” cells like dopaminergic differentiated mesenchymal stem cells for Parkinsons disease which could turn out to be the effective therapy for this disease. Stempeutics is working with Manipal Hospital for pilot study

Currently, all the available therapies offer only “symptomatic” relief and do not address the root cause of the disease. Syndopa, the primary drug used in the treatment of Parkinson`s disease, initially offers good benefit, however its troublesome side effects(dyskinesias) become unbearable after sometime. These problems have led to search for newer therapeutic approaches to replace the dead dopaminergic neurons in the brain. Stem cells have shown huge promise in this area, especially mesenchymal stem cells. These cells can be derived from a very less amount of bone marrow and can be cultured outside to large numbers without losing their ‘stemness’. They are pluripotent cells that can proliferate, self-renew, and differentiate into dopaminergic neurons. They can be stored and repeated doses can be given in future, if needed.

Parkinson's disease (PD) occurs when brain cells containing dopamine in a specific part of the brain die or are damaged. Experts do not know for sure what causes the damage to these brain cells. The prevalence of PD is 60-100 per 100,000 in India as compared to 200 per 100,000 in the West. There are approximately 120,000 people with PD in India. Almost a quarter is in hospitals or residential care and another third in the community require help from others for daily living. Parkinson's disease affects both men and women almost equally. The average age at which the disease strikes is 60 years; however, doctors are now finding Parkinson's disease in a growing number of people under the age of 40.

The early symptoms of Parkinson's disease are often very slight and may include a constant blank look on the face, shaky hands, decreased arm swing, a stooped posture, or shorter steps when walking. The main symptoms of Parkinson's disease are Tremors (rhythmic movements or shaking, especially in the hands), rigid limbs and trunk, slowness of movement, poor balance and coordination. As time goes on, Parkinson's disease sometimes leads to other symptoms, such as depression or anxiety, problems with chewing and swallowing, and speech changes. Some people may have problems with urination or constipation.

Although there is no cure for Parkinson's disease, medication can provide relief from many of the symptoms. Most

medications used to treat Parkinson's disease mimic the effect of dopamine, increase dopamine levels, or extend the action of dopamine in the brain. These drugs include dopamine precursors like levodopa, dopamine agonists like bromocriptine, anticholinergics like Diphenhydramine and other drugs like amantidine and selegiline. The major limitations of presently available medications are fluctuations in mobility related to drug dosage and intervals, wearing off (loss of efficacy at the end of dosing interval and dyskinesias (excessive involuntary movements). Surgical management like Pallidotomy, Thalamotomy and Deep Brain Stimulation are also being offered but partial or limited response to surgical interventions limits their wide spread use.

For more details please visit www.stempeutics.com or pl email to info@stempeutics.com

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About Stempeutics Research Pvt. Ltd.

Stempeutics Research Private Limited (SRPL) is a leading stem cell company in India, focusing on Research, Therapeutics and Therapy in the field of regenerative medicine. To develop therapies to treat various diseases, Stempeutics undertakes research to acquire knowledge & understanding of stem cells and their differentiation process. Stempeutics is committed to help patients by delivering safe, effective and affordable stem cell therapies.

Stempeutics strength lies in a first rate clinical environment for both research and therapy, knowledge and understanding of translating stem cell therapies into clinical practices. Stempeutics long standing research into the properties and potential of adult mesenchymal stem cells and recent advances in human embryonic stem cells, limbal stem cells and dental stem cells gives Stempeutics the advantage of utilizing these stem cell types in a clinical setting.

Located at Manipal hospital Bangalore, Stempeutics leverages group’s healthcare infrastructure and accessibility to trained physicians and surgeons in developing a delivery mechanism for stem cell therapies. It has created a start of the art Stem Cell lab which is cGMP compliant. This lab has been audited by Indian Council of Medical Research (ICMR) and has been approved for Stem Cell research – the only of it’s kind in the country.

Keeping in mind the global burden of disease and disorders, Stempeutics has made a strategic move to operate out of its facilities in Manipal and Malaysia. Stempeutics is the first international company to be awarded with BioNexus status in Malaysia by Malaysian BioTechnology Corporation.

Research at Stempeutics operations are within four major categories: (a) Adult mesenchymal stem cells derived from a variety of sources (b) In vitro differentiation of Adult bone marrow stem cells in to various cell types (c) Establishing different Embryonic stem cell lines and (d) Stem Cells isolation and up scaling process

Key therapeutic areas are cardio-vascular, central nervous system, orthopedics, dermatology, pediatrics, endocrinology, gastroenterology, oncology and immunology. The on –going stem cell research focus also provides immense scope to generate future medical solutions for various medical conditions – this only confirms to Stempeutics commitment to deliver ‘Bench to Bedside’ therapies to Regenerate Hope to millions of patients.

You can find this press release here