



Carlo Ventura

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PROF. CARLO VENTURA devoted his studies to the molecular dissection of mechanisms underlying the cell growth and differentiation of the cardiac myocytes, discovering nuclear endorphin receptors and small peptide signaling responsible for cardiogenesis in mouse embryonic stem cells. In these cells, he also investigated the potential for differentiating patterning by physical stimuli, discovering that cardiogenesis could be turned on by cell exposure to “extremely low frequency magnetic fields”.

He synthesized and developed new molecules harboring differentiating and paracrine logics for human mesenchymal stem cells, affording new strategies in cardiovascular regenerative medicine. He investigated the ability of radio electric fields to modulate the expression of pluripotentiality in human adult mesenchymal stem cells, and afford efficient reprogramming of human fibroblasts without the need of viral vector-mediated gene transfer. These activities paved the way to the use of physical energy in stem cell science. He published more than 100 full papers in the top level Journals of cellular and molecular biology.