Adipose derived stem cells as cell sources for regenerative therapies

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Regenerative medicine offers the perspective of revolutionizing medical practice introducing novel therapies for unmet clinical needs, enhancing the effect or counteracting adverse reactions of already existent therapies. An important aspect of regenerative medicine is detecting clinically significant cell sources to be used as autologous or allogeneic therapies. Due to their accessibility, immunomodulatory properties reduced tumorigenesis and uncomplicated ethical status, adult somatic mesenchymal stem cells present as appealing sources for regenerative medicine purposes. Adipose derived stem cells (ASCs) are intensively studied and already used as therapeutic agent in different clinical trials in various medical fields of which musculoskeletal, cardiac, vascular, and neural regeneration. Due to their availability, expansion and differentiation properties, ASCs are suitable to be used as cell sources for various regenerative strategies ASCs are reported to differentiate not only to mesodermal but as well to ectodermal and endodermal lineages making them relevant for a multitude of RM applications.

ASCs populations can be efficiently isolated from donors of all ages therefore systematic collection of tissues discarded during surgical intervention(s) could derive in setting up cell repositories and bio-banks to be used as for research as well as for RM therapies.

Biography

Luminita Labusca is medical specialist, consultant in orthopedics and traumatology, with a PhD in regenerative medicine. Labusca has worked as medical practitioner, clinical researcher and scientist involved in basic science in various national and international settings and in multidisciplinary teams. Her activity is oriented in expanding research and implementing stem cell based regenerative medicine in clinical practice.

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