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## Stem cell based therapy in neonates

Despite recent advances in neonatal intensive therapy, still is present significant morbidity associated with extreme prematurity that includes both short-term and long-term pulmonary, neurologic and visual impairments. These complications of prematurity not only affect the quality of life of these children in the rest of their lives, but can also cause numerous medical and economic burdens in the society. No single therapy has proven to be effective in preventing or treating developmental lung, brain and retinal injuries in preterm infants or the hypoxic-ischemic brain injury in full-term infants. Stem cell based therapies are emerging as potential alternative treatment for such complex diseases (BPD, IVH, ROP and HIE) with multifactorial etiologies. Recently, various preclinical studies have shown that stem cell therapy significantly attenuates injuries in newborn animal models of BPD, HIE, IVH and ROP. Caution is warranted, however because stem cell-based therapies for regenerative purposes represent innovation, mechanisms of action are still not completely understood and standardization, clinical indications, timing and dosage are required to permit safe clinical translation of stem cell therapy in animal models for newborn infants in the near future.

## **Biography**

Brankica Vasiljevic is currently working as the Head of Maternity and Child Health Services in NMC Royal Hospital DIP in Dubai, UAE. She had completed her Clinical Post-graduation Education and Academic Post-graduate Education (MSc in pediatric and ultrasonography field and PhD in neonatology field) at Belgrade University School of Medicine in Belgrade, Serbia. She has published more than 35 international publications in international indexed journals (100 citations), 5 chapters in various fields of Neonatal Medicine and has more than 30 presentations in international conferences.