



Awalokan

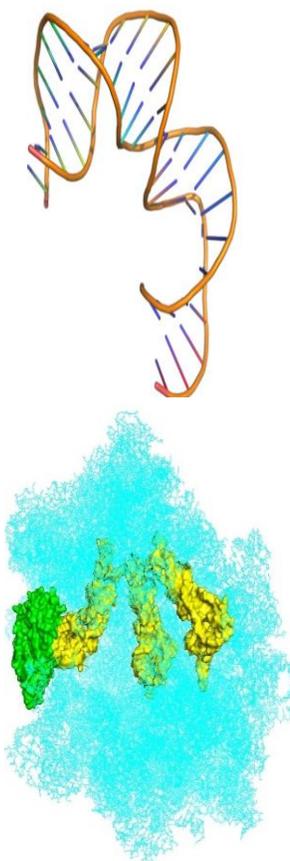
DEPARTMENT OF BIOSCIENCES AND BIOENGINEERING IIT GUWAHATI

VISION/MISSION

THE DEPARTMENT OF BIOSCIENCES AND BIOENGINEERING (BSBE) AT THE INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI (IITG) WAS ESTABLISHED IN NOVEMBER 2002 TO CONTRIBUTE TO THE FASCINATING AND EMERGING AREAS OF BIOLOGICAL SCIENCES. THE DEPARTMENT IS UNIQUE IN NORTH-EASTERN INDIA, IMPARTING QUALITY EDUCATION AND PROVIDING AN EXCELLENT RESEARCH ENVIRONMENT THROUGH ITS ONGOING PROGRAMS.

IT IMPARTS TRAINING FOR STUDENTS TO MAKE THEM COMPETENT, MOTIVATED ENGINEERS AND SCIENTISTS. THE DEPARTMENT HAS DEVELOPED EXTENSIVE RESEARCH FACILITIES AND INFRASTRUCTURE TO SUPPORT THE ONGOING TEACHING AND RESEARCH INITIATIVES.

APART FROM FUNDAMENTAL RESEARCH, THE DEPARTMENT AIMS TO MEET THE TARGETED DEMANDS TO CATER THE REQUIREMENTS OF BIOTECHNOLOGY BASED INDUSTRIES.



RESEARCH THRUST AREAS

- ✚ BIOCHEMICAL ENGINEERING
- ✚ BIOMECHANICS
- ✚ BIOSENSORS
- ✚ CANCER BIOLOGY
- ✚ CELL BIOLOGY
- ✚ COMPUTATIONAL BIOLOGY
- ✚ FUNGAL BIOTECHNOLOGY
- ✚ INFECTIOUS DISEASES
- ✚ NANO BIOTECHNOLOGY
- ✚ NEURAL ENGINEERING
- ✚ PLANT BIOTECHNOLOGY
- ✚ STEM CELL BIOLOGY
- ✚ STRUCTURAL BIOLOGY
- ✚ TISSUE ENGINEERING
- ✚ VIROLOGY

FROM HOD's DESK

I am delighted to see our BSBE Dept Annual Newsletter "Awalokan" for the year 2018-19. I hope it will be a regular feature from now on. We started our journey in 2002 and for last 17 years, the department has steadily grown in terms of its academics, facilities and research environment through its ongoing programs coupled with an OUTREACH program and development activities. Thanks to the efforts of the faculty members, staff and our students who are credited to its success. Still a long way to go...

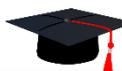


PROGRAMS OFFERED

✚ UNDERGRADUATE PROGRAM
B.TECH BIOTECHNOLOGY
(8 semesters)

✚ GRADUATE PROGRAM
M.TECH BIOTECHNOLOGY
(4 semesters)

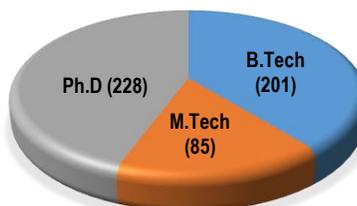
✚ PhD



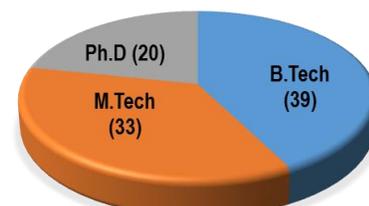
M.Tech



B.Tech



ONGOING STUDENTS



STUDENTS GRADUATED IN 2018-2019

STUDENT ACCOMPLISHMENTS – Just a few from a long list!

- ✚ **Ms. Debika Datta:** Travel grant by American Peptide Society to attend the American Peptide Symposium.
- ✚ **Ishani Chakrabartty:** AWSAR Award by DST, Govt. of INDIA, for the Best Science Story in the PhD category.
- ✚ **Janani G:** Awarded “Fulbright Nehru Doctoral Research Fellow.
- ✚ **Pratik Nag:** Selected for the Prime Minister’s Research Fellowship (PMRF).
- ✚ **Yoganand K.N.R:** AWSAR Award by DST, Govt. of INDIA, for the Best Science Story in the PhD category.
- ✚ **Yogendra Pratap Singh:** Awarded Newton Bhabha PhD Placement Programme 2017-18 by Department of Biotechnology, Government of India and British Council, UK and Raman-Charpak fellowship 2017-18 by Indo-French Centre.
- ✚ Several B.Tech and M.Tech students have been admitted to prestigious universities worldwide like Yale, Cornell, Maryland, University of Frankfurt, National University of Singapore, *etc.* for their higher studies.

JOINT ACADEMIC PROGRAMS

The department has ongoing joint academic programs with several international and national institutes such as GIFU University, University of Heidelberg, NIPER Guwahati, NIT Agartala, *etc.*



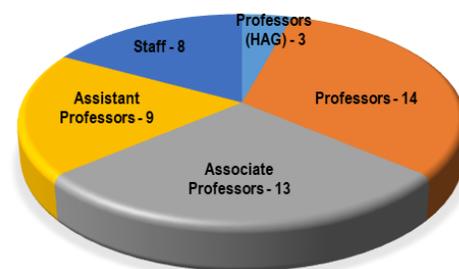
UNIVERSITÄT
HEIDELBERG
ZUKUNFT
SEIT 1386



Congratulations

FAST FACTS: RESEARCH 2018-19

Journal publications	235
Impact factor range	1-19
Books published	04
Book chapters published	56
Patents filed	17
Invited lectures	115



Faculty: 39 and Staff: 8

RESEARCH PROJECTS



Funding Agency	No of Projects	No of faculty	Amount in lakhs
DBT	39	21	3867.7180
SERB	9	7	351.7300
DST	7	4	269.7500
ONGC	1	1	181.7230
CSIR	2	2	42.1600
ICMR	1	1	37.9600
BRNS	1	1	31.3375
IIT Guwahati	2	2	15.0000
Central Silk Board	1	1	3.3000
TOTAL	63		4800.6785



Funding Agency	No of Projects	No of faculty	Amount in lakhs
DBT	13	11	1457.2288
NER-BPMC	1	1	210.6100
DST	4	3	179.3890
SERB	3	3	126.5500
DHR	1	1	120.9700
ICMR	2	1	79.0000
SPARC	2	2	58.8400
DRDO	1	1	9.8700
Himalaya Drug Company	1	1	3.4000
Total	28		2245.8578

FACULTY AND STAFF ACCOMPLISHMENTS

- ✚ **Dr. Ajay Kunnumakkara:** Appointed as visiting scientist AIST, Japan.
- ✚ **Prof. Arun Goyal:** Nominated as member, technical expert committee for DBT-NER by DBT in the area energy, environment and biodiversity, Dec 2018 for 3 years.
- ✚ **Dr. Biman B. Mandal:** Cover pages (03) in "ACS Biomaterials Science & Engineering", "ACS applied Bio materials" and "JMC-B" for work on silk based tissue engineering.
- ✚ **Dr. Kusum Singh:** Biotechnology Overseas Associateship for NER Scientists Award 2018, Department of Biotechnology, Ministry of Science and Technology, Govt. of India.
- ✚ **Dr. Pranjal Chandra:** Awarded Young scientist Award 2017-2018 by the Biotech Research Society of India and Young Engineers Award – 2018 by the Senior Engineers Forum-Guwahati.
- ✚ **Prof. Pranab Goswami:** Nominated as DBT-NER steering committee member for a period of 3 years from December 2018.
- ✚ **Dr. Souptick Chanda:** Received Fulbright-Nehru Academic and Professional Excellence Fellowship 2019-20 to carry out research at Harvard Medical School, Boston, USA.
- ✚ **Prof. Ranjan Tamuli:** Appointed as research advisor of Nan Yang academy of sciences (Singapore) with effect from the October 22, 2018.
- ✚ **Dr. Surajbhan Seveda:** Awarded "Shastri-Canadian Travel support" as a visiting scientist, Department of Biological Science, University of Calgary, Canada (16 Dec 2018 to 10th Jan 2019).

Congratulations

MAJOR EVENTS: 2018-19

- ✦ Vigyan Jyoti 2018, Department of Science and Technology (DST) India, 29 August- 14 September 2018.
- ✦ International Conference on Nutraceuticals and Chronic Diseases, 14-16 September 2018.
- ✦ Recent advances in Bioinspired Nanomaterials for Environmental Applications, DST-UK India educated and research initiative, 18 December 2018.
- ✦ International Conference on Next Generation Plant Production and Bioresources Utilization Technologies (NGPPBUT 2019), in association with IIT Guwahati and International Plant Propagators' Society (IPPS), 11-13 February 2019.
- ✦ International Conference on Trends in Plant Sciences and Agrobiotechnology (ICTPA 2019), in association with IIT Guwahati and Plant Tissue Culture Association-India (PTCA-I), 14-16 February 2019.
- ✦ 20th Indo-US Flow Cytometry Symposium cum Workshop on "Applications of Flow Cytometry in Biotechnology, 13-16 March, 2019.



RESEARCH CONCLAVE 2019



- ✦ Research Conclave is organized under the banner of Students' Academic Board (SAB) of Indian Institute of Technology Guwahati (IITG).
- ✦ It is a staunch platform to nurture the young minds towards research, innovation and entrepreneurship.
- ✦ Students showcase their research activities in the form of oral presentation, poster presentation, model presentation, etc.



INTERNATIONAL GUESTS/SPEAKERS

- ✦ **Prof. Philip Cohen**, University of Dundee gave a lecture on "The interplay between protein phosphorylation and ubiquitylation in regulating the innate immune system".
- ✦ **Prof. Claus-Michael Lehr**, Helmholtz Institute of Pharmaceutical Research, Drug Delivery Technologies for Combatting and Preventing Infectious Diseases.
- ✦ **Prof. John N. Giannios**, World Genomic Translational Medicine Organization, Eradication of chemoresistant metastatic cancer stem cells mediated by nanosurgery.
- ✦ **Prof. Akio Ebihara**, Gifu University, Gifu, visited the Department.

