绚雅 Stellar™ Cells

STEM CELL THERAPY & TREATMENT

THE **FOUNTAIN** OF **YOUTH** OF THE **21ST CENTURY!**

No, the fountain of youth has not been found. However, one medical field that has time and time again excited the medical world with discoveries hold much promise. Medical research centers, pharmaceutical companies, prestigious universities and governments have poured a tremendous amount of resources into this field, as it continues to break through many diseases and disabilities that were once thought as incurable and untreatable.

It's Regenerative Medicine. More specifically, the use of human stem cells to regenerate cells for treating or preventing a disease or condition.

Worldwide, researchers have developed treatments that could make the disabled walk, reverse age-related diseases and even cure neuro degenerative disorders.

"Stem cells have tremendous promise to help us understand and treat a range of diseases, injuries, and other health-related conditions."

- INTERNATIONAL SOCIETY OF STEM CELL RESEARCH (ISSCR)

What is **stem cell therapy?**

Stem Cell Therapy has been around for decades, most well known for the treatment of leukemia, where it has saved thousands of lives via stem cell transplantation or more popularly known as bone marrow transplant. It involves the use of stem cells, cells with the remarkable potential to both multiply and develop it themselves into many different cell types in the body to treat or prevent a disease or condition.

What are **stem cells?**

Stem cells are basically cells within our body that can differentiate into specific cells like bone cells, muscle cells or divide to produce more of itself.There are two broad types of stem cells in mammals: EMBRYONIC and ADULT Stem cells.

Embryonic stem cells, which most people are more familiar with, are isolated from an embryo that has yet to differentiate, as such they can change into any body part. However, they have been associated with rare tumor (teratoma) formations. There is ongoing research in embryonic stem cells, particularly in the area of isolating particular lines of embryonic stem cells for future use of the individual.

Adult stem cells are matured stem cells that reside within different tissues in one's body but are yet to become specialized cells like muscle cells, bone cells, etc. These are also known as "mesenchymal stem cells" because they come from the mesodermal section of your body. They together with progenitor cells act as a repair system for the body, replenishing the adult tissues where they reside. In recent times, much work has been done isolating bone marrow-derived stem cells. They can differentiate into bone and cartilage, and probably all other mesodermal elements, such as fat, connective tissue, blood vessels, muscle and nerve tissue.

Where are **stem cells** derived from?

Embryonic stem cells are taken from the embrio a few days after being generated. Adult stem cells are extracted from 4 primary parts of the body; which is the **adipose tissue**, **bone marrow, Wharton's Jelly** or **blood**. Stem cells that are derived from one's own body are known as **autologous stem cells**, whilst stem cells that are derived from other sources are known as **allogeneic stem cells**. Autologous harvesting involves the least risk and can be banked for later elective procedures.

Adipose tissue(fat)

Fat is also loaded with stem cells. In fact, it has hundreds if not thousands of times more stem cells compared to the bone marrow. Because most people have adequate fat supplies and the numbers of stem cells are so great, there is no need to culture the cells over a period of days. They can be used right away. Extraction is by liposuction.

Bone Marrow

Bone marrow stem cells are extracted by drilling into the bone, typically the femur or iliac crest. The yield of stem cells is relatively low but can be cultured to multiply.

Wharton's Jelly

A gelatinous substance within the umbilical cord which also contains some fibroblasts and macrophages. Derived from extra-embryonic mesoderm. These stem cells are to believed best treatment for neurological disease.

Blood

Patient has to consume a haemopoitic growth factor drug called a colony-stimulating factor (CSF) before harvesting stem cells from peripheral blood. Without the growth factors,human peripheral blood contains less than 0.1% of stem cells.

Extraction is through apheresis, wherein blood is drawn from the donor and passed through a machine that extracts the stem cells and returns other portions of the blood to the donor.

Why **living stem cells?**

Stem cells have to be live cells to perform their unique role. Stem cells cannot survive in ampoule or capsule forms. In other words, those "stem cells" that come in capsule forms are not actual stem cells.

Our cells die every day. Their death contributes to the aging process, leading eventually to organ failure. Stem cells with proper processing and direction can be used to:

1. Regenerate and repair damaged and aging tissue.
2. Restore body function.
3. Re-address hormonal balance.
4. Boost energy.
5. Regenerate lost tissue and scars.
6. Provide immune privileges, as the host immune defense cells will not kill them.

How do **adult stem cells heal?**

Stem cells are also known as regenerative cells. Two properties define these cells:

First, they can self-regenerate, allowing them to divide and give rise to more regenerative cells of the same kind.

Secondly, they can mature or differentiate into specialized cells that carry out a specific function, such as in the skin, muscles or blood.

All tissues in our body contain adult regenerative cells. Most tissues contain only small numbers of regenerative cells. The exception is fat, bone marrow, and umbilical cord blood, which contains a relatively high number of regenerative cells. In each tissue, adult regenerative cells are used to produce new mature cells as old ones die in the natural process of aging. Disease or injury may also activate them.

Adult stem cells are also known as "progenitor" cells. This means they remain dormant (do nothing) until it experiences some level of tissue injury. It's the tissue injury that activates them. Research has indicated that stem cells tend to go to specific areas that have experienced degeneration and would begin the healing process.

The mechanism of stem cells regeneration has yet to be fully understood. However, researchers believe these cells simply change into the type of injured tissue needed for repair or they would send out signals that induce the repair by some other mechanism. Suffice to say that there are multiple animal models and a plethora of human evidence that indicates these are significant reparative cells.

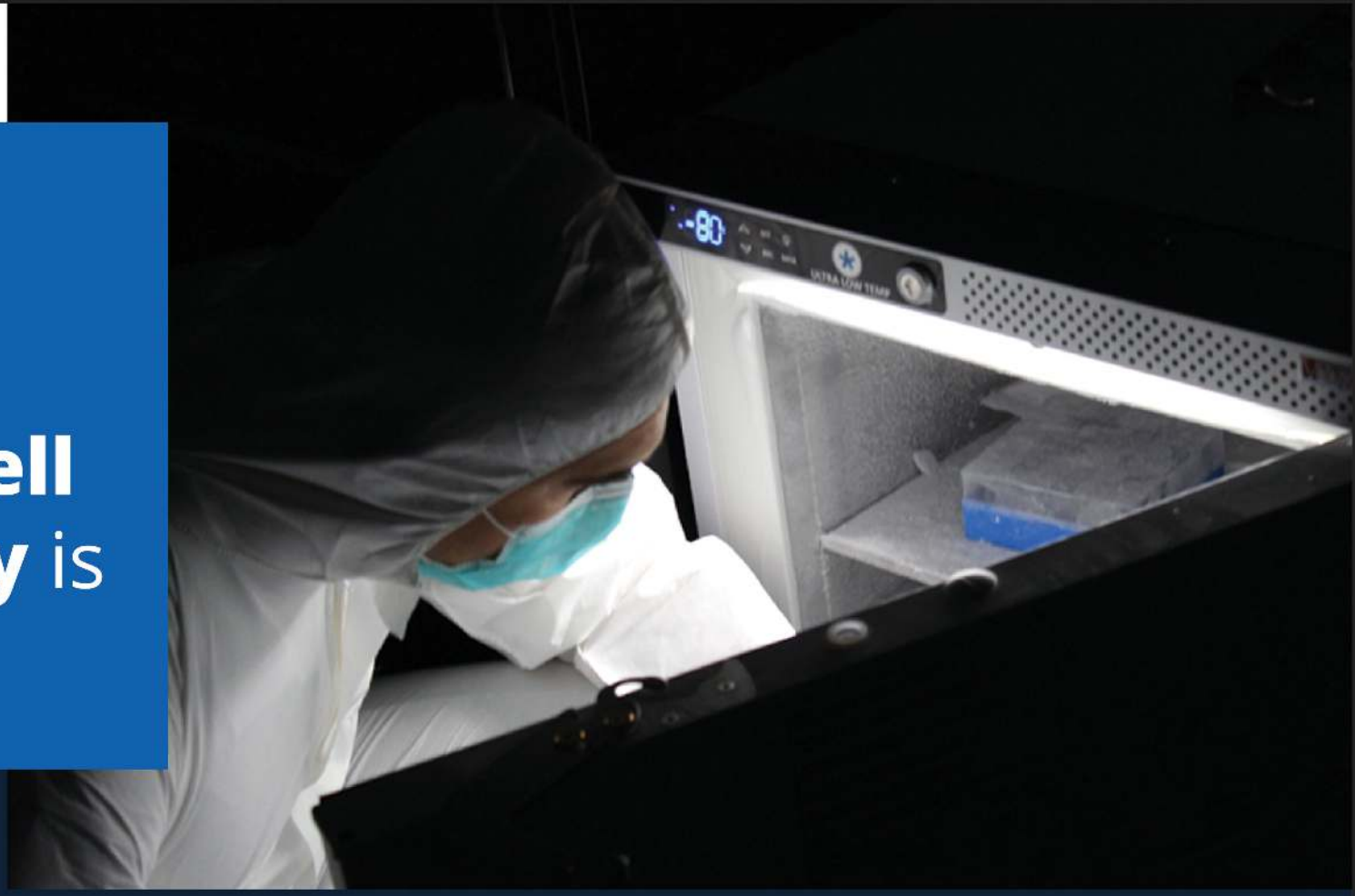
Fats derived stem cells can form muscle, bone, cartilage, and can also differentiate into nerve cells, which do not reproduce themselves. One of the key characteristics of stem cells is their anti-inflammatory and immune-suppressing properties, making it suitable for use in treating diseases caused by immune system attack on specific tissues. In many cases autoimmune diseases has shown marked improvement with fats derived stem cells.

What **diseases** that can be **treated** with stem cells?

Bone marrow transplant is a form of stem cell therapy that has been used for many years to treat leukemia. It is also used to treat certain blood and immune system disorders or to rebuild the blood system after treatments for some kinds of cancer.

Recent developments in stem cell treatment have extended its application to treat diseases or injury to the bone, skin, and surface via tissue grafting and implantation, with the healing process largely dependent on these implanted tissues to regenerate and restore the damaged areas. Many of these forms of treatment are currently undergoing late stages of human clinical trials with a majority of those reporting positive results. The medical community considers these procedures safe and effective, hence its wide use as part of the treatment.

Areas where **Stem Cell Therapy** is useful



Personal Health

- Anti-Aging
- Erectile Dysfunction
- Vaginal atrophy
- Hair Restoration

Disabilities & Injuries

- Stroke Disabilities
- Muscle, Tendon & Ligament Injuries
- Arthritis
- Osteoporosis

Diseases & Illnesses

- Autoimmune Diseases
- Autism
- Cancer
- Diabetes
- Heart Disease
- Multiple Sclerosis
- Parkinson
- Alzheimer

FAQs

How do we control the **sterility** in the **processing** of the **stem cells?**

Stem cells are harvested under sterile conditions using special "closed system" technology so that the cells never come into contact with the environment throughout the entire process from removal to deployment.
"Or we use cultured stem cells from GMP certified laboratory"

What are the **benefits** of having **live stem cells?**

1. No animal products.
2. Proper manufacturing standards.
3. Endorsed by qualified and registered medical doctor.
4. No worries of allergies.
5. Treatment protocol produced by panels of experts worldwide.
6. Integrated treatment worldwide with experts from USA, Germany, Korea, Japan, Malaysia, Singapore, Indonesia, and India.

Why do some stem cell facilities around the world require days to weeks before removal of mesenchymal stem cells until reinsertion into patient?

These facilities obtain stem cells from bone marrow or blood in relatively small quantities and then "grow" (or culture) these cells to create adequate quantities. Research has indicated that the success of treatment is directly related to the number of cells injected. Stellar™ clinic uses adipose-derived stem cells that are abundant naturally at approximately 2,500 times level found in bone marrow (the most common source of mesenchymal stem cells). Stellar™ uses technology that isolates adipose stem cells in vast numbers in a short time span so that prolonged culturing is unnecessary and cells can be deployed into a patient within 90 minutes of harvesting. Which also increases the efficacy of the stem cells in targeting damaged tissue.

Can stem cell cause cancer?

Adult mesenchymal stem cells are not known to cause cancer. Some patients may have heard of stories of cancer caused by stem cells, but these are probably related to the use of embryonic cells. (Not adult Mesenchymal cells). These embryonic tumors known as teratomas are rare but possible occurrences when embryonic cells are used.

Can stem cell treatment give an everlasting life?

We firmly believe that stem cells can repair aging cells and tissues, so that to maintain health. Due to its anti aging effect, it is also called the medicine of longevity in this modern world.

What claims are currently made by our centre about what stem cell therapy can do for you?

None. Our aim is to make cell based medicine available to patient who are interested. We are aware of a lot of stories about marked improvement of a variety of conditions, but we make no claims about intended treatment. At some point, once adequate, amounts of data are accumulated, it might be appropriate to submit the information to the MOH at which point an actual claim may be substantiated and recognized.

How are the cells deployed into patient?

Depending on the type of treatment required, stem cells can be injected through veins, arteries, into spinal fluid, subcutaneously or directly into joints and organs. All of these are considered minimally invasive methods of introducing the stem cells. Stem cells injected intravenously are known to "seek out and find" areas of tissue damage and migrate to that location thus potentially providing regenerative healing. Intravenously injected stem cells have been shown to have the capability of crossing the "blood-brains barrier" to enter the central nervous system and they can be identified in the patient's body many months after deployment.

Can I use stem cell treatment for my condition?

It depends on the type of degenerative condition you have. A specialist will evaluate you and discuss whether you're a potential candidate for stem cell therapy. If after you've been recommended for treatment, had an opportunity to understand the potential risks and benefits, and decided on your own that you would like to explore this avenue of treatment, then you can be considered for treatment. Of course, even though it' a minimally invasive procedure, you will still need to be medically cleared for the procedure.

Can I be expected to improve after stem cell treatment?

Different conditions are treated in different ways and there are different degrees of success. If the goal is regeneration of joint cartilage, one may not see expected results until several months after treatment. Some patients may not experience significant improvement and others may see dramatic regeneration of damaged tissue or resolution of disease.

Are any patients automatically excluded?

Yes. Patients with uncontrolled cancer are excluded. If you have an active infection anywhere in your body you must be treated first. Severely ill patients may require special consideration. Also, anyone with bleeding disorder or who takes blood thinning medications requires special evaluations before consideration for stem cells.

How many injections are required for success?

Most patients, especially those with orthopaedic conditions, require only one deployment. Certain types of degenerative conditions, particularly auto-immune diseases, may respond best to series of stem cell deployments. The numbers and necessity of any additional treatments would be decided case to case basis. Financial considerations is given in these instances.

Cord blood? PRP? Placenta cells?
ARE THESE **STEM CELLS?**

Although they are called 'stem cells' by some clinicians, these are not considered stem cells. They are 'a-cellular', which implies that there are no living cells in the mixture. Samples are lyophilized, snap frozen or de-moisturized which kills these cells. These products are only growth factors and do not contain stem cells at all.

How about **cord stem cells?**

Cord stem cells are not as effective and research has indicated that treatments based on mesenchymal stem cells have higher efficacy.

Why **Stellar**™ 绚雅 not others?

We specialize in the area of stem cell therapy and have been the pioneers of stem cell therapy in Malaysia. Our efforts have been nationally recognized and we're included in the National Medical Research Registry of Malaysia, authorized to conduct stem cell research. Our procedures are regulated and we constantly update ourselves with the latest procedures and processes to improve the delivery and efficacy of stem cell treatment. We're also members of Cell Surgical Network, a worldwide body of physicians devoted to advancing access and quality care in the area of adult stem cell regenerative medicine, assuring you, our clients have the best treatment that is currently available.

GET IN TOUCH WITH US

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