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Miraqules MedSolutions: Engineering Biomaterials to Stop Bleeding and Save Lives

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From a research breakthrough at NIT Rourkela to a medical innovation entering commercial deployment, Miraqules MedSolutions is developing advanced nanostructured biomaterials for emergency bleeding control, wound management and regenerative medicine. Founded in 2018, the deep-tech life sciences startup is working to make rapid, affordable and accessible hemostatic solutions available across hospitals, emergency services and resource-limited settings.



Problem

Uncontrolled bleeding remains a critical challenge in trauma care, emergency medicine and surgical procedures, particularly when conventional compression methods are difficult to apply. Miraqules aims to address this gap with a biomaterial designed to accelerate bleeding control, including in irregular wounds and hard-to-access bleeding sites.

Product

Its flagship innovation, StopBleed®, is a patented nanostructured hemostatic biomaterial designed to control bleeding in as little as 60 seconds. Its porous, fibrous architecture helps absorb fluids and concentrate platelets and coagulation factors at the bleeding site. It is being developed in powder, applicator-based pellet, gauze and patch formats for different clinical applications.

Proof

StopBleed received regulatory approval in India in February 2026 and has been used across 30+ hospitals and select Indian Army units. The company reports more than 2,000 units sold, approximately â?¹8 lakh in realised revenue and a sales pipeline exceeding 3,000 units. It has also secured a paid pilot covering 800 units with the Maharashtra Government for emergency medical services.

People

Founded by Sabir Hossain, Miraqules originated from biomaterials research conducted with his professor, Prof. Devendra Verma, who serves as Chief Scientific Advisor. The leadership team also includes Dr. Mubeen Midda, Co-founder and Chief Marketing Officer. The company's scientific and engineering foundation is supported by expertise in biomedical engineering, biotechnology and clinical medicine.

Purse

Miraqules has secured approximately US$1.17 million through private investment and institutional support. This includes a US$400,000 SAFE investment from GoAhead Ventures in 2021. The company is currently raising a seed round to strengthen manufacturing, accelerate commercial expansion and advance its biomaterials platform.

Plan

The company plans to scale StopBleed manufacturing and expand adoption across Indian hospitals, government healthcare systems and emergency medical services. Following its SLINGSHOT 2026 Grand Winner recognition in Singapore, Miraqules is also exploring opportunities in Southeast Asia, the US and Europe. Its longer-term roadmap includes applications in internal haemorrhage management, wound care, tissue engineering and regenerative medicine.

Why it matters

Rapid bleeding control can be critical in trauma and emergency situations, where delays in intervention can have serious consequences. By developing an indigenous biomaterials platform with applications extending beyond hemostasis, Miraqules is working to address an important clinical need while building India's capabilities in advanced medical materials and life sciences innovation.

FAST FACTS

Particulars	Details
Company	Miraqules MedSolutions
Legal Entity	Miraqules MedSolutions Private Limited
Inception	2018
Origin	NIT Rourkela, India
Industry	MedTech, Life Sciences, Advanced Biomaterials
Founder & CEO	Sabir Hossain
Co-founder & CMO	Dr. Mubeen Midda
Chief Scientific Advisor	Prof. Devendra Verma
Flagship Product	StopBleed®
Core Technology	Nanostructured Hemostatic Biomaterials
Regulatory Milestone	Indian regulatory approval, February 2026
Clinical Adoption	30+ hospitals and select Indian Army units
Patents	11 granted patents across seven international markets
Funding	Approximately US$1.17 million, including institutional support
Key Investor	GoAhead Ventures

Recent Recognition Grand Winner, SLINGSHOT 2026