

Towards regenerative medicine

Transcell Biologics provides stem cell banking and ensures quality processing and presentations for clients, writes **K Rajani Kanth**

Madhavi Latha, 34, was diagnosed with a debilitating disease in 2010. She went for stem cell therapy in 2011 with the support of Hyderabad-based stem cell research start-up Transcell Biologics. Today, Latha is relieved of her malady and has regained her lost energy and strength.

Founded in 2009 by Subhadra Dravida, a postgraduate in industrial biotechnology with a PhD from University of Ottawa, Transcell was born with a singular mission of bringing adult stem cell technologies to the Indian patient for debilitating diseases.

Dravida's past professional associations were with the University of North Carolina and the Ottawa Health Research Institute. In India, she researched at the Centre for Cellular and Molecular Biology and the LV Prasad Eye Institute, both in Hyderabad.

"The core of our business revolves around adult stem cell technologies in regenerative medicine and drug discovery, preserving the right kind of stem cell formulations as the fundamental theme," says Dravida.

The journey

Transcell achieved its first milestone in 2011, when it commercialised its stem cell banking vertical in Hyderabad. The vertical has now expanded to other cities of Telangana and Andhra Pradesh. It also has presence in Pune Mumbai, Jaipur, Punjab, Delhi and Jammu & Kashmir.

The company has been developing donor-derived stem cell platforms for regenerative medicine and drug discovery applications. It is now conducting trials for rheumatoid arthritis, muscular dystrophies (a genetic disorder causing muscle weakness), stroke and periodontal (gum) diseases. The trials are at animal safety evaluation stages.

"We are creating patient-derived sample repositories for research and



Transcell Biologics founder and Chief Executive Officer Subhadra Dravida

PHOTO: K SUDHEER

development towards advancements in adult stem cell technology-based drug discovery in oncology and brain diseases," she adds.

The Indian oncology market is estimated at ₹3,831 crore, while it is ₹1,200 crore in the brain diseases space. GIA and Axis Research peg the global market growth for bio-banking in human medicine and drug discovery at \$70 billion in 2017.

"India hogs almost 50 per cent of the bio-banking space. Successful stem cell products, clinicians' acceptance to integrate regenerative medicine in their traditional medical practice and a holistic attitude towards well-being and rejuvenation could trigger growth," Dravida says.

Being unique

There are many stem cell banking firms in India, including Chennai-based

LifeCell International. But, what makes Transcell stand out in the crowd? Its focus on creating donor and patient-derived stem cell repositories, productisation of regenerative medicine and

drug discovery have enabled it to march ahead. Transcell's repository facilitates its clientele to retrieve their stored units to participate in clinical trials or for approved treatment processes, claims

EXPERT TAKE



Stem cells are a great resource that can be used to treat a few diseases such as blood cancer and in the future, potentially more.

These hold promise for people suffering from relapsed blood cancer, where stem cell transplantation has proven benefits beyond other existing therapies.

The start-up is positioned in a very exciting area of medical research. With many patents under its belt, Transcell is looking at exploiting adult stem cells to help patients with multiple diseases.

Conducting robust multi-centre clinical trials, publications in reputed peer-reviewed journals, and gaining regulatory approvals will help it grow.

FACT BOX

Inception: 2009

Area of business: Stem cell research

USP: Donor and patient-derived stem cell repositories, productisation of regenerative medicine and drug discovery

Funding: An undisclosed amount from Indian Angel Network in March

Dravida.

"While other players are popular for their cord blood banking activity, Transcell is spun out of in-built stem cell research and proprietary technologies," she says.

In March, Transcell had raised its first investment from the Indian Angel Network (IAN). The company plans to utilise these funds for pre-clinical trials in regenerative medicine and to develop stem cell-based platforms in therapeutic areas like muscular dystrophies, rheumatoid arthritis, stroke and ovarian cancer, and non-therapeutic areas like oncology and brain diseases, with internal accruals managing its storage business.

"We intend to provide strategic support to Transcell's growth, guiding the management in building intellectual property in key areas like solid tumours and brain diseases," says Nagendra Bandaru, lead IAN investor.

Transcell achieved break-even in 2014, as the company is building its intellectual property portfolio as business assets, Dravida says.

LAUNCH PAD

Personalising education



Oliveboard founders Abhishek Patil (left) and Satish Kumar

K RAJANI KANTH

With most competitive examinations being conducted online, students are increasingly looking at online courses as an alternative to books and institutes. Bengaluru-based start-up Oliveboard is trying to provide need-based learning and remedial content for Master of Business Administration and job-oriented examinations.

Founded in 2012 by former Inmobi employees, Abhishek Patil and Satish Kumar, it offers a learning module where one can access video content and tutorials to understand the subject, and a practice section that helps him/her solve mock question papers and daily tests, all synchronised across mobiles and personal computer.

The start-up supports 15 competitive exams. It has at least 260,000 registered users from across the country, and plans to bring one million more on board in the next 12 months. In an already crowded test prep market, with presence of start-ups like Toppr, MeritNation, Byju's and MockBank, Oliveboard has created a niche with its 'gamified group study platform', which allows users to collaborate and compete with friends in live group study sessions in a game-like environment. About 250 students can participate in a session.

Oliveboard raised an undisclosed amount last week from India Educational Investment Fund, an early-stage impact investment fund established by Michael and Susan Dell Foundation.

The start-up has been profitable since January 2015.

While continuing to build on success in these exams, it plans to add 10-15 similar ones in the graduate test prep space.

Sooraj Ratnakumar is founder-scientist at advanced molecular biology lab Swagene