

Medeze Recognized as the

2021

Company of the Year

Southeast Asia Stem Cell Banking Industry

Excellence in Best Practices



MEDEZE

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Medeze Group excels in many of the criteria in the stem cell banking space.

AWARD CRITERIA	
<i>Visionary Innovation & Performance</i>	<i>Customer Impact</i>
Addressing Unmet Needs	Price/Performance Value
Visionary Scenarios Through Mega Trends	Customer Purchase Experience
Implementation of Best Practices	Customer Ownership Experience
Leadership Focus	Customer Service Experience
Financial Performance	Brand Equity

Medeze Group: Southeast Asia’s Stem Cell Banking Hub

“Frost & Sullivan commends Medeze for its commitment to providing high-quality research-backed banking services for all age groups.”

- Azza Fazar, Best Practices Research Associate

Public awareness about the therapeutic advantage of stem cells grows alongside increasing clinical evidence. Research suggests stem cells treat most hematopoietic disorders, immunodeficiency diseases, metabolic disorders, cancer, and degenerative neuromuscular conditions. Additionally, the rising blood and immune-related disorders rates in newborns and children pose a demand for personalized stem cell banking, enabling the cryogenic storage of their most active stem cells.

Stem cell banking has the potential to transform treatments for chronic and degenerative diseases. Novel treatment methods can also involve stem cell samples. Research areas of tissue engineering, gene therapies, biologics, and stem cells increasingly incorporate stem cell samples in preclinical and clinical stages. In 2018, the stem cell market yielded \$700 million.¹ Frost & Sullivan projects the market expanding at a compound annual growth rate of more than 20% by 2029 due to stem cell samples lasting in temperature-controlled conditions, thus accessible for research purposes.²

¹ Strategic Commercial Partnerships Transforming the Global Biobanking Market, 2020-2026; Frost & Sullivan, (August 2021).

² Ibid

Stem cells use in rare diseases, regenerative medicine, and targeted therapies is the current focus of commercial research globally; particularly, its increase in research and development (R&D) activities within Southeast Asia drives the market growth for stem cell banking in the region.

Thailand-based stem cell banking company, Medeze Group (Medeze), captures the surging opportunity in stem cell banking by leveraging its offerings for newborns (cord blood, placenta, and cord tissue) and adults (adipose tissue and epithelial cells). Being an established name in Southeast Asia with ten branches in Thailand, Singapore, Vietnam, Myanmar, Indonesia, South Korea, Taiwan, Cambodia, New Zealand, and Australia, Medeze is one of the most experienced mesenchymal stem cell (MSC) banks in the region. The company garners this reputation through its commitment to high-quality research within its established R&D department to advance and contribute to the field of advanced regenerative medicine.

Cord Blood, Placenta, and Cord Tissue Banking

Cord blood banking is a procedure that extracts and stores potentially life-saving stem cells from the umbilical cord fluid and placenta. The extraction of these cells occurs immediately after the baby's birth, with Medeze's specialized collection kit. These cells are beneficial in treating cancer, blood-related diseases like anemia, and immunity disorders. According to Medeze, research suggests that cord blood is rich in hematopoietic stem cells (HSCs), which can change into white blood cells, red blood cells, and platelets.

The company's cord blood extraction technique does not risk the newborn's or mother's life as the healthcare practitioner clamps and cuts the cord before extraction. It is possible for both natural and cesarean deliveries. Besides, placenta and cord tissue extraction also uses Medeze's patented extraction technology at the point of delivery.

Adipose Tissue Banking

Medeze leads the market by being the primary choice for stem cell banking for the whole family, not limited to an age group. The company's cord blood bank is the first that offers families the additional banking of cord tissue, placenta, and adipose tissue. Medeze offers adipose tissue banking derived from the mother's fat through C-section subcutaneous adipose tissue and fat. The company obtains this tissue, a rich MSC source, through liposuction for family stem cell banking.

"Thailand-based stem cell banking company, Medeze Group (Medeze), captures the surging opportunity in stem cell banking by leveraging its offerings for newborns (cord blood, placenta, and cord tissue) and adults (adipose tissue and epithelial cells)."

- Azza Fazar, Best Practices Research Analyst

These MSC cells are easily extracted from adipose tissues and ideal for tissue regeneration, e.g., repairs fractures, nerves, and damaged organs. Medeze uses a patented, painless, and scar-free procedure for stem cell extraction applicable to various medical and regenerative methodologies and offers stem cell retrieval at no additional cost.

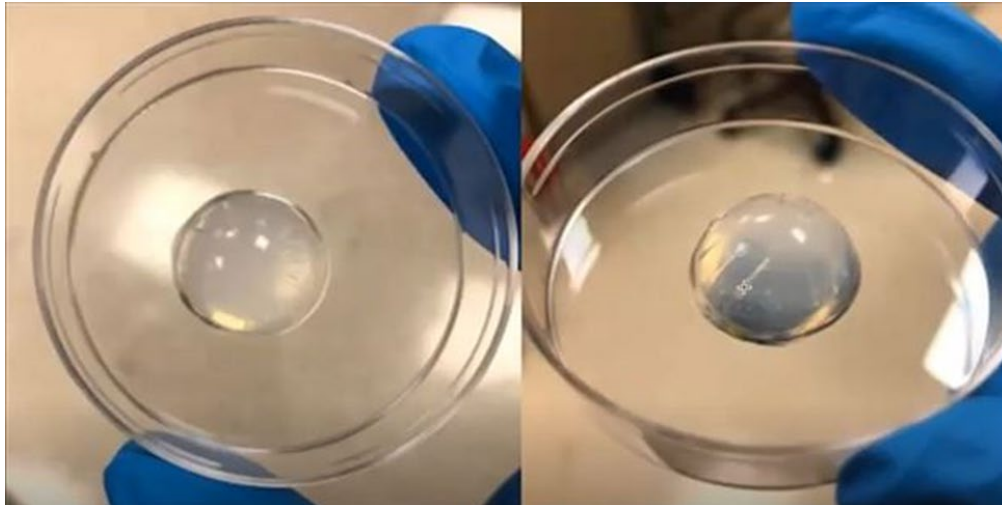
Frost & Sullivan commends Medeze for its commitment to providing high-quality research-backed banking services for all age groups. In 2020, the company earned Frost &

Sullivan's Best Practices recognition for its services. In 2021, Medeze is gaining recognition for its performance during the COVID-19 global pandemic and the innovative banking solutions currently in its pipeline.

Leading with Research & Development

Stem Cell Printed Cornea

First 3D-printed Stem Cell Cornea



Courtesy of the Medeze Group

Medeze's stem cell banking solutions arise from years of research, whether internal or third-party medical research findings. Its Singapore-based R&D division, Singapore Medical Innovative Technology Pte. Ltd. (SMIT), researches the possibility of three-dimensional (3D) printed stem cell corneas. The company's first successfully 3D-printed cornea uses adipose stem cells and fish collagen. It is currently awaiting ethical approval for its corneal transplant trial in rabbits which will test for toxicity. If the trial's first phase is successful, Medeze anticipates the second phase to move from testing its transplants from rabbits to dogs.

Hair Follicle Banking

Hair follicle banking is also in the works in Medeze. Those who suffer from baldness, or are at risk, can choose to bank their hair follicles for the future. The company fixes balding by hair remigration from the back of the head to the front with the banked follicles. With only 200 follicles, it cultures up to 400 million cells. Once the individual decides to use their banked follicles, the cell implantation procedure is as simple as injecting it under the dermis of the scalp. The implanted cells take about six months to grow out.

Frost & Sullivan opines that this move by Medeze is revolutionary, granting it a first-mover advantage in hair follicle banking in Southeast Asia.

Aiming for Growth in Southeast Asia

As Medeze works on new banking solutions, the company also aims for public listing in the coming year.

Additionally, its current growth trend indicates reaching a net profit of \$10 million by the end of 2021. The company also expects to exceed a customer satisfaction rate of 97% through its new offerings.³ Medeze's Founder and Managing Director, Dr. Veerapol Khemarangsarn, M.D., states planning to open multiple other labs across Southeast Asia. He believes sensitive materials such as stem cells should not be shipped on planes to another country for storage while risking their quality.

Dr. Veerapol is currently in discussions with Indonesia to build there another lab by 2022. Along with its dedication to R&D in expanding its offerings, such planning gives physicians and patients the confidence they need when recommending and using Medeze's stem cell banking solutions.

Conclusion

Medeze Group (Medeze) is a Thai stem cell banking provider with prominence spanning across Southeast Asia. Its stem cell banking portfolio includes adipose tissue, cord blood, cord tissue, and placenta banking opportunities for newborns and adults of all ages. Its patented stem cell extraction methodology is painless, scar-less, efficient, and carried out entirely in-house.

Medeze's presence within Southeast Asia spans ten countries and will expand in 2022, with additional labs currently planned in the region. The Founder and Managing Director, Dr. Veerapol Khemarangsarn, M.D., envisions the company's presence in every Southeast Asian country to avoid shipping stem cells by plane to countries with banks and, thus, compromising cell quality. The company strives to expand its offerings based on the latest technologies, such as stem cell printed cornea and hair follicle banking services.

Moreover, Medeze also dedicates its energy to research and development to create high-quality customer offerings. It takes pride in its research-backed offerings, which give physicians and patients the confidence they need when selecting the best stem cell banking solution.

Medeze Group earns Frost & Sullivan's 2021 Southeast Asia Company of the Year Award in the stem cell banking industry with its strong overall performance.

³ Medeze's briefing to Frost & Sullivan.

What You Need to Know about the Company of the Year Recognition

Frost & Sullivan's Company of the Year Award is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Award Analysis

For the Company of the Year Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or under-served needs are unearthed and addressed by a robust solution development process

Visionary Scenarios Through Mega Trends:

Long-range, macro-level scenarios are incorporated into the innovation strategy through the use of Mega Trends, thereby enabling first-to-market solutions and new growth opportunities

Leadership Focus: Company focuses on building a leadership position in core markets and on creating stiff barriers to entry for new competitors

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate a consistent and repeatable level of success

Financial Performance: Strong overall business performance is achieved in terms of revenue, revenue growth, operating margin, and other key financial metrics

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

About Frost & Sullivan

Frost & Sullivan is the Growth Pipeline Company™. We power our clients to a future shaped by growth. Our Growth Pipeline as a Service™ provides the CEO and the CEO's growth team with a continuous and rigorous platform of growth opportunities, ensuring long-term success. To achieve positive outcomes, our team leverages over 60 years of experience, coaching organizations of all types and sizes across 6 continents with our proven best practices. To power your Growth Pipeline future, visit Frost & Sullivan at <http://www.frost.com>.

The Growth Pipeline Engine™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fuelled by the Innovation Generator™.

[Learn more.](#)

Key Impacts:

- **Growth Pipeline:** Continuous Flow of Growth Opportunities
- **Growth Strategies:** Proven Best Practices
- **Innovation Culture:** Optimized Customer Experience
- **ROI & Margin:** Implementation Excellence
- **Transformational Growth:** Industry Leadership



The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- Mega Trend (MT)
- Business Model (BM)
- Technology (TE)
- Industries (IN)
- Customer (CU)
- Geographies (GE)

