

2019-20

BIOBEADS



DEPARTMENT NEWSLETTER
DEPARTMENT OF BIOTECHNOLOGY
SAHRDAYA COLLEGE OF ENGINEERING
AND TECHNOLOGY, KODAKARA

INSTITUTE VISION

- Evolve as a leading technology institute to create high caliber leaders and innovators of global standing with strong ethical values to serve the industry and society

INSTITUTE MISSION

- Provide quality technical education that transforms students to be knowledgeable, skilled, innovative and entrepreneurial professionals.
- Collaborate with academia and industry around the globe, to strengthen the education and research ecosystem.
- Practice and promote high standards of professional ethics, good discipline, high integrity and social accountability with a passion for holistic excellence.

DEPARTMENT VISION

- To be a national centre of excellence in Biosciences and Bioengineering

DEPARTMENT MISSION

- Educate the next generation of engineers with a relevant curriculum that will enable them to integrate biological sciences with engineering fundamentals that can create, model, and modify biological systems for industrial applicability.
- Encourage and facilitate research that would enable students to acquire new knowledge that is industrially and socially relevant.
- Train students to be leaders who value professional ethics and realize the need for societal contribution and environmental sustainability in their work

PROGRAM SPECIFIC OUTCOMES

Students should be able to:

- To measure, model and manipulate properties of biological systems at the cellular and molecular level so as to produce sustainable products that address environmental and ethical standards.
- To formulate and execute quantitative and design- oriented analysis of biological systems with modern tools and techniques that generate new knowledge at the interface of engineering and biology.
- To transform as socially relevant biological engineers having a professional outlook that would enable them to work as a part of a team in an industrial, research or entrepreneurial set up and sustain a desire for higher learning and research.

PROGRAM EDUCATIONAL OBJECTIVES

- To be equipped with the engineering skills and technical concepts enabling them to take up careers in Biotechnology and allied fields globally.
- To instill the passion for lifelong learning & scientific discovery that will allow them to conduct research and innovate technologies keeping them motivated to take up research, entrepreneurial or industrial careers.
- To inculcate entrepreneurial & techno management skills along with professional & ethical responsibility empowering them to be responsible & socially aware citizens



DEPARTMENT ACTIVITIES



- AICTE sponsored national conference on Molecular Tools and Disease Diagnosis 'MTADD 2K19' was successfully organised on 3rd, 4th & 5th of October, 2019. KTU Vice Chancellor Mrs. Rajasree M.S. inaugurated the conference. Paper and poster presentation competitions were conducted as a part of the conference.

TECHNICAL TALKS



- Dr Deepa Muricken, Head of Dept, Dept of Biotechnology of St Mary's College delivered a technical talk on the topic "Phytochemistry and plant derived compounds" for 2016 and 2017 batch students on 8th August 2019.



- Dr. Leon Ittiachen delivered a talk on the topic Professional Ethics for 2016 and 2017 batches on 27th September 2019.
- An Invited talk by Mr Sunil Thomas, DGM, Product Development, Arjuna Naturals Ltd was conducted for every student in the department on 18th January 2020.



- A student interactive session on the topic Waste Management was organized for the whole department on 1st February 2020. The session was handled by Dr. C.N. Manoj, Pelican Foundation, Alappuzha.
- A technical talk on How to use E-resources in the biotech field effectively was organised for 2017 batch students on 5th February 2020. The session was handled by Mr. Nandalal, Senior Training Manager of South India EBSCO Information Series & IEEE.



ASSOCIATION EVENTS

- The compilation of university seminar reports of 2016-2020 batch students was released on 11th January 2020
- In connection with National Science Day, A prototype making competition was organized on the theme 'Science for a Better Life' on 28th February 2020.



- As a part of promoting scientific thinking and scientific temper in the students, BEATS organised 'SCIENCEPTION 2020', A series of talks on science was conducted for first year students and the students of biotechnology department on 5th & 6th March 2020 respectively. The sessions were handled by Dr. Leon Ittiachen, Asst. professor, SCET and followed by the students Adityah Ganesh, Bristo Lorence, Britto Lorence and Caris Anthony.
- A virtual send off was arranged for 2016-2020 batch students on 21st June 2020.

ALUMNI INTERACTIONS

- Mr. Vishnu K, Junior Research Fellow, AIIMS Delhi and Mr. Abey Joseph, PhD Scholar, NIT Calicut interacted with S6 students on 21st August 2019.
- Mr. Sreekumar, An alumnus from 2013-17 batch, interacted with S6 BT students on 3rd September 2019. He has completed MS in Biotechnology from Warwick University, England.

STUDENT ACHIEVEMENTS

STUDENT PROJECT GRANTS AND AWARDS



- A team from S7 BT (Mijil Martin, Maya Swaran, Musthaqu T.M., Marzaan M. guided by Dr.Midhila Padman) reached the final round of Yuva Master Mind and secured a project grant of Rs.10,000/-.



- Alisha Babu, Anugraha V I, Megha Vincent and Saincy Maria Jenson of S5 BT guided by Ms. Pooja Das secured first prize in SRISHTI-2020 consisting a cash award of Rs 12,000/-, they also secured first prize and a cash award of Rs.5,000/- in Shastra-2020, they got a second prize and a cash award of Rs.13,000/- in Dyuthi-2020, and also third prize and a cash award of Rs.1000/- during Diksha-2020 for their project "KEYTHIN- A Keratin based Bioplastic".
- Ann Elizabeth Chummar and Ann Maria David of S5 BT participated in Eden 2.0 and their project was on "Exoskeleton for people affected by



Cerebral Palsy". They also participated in Idea Fest 2019 and were shortlisted for the second round for their another project Eeze flow-A communication enabled smart sanitary napkin, they also participated for Young Innovators Programme and were the finalists amongst the Top 102 teams, the duo with members from other department had also participated in Why Hack and their project was selected as one of the four best projects in the event.

STUDENT PROJECT PARTICIPATION

- Three teams from S7 BT (Nimi James, Neena T.K, Neeraj Ramesh, Najeeb Bin Haneef O, Amal Jose Thomas, Anju P.M, Adasrh Vishnu, Adityah Ganesh, Steffi Seelia Alphonso, Sujitha Unnikrishnan, Varsha J, Varsha P Ramesh) participated in Srishti 2020 hosted at Saintgits College College of Engineering, Kottayam.

- A team from S3 BT (Dimple Jose, Geethika, Fidha Aboobacker, Jini K Biju) had participated in Srishti 2020 at Saintgits College College of Engineering, Kottayam.

PAPER AND POSTER PRESENTATION



- A total of 18 students participated in the Paper presentation during MTADD 2019 among which 12 of them were from S8 BT and the rest 6 students were from S6 BT. Manju Mani of S8 BT secured first in a paper presentation on the topic "Dark DNA and its clinical significance". Athulya Martin of S8 BT secured second position in the paper presentation on the topic "Nanopore method for whole genome sequencing".

- Milan Maria Sajeev from S6 BT secured first in Paper presentation on the topic "Use of Nanotechnology for infectious disease diagnostics: Application in drug resistant Tuberculosis". Hanna Thomas of S6 BT also secured third prize in a paper presentation on the topic "Biomarker for detecting early stage breast cancer".



- Almost 62 groups presented their posters on various topics, 17 were from S8 BT, 38 were from S6 BT and 7 of them were from S4 BT. Ann Mariya joshi, Arathi.K.P, Aruna P.B, Arya M. Nair secured first prize in the poster presentation on the topic Bioremediation of PAH using Catechol 1,2dioxygenase.

TRAINING, INTERNSHIPS, COURSES & WORKSHOPS

- A total of 29 Students from S8 BT had attended for internships at various places -Bionest Kalamassery (7 Students-21 days), Kerala Forest Research Institute, Peechi (5 Students- 5 days), MIMS Calicut (12 Students- 7 days), Sangene Biotech, Bangalore (5 Students-15 days).

- Around 18 Students from S6 BT had attended for internships at various places -Unibiosys (14 Students-7 days), Indian Cardamom Research Institute(3 Students-12 days), Uwin Life Sciences, Malappuram(1 Student- 12 days)

- Almost 40 Students from S4 BT had attended for internships at various places - FACT, Eloor (30 Students- 7 days), Sitharam Medicals (4 Students- 7 days), Milma (3 Students- 7 days), Eastern Commo-



dities Pvt. Ltd.(1 Student-7 days), NIT Rourkela (1 Student-16 days).

- Around 10 students had participated in the Startup Biotech Bootcamp which was conducted at KRIBS Bionest, Kalamassery.
- A handful of students had participated in the TEDx SahrdayaCET which was hosted in the campus on 28th September 2019.
- Almost 6 students from S6 BT had participated in a workshop on Virtual Reality and Augmented Reality at NIT Calicut on 10th January 2020.
- More than 20 students from S4, S6, and S8 BT had actively participated in Makers internship that was conducted in connection with IEDC Summit 2019.
- Some of the students from the department had participated in the WING- Women Rise Together Workshop conducted on 18th and 19th October 2019.
- A few students have also completed various online trainings offered by Internshala.
- Around 40 Students and Faculties of the department have successfully completed various NPTEL Courses and many students and faculties are attending the ongoing sessions too.
- Anjali P S and Milan Maria Sajeev of S6 BT had attended an International Conclave on Skills (ICSET 2020) at Government Engineering College, Thrissur.

UNIVERSITY RESULTS

- KTU results of 2016, 2017 and 2018 batches were published. Athulya Martin (SGPA-8.83) of 2016 batch was the topper of 6th semester. Nimmi James was the topper of 7th semester (SGPA-8.8) and Varsha J (SGPA-10) was the topper of 8th semester results. Jayalakshmi Jayan (SGPA-9.04) of 2017 batch was the topper of 4th semester and Merin John was the topper of 5th semester (CGPA-8.8)results.
- Varsha V (9.88) of 2018 batch was the topper of 2nd semester and also the topper in 3rd semester

results (CGPA-8.92)

PLACEMENTS AND HIGHER STUDIES

- Aakash P and Gopika Menon are placed at Zifo R&D solutions. Angitha Melvin, Ann Rose and Shraddha R Nair are placed at Sutherland Global Solutions. Rose Maria George and Varsha J are placed at Infosys Ltd. Gopika C and Shraddha R Nair are placed at CSS Corp.
- Adithyah Ganesh, Aakash P, Varsha J had qualified in the GATE Examination 2020.
- Varsha J joined for M.Tech at NIT Warangal. Amal Jose Thomas and Gopika C joined for M.tech at VIT, Vellore.
- Keerthana R Nair. Amrita E K.Sneha Shojan got placed as Trainee – Coding Services Visionary RCM InfoTech, Coimbatore.

STUDY TOURS

- Students of S4 visited Rubber Research Institute of India, Keezhukunnu, Kottayam on 5th March 2020.
- A study tour from 20th February to 24th February 2019 was organized for S8 students and visited Bangalore, Chikmagalur & Mysore.

SPORTS AND ARTS

- Amal Raj of 2017 batch participated in KTU E- Zone level chess competition held at Ernad Knowledge Centre, Malappuram and secured fourth position. He also participated in cricket competition held at GEC,Thrissur.
- Dheekshitha.K.S of 2017 batch participated in inter zone table tennis held at Vidya Institute of Science and Technology,Thrissur.
- G.Geethika Nair of 2018 batch participated in KTU E- Zone level badminton competition and qualified for semifinals.
- Sports day was conducted on 28th september 2019 and Athira C.S. of S1 secured first position in



discus throw. Anagha Rajendran of S3 secured third position in the 800m race. G.Geethika Nair and Gini.K.Biju of S3 secured third position in badminton. Arya.P.N and Cinda Maria Shaji of S3 secured second position in carroms. Neena T.K of S7 secured second position in the 1500m race. K S Sreehari and Amal Raj secured first position for BEATS in Chess.

- Beats secured second position in cricket, The team involved Amal Raj, Richards joby, Febin baby, Ananthu das K, Adarsh vishnu P S, Aakash P, Shreeraj S, Basil Tytus, Dheekshith KS, Alen Jos & Godwin Varghese.

- BEATS secured second position in volleyball, the team involved Adarsh Vishnu PS, Aakash P, Amal Jose Thomas, Basil Tytus, Najeeb bin Haneef, Shreeraj S, Rakesh V R.

FACULTY ACHIEVEMENTS



- Dr. Dhanya Gangadharan visited the University of Hull from September 3rd to 6th 2019.

- She delivered a lecture to the staff on possible collaborative research projects, in particular on renal monitoring using electro-chemical biosensors. Meetings with senior staff from Medical Engineering, Physics, Chemistry and Biosciences were also arranged.

- Dr.Amita Joy-Presented a paper in the Young Scientist Award category in AICTE sponsored conference on Molecular Tools and Disease Diagnosis conducted during 3rd, 4th and 5th October 2019 at SCET.

- Dr.Dhanya Gangadharan received a grant of Rs.35700/- from BRSI, INDIA for hosting Biotechnology Popularization and Skill Development Programme of BRSI during 2019-2020 on the topic “Biotechnology: Manipulating Biomolecules to Human Benefit”.

- Ms.C.Ambili Sasidharan presented a paper in AICTE sponsored conference MTADD organised by SCET.



- Dr.Leon Ittiachen served as a resource person for a national seminar on IPR-Tools to Protect Inventions and Creations in Biotechnology organized by St. Joseph's College, Irinjalakuda.

FACULTY PUBLICATIONS

- Dr.Midhila Padmam published a Malayalam novel named Njanum ente Unnikuttanum. The book was released by Honourable Minister Sri.V.S.Sunilkumar on 30 Nov 2019 during a book release function conducted in Kerala Sahitya Academy, Thrissur.

FACULTY TRAINING/WORKSHOPS

- Dr.Ambili Mechoor attended a FDP organised by NIT Calicut on 14th December 2019 on the topic ‘Beyond Glass Barriers’.

- Dr.Ambili Mechoor completed 9 FDPs during January 2020 - June 2020. It includes 6 FDPs offered by COURSERA, two by NPTEL and one FDP organized by Kristu Jayanthi College, Bangalore on the topic “SARS-CoV-2 Research: Insights from Computational Biology”



- Ms.Ranimol G, Ms.Smeera Thomas and Ms.Salini P J attended a FDP organized by the Division of Safety and Fire Engineering and Division of Chemical Engineering, School of Engineering of CUSAT and THDC Institute of Hydropower Engineering and Technology, Tehri, Uttarakhand at Cochin from 2nd December 2019 to 7th December 2019 on the topic “Advanced Separation Processes”.
- Dr.Uma Krishnakumar attended a FDP Programme organized by Department of Chemical Engineering, Government Engineering College Thrissur from 2nd December 2019 to 7th December 2019 on the topic “Recent and Emerging Trends in Fluid Mechanics Research” sponsored by Department of Technical Education, Govt of Kerala.
- Ms.Pooja Das has participated in the nature awareness camp held at Chimmony Wildlife Sanctuary from 20/12/2019 to 22/12/2019 as a part of NSS unit.
- Dr. Dhanya Gangadharan completed three FDPs offered by COURSERA.
- Dr.Uma Krishnakumar was the resource person for the FDP on “Role of Chemical Engineering in Sustainable Process Development” organized by the Department of Chemical Engineering, Sri Venkateswara College of Engineering, Sriperumbudur, Tamilnadu during 8/6/2020-12/6/2020. She also completed four FDPs on various field of Engineering and Technology.
- Dr.Amitha Joy, Dr.Dhanya Gangadharan, Dr.Uma Krishnakumar attended training in MATLAB fundamentals organized by Mathworks at SCET during 3rd-4th January 2020.
- Dr.Dhanya Gangadharan and Dr Uma Krishnakuma completed a 5 week FDP course on “Nanotechnology and Nanosensors” organized by Technion - Israel Institute of Technology
- Ms.P.Praveena completed two FDPs, offered by COURSERA and MHRD/ SPARC respectively
- Ms.Smeera Thomas completed FDP on Biology of Cancer by COURSERA and participated in an international webinar on “Recent trends and challenges in Biotechnology” organized by

Bharathiar University during 23/06/2020 to 26/06/20

- Ms.Ranimol completed four FDPs offered by COURSERA
- Ms.Salini.P.J attended STTP on “Recent Advances in Environmental Engineering & Management” organized by Division of Chemical Engineering, SOE @ CUSAT during 2nd-7th March 2020
- Dr.Amitha Joy successfully completed NPTEL course on Computer-Aided Drug Design with Elite + Silver certification.
- Ms.Smeera Thomas participated in SHE-RUN -2020, conducted by Decathlon Sports on March 8th 2020.

ENTREPRENEURIAL INITIATIVES



- B'Lite-India's first Algal seaweed Cookies produced by a startup Zaara Biotech has sparked with all its glory at GITEX Future Stars 2019 Dubai, an international startup event. Mr.Najeeb bin Haneef (2016 Batch) CEO and Founder of Zaara Biotech presented B'Lite at Dubai World Trade Centre from 6th to 9th October 2019. Zaara Biotech was one of the 18 startups selected from the state for the event.



ALUMNI IN NEWS



She subsequently joined NTU, Singapore (ranked as 11th in world) as a Postdoctoral Research Fellow in the Biomaterials group under the NTU-Northwestern institute for nanomedicine which is a collaboration between NTU and Northern western university in USA. Her work has been focused on developing nanoparticle-based solutions for therapeutic and diagnostic applications which covers areas such as controlled drug release, cancer detection using fluorescent nanocrystals and cell derived nanoparticles for therapeutic applications. She authored 16 high impact international scientific publications & one book chapter. Citations of over 620 and H index of 11. She had presented work in more than 17 international conferences.

Dr. Krishna Radhakrishnan (2005-09 Batch) did her MTech from Amrita center for nanoscience and molecular medicine and completed PhD. from Indian Institute of Science, Bangalore

GALLERY







STAFF EDITOR:

Dr Dhanya Gangadharan

STUDENT EDITOR:

Basil K Eldhose

