## **Therapy**

### The Immune System Reset

Stem Cell Educator Therapy (or "Educator Therapy" for short) is an ex-vivo process where a patient's white blood cells are circulated through a Stem Cell Educator device coated with the umbilical cord-blood stem cells, CB-SC. As this circulation occurs, the patient's white blood cells intercept the CB-SC's communications and are re-educated back to their pre-diseased state. This autologous process then circulates only the 'educated' white blood cells back into the patient. The newly 'educated' cells will now educate other defective cells in the patient's body on who to fight and who to protect. This "immune reset" is designed to be minimally invasive, have virtually no side effects, and sustain long-term results.

Throne aims to commercially launch its Stem Cell Educator Therapy once it receives regulatory approval.



Throne
Biotechnologies
Inc.

This company is changing people's lives by doing the treatment of severe diseases.

Throne Biotechnologies (Throne) is a clinical-stage therapeutics company. They have a disruptive stem cell technology that helps in fundamentally reversing type 1 diabetes (T1D), alopecia areata (AA) and all the other types of autoimmune diseases through their immune education of Stem Cell Educator therapy(Educator therapy). In 2005, Dr Yong Zhao discovered and patented a new kind of Stem Cell from the human umbilical cord blood.

More than 200 patients between the ages of 3 and 70 years have received the Educator therapy in 10 years of international multi-center clinical trials held in Spain, China, and the US.

EXCLUSIVE:- We got into the conversation with Yong Zhao, the chief executive officer of Throne Biotechnologies Inc., to learn more about the company and how it's sensing solutions for improving people's health!

#### 1) Please give an overview of your company?

Our company, Throne Biotechnologies, is one of the global- leading biotech companies. Our main aim is to find a cure for type 1 diabetes. We have a fully- equipped GMP facility and research lab in Paramus, New Jersey.





#### 2) Tell us about your team. How have they contributed to the success of your company?

I have a strong team consisting of renowned scientists, Diabetologist, dermatologists, experts in cellular therapy and entrepreneurs from big pharmaceutical biotech companies and famous universities.

#### 3) Give us a brief detail of the procedure for testing Alopecia Areata?

With the help of Stem Cell Educator technology, a patient's blood is circulated through a blood cell separator, and the patient's immune cells, also known as the ( mononuclear cells) are co-cultured with CB-SC in vitro; after that,

the CB-SC - "Educated immune cells (Gleukocell) are returned to the patient's circulation through the process of infusion.

The Clinical efficacy of the Stem Cell Educator therapy has been proven for the treatment of AA in phase  $\frac{1}{2}$  of a clinical study.

Many findings from this trial provide clear evidence that Stem Cell Educator therapy can control the autoimmunity and lead to hair growth.

Clinical data also demonstrated that patients with severe AA achieved an excellent hair regrowth, and their quality of life also improved after receiving our Stem Cell Educator therapy.

#### 6) Why do scientists need Stem cells?

Scientists need stem cells to explore alternative resources for tissues and overcome the limitations of cell numbers for adult stem cells.

> 7) Do all community members need to be knowledgeable about Stem Cells?

Yes. Stem Cell therapy will bring new hopes and beliefs for public health.



#### 4) Are there any health and biodiversity concerns linked with Biotechnology?

No. We only utilize the human cord blood as a source to isolate the stem cell, designated cord blood-derived stem cells (CB-SC).

#### 5) How do you battle the spread of Alopecia?

Alopecia areata (AA) is one of the most common autoimmune diseases. Its main targets are the hair follicles, which severely impact the quality of life and self-esteem of patients due to hair loss.

However, clinical management and outcomes are challenged due to the currently limited immunosuppressive and immunomodulating regimes.

#### 8) Does Biotechnology pose any danger? Please Clarify?

The international multicentre clinical trials in type 1 diabetes (T1D), type 2 diabetes (T2D), and alopecia areata (AA) held in the United States, China and Spain demonstrated the Safety of Educator therapy. All the procedures were acceptable in all patients aged 3 to 70 years old.

This therapy doesn't have any significant adverse events or safety concerns during the treatments. Educator therapy modifies the immune cells which are responsible for autoimmunity. Therefore, this therapy doesn't increase the chances of infection and tumor.

#### 9) What are the specialities of your company?

We are specialized in the following:-

- Stem Cells
- Type 1 diabetes
- Type 2 diabetes
- · Alopecia areata
- Autoimmunity diseases
- Immunology
- Clinical trials
- FDA regulations
- Clinical treatment

### 10) Does the United States biotechnology process allow for public scrutiny?

There's no need for public scrutiny. Being a Global-leading technology in the field of T1D treatment ( Juvenile Diabetes Cure Alliance Report, 2021, New York), it is highly expected that our Educator therapy will achieve the expedited FDA approval under the designation of Regeneration Medicine Advanced Therapy ( RMAT), due to an unmet medical need for the life-threatening T1D patients.

# 11) Please clarify how biotechnology products are distinguished from genetically engineered products?

In Educator therapy, patients' immune cells were only educated by cord blood stem cells (CB-SC) to correct their functional defects without using any genetically engineered products.

## 12) Describe the process of delivering the cells to the correct location within the body?

Stem Cell Educator therapy is different from conventional stem cell therapy. Educated autologous immune cells are the final products of the Stem Cell Educator therapy. These educated immune cells can educate other immune cells after infusion. This therapy reverses the root cause of autoimmune diseases, resulting in the long-lasting efficacy of Educator therapy.

## 13) Please give a brief description of the cells' differentiation process into specialized cells before treatment?

For replacing the diseased or aged cells, stem cells can be either partially or fully differentiated into specialized cells before the transplantation.

The partly- differentiated cells will be continued becoming the mature cells after treatment.

### 14) Does your Educated therapy require one treatment or multiple treatments?

Our Educator therapy is capable of correcting the autoimmunity through one treatment. Most patients receive one or two treatments.

#### 15) Tell us about your Awards and Recognition?

My company is one of the awardees of the "five best Bio-Tech Companies to watch" by The Silicon Review.

#### What do we have to say?

Dr Yong Zhao and his whole team are continuously putting their best efforts into treating life-threatening diseases such as type 1 diabetes, type 2 diabetes, and alopecia areata (AA) with the help of their Stem Cell Educator therapy.

This therapy helps patients in improving their quality of life and self-esteem. This company is ruling the market also. The T1D market in 2019 was approximately \$2 billion, and it is also expected to grow at 5% CAGR (Compound Annual Growth Rate).

In 2020, the Alopecia market was approximately \$7 billion, and it is expected to grow at an 8% CAGR.

Throne's Stem cell therapy is designed to reverse the root cause of autoimmune diseases. It is also the leading "Practical Cure Projects "for type 1 diabetes among 590 global technologies.

Dr Zhao aims to commercially launch his Stem Cell Educator therapy once it receives regulatory approval. This therapy will bring new hopes and beliefs for public health.

