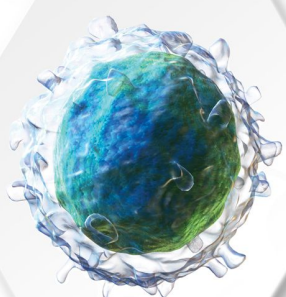
Advancells
GROUP
Shaping the Future

# Diabetes



advancells
THE POWER TO CURE

Advancells GROUP
Shaping the Future

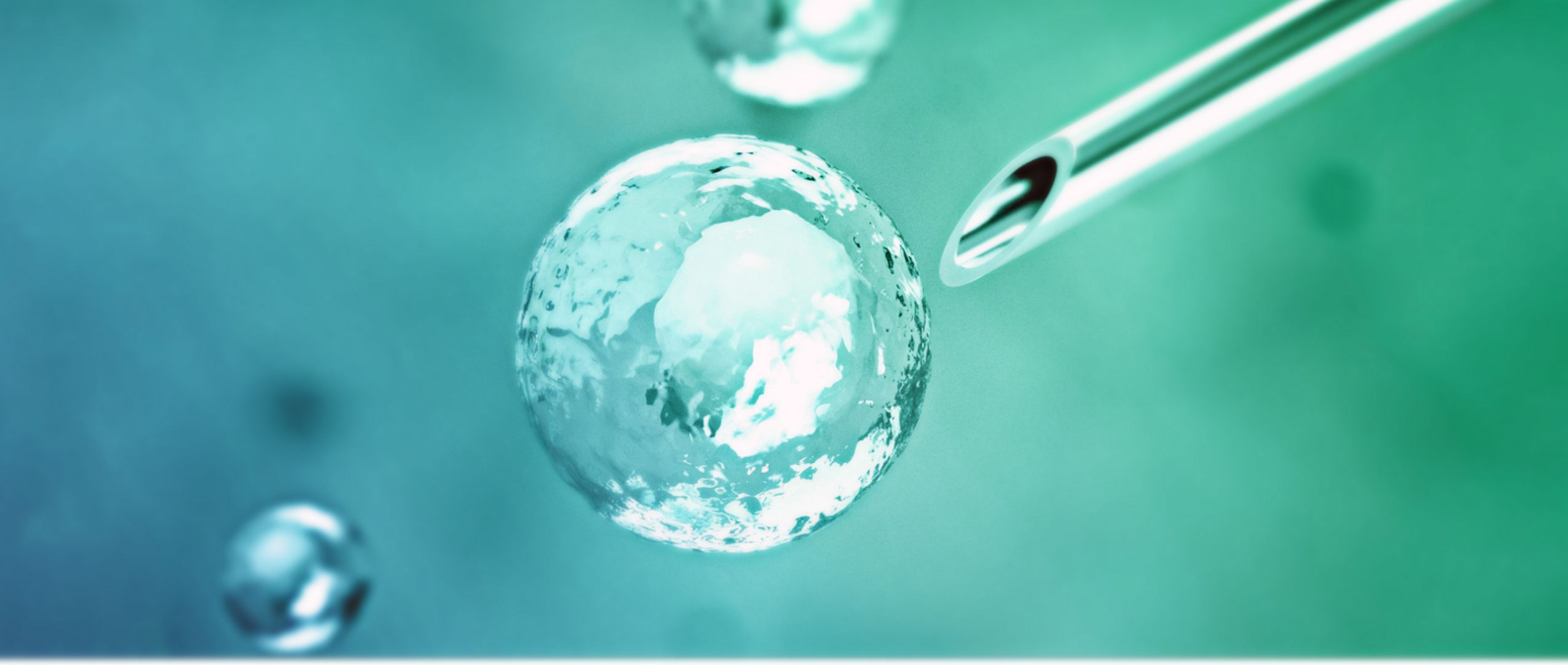
Advancells Group believes in the almost limitless potential of stem cells in managing life threatening diseases. Advancells provides customized protocols for 360° management of diseases and conditions with a regenerative medicine solution. We believe in promoting stem cell awareness to ensure that patients and caregivers, worldwide, know their role in the regeneration of damaged body tissues for neurodegenerative, musculo-skeletal, organ damage, and aging disorders.

With the **CMO Asia Healthcare Excellence Award** and the **Healthcare and Lifescience Award** (Corporate LiveWire) adorning our achievements, we provide the best medical consultation with value to treatment aesthetics and patient consent. Besides patient-friendly therapeutics, we also aid efficient biomedical research with our customized stem cells and primary cells, as it precedes every clinical translation that can help our future generation.

## ORGAN-SPECIFIC DISORDERS FOR REGENERATIVE THERAPY

- LIVER DISORDER
- LUNG DISORDER
- EYE DISORDER
- **DIABETES**
- KIDNEY DISORDER

# WE ARE HERE TO HELP



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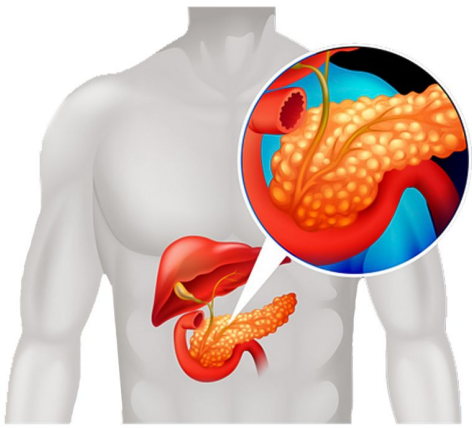
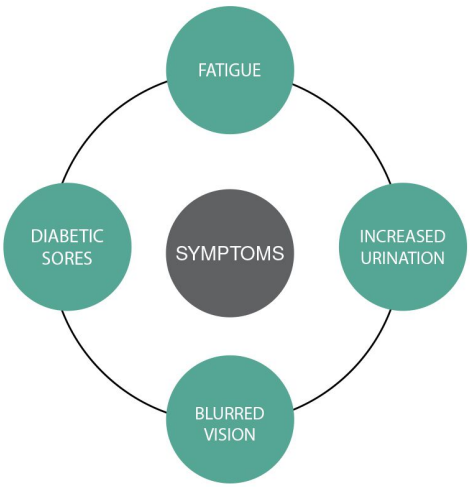
# What is Diabetes?

■ Blood glucose level increase due to insulin deregulation.

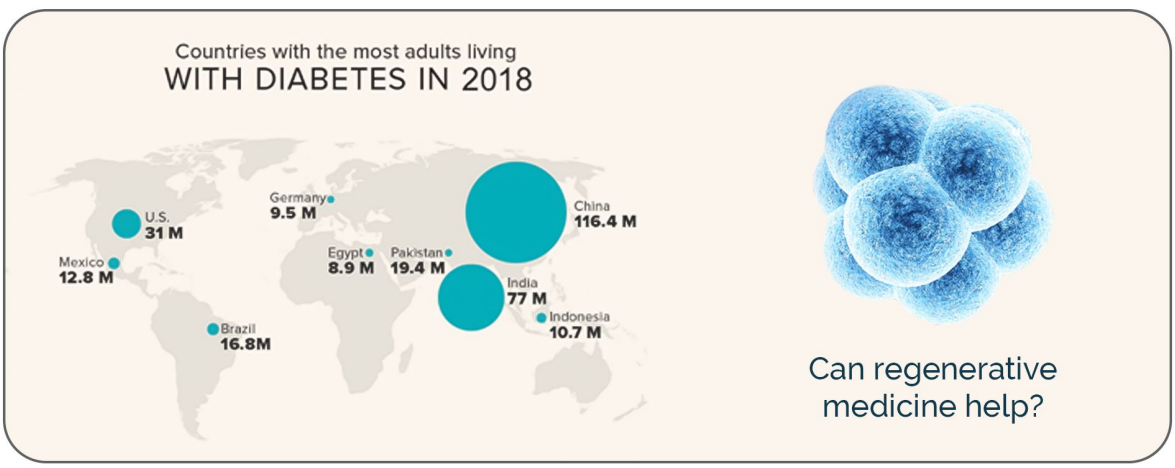






Diabetes is a disease that occurs when your blood glucose, also called blood sugar, is too high. Insulin, a hormone secreted by the pancreas, helps in metabolizing glucose for energy. In case insulin levels are deregulated in the body, glucose doesn't reach the cells and leads to an increase in blood glucose.

Diabetes is commonly of two types: Type1 and Type2. Type1 diabetes occurs when your immune system, the body's system for fighting infection, attacks and destroys the insulin-producing beta cells of the pancreas. Type2 diabetes is the more common form of diabetes that can be caused by obesity, insulin resistance, hormonal disorders, etc. Another pathology associated with diabetes is diabetic foot. Due to diabetic neuropathy, ability to feel pain is reduced and wounds take longer to heal, thus allowing infection.

Conventional treatment of drugs and external insulin, besides rehabilitation therapies, do hinder the progress rate of the disorder but there has been no disorder reversal with these treatment regimes. With recent scientific advances and research in stem cell therapeutics, diabetes may have a new disease-reversal hope in the form of Regenerative Medicine.



# STEM CELL Treatment for Diabetes

- Enhanced stamina and body rejuvenation.
- Reduced fatigue and regulated urination.
- Reduced external insulin injections.
- Reduced blood glucose levels.

## Regenerative Medicine

Stem cells have the unique potential to undergo self- renewal as well as differentiate into cells of neuronal origin in the body upon natural. stimulation.

## What can you expect?

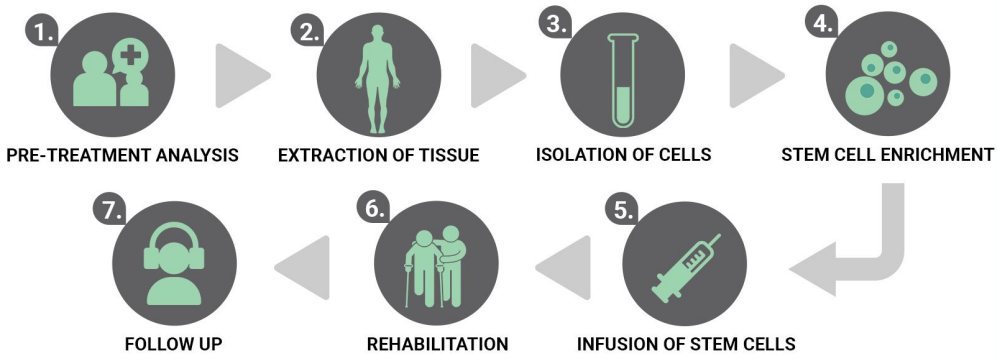
Majority of the patients have shown improved results upon undergoing stem cell therapy with healthy lifestyle choices. Diabetes patients have experienced reduced body fatigue, regulated urination, enhanced stamina, reduced requirement of external insulin injections.

Although type and extent of improvement is patient specific, some of the common benefits that you can expect after stem cells treatment for diabetes are:

- Reduced blood glucose levels.
- Improved stamina and wound healing.
- Reduced requirement for external insulin.
- Improved immunological and inflammatory fuctions based on pre-treatment and post-treatment marker analysis.

# Cell Therapy Management

Establishment of day care procedure.




## PRE-TREATMENT procedure

Complete assistance will be given to the patient in all pre treatment procedures such as consultation. hospitalization (If required), Assessment.

### ■ Eligibility Criteria

**Pre-Treatment Assesment**

- Routine Blood Test
- Routine Urine Analysis
- Infectious Disease Testing
- Physical Examination
- X-Ray

**Pre-Op Procedure**

- MRI
- CT Scan
- Neurophysiology
- Medical Neurological Reports
- Medical History

## EXTRACTION of tissue sources

Generally the entire procedure takes around 7-8 hrs including 1-2 hrs of source aspiration, 2-3 hrs of stem cell isolation and another 1-2 hrs in injecting cells. The processing of sample is done in a state-of-the-art class 10000 clean room facility wherein we strictly adhere to maintain quality of standards. Wherein the extracted sources undergo minimum manipulation such as been spun in a centrifuge to cull out a stem cells.

## TARGETED delivery

Once isolated, intensified and ready for reinstalling back into the body. we work out different mode of implantation: depending upon patient's health condition.

### ■ Intravenous Administration

Cells will be infused directly into the vein to be able to circulate in the vascular system. This may further help to induce immediate signaling pathways to direct cells to the site of injury.

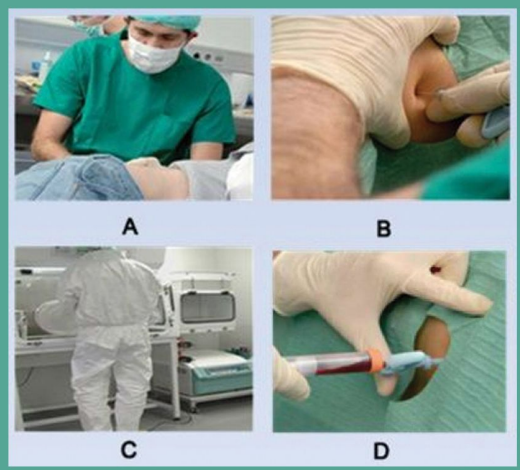
### ■ Intra-arterial Administration

Cells are infused into anterior pancreaticduodenal artery

## REHABILITATION

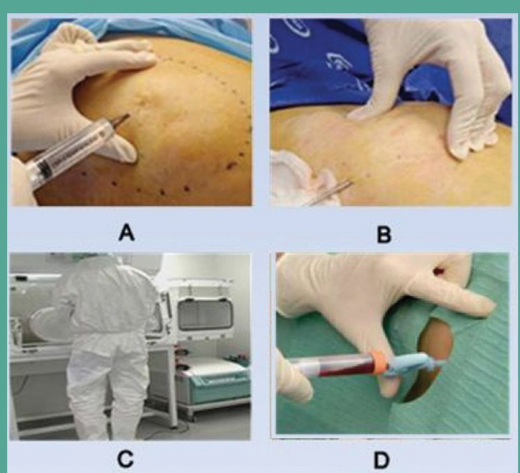
Post treatment care involves multiple reclamation therapies for accelerated recovery. Advancells is recommending range of therapies as discussed later.

## Bone Marrow Extraction




A. Application of local anesthesia.
B. Bone Marrow collection by needle insertion in the hip bone.
C. Isolation of Stem Cells in the clean room.
D. Intra-arterial Injection of stem cells.

## Adipose Tissue Extraction




A. Application of tumescent anesthesia.
B. Adipose Tissue collection by lipoaspiration.
C. Isolation of Stem Cells in the clean room.
D. Intra-arterial Injection of stem cells.

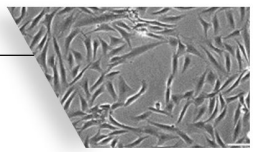
# Why Should YOU choose Advancells?

## 01 AUTOMATED and CLOSED System

At Advancells, stem cell therapy is performed under the supervision of medical experts in a multi speciality hospital and cells are processed in the state-of-the -art GMP compliant laboratory i.e. fully functional with automated equipments.

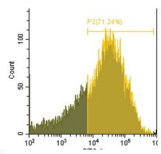
## 02 HIGH Quality of Cells

At Advancells, we ensure that cells are of best quality; and hence we perform a thorough **Quality Assessment** by experienced scientists. We provide a detailed certificate of analysis to each patient further authenticating the cell quantity and viability.



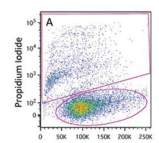
## 03 Disease-Specific MARKER Analysis

Our clinical research scientists do a thorough disease-specific marker analysis both **pre and post-treatment** to ensure subjective reduced expression levels of the same, thus showing evidence based assesment of improvement in each case.




## 04 HIGH Concentration Enriched with MULTIPLE Cell Population

The treatment procedure is performed using a high concentration of viable cells with multiple cell population, created from a very small portion of the tissue.




## 05 SAFE Treatment Procedure

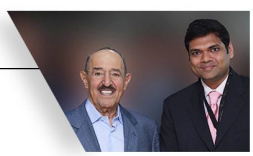
The procedure is completely safe and has not detected any adverse events throughtout the globe.

## 06 PATIENT SATISFACTION Assurance

Our medical team assures you treatment aesthetics and formal consent for your stem cell therapy. We prioritize patient follow-ups to ensure that your health improvements ascend with our therapeutic solutions.

## 07 Globally Recognized HEALTHCARE

Advancells Regenerative Medicine solutions have been globally recognized with the CMO Asia Healthcare Award for the Best Product Innovation and Quality Initiative. We were also privileged to host His Royal Highness, the king of Kuwait, for regenerative therapy during his 2017 visit.



# Special services for International Patient

- Assistance in Visa and planning travel itinerary.
- Assistance in getting comfortable accommodation in nearby location.
- Travel Assistance for sight seeing.
- Assisting with your interpretation services.
- Assisting with multiple payment options.
- Expedite arrival with fast track registration.

# *Each Case is Special For Us,*

Therefore Every Cell has to pass through a Stringent Quality Control Parameter.

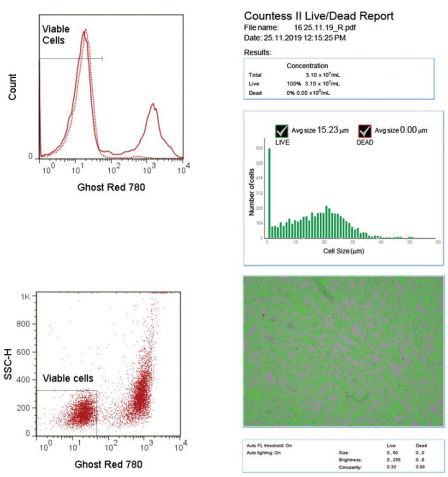
## ■ Clinical Definition of Stem Cells

- Stem Cells are the mother cells of our body.
- They can divide unlimited times.
- Can differentiate into any cell type.
- Can be exploited to treat diseased condition.

At Advancells, we provide a high concentration of viable stem cells with enhanced differentiation potential for our treatment procedure. The patient derived stem cells are checked for mycoplasma and endotoxin contamination after isolation from the patient's body.

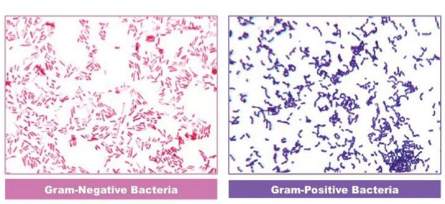
The stem cell suspension are checked for both gram-positive and gram-negative bacterial load during procedure for preventing any bacterial infection upon re-injecting them to the patient's body.

## 1. Characteristics of Stem Cells



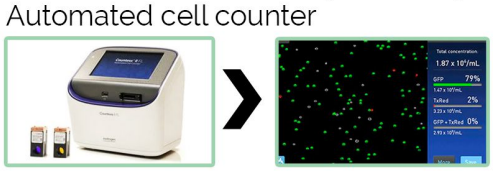

## 2. Mycoplasma Detection

## 3. Detection of bacterial containment



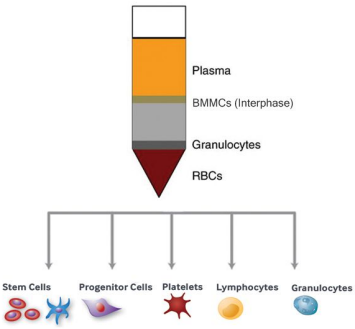

## 4. Endotoxin Analysis

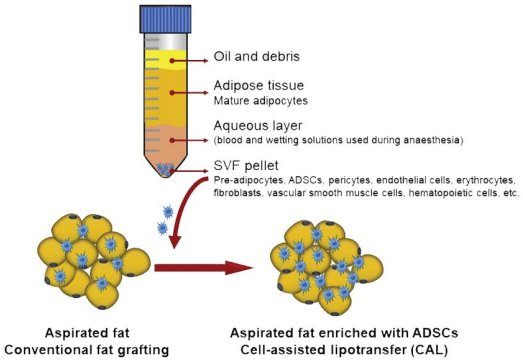
## 5. Viable Cell Count & Analysis through Automated cell counter



| Analysis report | | |
|---|---|---|
| **Viable cell count at the time of dispatch**: x * $x^x$ cells | | |
| **Mycoplasma :** Negative | **Endotoxin :** Negative **(Qualitative Test > 0.2EU/ml)** | |
| **Marker Analysis** (Reference Document No: 0024GI001552)**:** | | |
| **Markers Detected** | **Interpretation** | **Percentage** |
| xx | Positive/ Negative | xx% |
| xx | Positive/ Negative | xx% |
| xx | Positive/ Negative | xx% |

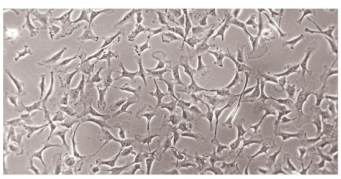
# Technology Calling.. .




## Bone Marrow derived mononuclear cells

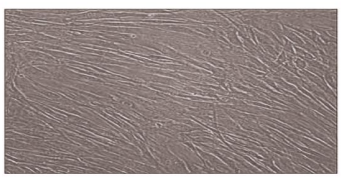
| | |
|---|---|
| Neutrophil | 72.3% |
| Eosinophil | 1.8% |
| Lymphocyte | 12.1% |
| Monocyte | 2.8% |
| Nucleated Erythrocyte | 8.9% |
| Blast Cells | 1.6% |



Bone Marrow Stem Cells promote vasculogenesis and differentiation to enhance blood circulation.

## Stromal Vascular Fraction

| | |
|---|---|
| Endothelial Cells | 25% |
| Myeloid Cells | 22% |
| Monocyte | 20% |
| cKit$^+$ Progenitor Cells | 5% |
| CXCR4$^+$ Multipotent Cells | 2.5% |
| PDGFR-β$^+$ Perivasular Cells | 20% |



Pre-Adipocytes are known to produce cels of neuronal origin and regularise inflammatory immune responses.

* A wide range of cell types including Mesenchymal Stem Cells can be isolated from various niches depending upon requirements and can be used for effective clinical outcomes. (Source: PubMed.gov)

The cells are extracted from other allogenic sources like umbilical cord Wharton's Jelly are further subjected to rigorous quality control processes; moreover, these cells display HLA-G receptors and hence do not cause any immunological reactions.

# Stem Cell Therapy Success Rate*

*Shraddha Singh Gautam, Lipi Singh, Pawan Sharma, Punit Prabha, Sumit Saha, Shiv Raghav, Rajkumar Maurya, Sanjeena Khatun and Sachin Kadam. Transplantation of Autologous Bone Marrow- Derived Stromal Cells in Type 2 Diabetes: A Pilot Study. Innovation in Tissue Engineering & Regenerative Medicine, 2019; ITERM.000517. 1(4).2019.

| SYMPTOMS | IMPROVEMENT |
|---|---|
| **Decrease in Insulin Dependency** | **60-70%** |
| **HbA1c** | **05-06%** |
| (Returned to normal rate from an elevated rate of 10-12%) | |
| **Decrease in Pain Index** | **60-70%** |

# FACILITY & EXPERTISE

# **Rehab** is *important*

- Physical therapy
- Occupational therapy
- Speech therapy
- Nutrition Therapy

## *How should I choose a good center for stem cell therapy?*

The following criteria should be kept in mind:

• A center with all types of regulatory complaince & certifications.

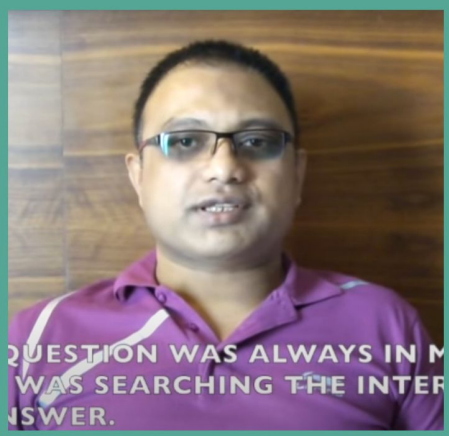
• Specialized in offering safe & viable stem cells which is further certified through CoA.

• A centre with good technical expertise & good infrastructure.

People suffering from Diabetes require long-term medical, lifestyle, and dietary management. Besides seeking treatment from experienced medical personnel, the multi-modal treatment array might include a variety of therapies to improve and accelerate the positive benefits of regenerative therapy. Regenerative rehabilitation can help patients by:

- Reducing stress and anxiety.
- Reducing obesity-related health issues.
- Improving cardiac health.
- Improving glucose metabolism.

## *Let's Hear it from the Patients.. .*




### ■ MR. ABDUL SALAM, 55 YRS

Mr. Salam was was suffering from uncontrolled diabetes mellitus with featured diabetes neuropathy. He was facing a problem with frequent urination, blurred vision, unstable sugar level in blood, fatigue. Besides, the patient had a 9 years old history of hypertension and was on the medications. During examinations, his glycosylated hemoglobin (HbA1C) level was found to be 9.2%; indicating poorly controlled diabetes. After stem cell therapy, and a three-month follow-up, his HbA1C levels were 6.8%. This is a significant progress with stem cell therapy showing remarkable improvement in diabetes mellitus cases.

## *Certifications*


CERTIFICATE

CERTIFICATE

Of Compliance

This is to Certify that

SAFFRON NATURELE PRODUCTS PVT. LTD.

A-102, SECTOR-5, NOIDA, UTTAR PRADESH - 201301, INDIA

has been independently assessed and is compliant with the requirements of:

GMP

(Good Manufacturing Practice)

This certificate is applicable to the following product or services ranges:

PREPARATION, PACKING, TRANSPORT OF REAGENTS & MEDIA FOR DIAGNOSTICS PURPOSES, TRANSPORTATION, PROCESSING, TESTING, CRYOGENIC STORAGE AND DISPENSATION OF TISSUE DERIVED CELLULAR PRODUCTS FOR THERAPEUTIC & STORAGE PURPOSES

This certificate refers to the information examined and read with manufacturer's declaration of conformity. Further, the product liability rests with the manufacturer or his representative in accordance with GMP

Certificate No.: SPC20G4987

Date of Initial Registration: 19-09-2020
1st Surveillance audit on or before: 18-09-2021
2nd Surveillance audit on or before: 18-09-2022
Date of Re-Certification: 19-09-2023

Authorised Signatory

SP Certification Limited
130, Old Street, London,
EC1V9BD, U.K.
Email: info@spcertification.co.uk
www.spcertification.co.uk


CERTIFICATE

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ISO 9001:2015

(Quality Management System)

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Certificate No.: SPC20Q4988

Date of Initial Registration: 21-09-2020
1st Surveillance audit on or before: 20-09-2021
2nd Surveillance audit on or before: 20-09-2022
Date of Re-Certification: 21-09-2023

Authorised Signatory

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