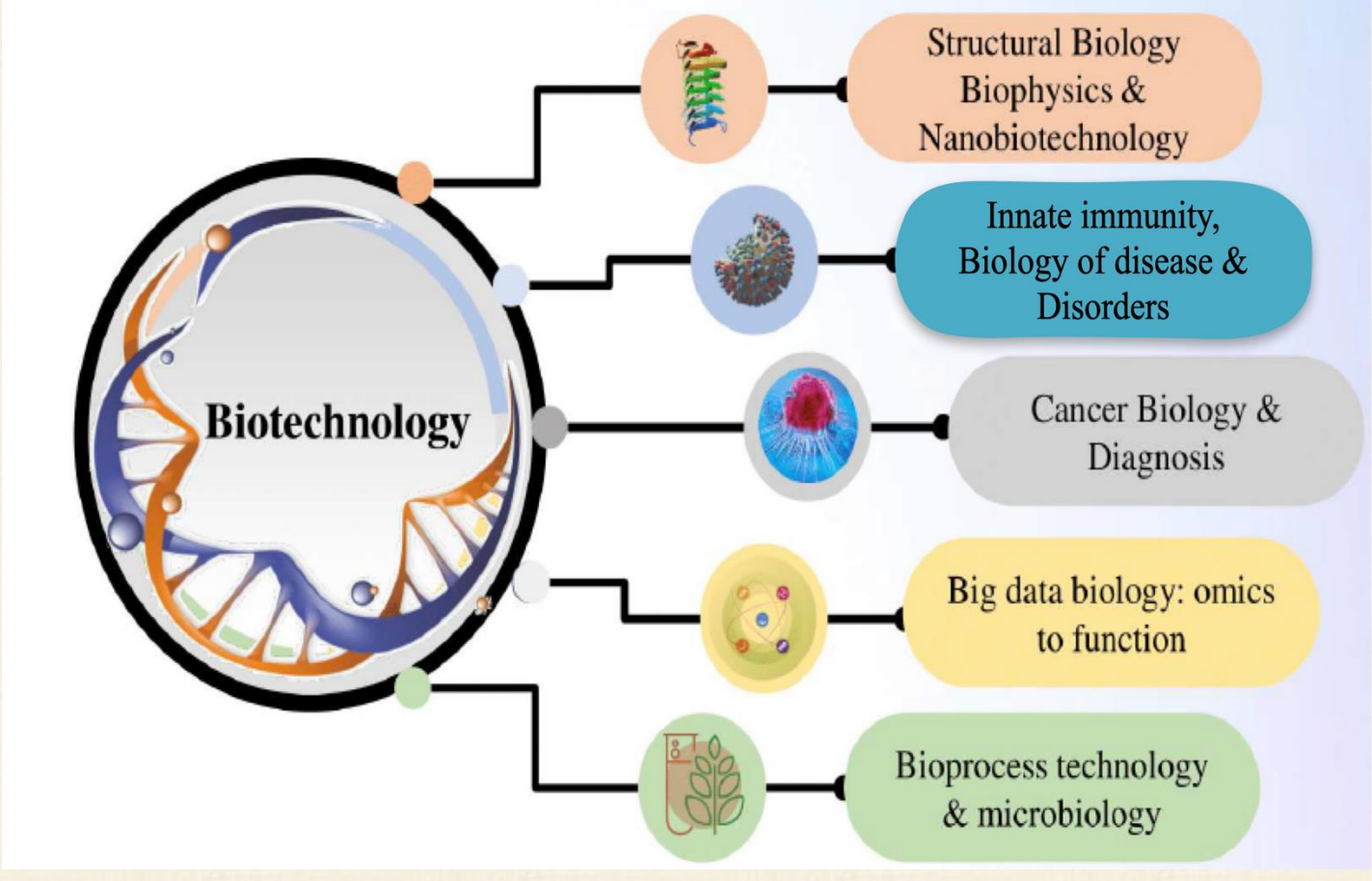
Department of Biotechnology

Indian Institute of Technology Hyderabad

भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Ph.D. Admissions Brochure [Jan 2026]

Website: https://biotech.iith.ac.in/



Department of Biotechnology

The Department of Biotechnology, established in 2010, offers outstanding research programs in the frontier areas of biotechnology encompassing both applied and basic research spanning various experimental and computational frontiers. Research activities in the department are funded by national agencies such as DBT, DST, ICMR, CSIR, etc.

The mission of the Ph.D. program is to develop a new generation of scientific leaders with scientific vigor, critical thinking, ethics, and multitasking managerial skills to thrive in the fast-paced technology-driven industry and academia. We foster innovations through cutting-edge technologies and interdisciplinary research.

For more details visit: https://biotech.iith.ac.in/

Research areas open for the Jan 2026 round

Applications are invited from suitably qualified & motivated candidates for admission to the Ph.D. program in the Department of Biotechnology, IITH, in the following research areas:

Computational Labs

Research Areas	Faculty
Exploring the molecular mechanisms of diseases by in vitro and in silico approaches: Antimicrobial resistance, neurodegenerative disorders, small molecule ligand screening & biomolecular interaction prediction using machine learning	**Prof. Thenmalarchelvi Rathinavelan** https://people.iith.ac.in/tr/Home.html
Models of human/mouse immunometabolism in fungal infections, Machine learning for detection of infection biomarkers, Metabolic network annotation & reconstruction of fungal parasites, Tool, algorithm and database development, Network topology analysis, Gene regulatory network inference	**Dr. Abhishek Subramanian** https://sites.google.com/bt.iith.ac.in/comp-bio-abhishek/home
Computational genomics and transcriptomics, AI for precision medicine, RadioGenomics, Image processing, predictive biomarkers in cancer, neurodegenerative disorders, epigenomics, genome wide drugs and CRISPR/sh-RNA screens.	**Dr. Rahul Kumar** (https://people.iith.ac.in/rahulk/)
Cancer genomics and biomarker discovery, 3D cancer model development, Drug resistance and repurposing, Long noncoding RNAs, Alternative splicing and RNA metabolism in cancer, Protein Engineering.	**Dr. Ashish Misra** https://cgrblab.bt.iith.ac.in/
Microbial genomics, Evolutionary biology, Microbial diversity, Plant Genomics, Plant metagenomics, Microbiome, Plant-microbe interactions, Computational biology, prediction webservers.	**Dr. Gaurav Sharma** https://sites.google.com/view/sharmaglab/

Research areas open for the Jan 2026 round

Applications are invited from suitably qualified & motivated candidates for admission to the Ph.D. program in the Department of Biotechnology, IITH, in the following research areas:

Wet labs/Experimental Labs

Research Areas	Faculty
Biofuels, Biochemicals, Biomaterials, Nanobiotechnology, Bioprocess technology, Downstream processing, Hydrothermal Liquefaction, Waste valorization and Circular economy.	**Dr. Althuri Avanthi** https://sites.google.com/bt.iith.ac.in/integratedbioprocesstechnology/home
Ion-channels in diseases, mechanistic toxicology using in-vitro and in-vivo models, identifying novel targets using zebrafish xenograft models. Prior experience with mammalian cell culture, patch-clamp electrophysiology or zebrafish handling is desirable.	**Dr. Anamika Bhargava** https://csl.biotech.iith.ac.in/
Epigenetics and DNA repair, Enzyme engineering for active pharmaceutical ingredient synthesis, Drug/inhibitor design, X-ray crystallography, Biophysics and biochemistry, Computational biology, phase separation of macromolecules.	**Prof. Rajakumara Eerappa** https://www.rajlab-bt-iith.com/
Mechanism of cell division, chromosome segregation, transcription regulation leading to aneuploidy, developmental disorders, infertility, and cancers. Epigenetics, hisotne modifications, single-molecule imaging	**Dr. Gunjan Mehta** https://www.mehtalab-iith.com/
Cancer genomics and biomarker discovery, 3D cancer model development, Drug resistance and repurposing, Long noncoding RNAs, Alternative splicing and RNA metabolism in cancer, Protein Engineering.	**Dr. Ashish Misra** https://cgrblab.bt.iith.ac.in/
Circadian Rhythms, Sleep, Cancer, Mental health	**Dr. Sandipan Ray** https://www.circadianlab-iith.com/
DNA repair	**Prof. Anindya Roy** https://sites.google.com/iith.ac.in/arlab

Research Areas open for the Jan 2026 round

Wet labs/Experimental Labs (continued)

Research Areas	Faculty
Exploring the molecular mechanisms of diseases by in vitro and in silico approaches: Antimicrobial resistance, neurodegenerative disorders, small molecule ligand screening & biomolecular interaction prediction using machine learning	**Prof. Thenmalarchelvi Rathinavelan** https://people.iith.ac.in/tr/Home.html

Minimum Eligibility Criteria

Minimum Eligibility

- MTech in any area of Life Sciences/Biotechnology/Physical Sciences.
- MSc degree in any allied area of Life Sciences/Biotechnology, Physical or Chemical Sciences and possessing a valid national level JRF qualification (or) qualified GATE.
- BTech/BE in any allied area of Life Sciences/Biotechnology/Physical Sciences/MBBS and qualified GATE or with a valid national level JRF qualification.

Please note: The department reserves the right to set a different criterion, which can be equal to or above the eligibility criteria for shortlisting the candidates for the selection process.

Category of admission

I. Full-time Institute Fellowship (funded by MoE): Any candidates with MTech can apply. Any candidates with MSc/BTech/MBBS (With GATE) degree can apply.

II. Fellowship from external funding agency: Candidates with valid CSIR-NET-JRF/UGC-NET-JRF/ICMR-JRF/DBT-JRF/ (Category-I) award or any other equivalent national level qualification for research fellowship tenable at IITH (e.g., DST-INSPIRE fellowship) can apply under this category.

Note: Prospective applicant has to ensure he/she meets all eligibility criteria before applying. Shortlisting criteria are usually higher than minimum eligibility criteria. *The department reserves the right to set any cut-off criteria for shortlisting the candidates.*

Selection Procedure

- Candidates will be shortlisted according to the criteria set by a shortlisting committee and called for an interview subsequently.
- Selection to the Ph.D. program will be based on the performance in the interview.
- Request to change the interview date/time will not be entertained.

Interested candidates can apply online through IIT Hyderabad's website: ***http://www.iith.ac.in/phdadmissions/***

For any further information, please contact by email:
phd_biotech@iith.ac.in

Note: ***The department has the right not to select any candidate if appropriate candidates are not found.***

Career Prospects

Biotechnology/Bioinformatics Research & Teaching (Academics)

Pharmaceuticals and Healthcare Industries

Science Writers Science Communicators

Top Companies and Institutes

NIH National Institutes of Health

Indian Institute of Science भारतीय विज्ञान संस्थान

Pfizer

MERCK

Roche

Harvard University

ThermoFisher Scientific

BIO-RAD

NOVARTIS

University of Cambridge

Stanford University

gsk GlaxoSmithKline

University of Oxford

Lilly

Massachusetts Institute of Technology