

Biography of Zoran Ivanovic, MD, MSc, PhD, HDR

Scientific Director of French Blood Institute for the Regions of Aquitaine and Limousin) (*Directeur Scientifique de l'Etablissement Français du Sang Aquitaine-Limousin*)

Zoran Ivanovic received his MD and PhD in Experimental Hematology at Faculty of Medicine, Belgrade University. He also received his MSc degree in System and Comparative Physiology at the Faculty of Science of Belgrade University. He specialized in Transfusion Technology (2nd university of Bordeaux) and in Cell Therapy (7th university of Paris). He received the degree of “HDR” (*Habilitation à Diriger les Recherches*) at 2nd University of Bordeaux.

He started his career in 1989 as a research assistant at the Institute of Medical Research, Belgrade, and received the title of Research Professor in 1998. He was appointed Associate Professor of Hematology at the Medical Faculties of Limoges University and of 2nd University of Bordeaux in the period 1999-2002. Since 2002, he has been Scientific Director of French Blood Institute for the regions of Aquitaine and Limousin.

Dr Ivanovic published some pioneer works on the induction of the stem cell self-renewal at low O₂ concentration. More than one decade-long work on this issue allowed him to develop his concept “Oxygen Stem Cell Paradigm” considering “anaerobic”, low-energy proliferation to be in fact a key of self-renewal: low availability of energy preventing cells from differentiating, which requires much more energy than simple cell division not coupled with differentiation. This feature of stem cells reflects the ancestral, primitive mono-cellular organisms existing at the time when atmosphere oxygen concentration was still very low. This concept, applied to the cell engineering enabled to Dr Ivanovic and his group to develop the clinical-scale ex-vivo expansion procedures combining an anti-oxidants-supplied medium with the cytokines mimicking the effects of a low O₂ concentration in order to neutralize the negative effects of hyper-oxygenation (20-21% O₂), as well as to design a completely new and original approach of stem and progenitor cell conservation in hypothermia.

He holds several grants in the field of cord blood and adult stem cell research. He has published 93 papers (mainly in peer reviewed journals) and book chapters; he realized 125 meeting communications and invited conferences. He supervised several PhD and master thesis. He serves regularly as reviewer for several scientific journals as J Cell Physiol and Stem Cells, for example.