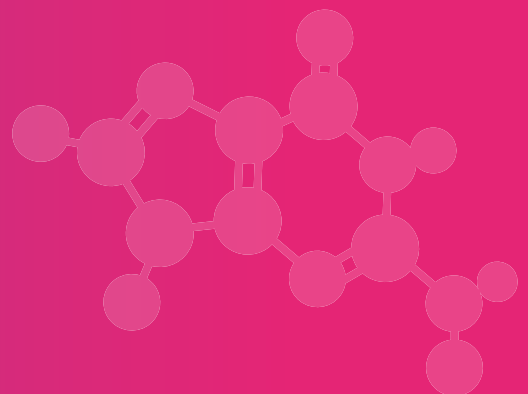


Biocord[®] Program

The Ultimate Stem Cell Storage Solution

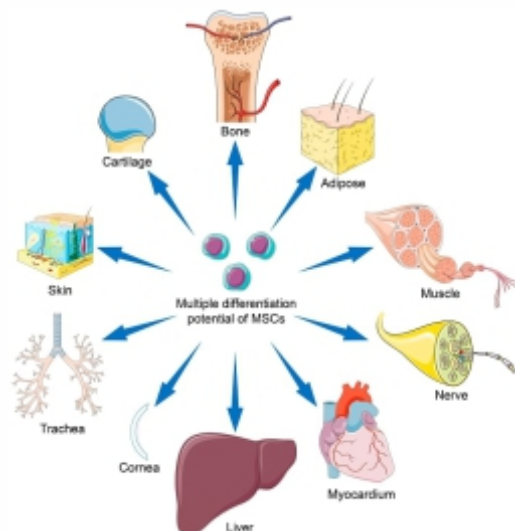
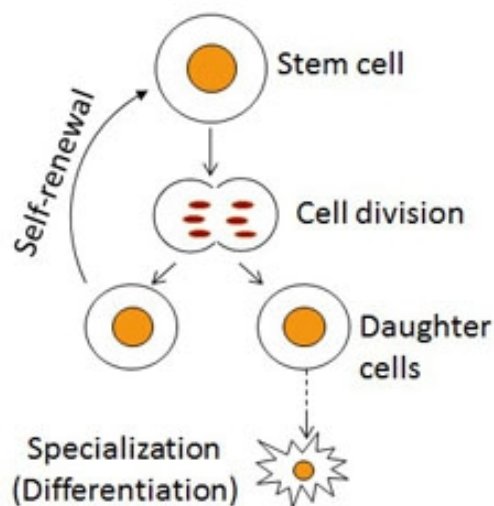


What are stem cells?

Cells make up the organs of the human body. They are called "the building blocks of life." In other words, cells are like legos that assemble to form different organs like skin, heart, and bones. Every organ carries out its normal functions due to the proper functioning of its cells.

Some cells in our body are unique because they can multiply to form millions of cells. Not only that, these special cells can turn into other cell types as well. These particular cells are called "Stem Cells".

Unique self-renewal capacity and multiple differentiation potential of stem cells



Source:

"Deutsches Primatenzentrum: Introduction Stem Cells," 2012 <https://www.dvcstem.com/post/what-are-mesenchymal-stem-cells>

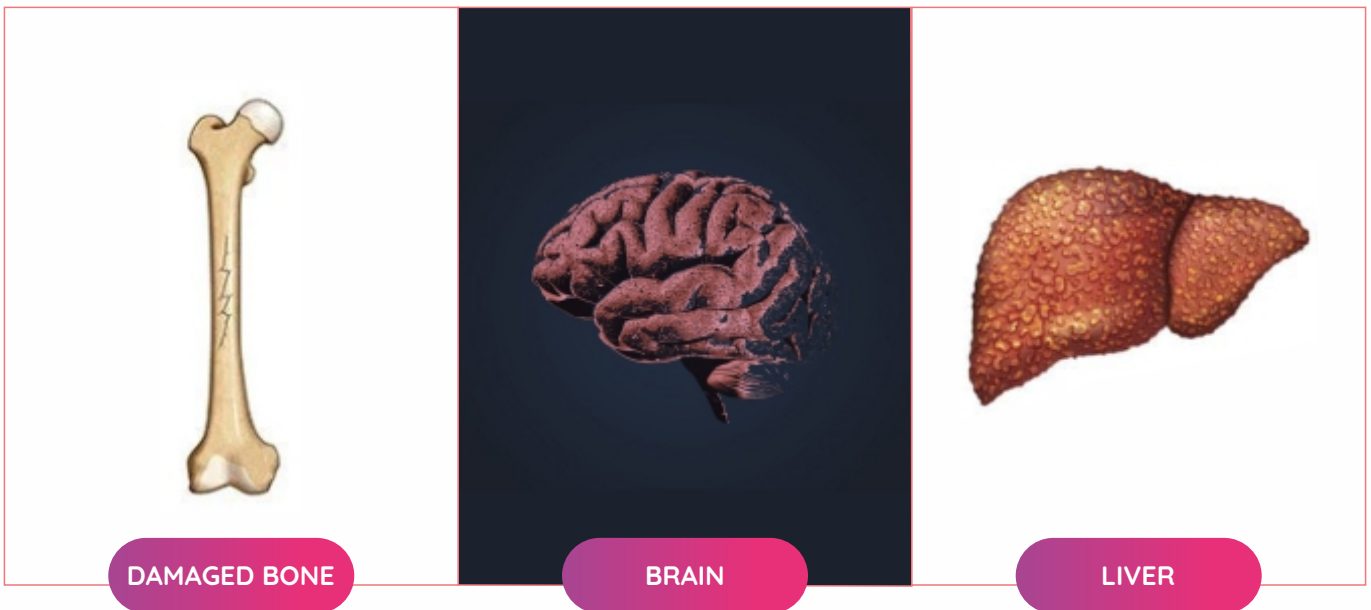
"What Are Mesenchymal Stem Cells (MSCs)?," 2022 <https://www.dpz.eu/en/platforms/degenerative-diseases/research/introduction-stem-cells.html>

What happens when organs don't regenerate?

Regeneration is essential for the organs to stay healthy. Organs stop functioning normally and are subjected to various diseases when the cells get damaged due to genetics or external factors. They are subject to massive stress and discomfort, eventually leading to complete organ failure.

preserving our natural organs.

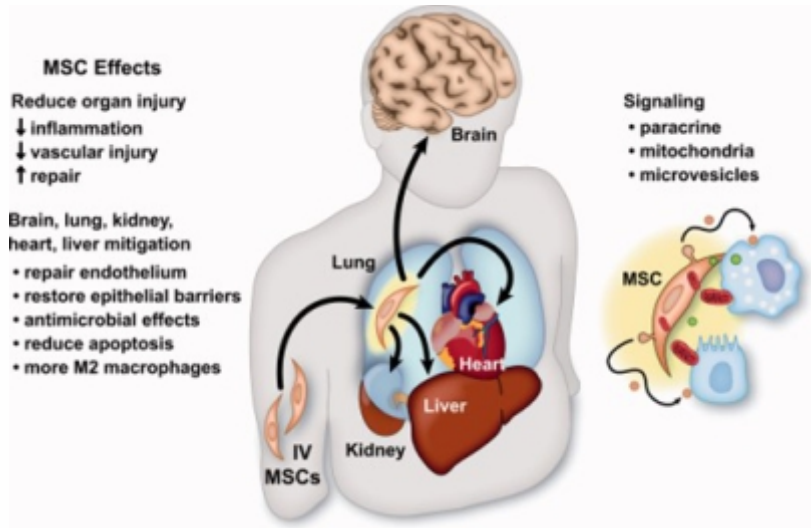
MSCs are valuable sources of therapeutics for regenerative medicine. The cells have the ability to reduce the severity of damaged organs like the brain, lungs, kidney, heart, and liver. This property is known as "mitigation". The cells also have the potential to regenerate the damaged organs by repairing the cell lining of the organs (endothelium and epithelium). MSCs also



Cell therapy is a branch of medicine that focuses on eliminating the root cause of a disease by replacing the damaged cells with new and healthy cells. This provides complete relief as the cells regrow tissues in the natural organs. The regenerated organ regains its original function and would not require further treatment. Hence, regenerative medicine is an ideal option for

protect the damaged organs due to their antimicrobial properties and differentiating to macrophages (cells involved in destroying harmful bacteria). They also regulate the cell population by reducing cell death (apoptosis) of healthy cells.

Effect of Intravenous (IV) MSCs



Source:

Concise Review: Mesenchymal Stem (Stromal) Cells: Biology and Preclinical Evidence for Therapeutic Potential for Organ Dysfunction Following Trauma or Sepsis <https://doi.org/10.1002/stem.2551>

MSC discovery and clinical application throughout the years

1958: French oncologist, Georges Mathé, performed the first stem cell transplantation of bone marrow grafts to save six nuclear researchers who were accidentally exposed to radiation

1991: The term “MSC” was first coined by Arnold Caplan

1995: First clinical trial using autologous MSCs

2003: First clinical trial with MSCs in

neurodegenerative disorders

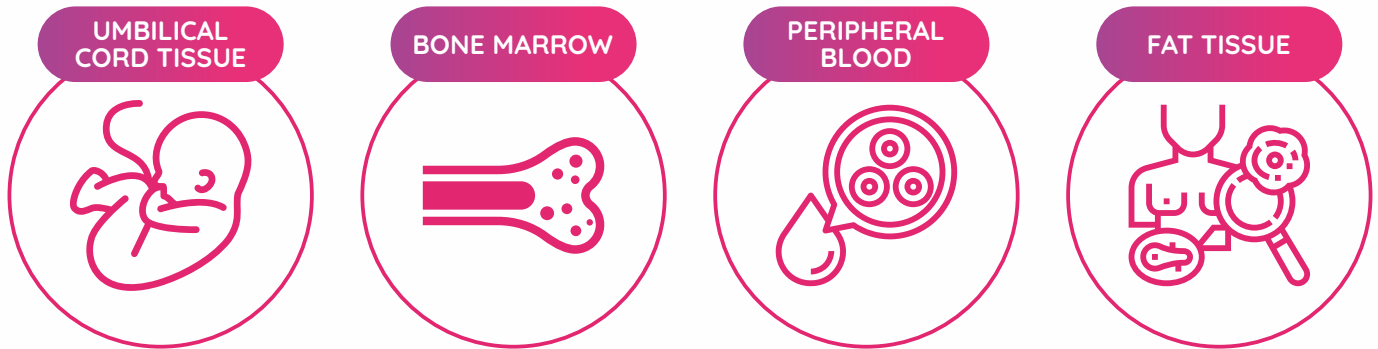
2011: Cellgram-AMI, the world's first Mesenchymal stem cell treatment drug, received marketing approval in Korea for Acute Myocardial Infarction

2012: Cupistem (MSCs) approved by the Korean Ministry of Food and Drug Safety (MFDS) for Crohn's Fistula

2018: Alofisel (MSCs) approved in the European Union for Crohn's disease complications

At Present: 82,000+ clinical publications and 1400+ clinical trials are underway with MSCs

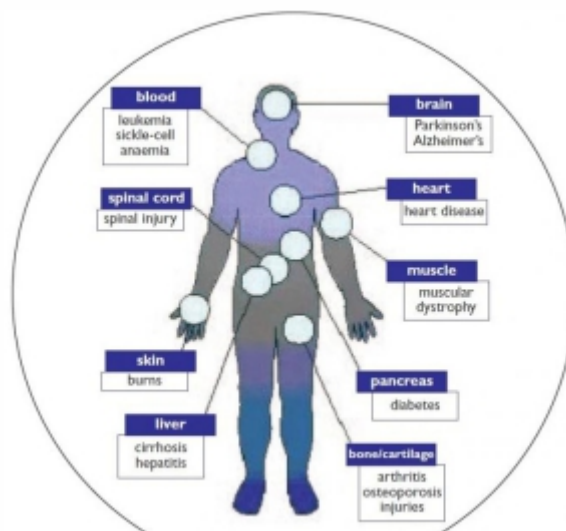
Where are MSCs found?



Properties of MSCs

- ⦿ Easy to isolate, especially from cord tissue that is readily available at the time of birth
- ⦿ Unique self-renewal capability
- ⦿ Repair damaged organ tissue
- ⦿ Ability to multiple diseases

Degenerative diseases of several tissues and organs can be treated by stem cell transplantation



Source: Team, D. (2002, December 3). Stem Cell PHARMACEUTICS. Retrieved November 7, 2022, from Drug Discovery World (DDW) website: <https://www.ddw-online.com/stem-cell-pharmaceutics-1551-200212/>

Biocord[®] Program @ Biocell[®]

In the future, if the child or any member of his family is diagnosed with a condition treatable by stem cell transplantation, the donor derived cryopreserved MSCs are safely retrieved from the storage facility and transported to the reported hospital. Extensive quality control testing and profiling are used to validate the quality of the cells before transporting them.*

Summary

- ⦿ Stem cells are an essential component of cord tissue that have the potential to treat multiple diseases such as autoimmune, neuro degenerative, liver and heart conditions
- ⦿ The Biocord[®] program protocol follows strict quality criteria to ensure an optimum sample standard and transparent communication at every step. The benefits apply to all the family members

** Upon ethical committee approval and other regulatory requirements as laid out by the Govt. Of India.*