Dr. Carlos Dau

Intermittent regenerative cell therapy

It is well known the presence of pluripotent cells in circulating blood. The hematopoietic bone marrow is one of the known reservoirs of these stem cells. Granulocyte growth factors have been used to mobilize pluripotent stem cells from that reservoir, increasing their amount in the circulating blood.

This fact has been used to facilitate the collection of such cells through aphaeresis, with or without expansion ex vivo, to produce regeneration of bone marrow transplant post chemotherapy, or other aplastic conditions.
A frontier in the development of this technology is the use of stem cells circulating in the blood to promote regeneration of different tissues affected by apoptosis, or cell necrosis, taking account of their pluripotency.

Good results have been reported using stem cells in Myocardial Regeneration after acute myocardial infarction, bone necrosis, or diabetic pancreatic pathology.

The most workable application in medical practice of the clinical models where this rational was tested in order to treat organic deterioration, is when the clinical models were configured as endogenous and autologous treatments. That is, using the regenerative activity of the patient's own stem cells, and enabling this activity without extraction outside the body.

Several authors have published their experience on the regeneration obtained with endogenous mobilization of autologous stem cells in the recovery after acute episodes of tissue necrosis.

Dr. Carlos Dau leads a team of researchers who try to apply this rational and technology, endogenous and autologous configuration, maintained in time, in order to address the multiple organic impairment associated with senescence and chronic pathologies, which ultimately, represent a loss of alive and functional cells in various locations.

At this time, Dr. Dau focuses his research in direct ionize the activity of stem cells, circulating and mobilized by growth factors, to tissues that suffer progressive and temporarily random damage, as in the evolution to aging.

In this field of research, Dr. Dau and his team have identified agents that properly induce the homing and the regenerative maturation of the circulating stem cells, in a manner appropriate to each case, registering personalized recovery responses in different functional reversed profiles.

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