

# TRANSCCOMM

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## KEYWORDS

Patient derived stem cells  
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Cryopreservation  
CD34+

## BRAIN STROKE AND THE ROLE OF STEM CELLS IN TREATING IT



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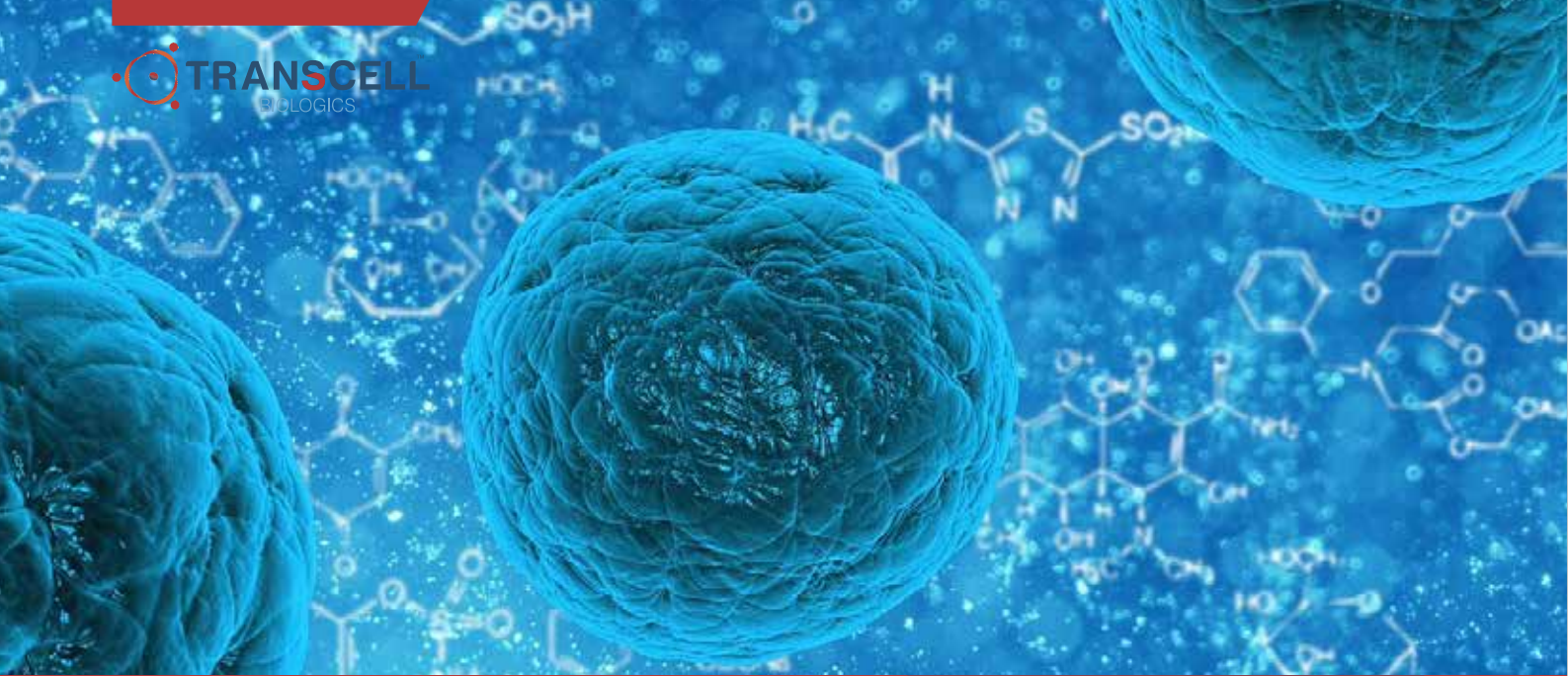
In the United States alone, some 800,000 people suffer from a brain stroke each year and close to 7 million are chronic stroke patients. With a population of 1.5 billion the burden of stroke on Indian society is considered to be significant. Increasing incidences of lifestyle diseases like diabetes and hypertension are also triggers for stroke in men and women. Stroke is the second most common cause of death in

India reported by a reputed multi-center study carried out in Chennai. The recent report by the Asia Pacific Heart Rhythm Society cites that the incidence of paralysis and stroke in India is increasing significantly by almost 50% every year with a very distressing fact that 40% die after a major stroke, 30% need full support and more than 50 % do not go back to work.

Strokes can fall into any of the two categories (i) Ischemic or (ii) Hemorrhagic. Approximately 87% of all the strokes tend to be ischemic in nature while the rest are hemorrhagic. The strokes are characterized by clot formation in a blood vessel supplying blood to a specific part of the brain or when there is a burst blood vessel which would then bleed into the brain and kill brain cells. This clot formation/internal bleeding eventually leads to very intensive damage of the affected area. Depending on the area of the brain in which the clot has occurred and its magnitude, it might lead to specific loss of function. The most common loss of functions associated with stroke are cognitive and motor. While approved therapeutic interventions for treating stroke such as administering tPA (tissue plasminogen activator) to dissolve the clot that blocks the flow of blood to the brain, exist, they have to be administered within a few hours of the occurrence of the stroke failing which they would be ineffective.

This poses a huge problem for patients who fail to receive the treatment immediately after stroke. A majority of such patients end up with disabilities. While there are documented cases wherein the lost ability is restored, the incidence of such cases is very low and typically happens over an extended period of time, which could only add to the discomfort of the patient.

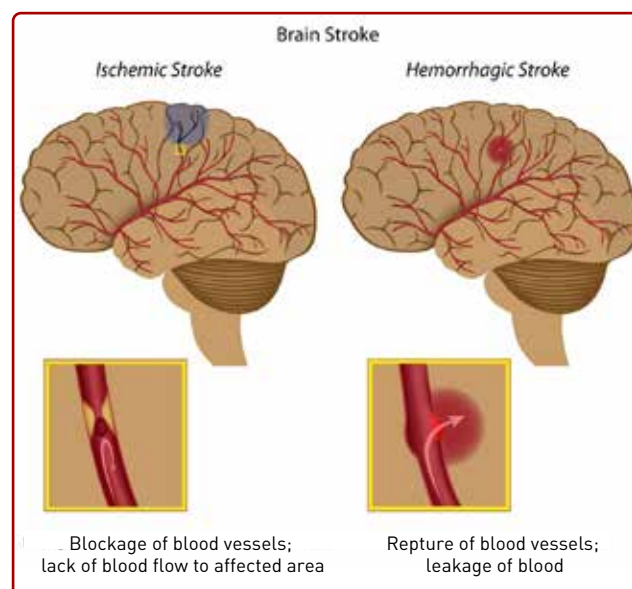
Recent studies in the field of regenerative stem cell medicine have shown that administering stem cells to stroke patients helped improve restoration of neurological function. Autologous stem cell transplants have proved to be safe and promising in treating stroke patients, while allogenic stem cells could be developed as druggable tools to treat stroke. We at Transcell strongly believe that given the ever growing importance of stem cells in treating debilitating conditions such as stroke, cancers and other disorders, the general public should be made aware of cryopreserving their loved ones stem cells for use in the future.



## Stem cells shown safe, beneficial for chronic stroke patients

Injecting modified, human, adult stem cells directly into the brains of chronic stroke patients proved not only safe but effective in restoring motor function, according to the findings of a small clinical trial led by Stanford University School of Medicine investigators. The patients, all of whom had suffered their first and only stroke between six months and three years before receiving the injections, remained conscious under light anesthesia throughout the procedure, which involved drilling a small hole through their skulls. The next day they all went home.

Although more than three-quarters of them suffered from transient headaches afterward — probably due to the surgical procedure and the physical constraints employed to ensure its precision — there were no side effects attributable to the stem cells themselves, and no life-threatening adverse effects linked to the procedure used to administer them, according to a paper, published online June 2 in *Stroke*, that details the trial's results.



## Brain damage caused by stroke could be repaired by stem cells

Thousands of lives a year could be changed thanks to a pilot research study by Imperial College which involves injecting a patient's stem cells into their brain.

Doctors said the procedure could become routine in ten years after larger trials to examine its effectiveness in a wider group of patients.

Dr Madina Kara, Neuroscientist at The Stroke Association, said: "In the UK, someone has a stroke every three and half minutes, and around 58% of stroke survivors are left with a disability. One of the few existing treatments which can limit brain damage caused by stroke is thrombolysis. However, this drug can only be used to treat strokes caused by blood clots and must be administered within the first 4.5 hours after a stroke. There is an urgent need for alternative treatments to help prevent the debilitating impact of stroke.

Previous studies have shown that a type of stem cell, called CD34+ cells, shows promise to aid stroke recovery. These latest results suggest that this type of treatment could be administered safely and we're looking forward to seeing the outcomes of further studies to see exactly how they are aiding recovery.

This is one of the most exciting recent developments in stroke research. It's still early days in stem cell research but these findings could lead to new treatments for stroke patients in the future."

-the Daily Telegraph website

## Transcell's commitment:

Since its inception a few five years ago, Transcell's commitment to reach the needy patient population through translating adult stem cell technologies has become nothing short of a movement led by my team at all levels. It has become a collective vision of my Research, Operations (including of Storage), Accounts, Sales & Marketing team of what we stand for and believe in as a Company today, engaging our mission to promote stem cell storage today for better medicines to people of India, who need them now and tomorrow.

By integrating the purpose of storing stem cells with the need effectively communicated through our in-house research data and the real stories published, we intend to connect with our stakeholders on the meaning behind what we are upto in a scientific way. The purpose of our existence is to contribute effectively translating research to clinics in our life time strongly believing:

Don't Climb a Mountain with an Intention that the World Should See You. Climb the Mountain with the Intention to See the World.



**Dr S Dravida CEO**

## This is our story:

A German once visited a temple under construction where he saw a sculptor making an idol of God... Suddenly he noticed a similar idol lying nearby...

Surprised, he asked the sculptor, "Do you need two statues of the same idol?"

"No," said the sculptor

without looking up, "We need only one, but the first one got damaged at the last stage..."

The gentleman examined the idol and found no apparent damage...

"Where is the damage?" he asked.

"There is a scratch on the nose of the idol," said the sculptor, still busy with his work....

"Oh... and Where are you going to install the idol?"

The sculptor replied that it would be installed on a pillar twenty feet high...

"If the idol is that far who is going to know that there is a scratch on the nose?" the gentleman asked.

The sculptor stopped work, looked up at the gentleman, smiled and said,

"I will know it..."

The desire to excel is exclusive of the fact whether someone else appreciates it or not.

"Excellence" is a drive from the inside, not outside.

Excellence is not for someone else to notice but for your own satisfaction and efficiency.



**PRESERVE YOUR STEM CELLS NOW**

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**TranScell Biologics** is now live on  
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