



## The state of the art in cord blood transplantation: “Past, Present and Future trends”

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### Abstract

Umbilical Cord Blood (UCB) Transplantation was introduced over 30 years ago as a curative therapeutic treatment. The availability of banked UCB has extended the option of allogeneic transplantation to patients without alternative curative options such as bone marrow or mobilized peripheral blood from an HLA – matched donor. More than 30000 UCB transplants have been performed worldwide in pediatric and adult patients. In 1982, Dr. Hal Broxmeyer, became interested in UCB as a source of hematopoietic stem cells (HSC). He was the first to analyze systematically the number of HSC in CB for hematopoietic reconstitution in humans. Advances in umbilical cord blood therapeutics show significant progress since the first transplant in 1988 involving a patient with Fanconi Anemia, performed by Dr. E. Gluckman. Cord Blood Banks currently store more than 1,300,000 units worldwide. UCB as an alternative source of stem cells can provide several important advantages including the absence of risks for donors, availability for immediate access and use, minimal cell manipulation and reduced ethical issues raised by the general public. The use of UCB provides viable options for patients with malignant conditions, hemoglobinopathies, metabolic disorders, immune deficiencies and regenerative applications. New concepts as Adoptive Immunotherapy after CBT, Pre implantation Genetic Diagnosis, Exvivo Expansion of Cord Blood Stem Cells, Co – transplantation of cord blood units and Mobilized stem cells from a third party donor, Cord blood is a unique biological resource for Hematopoietic Transplantation, Regenerative Medicine and Scientific Research. There is a need for increasing the number of units stored.

### Biography

Claudio Darío Dufour has completed his MD from University of Buenos Aires, School of Medicine, and postdoctoral studies at Favaloro University (Master in Health Management) Argentina & Valencia University, Spain (Master in Stem Cell Transplantation). He is Prof. of Internal Medicine & Hematology at University of Buenos Aires, School of Medicine; Staff Physician at Hematology Department, Navy Hospital Buenos Aires & Chief at the Hematology Unit, at Diego Thompson Public Hospital. On the other hand he is a Voluntary AABB Cell Therapy Assessor since 2012; between 2015-2018 he has worked as Voluntary International Ambassador for Cell Therapies, under AABB guidelines for Latin America.



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