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### RegenerAge system: Therapeutic effects of combinatorial biologics (Bioquantine®) and spinal cord stimulation system on a patient with spinal cord section

As it has been previously demonstrated that co-electroporation of *Xenopus laevis* frog oocytes with normal cells and cancerous cell lines induces the expression of pluripotency markers, and in experimental murine model studies that Bioquantine® extract (purified from intra- and extra-oocyte liquid phases of electroporated oocytes) showed potential as a treatment for a wide range of conditions as Squint, Spinal Cord Injury (SCI) and Cerebral Palsy among others. The current study observed beneficial changes with Bioquantine® administration in a patient with a severe SCI. Pluripotent stem cells have therapeutic and regenerative potential in clinical situations CNS disorders even cancer. One method of reprogramming somatic cells into pluripotent stem cells is to expose them to extracts prepared from *Xenopus laevis* oocytes. We showed previously that co-electroporation of *Xenopus laevis* frog oocytes; with normal cells and cancerous cells lines, induces expression of markers of pluripotency. We also observed therapeutic effects of treatment with a purified extract (Bioquantine) of intra and extra oocyte liquid phases derived from electroporated *X. laevis* oocytes, on experimentally induced pathologies including murine models of melanoma, traumatic brain injury and experimental skin wrinkling induced by squalene-monohydroperoxide. From the previous animal studies using an experimental model of traumatic brain injury, the results were found to be positive to human finding for spinal cord injury and cerebral palsy, respectively. Because of ethical reasons, legal restrictions, and a limited number of patients, we were able to treat only a very small number of patients. These results indicate that Bioquantine® may be safe and well tolerated for use in humans and deserves further study in a range of degenerative disorders. We propose that the mechanism of action of Bioquantine® in these various diseases derives from its unique pharmacology and combinatorial reprogramming properties. In conclusion, these preliminary findings suggest that Bioquantine is safe and well tolerated in patients with cerebral palsy and spinal cord injury, among others. In addition to the regenerative therapy and due to the patient condition, we decided to include the Restore-Sensor SureScan. Based on the of electrical stimulation for rehabilitation and regeneration after spinal cord injury published by Hamid and MacEwan, we designed an improved delivery method for the in-situ application of MSCs and Bioquantine® in combination with the RestoreSensor® SureScan®. Till date, the patient who suffered a total section of spinal cord at T12-L1 shows an improvement in sensitivity, strength in striated muscle and smooth muscle connection, 9 months after the first therapy of cell regeneration and 1 month after the placement of RestoreSensor® at the level of the lesion, the patient with a complete medullary section shows an evident improvement in his therapy of physical rehabilitation in standing for the first time and showing a progressively important functionality.

### Biography

Joel I Osorio is the CEO and Founder of Biotechnology and Regenerative Medicine at RegenerAge International and the VP of International Clinical Development for Bioquark, Inc. He is also the Chief Clinical Officer at ReAnima™ Advanced Biosciences.

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