

Summary of Patients Data Treated in Neurology Clinical Protocols with Stemedica Bone Marrow Mesenchymal and Neural Cells at the National Scientific Medical Center, Astana (Kazakhstan). Principal Investigator Djumaniyazov D.Z., Doctor of Med. Sci., Ph. D..

All clinical protocols approved by the Ministry of Health of Kazakhstan and Ethics Committee.

Patients Initials/Sex/Citizenship	Medical Indication	Dates Treated	# of MSCs	# of NSCs	Adverse Events	Major Efficacy Findings
AS- Female USA	Spinal Cord Injury-Para	12/2010 8/2012	60 mil 45 mil	73.7 mil 60 mil	NO NO	Increased muscle tone, partial feeling restored in legs & hips. Improved core strength allowing for greater functional movement and extremity control. Body temperature control has also improved.
JB-Male USA	Spinal Cord Injury-Para	12/2010 8/2012	60 mil 45 mil	75 mil 60 mil	NO NO	Increased bowel and bladder control with bladder control volume doubling. Able to stand with arm support. Increased lower extremity strength and endurance.
GT-Male USA	Spinal Cord Injury-Quad	8/2012	60 mil	45 mil	NO	Increased motor function in torso & upper extremities. Greater control of dynamic sitting posture. Now able to feed himself with and without utensils. Greater flexion, extension, abduction and strength of upper extremities. Body temperature control improved. Now feeling sensations in lower extremities and volitional lower extremity muscle contractions. Endurance with all activity has improved significantly and now rides a quad bike. Now able to self-propel wheel chair.
TC-Male USA	Spinal Cord Injury-Quad	8/2012	60 mil	45 mil	NO	Improved sitting posture and head control. Improved breathing capacity. Blood pressure maintains in standing position for up to 20 minutes. Sensation of touch to the plantar surface of bilateral feet has returned, with significant increased feeling in bilateral lower extremities and low back. Feeling in bilateral hands has also

AH-Male USA	Spinal Cord Injury-Quad	5/2012 11/2012	60 mil 45 mil	60 mil 60 mil	NO NO	<p>significantly improved. Significant decrease and healing of skin ulcers.</p> <p>Functional strength quality has improved. Smoother movement with greater control. Bilateral lower extremity clonus has improved significantly with no need for Botox injections for the last 9 months in ankles to keep him from rolling over his ankles during ambulation.</p> <p>Severe back pain has decreased significantly for the last 9 months.</p> <p>Standing balance with all activity has improved. Subject states that his bowel and bladder control is much better.</p>
MH-Male USA	Traumatic Brain Injury	8/2012	60 mil	45 mil	NO	<p>Tinnitus has improved significantly. Volume was up to 7/10 consistently prior to treatment, now not over 3/10 since 2 weeks post treatment. Sleeping quality has improved, prior to treatment averaging 4 hours nightly for 25 years, now sleeping consistently 8 hours a night. Balance has improved: prior to treatment would lose balance with eyes closed, now no balance loss standing with eyes closed. Significant increase in muscle mass and strength, gaining 8lbs and losing 1.5 inches off waist. Lifting 10-15% more weight during workouts. Stamina has increased tremendously and recovery time has improved after intense physical activity. Thyroid Peroxidase Score: From 232 to 81, MD states that it is unheard of to see a drop like this.</p>
MW-Male USA	Traumatic Brain Injury	8/2012	60 mil	45 mil	NO	<p>On electrical stimulation bike for up to 90 minutes. Self-propels his wheelchair 40' in 20 minutes. Swallow is responding to cold stimulus. Improvements in overall muscle tone. Movement improved, but is not coordinated. Able to stand with assist of a modified walker for up to 1 minute. Secretions prior to treatment were aspirated 6-8 times daily, since treatment only aspirated once in the past 5 months. Tracheal tube to be removed after next stem cell treatment, because lung</p>

						function has improved tremendously. Body temperature is now well regulated. Jaw reconstruction surgery healed in 6 months, his surgeon stated it would take up to 2 years to heal. Better able to use upper extremities. Very motivated and participates in physical therapy daily.
KD III-Male USA	Traumatic Brain Injury	8/2012	60 mil	45 mil	NO	Concentration is much better, able to complete tasks. A better decision making capability, clarity of thought has been noticed.
KD Jr.-Male USA	Parkinson's Disease	8/2012	60 mil	45 mil	NO	Better engaged with family and friends. No tremors and continues to drive vehicle. More aware of functional limitations, improved safety with movement.
KS-Male USA	Traumatic Brain Injury	10/2012	60 mil	45 mil	NO	Prior to treatment left side of his face was paralyzed with constant drooling, after treatment nerves and feeling completely restored and drooling has stopped. Tinnitus has completely disappeared. No longer slurs his words. Wife states that his vocabulary has improved significantly-uses larger words and does not have to take time to search for the right words. His energy levels have improved significantly-no longer falls asleep in the afternoon. He was on 3 time released morphine and 6 immediate release morphine per day-has completely eliminated the 6 immediate morphine per day since 1 week post treatment. His right arm had constant excruciating pain (one of the reasons for the morphine) and all arm pain has completely disappeared. He is significantly more positive and has not had any outburst of anger for the past 4 months as reported by his family. He also has not had any suicidal ideation for the past 4 months-outlook on life is positive and he wants to help other military with TBI. His short-term memory has slightly improved; however, he sometimes loses his train of thought while answering the question and sometimes has to ask you to repeat the question. This mostly occurs

JH-Male USA	Stroke	07/2011 10/2012	100mil 60 mil	100 mil 45 mil	NO NO	when he is in a large group of people. Significant increase in vitality and libido. Significant improvements in functional and extremity strength.
JBF-Male USA	Stroke	12/2010 8/2012	60 mil 60 mil	45 mil 65.9 mil	NO NO	Now has the ability to live alone for up to 5 days. Community ambulatory with no assistive device. Speech to include stringing up to 10 words together, where prior to treatment was unable to speak. States he has a renewed clarity of mind and thought. Facial symmetry has returned. Right upper extremity function improving with the ability to hold and swing a golf club. Overall strength and endurance have improved to where he now participates in a structured exercise program 2 hours 3 days per week.
ES-Male USA	Stroke	12/2010	60 mil	65.9 mil	NO	Ability to cycle up to 80 miles. Right lower extremity dysfunction isolated to ankle and foot, with a slight clonus. Right hand fine motor skills and dexterity are improving. Functional deficits in right hand and foot apparent only when fatigued. Able to participate in all family activities and with his young son.
KAMIK-Male UAE	Spinal Cord Injury-Para		60 mil	80 mil	NO	Increased muscle tone, partial feeling restored in legs and hips. Improved core strength. Temperature control improved. Improvement in lower extremity strength. Partial bowel/bladder restoration.
JM-Male Kuwait	Stroke	7/2012	45 mil	45 mil	NO	
RH-Male USA	Traumatic Brain Injury	1/2013	50 mil	50 mil	NO	Only 1 month since treatment. Energy levels are significantly higher, quality of sleep has improved. No headache or rash. 50% reduction in neck pain from cervical DJD, was taking daily aspirin regimen for pain

but has since discontinued. No stiffness and soreness post strenuous physical activity. Endurance has improved significantly, able to play entire hockey game whereas could not prior to treatment.

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