HARYANA STATE RESEARCH FUND | 2025-26

Student Principal Investigators

Agriculture

Name of PI	Institute of PI	Designation/Programme Enrolled	Topic of Research	Summary of Expected Outcome
Anil	GJUS&T, Hisar	Research Scholar	Fertilizer use and imbalance in Haryana: A district wise analysis	District-Wise Fertilizer Database: A standardized dataset quantifying N, P, and K consumption across Haryana's districts to measure exact deviations from the ideal : : baseline ratio. Trend of fertilizer actual use, Spatial GIS Mapping Framework: High-resolution spatial maps identifying regional fertilizer imbalance hotspots, over-reliance on Urea, and potassic/phosphatic nutrient deficiencies....
Sobit	Guru Jambheshwar University of Science and Technology (GJUS&T), Hisar, Haryana	B.Tech, 3rd Year — Department of Electrical and Electronics Engineering (EEE), GJUS&T Hisar	Smart Crop Monitoring Hexadrone for Real-Time Agricultural Analysis —	First, a working drone that can spot pest attacks and plant diseases early, so farmers lose less crop and use less pesticide. Second, a simple dashboard that gives farmers clear, easy alerts, so even small farmers with no technical background can use it. Third, a low-cost system that other institutions in Haryana can copy and use for other crops too, helping raise farm incomes and bring this kind of technology to more farmers across the state.
SURABHI	Central University of Haryana	PhD Microbiology, 1st Year	Development of Biodegradable Food Grade Active Packaging Film from Millets	Development of millet-based biodegradable active packaging film Value addition to millets and benefits to farmers Technology development, commercialization, and employment generation Overall, the research can position Haryana as a contributor to sustainable millet utilization and innovative biodegradable packaging technology, aligning agricultural development with environmental protection and economic growth.

Science & Technology

Name of PI	Institute of PI	Designation/Programme Enrolled	Topic of Research	Summary of Expected Outcome
DEEPANSHU	CENTRAL UNIVERSITY OF HARYANA	PhD Microbiology, 2nd YEAR	DEVELOPING NOVEL STRATIGIES AGAINST BIOFILM FORMING PROTEINS IN MULTIDRUG RESISTANT DIARRHEAL E.COLI STRAINS (14166 -2026 SPD/HSHEC/ HSRF)	Identification of novel biofilm targets combating antimicrobial resistance , development of anti-biofilm strategies Strengthening public health in Haryana
Mr. Vasudev	Guru Jambheshwar University of Science & Technology, Hisar	Student B.Tech (EE), [Enrollment number withheld], Department of Electrical and Electronics Engineering	Smart ADAS 4X - Hybrid Blind Spot Radar & AI-Based Accident Emergency System,	The main innovation of this project is to make the accident emergency response system automatic. After an accident is detected, the system can automatically send an emergency alert and help contact the ambulance and police, reducing the delay in getting medical help to the injured person. The system can also share important accident details and the location with the concerned authorities....

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Ms. Mehak Dhanuka	K. R. Mangalam University	Student Principal Investigator - B.Pharm., 3rd Year (5th Semester), School of Medical & Allied Sciences; [Enrollment number withheld]	Design, Synthesis, and Biological Evaluation of Novel Glycolipids for Immunotherapy in Inflammatory Bowel Disease	1. Scientific outcome: a library of 20 characterized glycolipids and 1-2 IL-10/Treg-active leads validated in relevant cellular and DSS-colitis models. 2. Innovation outcome: at least one patent application and a translational data package for industry or follow-on funding. 3. Capacity outcome: one peer-reviewed publication, hands-on student training, and an institutional medicinal-chemistry/ immunology pipeline. Together, these outcomes will strengthen Haryana's indigenous drug-discovery capacity, create protectable biomedical IP, encourage academia-industry collaboration, and support development of a more affordable therapy for chronic intestinal inflammation.
Navdeep	Guru Jambheshwar University of Science and Technology (Hisar)	Student, B.Tech. 3yr (5th semester)	Design of Smart Air Battery,	* Agricultural Power Reliability: Provision of stable, uninterrupted electricity for rural irrigation and community infrastructure, effectively eliminating reliance on diesel generators. * Scalable Clean Energy Integration: Cost-effective deployment blueprints that support Haryana's strategic vision of meeting % of its energy demand from clean sources by * Contribution to Haryana: These outcomes directly resolve rural grid intermittency, reduce local carbon footprints.
Preeti	Guru Jambheshwar University of Science and Technology, Hisar	M.Pharmacy (Pharmaceutics)- 2nd year	Poloxamer thermosensitive in-situ gel containing Itraconazole for Vaginal Candidiasis	The project is expected to deliver three major outcomes: (development and optimization of an itraconazole-loaded nanostructured lipid carrier (NLC) incorporated into a thermosensitive vaginal in-situ gel for effective localized treatment of vulvovaginal candidiasis; (generation of scientific evidence regarding improved drug solubility, controlled release, vaginal retention and therapeutic performance of the developed formulation;...
Shubham Singh Patel	National Institute of Food Technology Entrepreneurship and Management-Kundli	PhD Postharvest Technology Bioprocessing and Environmental Sciences 3rd year-5th Semester	Valorization of Mushroom Processing Residues for the Extraction of Vegan Chitosan Using Emerging Technologies and its Applications	To tackle agro-industrial waste by systematically utilizing discarded Mushroom Processing Residues (MPR) from Haryana's extensive button mushroom industry. To establish a sustainable economic model by converting low-value MPR waste into a high-value, biodegradable vegan chitosan. To source materials locally from Sonipat farms while actively educating farmers on the economic potential of their mushroom waste.

Industry Innovation and Others

Name of PI	Institute of PI	Designation/Programme Enrolled	Topic of Research	Summary of Expected Outcome
Ms Nidhi Mandloi	National Institute of Food Technology Entrepreneurship and Management An Institute of National Importance, Kundli, Sonipat, Haryana	PhD Scholar/ Postharvest Technology Bioprocessing and Environmental Sciences/ 3rd year 5th semester	Harnessing Paddy Straw Biomass to Develop Prebiotic XOS-Based Synbiotic for Gut Health.	First, an optimized, scalable protocol for PEF-assisted extraction of xylooligosaccharides (XOS) from rice straw, offering a practical route to divert straw from open burning, directly cutting air pollution in Haryana. Second, a characterized, food-grade XOS ingredient with confirmed prebiotic potential, creating a value-added product from agricultural residue that farmers and local food industries can market, generating new rural income streams....

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Prachi Nirwal	BPS Women University	Research Scholar	Generative AI Readiness in Circular Textiles: A Study of Panipat's Second-hand Clothing Firms	GenAI Readiness Assessment: Develop an evidence-based assessment of GenAI adoption readiness among Panipat's second-hand clothing MSMEs, enabling targeted policy and capacity-building interventions. Sustainable and Efficient Operations: Identify how GenAI can reduce textile waste, improve resource efficiency, and enhance productivity and profitability, supporting cleaner and more sustainable industrial practices in Haryana....

Climate Change, Water Management, AYUSH, Education and Skill

Name of PI	Institute of PI	Designation/Programme Enrolled	Topic of Research	Summary of Expected Outcome
Mukesh Kumar	Guru Jambheshwar University of Science and Technology, Hisar, Haryana	Research Scholar, Ph.D. Programme in Economics, Department of Economics	The Status of Anaemia among Women of Haryana: A District-wise Analysis Sanction	The study will prepare a district-wise anaemia profile of Haryana and identify districts with a high prevalence of anaemia. This will help the government prioritize districts and allocate health and nutrition resources more efficiently. The study will identify the major socio-economic and demographic determinants of anaemia, including poverty, education, nutritional status, rural residence, and healthcare access....