

IIT-Indore transfers breakthrough leukaemia drug tech to industry

Engineered L-asparaginase offers safer, effective, stable, affordable treatment with fewer side effects and stronger impact

Our Staff Reporter

INDORE

The Indian Institute of Technology Indore (IIT Indore) has achieved a major scientific milestone by transferring its breakthrough technology for a new leukaemia (blood cancer) drug to DK Biopharma. This innovation, led by Prof Avinash Sonawane

and his research team from the Department of Bio-sciences and Biomedical Engineering, aims to transform treatment options for Acute Lymphoblastic Leukaemia (ALL) patients.

Currently, ALL is treated using L-asparaginase, a drug that deprives cancer cells of essential nutrients. However, existing versions cause severe side effects such as liver damage, neurological issues and allergies, creating long-term risks, particularly for children.

The engineered L-asparaginase developed at IIT Indore overcomes these limitations and has shown remarkable



IIT Indore transfers novel drug technology for improved leukemia treatment outcomes in lab studies.

Key highlights of the breakthrough drug

- **SAFER:** Reduced side effects, especially for children.
- **MORE EFFECTIVE:** Destroyed over 85% leukemia cells in laboratory studies.
- **STABLE:** Longer shelf life, easier storage and administration.
- **AFFORDABLE:** Lower production costs ensure wider accessibility for hospitals and patients.

Director of IIT Indore, Prof Suhas S. Joshi, said, "At IIT Indore, we believe science should directly impact lives. This technology transfer represents a step toward making advanced leukaemia treatment both accessible and affordable."

Prof. Avinash Sonawane emphasised, "Seeing our research reach the stage of technology transfer is a proud moment. With DK Biopharma's collaboration, we aim to provide a safer, more effective and affordable treatment for leukaemia patients, especially children and young adults."

This development brings new hope to families battling blood cancer, particularly in India, where high costs often limit access to proper cancer care. The transfer marks a significant stride toward saving lives with innovative, patient-friendly solutions.