



GMIT's REFLECTION

E-News Letter

FEBRUARY
2023

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Issue-2



G M INSTITUTE OF TECHNOLOGY

Post Box No. 4, P.B. Road,
Davangere, Karnataka-577 006.

www.gmit.ac.in

DEPARTMENT OF BIOTECHNOLOGY

VTU RANKS FOR DEPARTMENT OF BT, GMIT @ 22ND VTU CONVOCATION:

Three students from 2022 output batch of Department of Biotechnology, GMIT secured ranks at the recently held 22ND VTU Convocation in Belagavi on 24th February, 2023. GMIT Chairman, GM MR Shri YU Subash Chandra, Principal Dr. Sanjay Pande MB, Head Dr. Prakash K K, faculty, staff and students of the department have congratulated the rank holders for their meritorious feat. The details are as follows:

- Rank 4th : Nivedita B Mangasuli (4GM18BT017) 9.26 CGPA
 Rank 5th : Pallavi K E (4GM18BT019) 9.23 CGPA
 Rank 7th : Bhoomika B (4GM18BT005) 9.23 CGPA



Biotechnology				
1	1SG18BT022	KALSHIK P M	SAPTHAGIRI COLLEGE OF ENGINEERING, BANGALORE	9.39 1
2	1MV18BT018	JUBY	SRI M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BANGALORE	9.39 2
3	4BD18BT010	POOJITHA S	BAPLUJI INSTITUTE OF ENGINEERING & TECHNOLOGY, DAVANGERE	9.3 3
4	4GM18BT017	NIVEDITA B MANGASULI	G.M. INSTITUTE OF TECHNOLOGY, DAVANGERE	9.26 4

SL NO	USN	STUDENT NAME	COLLEGE NAME	CGPA	RANK
5	4GM18BT019	PALLAVI K E	G.M. INSTITUTE OF TECHNOLOGY, DAVANGERE	9.23	5
6	1SG18BT009	BHAGYASHREE R	SAPTHAGIRI COLLEGE OF ENGINEERING, BANGALORE	9.23	6
7	4GM18BT005	BHOOMIKA B	G.M. INSTITUTE OF TECHNOLOGY, DAVANGERE	9.23	7
8	1OX18BT020	MOHASINA ANJUM P	OXFORD COLLEGE OF ENGINEERING, J.P. NAGAR,	9.22	8
9	4BD18BT004	GOWRISHREE UMESH M	BAPLUJI INSTITUTE OF ENGINEERING & TECHNOLOGY, DAVANGERE	9.21	9
10	1OX18BT008	CHAITHRA MUNIYODR	OXFORD COLLEGE OF ENGINEERING, J.P. NAGAR,	9.2	10

Some screenshots from leading newspapers:

OUTBOUND PROGRAMME:

Students of third semester were taken to Gokarna as a part of outbound programme on 11th and 12th February, 2023. They were accompanied by faculties Mr. Rakesh N R, Mrs. Keerthi S and Miss Sushma B S



DRONE APPLICATION DEMONSTRATION:

Students of third semester were taken to Arecanut fields of Davangere to demonstrate Greenfly drone insecticide/pesticide application demonstration on 22nd February, 2023. Faculty Dr. Pavan K J accompanied them.





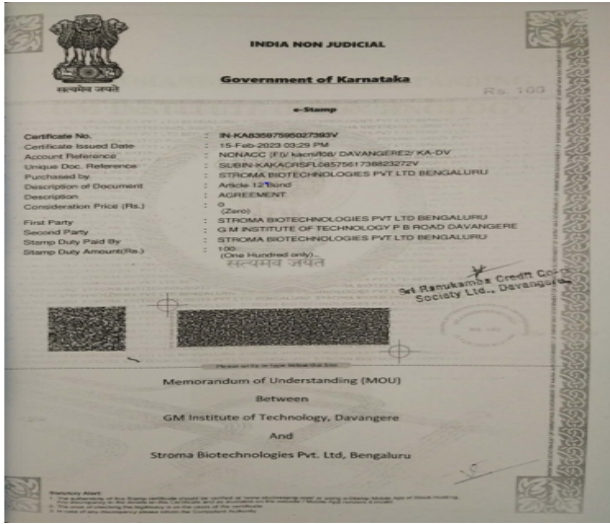
NEW FACULTY RECRUITMENT:

Mr. Akash Patel M P joined the Department of Biotechnology as Assistant Professor. He reported on 1st February, 2023. He recently completed his M.Sc in Biotechnology from Davangere University before joining GMIT.

FACULTY ACHIEVEMENTS:

MoU:

A Memorandum of Understanding (MoU) was signed between G M Institute of Technology and Stroma Biotechnologies Pvt. Ltd., Bengaluru on 15th February, 2023. This was initiated and conceptualized by Assistant Professors Mrs. Keerthi S and Miss Sushma B S



DEPUTATION TO VTU CONVOCATION:



Dr. Prakash K K, Professor and Head was deputed to VTU, Belagavi from 22nd to 24th February, 2023 on account of VTU 22nd Annual Convocation held on 24th February, 2023

Dear Sir,

Sub.: Deputation of Prof. Prakash - Reg

With reference to the cited subject above, it is requested to depute Prof Prakash to VTU, Belagavi from 22nd February 2023 to 24th February 2023 on account of VTU 22nd Annual Convocation to be held on 24th February 2023. Kindly do the needful.

Yours sinerly,

REGISTRAR (EVALUATION)

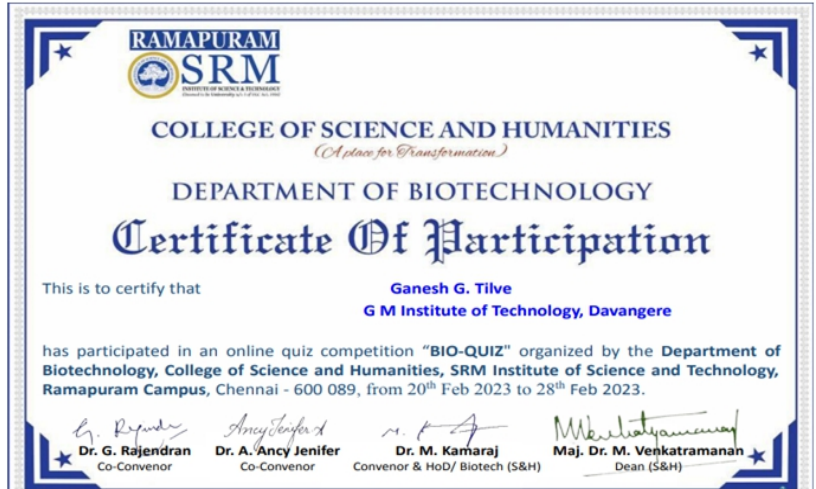
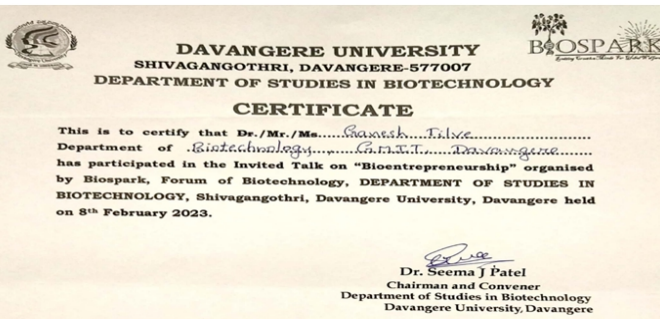
WEBINAR PARTICIPATION:

Dr. Gurumurthy H., Professor participated in two days webinar on " Fermentation: Interplay of Microbes, Immunity and Nutrition" organised by Department of Rural Development and Agricultural Production (RDAP), North- Eastern Hill University (NEHU), Tura Campus, Meghalaya held on 3rd and 4th February, 2023

INVITED TALK AND "BIOQUIZ" PARTICIPATION:



Mr. Ganesh G.Tilve, Assistant Professor, Department of Biotechnology participated in the invited talk on " Bioentrepreneurship" organised by BIOSPARK, Forum of Biotechnology. Department of Studies in Biotechnology, Shivagangothri, Davangere University, Davangere held on 8th February, 2023



Mr. Ganesh G.Tilve, Assistant Professor, Department of Biotechnology participated in online quiz competition "BIO-QUIZ" organised by the Department of Biotechnology, College of Science and Humanities, SRM Institute of Science and Technology, Ramapuram Campus, Chennai held on 28th February, 2023

2) POSTER PRESENTATION EVENT @ STATE LEVEL ISTE



On this occasion of **KARNATAKA STATE LEVEL ISTE STUDENT CONVENTION 2022**, the Department of Basic Science conducted **Poster presentation Competition** for the 1st year BE students on 23th July, 2022 to look beyond their technical knowledge and establish a relationship between Science and application of the learnt concepts. There were 4 teams participated in this event. The students were awarded with

the 1st and 2nd prize based on the visual impact, content, relevance and presentation. Participation certificate were given to all the participants.

The event was conducted in physics lab at 2 pm and was presided Dr. Onkarappa K. S. (Head- Dept. Basic Science), Dr. G. H. Pujar (Head-Dept of Physics), Dr. Onkarappa H S (Head-Dept. of Chemistry), and Basic Science staff.

The Event Judge: Dr. Dr. G. H. Pujar Assistant Professor and Head, Dept. of physics.

The event was co-ordinated by Dr. Vinay Parol, Dr. pavithra K S and Ms. Mamatha S R, Asst. Prof, Department of Basic sciences, GMIT, Davanagere.

The prize winners of the competition:

First prize: Dedeepya M and Geetha H T (SIT Gubbi)

Second prize: Ananya N G and Bhavana B R (GMIT Davanagere)

DEPARTMENT OF BIOTECHNOLOGY

NEW RECRUITMENTS:

Two new faculties have been recruited to the Department of Biotechnology:

1. **Dr. Pradeep MJ** (B.E-Biotechnology, M. Tech, Ph.D.- Chemical)

2. **Mr. Raviteja** [B.Sc., M.Sc., (Ph.D.)]

FACULTY ACHIEVEMENTS:



Mrs. Deepti Palleda
Assistant Professor



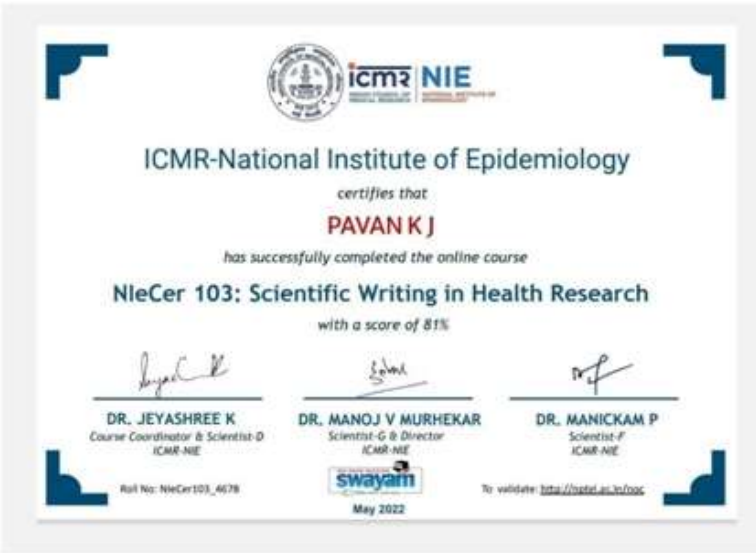
Mrs. Deepti Palleda was rewarded with “**Asset of GMIT- Gold**” on the occasion of Chairman Shri G M Lingaraju's birthday on 17th August, 2022. She was rewarded with a cash prize of **Rs. 1,00,000/-** and a **gold coin**. Members of GM family, MR Shri Y. U. Subhashchandra, Principal Dr. Y. Vijayakumar, Principals of GM group of institutions, Heads of various departments, teaching and non- teaching staff were present on the occasion.



Dr. Pavan K J
Assistant Professor

BOS Meeting:

Dr. Pavan K. J, Assistant Professor, Department of Biotechnology, attended the BOS meeting in KLE's RLS Science Institute, Belagavi to design CBCS Syllabi for 5th and 6th-semester Biotechnology.



Dr. Pavan K. J, Assistant Professor, Department of Biotechnology, completed NPTEL(Swayam) Online Course on “**Scientific Writing in Health Research**” with a score of 81%.



Dr. Pavan K. J, Assistant Professor, Department of Biotechnology, participated in FDP on Manuscript writing, Data Analysis, Publication, Patent, Plagiarism Ethics held between 11th to 15th July 2022 organized by REVA University, Bengaluru.



Dr. Gurumurthy H
Professor



Presented a Technical Talk on '**Stem cells and their Medical Applications**,' organised by Dept.of. Zoology, Govt. First Grade College, Davanagere



TECHNICAL SESSIONS

Session – I Time: 11.15 am to 12.30 noon

Topic:

Stem Cells and their Biomedical Applications

Speaker:

Dr. Gurumurthy H.
Professor, Department of Biotechnology
GM Institute of Technology, Davanagere





Mr. Rakesh N R
Assistant Professor

Has successfully completed his **open colloquium** for the submission of Ph. D. thesis under the guidance of Dr. Gurumurthy H. (Research Centre- Department of Biotechnology, GMIT) . **Dr. Uday Muddapur (Professor, KLE Tech, Huballi) and Dr. Prasanna (Assistant Professor, SIT, Tumkuru)** who are the members of his doctoral committee were the part of his colloquium.



DEPARTMENT OF CIVIL ENGINEERING



It is proud to share that Department had another feather to its thrown by winning the **BEST STUDENT PROJECT AWARD 2022** at state level in 45th series of KSCST Student project programme, IISc, Bangalore. By the students Mr. Amaranath swamy, Ms. Devika Hebbal, Mr. Hanumatha Gowda, and Mr. Hemanth Ambedkar, Under the Guidance of Mr. Puttaraj M.H.



It Is Glad to Inform that Mr. Harish B A has completed his PhD defense on “**PERFORMANCE OF RECYCLE AGGREGATE CONCRETE TWO WAY SLABS WITH DIFFERENT FIBERS UNDER PUNCHING SHEAR**” on 12-08-2022, under the guidance of Dr.N Venkata Ramana, Associate Professor, Department of Studies in Civil Engg. UBDTCE, Davanagere.



Dr. Arunkumar S L, Associate Professor, has published a paper in a reputed journal Ecology, Environment and Conservation Journal with the title of “**Assessment of Groundwater Quality and its Spatial Variability for Drinking Use in Northeastern Karnataka**”



Department has reached another milestone by getting funded for **STUDENTS INTERNSHIP** of worth 2 lakh from Ministry of Education, Ministry of Urban and Housing affairs and N.E.A.T through AICTE Internships under the mission of “**Jal Dharohar Sanrakshan**”, and it is one of among three colleges throughout Karnataka. Under the mentorship of Dr. Kirankumar H S and Mrs. Spoorthi B.



GM Institute of Pharmaceutical Science and Research, presented Certificate to **Dr. Sanjay Pande M B** for being resource person and presenting a lecture in AICTE sponsored Impact Lecture Series-Session-II on 8-8-2022.

Dr.Sanjay Pande M B, presented a talk in Induction program for Fresher in GM Polytechnic on the topic need for Technical Education in present era.

BENGALURU VISIT:



Interaction with Experts of IISc, IBM, Intel and CADMAXX for data center and Implementation of Startups in the Campus Members present are Dr. Y. Vijaya Kumar, Principal, Dr Divyananda, Dr SGS Swamy , Dr. Sanjay Pande M B, Mr. Keerthi Prasad, Mr. Kotreshi S N, Mr. Thippeswamy G N.



Mr. Niranjana Murthy C Assistant professor, Department of Computer Science and Engineering, has successfully submitted **PhD Thesis** to VTU under the guidance of **Dr.Sanjay Pande M B** in August 2022.

DEPARTMENT OF BIOTECHNOLOGY

FACULTY ACHIEVEMENTS:



Mrs. Deepti Pallea
Assistant Professor

Mrs. Deepti Pallea has published a research paper in SCOPUS indexed journal “Journal of Emerging Technologies and Innovative Research (JETIR)” titled “Characterization and in-vitro cytotoxicity of lupeol isolated from leaf extract of *Ficus mysorensis*”

How to Cite:
Gadde H, Krishna, V., & Henna, V. (2022). Characterization and in-vitro cytotoxicity of lupeol isolated from leaf extract of ficus mysorensis. International Journal of Health Sciences, 6(06), 2152-2153. <https://doi.org/10.53730/ijhs.v6i06.9105>

Characterization and in-vitro cytotoxicity of lupeol isolated from leaf extract of ficus mysorensis

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Krishna V
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Yankatech Rama
Department of Studies in Food Technology, Davangere University, Shivangotri campus, Davangere - 577507

Abstract—Medicinal plant extracts gain more attention in research of modern medical sciences due to their non-lethal activity. The use of traditional medicine practices from plants has been accepted as a main source for drug discovery in various health disorder especially cancer. *Ficus mysorensis* has a long history of usage as traditional medicine. The leaf extract of this plant possess phytochemicals such as alkaloids, flavonoids, terpenoids, steroids, saponins, Phenolics and glycosides. The ethanol leaf extract has been subjected to compound isolation and confirmed by GC/MS, HPLC Chromatogram, ¹³C and ¹H nuclear magnetic resonance (NMR). Its activity, based on spectral analysis was evaluated against MCF-7 cell lines by MTT assay. Lupeol induced an effective change in the cell viability of MCF-7 cells with IC50 concentration (1.9875 µg/ml). Induction of cell death, change in cell morphology and cancerous cells population was observed in the treated cells, but the normal cells was not affected.

Keywords—*Ficus mysorensis*, in-vitro cytotoxicity, Lupeol, MCF-7.

Dr. Prakash K K, Professor and Mrs. Deepti Pallea, Assistant Professor were felicitated by Davangere District Area Growers Association for innovative areca products development during their AGM on 26th September, 2022



Dr. Gurumurthy H
Professor

Dr. Pavan K J
Assistant Professor

Dr. Gurumurthy H, Professor has submitted a proposal to KSCST under “Science, Technology and Innovation (STI) interventions in the state”

Title: “Extraction of anti-odour compound from *Arabidopsis thaliana* and treating foul smell in sewage water”

Co- Guide: Dr. Pavan K J, Assistant Professor



Dr. Gurumurthy H, Professor has completed virtual four days FDP on “Next generation Sequencing- From Genomics to Medicine” organised by Dept. of Biotechnology, PES University held between 25th to 28th July, 2022 sponsored by VGST and DBT, Govt. of Karnataka

Sri Shyba Educational Trust (S), Hremamamudra
GM INSTITUTE OF TECHNOLOGY, DAVANGERE - 577 006
Approved by AICTE, New Delhi, and Govt. of Karnataka
Department of BIOTECHNOLOGY

Details of proposal submitted to KSCST-UNDER SCIENCE, TECHNOLOGY AND INNOVATION (STI) INTERVENTIONS IN THE STATE*

Sl.NO	TOPIC	Principal Investigator	Co-Investigator	Amount in Rs
1	EXTRACTION OF ANTI-ODOUR COMPOUND FROM ARABIDOPSIS THALIANA AND TREATING FOUL SMELL IN SEWAGE WATER	Dr.Gurumurthy H	Dr.Pavan K J	5,00,000.00

Gadde H
Dr. Gurumurthy H
Dept. R & D Coordinator

CERTIFICATE OF PARTICIPATION

This is to certify that **Dr. GURUMURTHY H** of **G M INSTITUTE OF TECHNOLOGY** has completed the Virtual Four days Faculty Development Program on **Next Generation Sequencing – From Genomics to Medicine** organized by Department of Biotechnology, PES University in collaboration with Leucine Rich Bio Private Limited, Bangalore held between 25-28 July 2022.

Sponsored by
Vision Group on Science and Technology (VGST), Department of Electronics, Information Technology, Biotechnology and Science & Technology, Govt of Karnataka.

Shanti
Dr. K. S. Shanti
Professor & Chairperson,
Department of Biotechnology
PES University

Prashantha
Dr. Prashantha Karunakar
Programme Coordinator
Assistant Professor,
Department of Biotechnology,
PES University

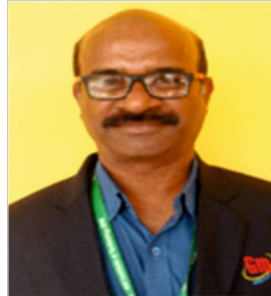
Kumar
Mr. Kumar Sankaran
CEO, Leucine Rich Bio,
Bangalore

BOOK CHAPTER PUBLISHED IN SPRINGER NATURE:

Three faculties from the department namely, **Dr.Prakash K K, Associate Professor and Head** , **Dr.Gurumurthy H, Professor** and **Mrs.Keerthi S, Assistant Professor** have published their book chapters in “**Enzymes for Pollutant Degradation**” published by **Springer Nature, Singapore**. Dr.Prakash K K has published **Chapter 12: “Probiotic Enzymes in Biodegradation and Value- Added Products”**, Dr.Gurumurthy H. has published **Chapter 8: “Biosorption of Industrial Wastewater by Microalgae”** and Mrs.Keerthi S has published **Chapter 16: “Bioinoculants for Rapid Production of Vermicompost”**



Dr. Prakash K K
Associate Prof. & Head



Dr. Gurumurthy H
Professor



Mrs.Keerthi S
Assistant Professor

Chapter 12
Probiotic Enzymes in Biodegradation and Value-Added Products



Prakash Kenchappa Karegoudru, Rangaswamy Bidarekere Eshwarappa, and Gurumurthy Dummi Mahadevan

Abstract Probiotics are a group of active microorganisms, providing health benefits to the host. It is of great significance to promote the development of human gastrointestinal nutrition and health by regulating the host mucosal and systemic immune function or regulating the balance of intestinal flora. Many enzymes produced by probiotics help for the biological activity especially in value addition in the food industry, for example, beverages and mushroom industry. Microbial agents can supplement, adapt, and maintain the balance of intestinal microorganisms, which can be used for disease prevention and treatment, promoting health and enhancing productivity. The rational utilization of edible fungus bran became an urgent problem in the edible fungus industry, and the production of probiotics from mushroom bran provided a solution. In the present report, we have tried to tabulate the enzymes from probiotic bacteria and their significance in the food industry.

Keywords Esterase · Laccase · Lipase

Chapter 8
Biosorption of Industrial Wastewater by Microalgae



Halleshappa Gurumurthy, Gurumurthy Dummi Mahadevan, and Sikandar I. Mulla

Abstract The heavy metals in wastewater are hazardous to aquatic animals, and it will start accumulate in the food web, and its removal from the wastewater is necessary. There are a number of techniques that emerged to remove heavy metals. The utilization of biomass is highly advantageous over conventional methods. Biofuel production is achieved by subjecting biomass into transesterification process. Algal biomass is a highly potential feedstock for the biofuel industry.

Chapter 16
Bioinoculants for Rapid Production of Vermicompost



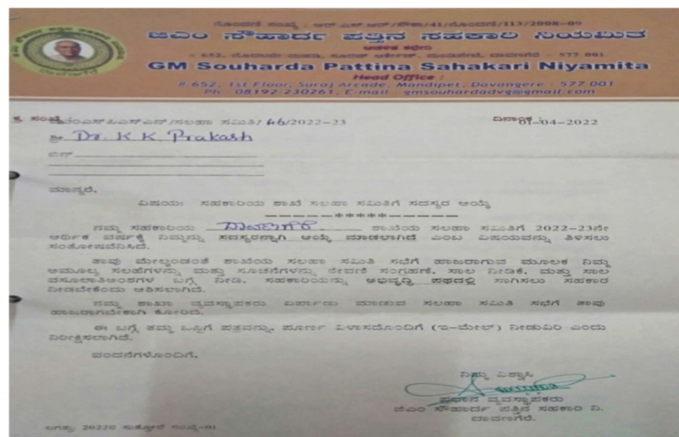
Veeresh Santhebennur Jayappa, Keerthi Shivanand, and Paramesha Mahadevappa

Abstract Day by day underutilized agricultural waste is increasing; a major part of agricultural waste is burned in the agricultural land itself. In the meantime, there is more demand for organic fertilizer. In this chapter more emphasis is given to various bio-inoculants used for conventional compost and vermicompost production with less duration. A number of studies have been done for the production of vermicompost from agricultural waste, agro-based industrial waste, and also from the municipal waste. A good number of experiments have been done for the rapid production of vermicompost by altering feed, rearing structures, and opting for better species of earthworms. There were only a few studies done for the utilization of bio-inoculants for the production of compost and vermicompost. Few studies showed that bio-inoculants increase the rapid degradation of biowaste and improve the texture of compost, micro- and macro-nutrient content, and also microbial density and diversity. In this chapter the influence of bio-inoculants on specific microorganism growth, enzyme production, and quality parameters of vermicompost was discussed briefly. There are good opportunities to explore specific interactions of microorganisms, enzymes, and bio-inoculants during vermicompost production.

FACULTY ACHIEVEMENTS:

MEMBER OF SALAHA SAMITHI:

Dr. Prakash K K, Head & Associate Professor, Department of Biotechnology, was selected as Member of Salahasamithi for GM Souharda Pattina Sahakari Niyamita Davanagere Branch 2022-23





Mr. Ganesh G. Tilve
Assistant Professor

Mr. Ganesh G. Tilve, Assistant Professor, has participated in national webinar titled “**Current Evidence of Health Hazards of Lead**” organised by the Department of Biochemistry, Sri Devaraj Urs Medical College, Kolar on 13th April, 2022



Mr. Ganesh G. Tilve, Assistant Professor, has participated in two days online workshop on “**Bioinformatics**” organised by the Department of Life Sciences, Sanjivani Arts, Commerce and Science College, Kopargaoan under the aegis of Lady Tata Memorial Trust, Mumbai on 8th and 9th April, 2022



Mr. Ganesh G. Tilve, Assistant Professor, has participated in national webinar on “**A Journey of Translational Biology through Bioinformatics**” organised by the Department of Microbiology in collaboration with Microbiologist Society, India of South Indian Children's Education Society's Degree College of Arts, Science and Commerce, Ambernath (W) (University of Mumbai)



AICTC - 100 Points Activity

Department of Biotechnology 8th Semester Students actively participated in various activities such as Waste Management, Blood Donation Awareness program, Digital awareness activity and Organic Farming at Kurki Village and Attigere Village on 10-05-2022 to 14-05-2022 guided by Dr.Pavan K. J, AICTC Programme Coordinator and Assistant Professor, Department of Biotechnology.

TEAM VISITED GRAM PANCHAYATH ATTIGERE



Discussion at Gram panchayath Attigere



Students active Participation

Dr.Gurumurthy H, Professor, Department of Biotechnology submitted a business plan for second level evaluation under **MANTHAN: 2022.**

TITLE: WASTE WATER TREATMENT AND GENERATION OF ELECTRICITY BY ALGAE.

- TEAM MEMBERS: 1.SindhuRajeevagoudaPatil (4GM20BT054)
2. Namitha H.N. (4GM20BT034)
3. TanayaTiwari. (4GM20BT057)

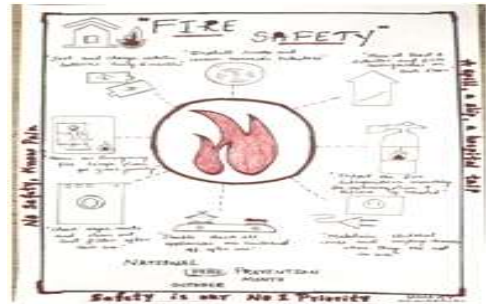


Dr. Gurumurthy H
Professor

DEPARTMENT OF CIVIL ENGINEERING



Department of Civil Engineering has organized a technical session on “Civil Engineering Softwares” on 19th May 2022 in association with CADD centre, Davanagere.



Course activity: Poster making competition was conducted for the 6th semester students on 24th may 2022 on topic “Fire Safety”

Fire safety is the set of practices intended to reduce the destruction caused by fire. Fire safety measures include those that are intended to prevent ignition of an uncontrolled fire, and those that are used to limit the development and effects of a fire after it starts. Fire safety measures include those that are planned during the construction of a building or implemented in structures that are already standing, and those that are taught to occupants of the building.



Academic audit of Department of Civil Engineering for the odd semester 2021-22 was conducted on 25th May 2022 by Mr. Santhosh Kumar M, Assistant Professor, Dept. of CSE.



Academic audit of Department of Civil Engineering for the odd semester 2021-22 was conducted on 25th May 2022 by Mr. Santhosh Kumar M, Assistant Professor, Dept. of CSE.

Students are motivated by hands-on experience and by linking concepts and physical models to real engineering problems. Event has been conducted for civil engineering students to improve their practical considerations in designing structures.



Consultancy team from Department of Civil Engineering visited GM Sugars-Unit II construction site for checking quality of structures by Non Destructive Test using Ultrasonic Pulse Velocity testing machine on 26th may 2022.

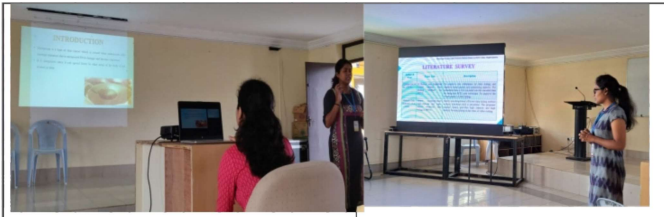
COMPUTER SCIENCE AND ENGINEERING

Internship Conduction:



Mr. Kotreshi S N, Internship coordinator conducted Internship Presentation for 8th semester students from 11/05/2022 to 13 /05/2022. All the staff members attended the presentation.

Technical Seminar Conduction:



Mrs. Sandya R S, Technical Seminar coordinator conducted Technical Seminar for 8th semester students from 23/05/2022 to 01 /05/2022. All the staff members attended the presentation.

Faculty Achievements:



Mr. Shankarayya Shastri has successfully completed the comprehensive viva on May 12th, 2022 at RYMCE research center Ballari. His research topic: *Text Mining using Machine-learning techniques.*



Ms. Suchitra H has secured **First Prize** in the event of **Idea Presentation** at Info - Arohana 22, organized by INSYNC forum of Information Science and Engineering Department held at BIET Davanagere on 26th and 27th May 2022.

NPTEL Online Certification
Founded by the M.E., Govt. of India

This certificate is awarded to **NAVAPRETTAM N**
 for successfully completing the course
Introduction to Programming in C

with a consolidated score of **88 %**

Online Assignments	25/25	Programming Exam	25/25	Proctor Exam	38.2/50
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Total number of candidates certified in this course: 1728

Prof. Jyoti Mahapatray
Head of the Dept. of Computer Science & Engineering

Prof. Deepak Chakraborty
Head of the Dept. of Information Science & Engineering

14th-Apr-2022
(12 week course)

Indian Institute of Technology Kharagpur

<https://nptel.ac.in/22CA48511912722>

NPTEL Online Certification
Founded by the M.E., Govt. of India

This certificate is awarded to **SAGAR PATIL**
 for successfully completing the course
Problem Solving through Programming in C

with a consolidated score of **84 %**

Online Assignments	24/25	Programming Exam	25/25	Proctor Exam	34.5/50
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Total number of candidates certified in this course: 2233

Prof. Jyoti Mahapatray
Head of the Dept. of Computer Science & Engineering

Prof. Deepak Chakraborty
Head of the Dept. of Information Science & Engineering

14th-Apr-2022
(12 week course)

Indian Institute of Technology Kharagpur

<https://nptel.ac.in/22CA48511912726>

NPTEL Online Certification
Founded by the M.E., Govt. of India

This certificate is awarded to **PRANAV V**
 for successfully completing the course
Problem Solving through Programming in C

with a consolidated score of **83 %**

Online Assignments	25/25	Programming Exam	25/25	Proctor Exam	32.5/50
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Total number of candidates certified in this course: 2233

Prof. Jyoti Mahapatray
Head of the Dept. of Computer Science & Engineering

Prof. Deepak Chakraborty
Head of the Dept. of Information Science & Engineering

14th-Apr-2022
(12 week course)

Indian Institute of Technology Kharagpur

<https://nptel.ac.in/22CA48511912723>

NPTEL Online Certification
Founded by the M.E., Govt. of India

This certificate is awarded to **SAHANA BAGI**
 for successfully completing the course
Problem Solving through Programming in C

with a consolidated score of **69 %**

Online Assignments	28.44/25	Programming Exam	25/25	Proctor Exam	25.5/50
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Total number of candidates certified in this course: 2233

Prof. Jyoti Mahapatray
Head of the Dept. of Computer Science & Engineering

Prof. Deepak Chakraborty
Head of the Dept. of Information Science & Engineering

14th-Apr-2022
(12 week course)

Indian Institute of Technology Kharagpur

<https://nptel.ac.in/22CA48511912726>

Mr. Navaprettam N, Mr. Sagar Patil, Mr. Pranav V and Ms. Sahana Bagiare 4th semester students, CSE department has been taken the online NPTEL course on **Problem Solving through Programming in C** which is conducted by IIT, Kharagpur, and successfully completed the course with certification.

NPTEL Online Certification
Founded by the M.E., Govt. of India

This certificate is awarded to **PRITHVIRAJ HULGUR**
 for successfully completing the course
Programming in Java

with a consolidated score of **82 %**

Online Assignments	24.6/25	Programming Exam	25/25	Proctor Exam	32/50
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Total number of candidates certified in this course: 4814

Prof. Jyoti Mahapatray
Head of the Dept. of Computer Science & Engineering

Prof. Deepak Chakraborty
Head of the Dept. of Information Science & Engineering

14th-Apr-2022
(12 week course)

Indian Institute of Technology Kharagpur

<https://nptel.ac.in/22CA47511912682>

NPTEL Online Certification
Founded by the M.E., Govt. of India

This certificate is awarded to **RAKSHA GM**
 for successfully completing the course
Programming in Java

with a consolidated score of **76 %**

Online Assignments	22.56/25	Programming Exam	25/25	Proctor Exam	28.5/50
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Total number of candidates certified in this course: 4814

Prof. Jyoti Mahapatray
Head of the Dept. of Computer Science & Engineering

Prof. Deepak Chakraborty
Head of the Dept. of Information Science & Engineering

14th-Apr-2022
(12 week course)

Indian Institute of Technology Kharagpur

<https://nptel.ac.in/22CA47511912682>

NPTEL Online Certification
Founded by the M.E., Govt. of India

This certificate is awarded to **SOWBHAGYA V KINI**
 for successfully completing the course
Programming in Java

with a consolidated score of **75 %**

Online Assignments	24.06/25	Programming Exam	25/25	Proctor Exam	28.84/50
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Total number of candidates certified in this course: 4814

Prof. Jyoti Mahapatray
Head of the Dept. of Computer Science & Engineering

Prof. Deepak Chakraborty
Head of the Dept. of Information Science & Engineering

14th-Apr-2022
(12 week course)

Indian Institute of Technology Kharagpur

<https://nptel.ac.in/22CA47511912682>

NPTEL Online Certification
Founded by the M.E., Govt. of India

This certificate is awarded to **SHEETAL S V**
 for successfully completing the course
Programming in Java

with a consolidated score of **73 %**

Online Assignments	23.84/25	Programming Exam	25/25	Proctor Exam	24/50
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Total number of candidates certified in this course: 4814

Prof. Jyoti Mahapatray
Head of the Dept. of Computer Science & Engineering

Prof. Deepak Chakraborty
Head of the Dept. of Information Science & Engineering

14th-Apr-2022
(12 week course)

Indian Institute of Technology Kharagpur

<https://nptel.ac.in/22CA47511912682>

NPTEL Online Certification
Founded by the M.E., Govt. of India

This certificate is awarded to **HARSHA V HANUMANAHALLI**
 for successfully completing the course
Programming in Java

with a consolidated score of **68 %**

Online Assignments	21.91/25	Programming Exam	25/25	Proctor Exam	20.84/50
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Total number of candidates certified in this course: 4814

Prof. Jyoti Mahapatray
Head of the Dept. of Computer Science & Engineering

Prof. Deepak Chakraborty
Head of the Dept. of Information Science & Engineering

14th-Apr-2022
(12 week course)

Indian Institute of Technology Kharagpur

<https://nptel.ac.in/22CA47511912682>

NPTEL Online Certification
Founded by the M.E., Govt. of India

This certificate is awarded to **SAMPADA PAVATE**
 for successfully completing the course
Cloud Computing

with a consolidated score of **60 %**

Online Assignments	23.75/25	Proctor Exam	38.2/75
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Total number of candidates certified in this course: 4701

Prof. Jyoti Mahapatray
Head of the Dept. of Computer Science & Engineering

Prof. Deepak Chakraborty
Head of the Dept. of Information Science & Engineering

14th-Apr-2022
(12 week course)

Indian Institute of Technology Kharagpur

<https://nptel.ac.in/22CA47511912682>

Mr. PrithvirajHulgur, Ms.Raksha G M, Ms. Sowbhagya V Kini, Ms. Sheetal S V, M Harsha V Hanumanahalli and Ms. Sampada Pavate are 6th semester students, CSE department has been taken the online NPTEL course on **Programming in JAVA** which is conducted by IIT, Kharagpur, and successfully completed the course with certification.

FACULTY ACHIEVEMENTS: Mr. Ganesh G. Tilve, Assistant Professor

Mr. Ganesh G. Tilve, Assistant Professor has successfully completed **Course Work examinations (Part-I)** for his Ph.D registered under **Dr. Seema J. Patel**, Associate Professor and Chairman, Department of Studies in Biotechnology, Davangere University. The exams were held between 18th - 24th June, 2022. He has scored **322/400** marks and secured **80.50%** in the examinations. With this, he has successfully completed Part-I, registration is confirmed and allowed to begin research work for thesis submission.



COURSE WORK DOCTOR OF PHILOSOPHY IN BIOTECHNOLOGY June 2022 Examination	
Register number : 21PHBT03	Student Name : GANESH G TILVE
Father Name : GOPAL V TILVE	Mother Name : SHOBHA G TILVE

RESULT SHEET (Provisional Result)							
Sl.No.	Subject Name	Th. / Pr.	Univ Exam	Viva	IA	Total	Remarks
1	COURSE - I : RESEARCH METHODOLOGY	Th.	59	-	22	81	
2	COURSE - II : COGNATE / CORE SUBJECT	Th.	49	-	24	73	Pass
3	COURSE - III : FIELD OF SPECIALIZATION	Th.	62	-	24	86	Pass
4	RESEARCH AND PUBLICATION ETHICS	Th.	28	-	14	42	Pass
5	VIVA VOCE	Pr.	-	-	40	40	Pass

Passing Criteria : 40% in course end examination and 50% in subject including continuous assessment marks.

RESULT SUMMARY	
Max. Marks : 400	Sec. Marks : 322
Percentage : 80.5	Result : Pass
College : 8027 - DEPT OF BIOTECHNOLOGY, DAVANGERE UNIVERSITY, DAVANAGERE	

Mr. Ganesh G. Tilve, Assistant Professor, has participated in national webinar titled **“Interpersonal Communication Skills”** organised by **Maitreyi College Centre, Non-Collegiate Women's Education Board (University of Delhi)** held on 4th June, 2022.



Mr. Ganesh G. Tilve, Assistant Professor, has actively participated in **one week professional development program** on **“Avenues of Biotechnology”** organised by **Department of Biotechnology, SRM Institute of Science and Technology, Chennai** conducted from 20/06/2022 to 26/06/2022.

Dr.Gurumurthy H, Professor, Department of Biotechnology submitted a business plan under **MANTHAN: 2022**. This plan has been selected for **next level**.



TITLE: WASTE WATER TREATMENT AND GENERATION OF ELECTRICITY BY ALGAE.



TEAM MEMBERS:

- 1.Sindhu RajeevagoudaPatil (4GM20BT054)
2. Namitha H.N. (4GM20BT034)
3. Tanaya Tiwari. (4GM20BT057)a

DEPARTMENT OF CIVIL ENGINEERING



Department of Civil Engineering has organized Industrial trip to **Dams and Hydro Electric Power Plant** for 8th semester students from 2nd - 3rd June 2022.

Department of Civil Engineering has organized a technical session on **“Civil Engineering Softwares”** on 6th June 2022 in association with **SKETCHPAD Designers & Engineers, Tumkur**.



Sampling plantation in the GMIT Campus on the occasion of World Environment Day organized by the Department of Civil Engineering, Chief Guest was Mr. Lingaraju G M, Chairman, GMIT, Davanagere, Beloved Principal Dr. Y Vijaya Kumar, Dr. Y B Bharatharaj Etigi, Head, Civil Department, Heads of various departments, teaching and non-teaching staffs were present.



Department of Civil Engineering has organized Technical visit to Smart City Office, Davanagere on 29th June 2022.



4th and 6th Semester students submitted proposed working model of Sangolli Rayanna Circle and Gandhi Circle, Davanagere to Smart City Office, Davanagere



COMPUTER SCIENCE AND ENGINEERING

Student Achievements:

Mr. Sagar Patil has secured **First Prize** in the event of **Product Marketing** at Info - Arohana 22, organized by INSYNC forum of Information Science and Engineering Department held at BIET Davanagere on 26th and 27th May 2022.

Mr. Sagar Patil, 6th semester student, submitted his project, Title: **Anti-Piracy** to Smart India Hackathon. Sagar team is shortlisted for Smart India Hackathon 2022.



Mr. Vanamali Sedimbi and **Mr. Pranav V** got **Second Place** in the event **Competitive Coding** organised by the Department of Computer Science and Engineering, BIET, Davanagere, held on 10th and 11th June 2022.



Mr. Vanamali Sedimbi and Mr. Pranav V got **Second Place** in the event **Fixit** organized by the Department of C omputer Science and Engineering, BIET, Davanagere, held on 10th and 11th June 2022.



Mr. Deepu R Heggere and Mr. Kantesh M S secured **First Place** in the event **Graphic Designing** organized by the Department of Computer Science and Engineering, BIET, Davanagere, held on 10th and 11th Jun 2022.



RajaniRadhakrishnan, Systems Lab - University Initiative, IBM India Pvt Ltd, and team members from IBM with Dr. Bharath K N, Dean R&I, with Head and Faculty Mr. Murgesh V J with Mr. Suchith V S and Mr. Jnanidhi M



RajaniRadhakrishnan, Systems Lab - University Initiative, IBM India Pvt Ltd, interacting and evaluating Agri Trade Application designed by Mr. Suchith V S 6th semester student.



Mr. AkhilAendapally, working has Architect, in AWS Solutions, New York USA, and Ms. Pavithra Y, NewJersy USA, interacting with Mr. Sagar and team about Movie Piracy.

DEPARTMENT OF BIOTECHNOLOGY

Newsletter- BIO- Codes

INFORMATION FOR MARCH-2022**Workshop on “Career Opportunities After Graduation”**

As a part of department academic activity, **one-day workshop on “Career Opportunities After Graduation”** was organised on **4th March, 2022** at **CNR Seminar Hall, Department of Biotechnology**. This event was mainly focused for the students of 3rd semester. The event was co-ordinated by **Mrs. Deepti Palleda**, Assistant Professor and Academic Coordinator (Department of BT) and **Mr. Ganesh G. Tilve**, Assistant Professor and Forum Co-ordinator (Department of BT). **Mr. Sharath G N**, Director of Copperage Training Institute, Davangere was invited as Chief Guest. He addressed the students and guided them on various entrance examinations and training to be taken up after graduation for a bright future. After his session, two more resource persons from the college, **Dr. Manjula G M**, Assistant Professor, Department of Mathematics guided students about various concepts on Arithmetic Aptitude & **Mr. Ganesh G. Tilve**, Assistant Professor, BT guided students about various concepts in English. The inauguration programme was held in the morning in the presence of **Dr. Y. Vijayakumar**, Principal and **Mr. Tejasvi Kattimani**, Head, Training and Placement. **Mr. Sharath G N** (Chief Guest), **Dr. Prakash K K** (Head, Department of BT), event co-ordinators **Mrs. Deepti Palleda** and **Mr. Ganesh G. Tilve**, teaching and non-teaching staff of the department and students of 3rd semester were present on the occasion.

Slrshyla Educational Trust® Bheemasamudra
GM Institute of Technology
 Davanagere
Department of Biotechnology

Is Organizing
 One day workshop on
“Career Opportunities After Graduation”
 (for 3rd sem students)

Chief Guest:
 Sharath G N
 Director, Copperage

President:
 Dr. Y. Vijayakumar
 Principal
 GMIT

Event Coordinators:
 Mrs. Deepti Palleda
 Mr. Ganesh G. Tilve

HOD:
 Dr. Prakash KK
 Head Of Department
 GMIT

Venue: C.N.R. Rao Seminar Hall, Department of Biotechnology
Date: 4th March 2022, 10 am.



Students achievements:

Miss Monisha G (4GM17BT015), output of 2021 batch secured 1st Rank to VTU in Biotechnology with final average CGPA of **9.35**. She secured **two gold medals**, one for being the topper in VTU for Biotechnology and another endowment gold medal sponsored by Late Shri. A C Jayanna.

Miss R Dhanyashree (4GM17BT021), 2021 batch O/P secured 5th Rank to VTU in Biotechnology with final average CGPA of **9.13**.

G. M. Lingaraju, Chairman, GM Group of Institutions, **Shri. Y. U. Subhashchandra**, MR, GM Group of Institutions, **Dr.Y. Vijayakumar**, Principal, GMIT, Heads of various departments, staff and students of GMIT have congratulated both for their exemplary and meritorious performance.

Biotechnology(BT)

1	4GM17BT015	MONISHA G	GMIT, Davanagere	9.35	1
2	1OX17BT004	ANUSHA S	Oxford College,Bengaluru	9.34	2
3	4PA17BT005	ANGOSHA RAO	PACE, Mangalore	9.29	3
4	4PA17BT015	NAILA ANWAR	PACE, Mangalore	9.17	4
5	4GM17BT021	R DHANYASHREE	GMIT, Davanagere	9.13	5
6	LMV17BT023	SAHANA B T	SMVIT, Bangalore	9.09	6
7	1OX17BT041	SUMALATHA M	Oxford College,Bengaluru	9.09	7
8	1SG17BT020	PRATHIMA HS	Sapthagiri, Bengaluru	9.06	8
9	1OX17BT038	SAIMA JAMAL	Oxford College,Bengaluru	9.01	9
10	1SG17BT031	SHASHIKALA S	Sapthagiri, Bengaluru	8.96	10

VTU 21st Annual Convocation-March 2022

3

**Sports achievement:**

Two students from our department **Miss Rakshitha R. Kamath and Miss. Anjali P.** have added laurels to the department and the institution. **Miss Rakshitha R. Kamath (5th Semester) and Miss Anjali P. (5th Semester)** won **two gold medals each** in State level Open Powerlifting Computation- 2022 organised by Karnataka State Powerlifting Association in Davanagere in 90+ Kg. category on 18th March, 2021. They will be participating in National Level event organised at Nagpur (Maharashtra) next month. **Principal Dr. Y. Vijayakumar, Department**



Head Dr. Prakash K. K., Sports Coordinator Mr. Rakesh N. R., department faculties and students have congratulated them for their achievement.

Faculty achievements:



Dr. Prakash K K, Associate Professor and Head, Department of Biotechnology received grant of **Rs. 8.00 lakhs** under VTU Research Grants Scheme, 2021 for the research proposal titled **“Optimization of extraction process to obtain omega-3 fatty acids from fish oil and to develop biodiesel from waste oil”**. He is the Principal Investigator (PI) for the project along with **Dr. Bharath K N** (Co-1) and **Dr. Santosh B M** (Co-2)

G. M. Lingaraju, Chairman, GM Group of Institutions, **Shri. Y. U. Subhashchandra**, MR, GM Group of Institutions, **Dr.Y. Vijayakumar**, Principal, GMIT, Heads of various departments, staff and students of GMIT have congratulated them for their achievement.


ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ
 ("विश्वेश्वरय्य तंत्रिक विश्वविद्यालय" or "ವಿಶ್ವಯ್ಯ ಶಿವಾಲಯ ಸ್ಥಾಪನೆಯ ಸ್ಮಾರಕವಾಗಿ ಸ್ಥಾಪಿಸಲಾಗಿದೆ")
 'ಜ್ಞಾನ ಸಂಗಮ', ಬೆಂಗಳೂರು - ೫೬೦ ೦೧೮ ಕರ್ನಾಟಕ ರಾಜ್ಯ

Visvesvaraya Technological University
 (State University of Government of Karnataka Established as per the VTU Act, 1994)
 "Jnana Sangama", Belagavi-590 018, Karnataka State, India

Prof. A. S. Deshpande B.E., M.Tech., Ph.D. Phone : (0831) 2498100
REGISTRAR Fax : (0831) 2405467
 Ref: VTU/BGM/Aca/A-12/ VTU RGS/DIS -ID/2021-22/ 5858 /1 Date **18 FEB 2022**
 To,
The Principal,
GM Institute of Technology, Davanagere

Sub: Grants for Research Proposal for the year 2021-22.
 Ref: 1. VTU/Aca./2021-22/ PS/2019-20/9707, dated 18-3-2020.
 2. Hon'ble Vice-Chancellor's approval dt:11-02-2022.

At the outset please accept our congratulations and greetings.

We are pleased to inform you that, the grant of **Rs. 8.00 Lakhs (Rupees Eight Lakh only)** is being sanctioned for the research proposal entitled as **“Optimization of extraction Process to obtain Omega 3 fatty acids from fish Oil and to develop biodiesel from waste oil.”** submitted **Dr.Prakash K K (PI), Dr.Bharath K N (Co-1) and Dr. Santhosh B M(Co-2)** under VTU Research Grants Scheme -2021.

The expenditure of the sanctioned amount needs to be planned as under.

Expenditure Particulars		First Year (Rs. in Lakhs)	Second Year (Rs. in Lakhs)	Total (Rs. in Lakhs)
Non - Recurring	Fellowship for Research Scholar	0.00	0.00	0.00
	Equipments/Software/Instruments (Purchase of Desktops/Laptops are not Permitted)	5.50	0.00	5.50
Recurring	Consumables (Glass wares/Chemicals)	1.50	0.50	2.00
	Others (Expenditure towards/ testing / consultancy / publications of research work in terms IPR Registrations (not for paper publications in journals) / TA-DA to present a paper in conferences or workshop or symposia in India)	0.25	0.25	0.50
Total (Rs. in Lakhs)		7.25	0.75	8.00
VTU Contribution (75% of the Sanctioned Amount) This amount will be released after receiving the acceptance letter and compliance of Point Number 10,11 & 12 mentioned in "Terms and Conditions"		5.4375	0.5625	6.00
Institution Contribution (25% of the Sanctioned Amount) Please Refer Point number 10,11 & 12 in the "Terms and Conditions" and comply accordingly		1.8125	0.1875	2.00



Dr. Pavan K J, Assistant Professor published a research article on **“Divulging pigmented microbial community from hyper-alkaline Lonar lake”** in the UGC listed peer reviewed journal **“ Journal of Emerging Technologies and Innovative Research (JETIR)”** Vol.9, Issue-2, February 2022

© 2022 JETIR February 2022, Volume 9, Issue 2 www.jetir.org (ISSN-2349-5162)
JETIR.ORG | ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issues
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
 An International Scholarly Open Access, Peer-reviewed, Refereed Journal

DIVULGING PIGMENTED MICROBIAL COMMUNITY FROM HYPERALKALINE LONAR LAKE.

*Geetanjali R Kamble, *Pavan K J, *Shivaprakash V Hiremath, **Murtigendra B Hiremath

1 Post-Graduate Department of Studies in Biotechnology and Microbiology, Karnataka University, Dharwad (Karnataka), India and Department of Biotechnology and Microbiology, P. C. Jeeva Science College, Hubballi (Karnataka), India.
 2 Department of Biotechnology, GM Institute of Technology, Davanagere, Karnataka, India
 3 School of Life Sciences, J. J. E. Tech, Hubballi (Karnataka), India.
 *Email: anuragshel@gmail.com Telephone: +918073671573

ABSTRACT:

Lonar lake, the only basaltic lake in India 19°58' N & 76°31' E from Lonar, Buldhana district of Maharashtra India, with alkaline and saline water. The diameter of the lake is 1.8 km and 137m deep

Mr. Ganesh G. Tilve
Assistant Professor



Mr. Ganesh G. Tilve, Assistant Professor was appointed as Question paper setter for M. Tech/Biotechnology SEE Examinations April-2021-22 by B.V.V. Sangha's Basveshwar Engineering College (Autonomous), Bagalkot (Karnataka). He has set two question papers for M. Tech scheme namely **Quality Control in Food Biotechnology** and **Food Product Development**.



B. V. V. Sangha's
BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS)
BAGALKOT - 587102, KARNATAKA

Dr. K. Chandrasekhar
Controller of Examinations



08354-234205
7618 78 1963

Ref. No/BEC / Exam /

Date: 23/2/2022

APPOINTMENT LETTER

STRICTLY CONFIDENTIAL

To
Prof. Ganesh G. Tilve,
Assistant Professor,
Dept of Biotechnology,
G M Institute of Technology,
Davanagere

Sir / Madam,

Subject: Appointment as a Question paper Setter for SEE Examinations April - 2021 -22

By the direction of Principal, I am pleased to appoint you as a Question paper setter and the details as under: Course: M.Tech Branch: Biotechnology Sem: 3

Subject: **Quality Control in Food Biotechnology** and **Food Product Development**
Code: **PFB331E** and **PFB312E** No. of sets: 1+1 to be submitted before 2/3/2022



Mr. Ganesh G. Tilve, Assistant Professor, has participated in online symposium on **“Biotechnology and Bioinformatics Research in Healthcare: Why and How?”** held on February 25th and 26th, 2022 by Centre for Health Science and Technology (CHeST), JISIAR, Kolkata

Mr. Ganesh G. Tilve, Assistant Professor has participated in online symposium on the eve of **“National Science Day 2022”** entitled **“Integrated Approach in Science and technology for Sustainable Future”** organised by the Innovation and Entrepreneurship Cell, Department of Biotechnology, Karunya Institute of Technology and Sciences, Coimbatore, Tamil Nadu on 28th February, 2022





Mr. Ganesh G. Tilve, Assistant Professor, has participated in five day international webinar on “Promoting Quality , Skills and Innovation in Higher Education” held between March 7th to 11th, 2022 organised by IQAC, Department of Mathematics and Zoology, JMJ College for Women (A), Tenali, AP

Mr. Ganesh G. Tilve, Assistant Professor, has participated in two day national webinar on “Intellectual Property Rights (IPR)” held on March 15th and 16th , 2022 organised by Department of Commerce, JMJ College for Women (A), Tenali, AP



Mr. Ganesh G. Tilve, Assistant Professor, has participated in three day international webinar on “Recent Innovations in Pharmaceutical and Applied Sciences” held between March 17th to 19th, 2022 organised by Department of Chemistry, JMJ College for Women (A), Tenali, AP

Mr. Ganesh G. Tilve, Assistant Professor, has participated in one day national webinar on “Approaches and Challenges in Everyday Life” held on March 25th, 2022 organised by Department of Chemistry, Govt. Degree College (Men), Srikakulam (AP) in association with Royal Society of Chemistry (London)- Local Section Deccan, Hyderabad



CELEBRATION OF WORLD WATER DAY-2022

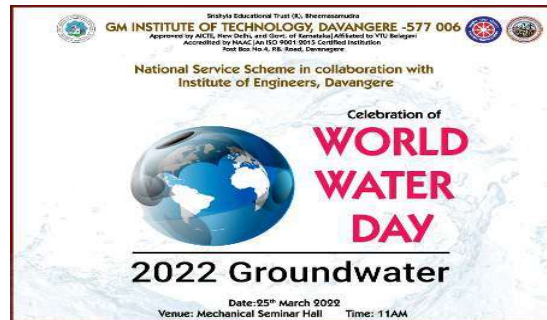
GMIT NSS in collaboration with institute of Engineers organized World Water Day, on 25th March 2022. In Mechanical Seminar Hall. To create awareness among the students with the theme of “Conservation and utilization of ground water and making the invisible visible”

In this program **Dr Shishupala**, Professor, Department of Microbiology, Davangere University address the gathering. by Creating awareness among the students about environmental pollution and guided how to save water and preserve for our future generation. He showed us how organism live in water system and nature. Then stress on how to save water and contribution of our mother earth.

Our beloved principal **Dr Y Vijay Kumar** address the gathering and insist the students to come up with new ideas to conserve water and save the water for future generation.

With the support of principal, management and staff this event was successfully organized by **Dr Srinivas C V** Prof and Head Dept of Mechanical Engg & **Dr Onkarappa H S**, Assistant Professor and Head, Dept of Chemistry.

This program was hosted by **Ms. Srusti & Syeda Riyan**. Invocated by **Sharon Abhilasha & Banashree**. About the program by **Prateksha** and Vote of thanks by **Santhoshini**.

**WOMEN CELL GMIT****Report on Celebration of International Women’s Day 2022**

The International Women’s Day-2022 was celebrated on 8th of March 2022, Monday at GMIT campus. The program was inaugurated by watering a flower plant to uphold the importance of the environment. Mrs. Shilpa Y.S. police Inspector, Women’s Police station, Davanagere, Karnataka, had graced the occasion as the Chief Guest. The program was presided by Dr. Y Vijaya Kumar, Principal, GMIT. The members of women cell and all women teaching and non-teaching staff, and first year girl students from various branches joined together for the celebration. The Chief Guest enlightened the girl students of first year about the effects of the social media on today’s youth. She also gave suggestions on maintaining a healthy lifestyle. Mrs. Deepa B S Kannada Professor GMIT, put forth the significance of the International Women’s Day celebration.

On this occasion, there were various events of celebrations and deliberations performed by the students of the college. A cultural show was carried out which emphasized the role of women in the society.

In accordance with the theme for the International Women’s Day-2022 being “GENDER EQUALITY FOR A SUSTAINABLE TOMORROW”, all the women staff and girl students of GMIT were in gold and cream color dress code that symbolizes qualities such as responsibility, intelligence, confidence and power which are the attributes required to face any challenge. Dr. Y Vijaya Kumar, Principal, GMIT, concluded the event by giving the presidential remarks by urging that women should give first priority to their health and well-being and also give importance to higher education like IAS IPS. Special Invitee placement officer Tejasvi kattimani, Dr. Latha B M Chairperson GMIT women cell, Mrs. Manjula B K Chief Coordinator, CICC and Mrs. Venkata sumana C H Chief coordinator women cell were attended the function.



DEPARTMENT OF BIOTECHNOLOGY
Newsletter BIO- Codes

INFORMATION FOR FEBRUARY -2022

Jnanadhara A Knowledge Fest

Department of Biotechnology organised “**Jnanadhara- A Knowledge Fest** in **CNR Rao Seminar Hall, Department of Biotechnology 4th and 5th February, 2022** This inter-departmental event mainly concentrated on 3rd semester students from different branches and also provided a platform for freshly admitted 1st semester students across different branches of our institution. This event was designed and conceptualised by **Mr. Ganesh G. Tilve** Assistant Professor and Forum Coordinator, Department of Biotechnology. Student event co-ordinators **Akshay J Shet** and **Namitha H N** (3rd Sem, BT) conducted the events.

The event included two events:

1. **Flash Talk** (To exhibit developments on an emerging field in different branches of engineering)

This event was organised on **Day 1 (4th February, 2022)**. Ten participants from different branches participated in this event. **Prof. Keerthi Prasad** Assistant Professor and Head, Department of AI & ML and **Mrs. Deepti Pallela** , Assistant Professor, Department of Biotechnology were invited as adjudicators.

Winners of this event are:

1st Prize: Sahana S Bagi 3rd Sem, CSE

2nd Prize: Khushi Patil 1st Sem, AI & ML

2. **Logical Nuts** (Quiz)

This event was organised on **Day 2 (5th February, 2022)** Sixteen teams participated from different branches in this event. This event was conducted in two rounds and two team winners were selected as follows:

1st Prize: Navaprettam, Pooja H P, Pranav V and Sahana Bagi (3rd Sem, CSE)

2nd Prize: Abhinandan K, Raghuveer P M, Darshan M and Tushar B R (3rd Sem, ECE)

Valedictory programme for this event was held on 5th February, 2022 at CNR Rao Seminar Hall, Department of Biotechnology. **Principal Dr. Y. Vijaya Kumar, Training and Placement Head Mr. Tejasvi Kattimanj Head of Biotechnology Department Dr. Prakash K K and faculty event convenor Mr. Ganesh G. Tilve**, teaching and non-teaching staff along with students of the department were present on the occasion. Certificates and medals were handed over to the winners and participation certificates were handed over to all the participants.



Faculty achievements:

Following faculties have submitted proposals under various schemes of **Vision Group on Science and Technology (VGST)**,

Government of Karnataka:

1. **Dr. Gurumurthy H (Professor)** has submitted **KSFT- Level 1** proposal as **Principal Investigator** on “Extraction of anti-odour compounds from *Arabidopsis thaliana* and treating foul smell in recycled sewage water”
2. **Dr. Pavan K J (Assistant Professor)** and **Mrs. Keerthi S (Assistant Professor)** have submitted **Faculty Development Programme (FDP)** proposal as **Principal Investigator and Co-Principal Investigator** on “Trends in Artificial Intelligence and Machine Learning in Agriculture Biotechnology”
3. **Mr. Rakesh N R (Assistant Professor)** and **Mr. Ganesh G. Tilve (Assistant Professor)** have submitted **Faculty Development Programme (FDP)** proposal as **Principal Investigator and Co-Principal Investigator** on “Molecular techniques for the application of pandemic disease detection”
4. **Mrs. Deepti Pallela (Assistant Professor)** and **Miss Shalini Billa (Assistant Professor)** have submitted **Faculty Development Programme (FDP)** proposal as **Principal Investigator and Co-Principal Investigator** on “Design and production of eco-friendly cutleries”

Faculty achievements:

Dr. Pavan K. J, Assistant Professor and **Mrs. Deepti Pallela**, Assistant Professor participated in **IP Awareness/ Training program** under “**National Intellectual Property Awareness Mission**” on February 16th, 2022 organised by Intellectual Property Office, India



- **International virtual lecture workshop:**

Mr. Ganesh Tilve (Assistant Professor) participated in One week international virtual lecture workshop on “**Recent Advances and Current Trends in Biological Sciences**” organised by Department of Studies in Botany, Davanagere University, Shivagangothri, Davanagere-577007 and P.G. Centre, G. R. Halli, Chitradurga -577502 from 14th to 19th February, 2022



Mr. Ganesh Tilve
Assistant Professor

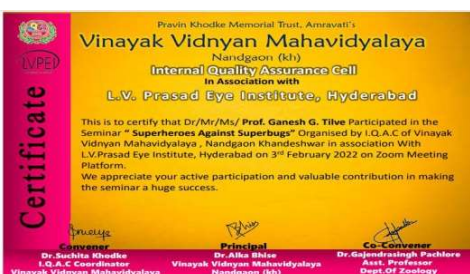


- **IP Awareness/ Training program:**

Mr. Ganesh Tilve (Assistant Professor) participated in IP Awareness/ Training program under “**National Intellectual Property Awareness Mission**” on February 16th, 2022 organised by Intellectual Property Office, India

- **NATIONAL SEMINAR:**

Mr. Ganesh Tilve (Assistant Professor) participated in national level seminar “**Superheroes Against Superbugs**” organised by I.Q.A.C of Vinaya Vidyan Mahavidyalaya, Nandgaon, Khandeshwar in association with L.V. Prasad Eye Institute, Hyderabad on 3rd February, 2022



- **Online Lecture Series:**

Mr. Ganesh Tilve (Assistant Professor) participated in **online lecture series** organised by IIC, Department of Food Technology, Vidya Pratishthan's Arts, Science and Commerce College, Baramati, Pune (D) in collaboration with VSBT IGNOU Study Centre as a part of Golden Jubilee of Establishment of “**Vidya Pratishthan**” on 9th February, 2022



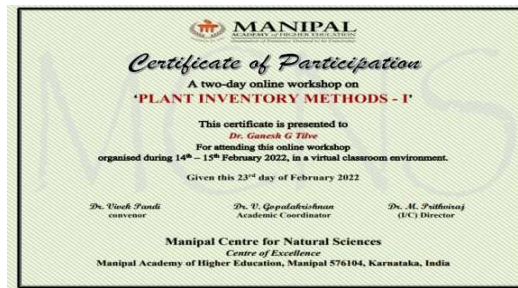
- **Online Workshop:**

Mr. Ganesh Tilve (Assistant Professor) participated in the two-day online science academies' virtual lecture workshop on "Proteins- Structure, Function and Evolution", organised by Department of Botany, Telangana University, Dichpally, Nizamabad on 23rd and 24th February, 2022



- **Online Workshop:**

Mr. Ganesh Tilve (Assistant Professor) participated in the two-day online workshop "Plant Inventory Methods - I", organised by the Manipal Centre for Natural Sciences, MAHE on 14th and 15th, February 2022



DEPARTMENT OF CIVIL ENGINEERING

Mr. Kiran Kumar C M, Assistant Professor, Department of Civil Engineering has received the certificate for participating in Faculty development program on "Advances in Highway Technology and Traffic Systems" organized by Department of Civil Engineering, MSRIT, Bengaluru from 7th to 11th February, 2022.

Mr. Swamy L V, Assistant Professor, Department of Civil Engineering has received the certificate for participating in Faculty development program on "Advances in Highway Technology and Traffic Systems" organized by Department of Civil Engineering, MSRIT, Bengaluru from 7th to 11th February, 2022.



Department of Civil Engineering has organized industrial visit to Brick Manufacturing Industry near Harihara for 3rd semester students on 8th February 2022, accompanied by Assistant professors Virupaksha H V, Kiran Kumar C M, Puttaraj M H, Mamatharani R S and Spoorthi B.



Mr. Hanumesh B M, Assistant Professor, Department of Civil Engineering, has completed his open seminar - II for the Ph.D. Work on topic "Behaviour of Hybrid Reinforced Two Way Slabs" on 25th February 2022 under the guidance of Dr. H R Prabhakara, Professor, UBDTCE Davanagere and Dr. N Venkata Ramana, Professor, UBDTCE, Davanagere



Dr. B K Varun, Assistant Professor, Department of Civil Engineering has received the certificate for participating in IP awareness/training program under "National Intellectual Property Awareness Mission" organized by Ministry of Commerce and Industry, Government of India on 16th February 2022.

BIO - Codes :

Biotechnology Product Mela :

Department of Biotechnology organized “**Biotechnology Product Mela**” in college premises on 10th January 2022 10 A.M. onwards. The event was mainly a product exhibition, demonstrating the innovative product development skills among students. The mela mainly emphasized products based on technical innovations in the field of Biotechnology that would benefit human society in general. This product mela was designed and conceptualized by Mrs. Deepti Palleda, Assistant Professor, Department of Biotechnology. Around 43 different products were exhibited and these were

classified under four themes that included: **1. Areca products 2. Healing products 3. Organic and eco-friendly products 4. Immunity booster and edible products**



GMIT Chairman **Shri G M Lingaraju** inaugurated the event at the old library premises of the institute. After hearing to each team very keenly about their products, he appreciated the efforts made by the department in conducting such a successful event and promised all support to take these products developed to the next level. Principal Dr.Y. Vijaya Kumar applauded the efforts put by the students of the department in developing these low-budget and eco-friendly products. He emphasized that along with academics, interest in research and product development is the need of the hour. He also motivated students to think differently and come up with novel thoughts including start-ups. Dr. Bharath K N, Associate Professor, and Dean, R & D graced the event as a special invitee. He shared his memories with respect to Biotechnology research when he was pursuing a postdoc in the U.S. and said it is one of the most demanding areas in the field of engineering, especially after the Covid episode. Training and Placement Head Mr. Tejasvi Kattimani, another special invitee for the event also congratulated the students for their splendid efforts and stressed on the need for skill set acquirement for getting placed in core biotech companies. Management representative **Shri. Y. U. Subhash Chandra**, Head of Biotechnology Department **Dr. Prakash K K**, event co-ordinator **Mrs. Deepti Palleda**, heads of various other departments, teaching and non-teaching staff along with students of the department were present on the occasion.

Later, the same evening, a valedictory event for the mela was organized at Mechanical Seminar Hall. Principal **Dr. Y. Vijaya Kumar**, **Dr. Bharath K N**, Associate Professor, and Dean, R & D, Training and Placement Head **Mr. Tejasvi Kattimani**, Head of Biotechnology Department **Dr. Prakash K K** and event co-ordinator Mrs. Deepti Palleda, who also presented a brief report about the event were present on the occasion. **Dr. Bharath K N** was invited as judicator for evaluating the innovative quotient of each product and the best three products were rewarded accordingly. Faculty forum coordinator Ganesh G. Tilve hosted the prize distribution ceremony.

The best three products were awarded to:

1st Prize: Mehak Irum and Musab Anas (3rd Sem) (Millets ice cream and Palmaccino)

2nd Prize: Dikshith DR, Muddegowda S R, Bhavana Hiremath, Vandana M & Gowthami H (5th Sem)
(Organic Lipstick)

3rd Prize: Ashwini S V, Tejaswini G and Siddharth Gowda (7th Sem) (Areca Ink)

Department magazine release :

Department magazine “**Erekyand Me**” was released on 28th January 2022 at Dr. CNR Rao Seminar Hall. Two editions of the magazine for 2019-20 and 2020-21 were released on the occasion, which could not happen previously because of the pandemic. Principal Dr. Y. Vijaya Kumar graced the occasion and **Shri. Shivakumar B K**, President, Davangere Areca Growers’ Association, and his team were special invitees.



Department Head and Forum Chairman **Dr. Prakash K K** and Magazine co-ordinator **Mrs. Keerthi S** were present on the occasion. Chief student coordinator **Akshay J. Shet** (3rd Sem) was presented a memento on this occasion for his efforts in designing the magazine. Forum Co-ordinator **Mr. Ganesh G. Tilve** anchored the program.

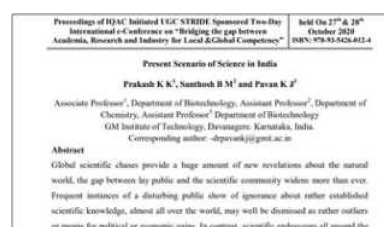


On the same occasion, Davangere Areca Growers’ Association and team felicitated Principal **Dr. Y. Vijaya Kumar**, Head of Department **Dr. Prakash K K** and Biotechnology Product Mela coordinator **Mrs. Deepti Palleda** for successfully organizing Biotechnology Product Mela and highlighting innovative products made from arecanut.

Research paper Published :

Dr. Pavan K. J, Assistant Professor and **Dr. Prakash K K**, Associate Professor and Head, Department of Biotechnology, has published an article on “**Implementation of artificial intelligence for sustainable agriculture**” at UGC STRIDE Sponsored Two-Day International e-Conference on “**Bridging the gap between Academia, Research & Industry for Local & Global Competency**” with ISBN: 978-93-5426-012-4.

Dr. Prakash K K Associate Professor and Head and **Dr. Pavan K. J**, Assistant Professor, Department of Biotechnology, has published an article on “**Present Scenario of Science in India**” at UGC STRIDE Sponsored Two-Day International e-Conference on “**Bridging the gap between Academia, Research and Industry for Local & Global Competency**” with ISBN: 978-93-5426-012-4.



Provisional seat allotment for Ph.D in Biotechnology in Davangere University

Mr. Ganesh G. Tilve has been allotted a provisional seat for Ph.D. in Biotechnology admission at Davangere University. He has successfully cleared the entrance examination with 72% marks. He will be carrying out research in microbial biotechnology on xylose utilizing yeast under the guidance of **Dr. Seema J. Patel**, Associate Professor, Department of Biotechnology, Davangere University.

Sl. No.	Name of the Candidate	Category	Rank	Final Percent
1	GANESH G. TILVE	SC	1	72.00
2	SHRIKANTH K. SURESH	OPEN	2	70.00
3	SHRIKANTH K. SURESH	OPEN	3	68.00
4	SHRIKANTH K. SURESH	OPEN	4	66.00
5	SHRIKANTH K. SURESH	OPEN	5	64.00
6	SHRIKANTH K. SURESH	OPEN	6	62.00
7	SHRIKANTH K. SURESH	OPEN	7	60.00
8	SHRIKANTH K. SURESH	OPEN	8	58.00
9	SHRIKANTH K. SURESH	OPEN	9	56.00
10	SHRIKANTH K. SURESH	OPEN	10	54.00

National Online Workshop :

Participated in a 3-week online course on “**Entrepreneurial Skills Development Course for Young Researchers in Biotechnology**” organized by Pune Knowledge Cluster (PKC) and Agharkar Research Institute, Pune between 11th October to 29th October 2021.



National Webinar participation :

Participated in national webinar on “**Success without Stress**” organized by Department of Plant Biology and Plant Biotechnology, Presidency College, Chennai on October 30th, 2021



National e-quiz participation :

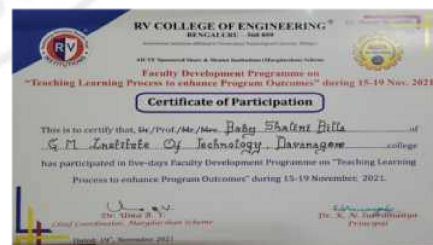
Participated in National Level E-Quiz on General Microbiology organized by C.G. Bhakta Institute of Biotechnology, Surat (Gujarat) in November 2021 and secured 64%



Faculty Development Programme:



Miss Baby Shalini Billa, Assistant Professor Attended 5 days AICTE sponsored Faculty Development Programme “**Teaching-Learning Process to enhance Program Outcomes**” organized by R V College of Engineering, Bengaluru from 15th to 19th November 2021.



International publications :



Rakesh, N. R., et al “In Silico Pharmacological Studies and RMSD Comparison of FDA Drugs with Bioactive compounds in Musa Paradisica for Ligand Promotion”. Journal of Xi’an Shiyou University, Natural Science Edition, 2021 ISSN: 1673-064X, 17(1) pageNo.90-104

Rakesh, N. R., et al. In silico Molecular Docking study approach with Multipotent anti-viral and anti-malarial drugs for COVID-19 main protease key enzyme responsible for mediating viral replication and transcription. Journal of Xi’an Shiyou University, Natural Science Edition, 2021 ISSN : 1673-064X, 17(1), November 2021, 9-20

SMART - CIVIL :
Forum Inauguration :

Inauguration of Civil Engineering Students forum association “**PYRAMID**” on 13th November 2021. The chief guest of the function was **Dr. K Manjunath**, Professor, DoS in Civil Engineering, UBDT college of Engineering., Presided by our beloved Principal **Dr.Y Vijaya Kumar**, Head of the Department **Dr. Y B Bharatharaj Etigi**, Forum Co-ordinator **Mr.Kiran Kumar C M**, Forum student coordinator **Ms. Sadvi Balaraj** were Present.



Mr. Kiran Kumar C M, Assistant Professor, Department of Civil Engineering, attended 5 days faculty development program on “**Teaching-Learning Process to Enhance Program Outcomes**” Conducted by RV College of Engineering, Bengaluru, from 15-11-2021 to 19-11-2021.



Dr. Arun Kumar S L, Associate Professor, Department of Civil Engineering, has participated in the two days workshop on “**National Education Policy-2020**” conducted by KLS Gogte Institute of Technology, Belagavi, from 19-11-2021 to 20-11-2021.



Department of Civil Engineering has organized a technical talk on “**Value Added Softwares**”, in association with INSTRUCT and ISTE professional bodies on 29-11-2021. **Mr. Syed Ahmed**, Structural Engineer, SMF Engineering Consultants, has delivered the technical talk.



Mr. Virupaksha H V, Assistant Professor, Department of Civil Engineering, has participated in the two days workshop on “**Universal Human Values and Professional Ethics**” conducted Department of Civil Engineering, BIET, Davanagere, from 29-11-2021 to 30-11-2021.



Mr. Hanumesh B M, Asst. Professor, Department of Civil Engg., completed his open seminar -1 for the Ph.D. Work on topic “**Behaviour of Hybrid Reinforced Two Way Slabs**” on 17th November 2021 under the guidance of Dr. H R Prabhakara, Professor, UBDTCE Davanagere, and **Dr. N Venkata Ramana**, Professor, UBDTCE, Davanagere.



Cache - CSE :

Mr. Aruna Kumar B T, Asst. Professor, Dept. of CS&E has published a patent with the title “**Visitors Detection and Face Recognition system using IoT Technology**” on 01.11.2021 with its Ref/Application No.: TEMP/E1/56402/2021-CHE and Application No.:262141043674, under the guidance of Dr.Manjanaik N, Professor, Dept. of E&CE, UBDTCE, Davanagere.



Bio - Codes :

Resource Person :

Dr. Gurumurthy D M was invited as a Resource Person/speaker for the Five-day Online Faculty Development Program (FDP) “**Recent Advances in Science, Technology, Engineering and Mathematics (STEM)**” from 16th – 19th and 23rd August 2021 organized by the School of Allied Health Sciences, REVA University, Bengaluru. Dr. Gurumurthy has delivered a talk on the topic “**Advances in Extremophilic Research**”.



Faculty Publications :

Mr. Ganesh Tilve. Published a research paper titled “**InVitro Morphogenesis and Molecular Analysis in Coffee**” in International Journal for Innovative Research in Science and Technology, Volume 8, Issue 2, July 2021 (ISSN- Online: 2349-6010).

UIRST -International Journal for Innovative Research in Science & Technology| Volume 8 | Issue 2 | July 2021
ISSN (online): 2349-6010

InVitro Morphogenesis and Molecular Analysis in Coffee

Prof. Ganesh G. Tilve
Assistant Professor
Department of Biotechnology
G.M. Institute of Technology, Davangere, India

Dr. Gurumurthy H.
Professor
Department of Biotechnology
G.M. Institute of Technology, Davangere, India

Naveen K. H
Department of Biotechnology
G.M. Institute of Technology, Davangere, India

Faculty Development Program :



1. **Mr. Ganesh Tilve** has Attended five-day online Faculty Development Program (FDP) on “**Recent Advances in Science, Technology, Engineering and Mathematics (STEM)**” organized by the School of Allied Health Sciences, Reva University, Bengaluru from 16th to 23rd August 2021

2. **Mr. Ganesh Tilve** and **Mrs. Deepthi Pallede** has Attended five-day online Faculty Development Program (FDP) on “**Frontiers of Biological Research: Challenges And Opportunities**” organized by Amity Institute of Biotechnology, Amity University, Kolkata from 13th to 18th August 2021

3. **Mr. Ganesh Tilve** attended the Virtual Faculty Development Program (VFDP) “**Skills for Evolving Education System**” scheduled from 23rd to 27th August 2021 organized by ICT Academy in association with Bangalore University.

Mr. Ganesh Tilve has attended AICTE Sponsored One Week Short Term Technical Programme (STTP) on “**Start-up driven Bio-innovation and IOT for Sustainable Agritech**” organized by the Department of Biotechnology, The Oxford College of Engineering, Bommanahalli, Bangalore from 23rd August to 28th August 2021

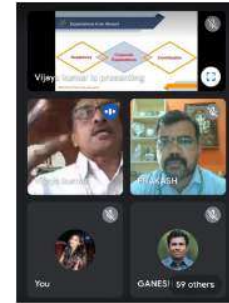


Mr. Ganesh Tilve has attended “**Training and Project Awareness**” webinar titled “ How to read Scientific Literature and Introduction to MANAV- The Human Atlas Initiative” organised by Amity Institute of Physiology and Allied Sciences, Amity University, Noida (Uttar Pradesh) under Project Manav- The Human Atlas Initiative funded by Department of Biotechnology, GOI and co-funded by Persistent Systems on 21st August, 2021 Key speaker: Dr. Anupama Harshal W., IISER Pune



Department Alumni Meet 2021:

Department of Biotechnology has successfully organised Online Department Meet-2021 on Sunday, 29th August 2021 at 11 AM as Department Alumni Co-ordinator. Totally 58 alumni attended the event from 2006 to 2020 output batch and shared their memorable experiences with GMIT, about their current workplace and interacted on how the academia- industry collaboration would help current students.



KSCST Project Presentation :

Student project work entitled “**Extraction of Anti-odour compound from Arabidopsis thaliana and treating foul smell in recycled sewage water**” was Evaluated by the KSCST expert committee on 17th August -2021. The group is headed by **Dr. Gurumurthy H.**



Mr. Rakesh N R, Research Scholar (4GM17PGA003) Department of Biotechnology as successfully completed the Open Seminar of his Ph. D Work on 23rd August 2021 Forenoon.

GMIT product Expo - 2021 :

All the faculties and staff of the Department of Biotechnology have participated in The **GMIT Product Expo 2021** organized on 06th August 2021 . Total of 9 ready to market products were demonstrated during the Expo. Two products were listed as best products and awarded a cash prize. The department congratulates **Mr. Rakesh N R** and **Mrs. Deepthi Palleda** and their respective project students for receiving the best two product category.



Smart - Civil :



Farewell to final year students and Technical Interactive Session was organized by Department of Civil Engineering on 05-08-2021. The event focused the technical aspects in construction industries by our alumni Mr. Ranjan D S, Managing Director, RV Consultant and Services, Channagiri.

Cache - CSE :

Mr. Aruna Kumar B T, Assistant Professor of the department has successfully completed his Ph.D. Comprehensive Viva Voce on 18th August 2021 on the research work titled "Performance of video quality metrics assessment in AVC and HEVC coded Videos". Aruna Kumar B T is pursuing his Ph.D. in Recognized Research Center, UBDTCE, Davangere from Visvesvaraya Technological University, Belagavi under the guidance of Dr.Manjanaik N, Professor, UBDTCE, Davanagere



Under the scheme of AICTE's Margadarshan and Margadarshakshare and mentor Institution, **Dr. Sharvani**, Associate Professor from RVCE Bangalore has visited and conducted a compliance report and external academic audit on 27.08.2021.

Computer Science & Engineering Alumni Meet – 2021 :

To strengthen the relationship with alumni of the department, an Alumni meet has been conducted online on 22.08.2021. This event was organized and conducted by Santoshkumar M and Dr. Shivanna K. Alumni were expressing their thoughts and ideas to improve and develop the teaching-learning environment to focus more on industry requirements based on their experience. Further, they were suggesting their juniors appear for Mock Interviews, Technical talks, and more in forum Activities. Around 70 Alumni were present and given suggestions during the alumni meet.

Dr. Y. Vijaya Kumar, Principal narrated the recent development taken place in institution, including MoUs, Center of Excellence and Research Centers. Sir has given information regarding institution ratings in Times of India, Outlook Express, and The Week magazine. Also he requested alumni to join their hands in the progress of the department and institution.

Dr. Sanjay Pande M B, Professor and Head of CSE has discussed about the initiatives and activities conducted in the department such as NPTEL online course, Infosys foundation programme, Koushalya – Soft Skills Training for Students. Also he emphasized about process taking place for the university status of the Institution in coming days. The alumni meet has started with invocation by Deepa G of 6th Semester and Vote of thanks was delivered by Mr. Kotreshi S N and the MOC was done by Mr. Rudresh N C.



Principal Dr. Y Vijaya Kumar addressing the gathering



HOD Dr. Sanjay Pande M B addressing the Alumni



More than 70 Alumni has attended the meeting



Mr. Shazib Khan giving the suggestions regarding placement activities



Mr. Krishna Wadone giving suggestions to include soft skills in 3rd semester



Mr. Sachin R addressing the Alumni Meet regarding Entrepreneurship

Patent Filing :



Mr. Niranjana Murthy C, Assistant professor, Department of Computer Science and Engineering has filed an Innovative Patent on **“Dry Land Agriculture and Yield Gap Analysis by Machine Learning Algorithms using IOT sensors”** on the 25th of August 2021 bearing patent number 2021104029. Management, the Principal, HoD, and all the staff members congratulated the achievement.



Mr. Santoshkumar M, Assistant Professor has attended an International STTP on **“Advanced Application in Artificial Intelligence and Machine Learning”** which is organized by MarathawadaMitraMandal Institution, Pune from 2nd to 6th August 2021.

The project work titled **“FACE MASK DETECTION AND THERMAL SCANNER FOR COVID CARE”** was conducted by **Karthik M Hadagali, Pradeep Kumar B S, Ritika Reddy V B, Priyanka M N** (Final Year students of AY 2020 – 21) under the guidance of **Mr. Sandeepa G S**, Assistant Professor has been exhibited and received the Best Product Award in **Product Expo 2020-21** organized by GMIT, Davanagere on 06th August 2021. The principal, HoD, and all the staff of the department has congratulated the achievement.



Mr. Sandeepa G S, Asst. Prof., has published a paper entitled **“FACE MASK DETECTION AND THERMAL SCANNER FOR COVID CARE”** in International Research Journal of Engineering and Technology, Volume 8, Issue 8, August 2021 <https://www.irjet.net/volume8-issue8> S.No: 380



Mr. Sandeepa G S, Assistant Professor has attended AICTE sponsored Online Short Term Training Programme on Focuses on Learning the Scope of Security Aspects and Applications organized by the Department of Information Science & Engineering, NMAM Institute of Technology, NITTE from 22nd to 31st of July 2021.



BIO - Codes :

Department of Biotechnology has organized the **Ayudha Pooja** celebration on 14th October 2021 on the eve of Naada Habba Dasara in CNR Seminar Hall. Principal **Dr. Y. Vijaya Kumar** presided over the function and performed the pooja. Management representative **Sri. Y. Subhash Chandra**, Placement Officer **Mr. Tejasvi Kattimani T R**, Head of Department **Dr.Prakash K K**, heads of various departments, teaching, and non-teaching staff were present on the occasion.



Department of Biotechnology organized “**Fun learning activities**” as a part of the induction program for 3rd-semester students of the department. The program was designed and conceptualized by **Mrs.Deepti Palleda** (Assistant Professor & Cultural Coordinator). Principal **Dr. Y Vijaya Kumar** presided over the event, addressed the students and stressed on the need of learning new skills along with academics to be industry-ready. Head of Department **Dr.Prakash K K**, Faculty Forum Co-ordinator **Mr. Ganesh Tilve**, all faculty members and students of 5th and 7th semester were present on the occasion.



Head of Department **Dr.Prakash K K** has been elected as **BoE** member for 2021-22 in the Department of Biotechnology, Visvesvaraya Technological University, Belagavi.



Dr.Pavan K. J, Assistant Professor, Department of Biotechnology, has attended the Academic council meeting (BOS) of RLS Science Institute, Belagavi to frame the syllabus as per NEP-2020 Guidelines for Biotechnology Semester I and II held on 16th October 2021.



Mr. Ganesh G. Tilve, Assistant Professor, Department of Biotechnology, Participated in Two Day Virtual Conference on **Planning and Implementation of National Education Policy (NEP) in Higher Education Institutions (HEIs)** on October 20 and 21st, 2021 organized by BCIC, Bangalore



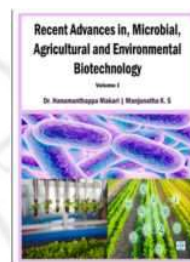
Mr. Ganesh G. Tilve, Assistant Professor, Participated in 3 weeks online course on “Entrepreneurial Skills Development Course for Young Researchers in Biotechnology” organized by Pune Knowledge Cluster (PKC), Pune between 11th October to 29th October, 2021.

FDP (Offline)

Dr. Pavan K. J., Assistant Professor, Department of Biotechnology, has participated in 5 days FDP-Workshop on “**Centre of Excellence for Innovation, Research, and Entrepreneurship**” from 27th Sept to 1st Oct 2021. Organized by NITI Aayog - Atal Incubation center (Jyothi Institute of Technology) held at GMIT, Davanagere Campus.



Mrs. Keerthi S., Assistant Professor has published a book chapter named “**Biosensor Technology: A Special Reference To Microbial Biosensor and Its Applications**” in Recent Advances in Microbial, Agricultural and Environmental Biotechnology (Volume 1) (ISBN : 978-81-94090-6-7)



Mrs. Deepti Pallea, Assistant Professor, Department of Biotechnology, has participated in 5 days FDP-Workshop on “**Centre of Excellence for Innovation, Research & Entrepreneurship**” from 27thsept to 1st Oct 2021. Organized by NITI Aayog - Atal Incubation center (Jyothi Institute of Technology) held at GMIT, Davanagere Campus.



Cache - CSE :

New Faculty :

New faculties Namely **Mr. Shankarayya Shasthri** and **Mr. Murgesh V Jambagi** have been appointed as Assistant Professor in the CS&E department and get reported on October 7th, 2021 and October 10th, 2021 respectively and they have good experience in both teaching and corporate level.



College-level Girl's cricket tournament has been conducted from 25th to 27th of October and the team CSE got the “**best team**” award in the tournament under the guidance of Dr. Sanjay Pande M B, HOD, CSE, and department sports coordinator Mr. Rudresh N C.



BIO - Codes :

Industrial Visit:

Students of the department were taken on an industrial visit to Mangalore from 18th to 20th December 2021. A total of 57 students from the department were accompanied by three faculties **Mr.Rakesh N R**, **Mr. Ganesh G. Tilve**, and **Miss Baby Shalini Billa**. They visited CampcoChocolate Industry (Puttur) and Manipal Anatomy and Pathology Museum (Manipal) as a part of their visit.



Pic taken at Campco, Puttur



Manipal Anatomy and Pathology Museum, Manipal

Sports achievements:

Two students from our department **Miss Rakshitha R. Kamath** and **Miss. Anjali P.** has added laurels to the department and the institution. Miss Rakshitha R. Kamath (5thSem) won Silver Medal in Judo (+78 Kg.) at inter-collegiate, inter-zone tournament organized by Department of Physical Education and Sports, VTU (Belagavi) at KLS's VDIT, Haliyal on 15th and 16th December 2021. Miss. Anjali P (5thSem) won Bronze Medal in Judo (+78 Kg.) at the same event. Department Head **Dr.Prakash K. K.**, Sports Coordinator **Mr.Rakesh N. R.**, department faculties and students have congratulated them for their achievement.



Forum activity "Cooking without fire":

"Cooking without fire", a cooking event was organized under the department forum "GENELIX" on 10th December 2021 in CNR Seminar Hall (Biotechnology). This event was designed and conceptualized by Forum Co-ordinator **Ganesh G. Tilve**. Students from the 3rd and 5th semesters actively participated in the event. Principal **Dr. Y. Vijaya Kumar**, heads and teaching staff of various departments visited the event and motivated the students.

A total of 14 teams participated and the winners were decided by **Mrs.NasreenTaj** (Asst. Professor, ISE) and **Mrs.Veena C M** (Asst. Professor, Mathematics). Forum Chairman and Head of Department **Dr.Prakash K K**, all teaching and non-teaching staff of the department were present on the occasion.

Winners of the event are as follows:

First Prize: Namitha H N, TanayaTiwari, Sindhu R, Bhavana H, Bindu G K, and Akshatha NB (3rdSem)

Second Prize: Chaitra P, Dhanya R, Pragyna S Savadi, Meghana Y and Sakshi Olivia K (3rdSem)

Third Prize: AkshayShet, Manjunatha S, Kiran B, Dileep G, Nikhil M and Samarth V M (3rdSem)



New faculty recruitment:

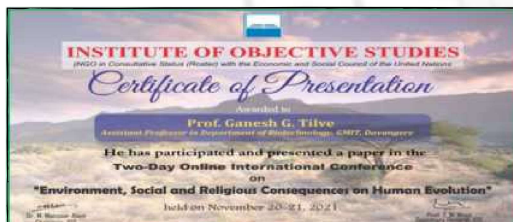


Miss. Sushma B S recently joined the department as Assistant Professor on 20th December 2021. She completed her B.E. in Chemical Engineering from BIET, Davangere (2018 output batch), and M.Tech in Chemical Engineering from RVCE, Bengaluru (2020 output batch). She worked for MultibashePvt. Ltd., Bangalore (online platform) as a tutor for 11 months. Her field of specialization is Chemical Engineering (Unit Operations and Chemical Reaction Engineering).

International Conference participation :

Mr. Ganesh Tilve participated and presented a paper at the two-day online international conference on “**Environment, Social and Religious Consequences on Human Evolution**” organized by the Institute of Objective Studies (NGO with the Economic and Social Council of the United Nations), New Delhi on November 20th and 21st, 2021

Mr. Ganesh Tilve participated and presented a paper in a two-day international webinar on “**Neurobiology of Behaviour: The Challenge and the Promise for Translational Research (NBCP-2021)**” organized by the Department of Zoology, Dr.HarisinghGourVishwavidyalaya (A Central University), Sagar, Madhya Pradesh on 15th and 16th December, 2021



Mr. Ganesh Tilve
Assistant Professor

National Webinar -1 participation :

Mr. Ganesh Tilve participated in a national webinar on “**Food and Nutrition Security for LIFE (Lifestyle For Environment)**” organized by the Department of Food Sciences and Nutrition with Nutrition Association and Nutrition Society of India, Coimbatore Chapter, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore (Tamil Nadu) on 23rd December, 2021



Mr. Ganesh Tilve participated in National Level Online Webinar and Workshop on “**Integrated Genomics and Proteomics Approach for Cancer Research**” jointly organized by the Department of Zoology, Gauhati University, Tata Memorial Centre (ACTREC), Navi Mumbai, and School of Life Sciences, Mizoram University on 4th December, 2021



Short Term Technical Programme (STTP) participation :

Mr. Ganesh Tilve attended AICTE Sponsored Phase-3 One Week Short Term Technical Programme (STTP) on “**Start-up has driven Bio-innovation and IOT for Sustainable Agritech**” organized by the Department of Biotechnology, The Oxford College of Engineering, Bommanahalli, Bangalore from 13th December to 18th December, 2021.

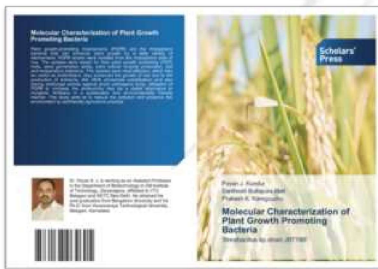


National e-quiz participation :

Mr. Ganesh Tilve participated in National Level E-Quiz on “**Atmospheric Pollution and its control**” organized by the Department of Botany, Maris Stella College, Chennai on 2nd December 2021.



Book Published:



Dr. Pavan K. J

Dr. Pavan K. J., Assistant Professor, Department of Biotechnology, has Published Book Titled “**Molecular Characterization of Plant Growth Promoting Bacteria**” in Scholars' Press with ISBN No: - 978-613-8-96460-5.

Smart - Civil :

Department of Civil Engineering has organized a Guest lecture on “**Preparation for Competitive Exams**” on 8th December 2021. **Mr. Sharath G N**, Managing Director, Copper age, Davanagere has delivered the talk.



Mr. Kiran Kumar C M, Assistant Professor, Department of Civil Engineering, has received a certificate for attending a webinar on “**Stone Matrix Asphalt**”, held on 4th December 2021 organized by Darshan University, Rajkot in association with J. Retternmaier & Sohne, Germany.



Mr. Swamy L V, Assistant Professor, Department of Civil Engineering, has completed a one-week short-term training program through ICT mode on “**Laboratory Practice on Civil Engineering Materials-Concrete**” from 13th December to 17th December 2021, organized by the National Institute of Technical Teachers Training and Research, Kolkata.



Mr. Virupaksha H V, Assistant Professor, Department of Civil Engineering, has attended two days workshop on “**Universal Human Values and Professional Ethics**” from 29th November to 30th November 2021, organized by Bapuji Institute of Engineering and Technology, Davangere.



2020
Current
Trends

GM Institute of Technology

EREKY & ME

SCIENCE AND TECHNOLOGY MAGAZINE



Bio technology
RESEARCH WATCH
Department
ACHIEVEMENTS

Editor:
Dr. Prakash. KK

Co-Editor:
Mrs. Keerthi S

SCIENCE AND TECHNOLOGY MAGAZINE OF THE DEPARTMENT OF BIO
TECHNOLOGY



GM Institute of Technology



Late Sri. G. MALLIKARJUNAPPA
Hon'ble Member of Parliament
Founder President

The founder Late Shri G. Mallikarjunapa had a dream to provide quality Technical and Management education to the Rural and sub-urban youths of the central part of Karnataka. He was fond of serving society through various services. Education is one among them. He was a man of hard work and dedication. He wanted to channelize his dream through Srishyla Education Trust by providing Hi-tech education to the Rural students



Message from the Governing body



Chairman

Shri. G.M Prasanna Kumar
M.Tech



Secretary

Shri. G.M Lingaraju

We congratulate the Department of Biotechnology and specially the magazine Committee Members of their efforts in bringing out the annual magazine for the year 2019-2020. We hope this magazine is an amalgamation of all the events held in the department and it plays an instrumental role in providing a greater exposure of the achievements accomplished by the students and the faculty. We wish all the very best in your endeavours.



Vision, Mission & Quality Policy.

Vision

To develop technologically competent, humane and socially responsible engineers and managers to meet the ever growing challenges of the Global Environment.

Mission

- To provide quality technical and management education by applying best practices in teaching, learning and with the state of the art infrastructural facilities.
- To mould engineers and managers with appropriate pedagogy to develop leadership qualities and skills by imbibing professional ethics to make them industry ready.
- To develop a student-centric Institution which evolves and fosters the talents of budding engineers, managers and entrepreneurs and prepare them to make a positive contribution to the society.
- To promote Research and Consultancy through collaboration with industries and Government Organizations.

Quality Policy.

Our institute delights stakeholders by providing hi-tech quality education and training through creating virtual industrial environment and innovative academic ambiance to promote scholastic ability and reviewing its effectiveness of Quality Management System by apex bodies of higher education

Message from Principal



Dr. Y VijayaKumar

M. Tech, Ph.D

I am very happy to mention that Department of Biotechnology brings it's annual magazine "Ereky & Me". This magazine gives insight into scope and range of the imagination and creativity of our students and faculty members. Nowadays the health sector is getting more advanced with the help of advance technology so there is a huge need of Biotechnology engineer's to fullfill the needs of society.

The department of Biotechnology in GMIT is booming with new high. I congratulate all the faculties and students who used various mediums of expression to present their ideas. I congratulate every student for their joy of participation on taking the Department to new high and making it Proud.

Message from HOD



Dr. Gurumurthy H

M.Sc ,Ph.D

It's my pleasure to present that Department of Biotechnology at GM Institute of Technology brings it's annual magazine "Erkey& Me" . This magazine is an initiative taken by the Department to cover multiple career opportunities. The magazine covers the various conferences, research watches, paper presentations, visits to research institutes and industries, students achievements, and academic progress of department.

Mentoring career counseling, personality development and development of technologically compete humane and socially responsible engineer's to meet ever growing challenges are the key areas which the Department focus.

I congratulate all the faculties and students who shared the joy of participation in making the magazine wonderful and also making Proud for the Department.

[Erkey &Me :Science and technology magazine of Department of Biotechnology.](#)

Department of Biotechnology.

Worldwide research is drastic in the field of Biotechnology and Bioengineering. To cater to the global requirement of trained manpower, university has introduced Biotechnology course in Engineering with a view to blend the Biosciences and technology for better results.

Keeping this vision, the management has introduced this course during the academic year 2002-03. The Department is emphasizing on imparting the knowledge in the broad areas like Chemical engineering, Molecular Biotechnology, Bioinformatics, Biochemistry, Food and Fermentation technology, Environmental and Plant Biotechnology etc.

Highly qualified, experienced and dedicated staff members are being involved aching the students with in depth technical knowledge. Well-equipped and sophisticated laboratories are the center of attraction. The laboratories provide the basic foundation for the various research projects. Another major strength of the department is its extensive collection of Technical Books, Periodicals and Journals that helps the staff and students to acquire their knowledge with latest trends in technology developments. Eminent scientists and experts are invited from various industries to interact with our students, contributing an insight into practical application areas.

Department is recognized as research center by VTU from 2008. Three students have obtained M.Sc. Engineering by Research degree from our research center.

GENELIX, the forum of Biotechnology department is actively involved in organizing technical seminars by eminent scientists and researchers. Furthermore, the department will organize various technical quiz, debates, model exhibitions, poster presentation, seminars, group discussions etc., which help the students in developing their personality and perform well in campus interviews and getting the lucrative placements.

Department of Biotechnology.

Vision

To be a Centre of Excellence with a blend of life science and technology to create professionally competent Biotechnology Engineers. and Socially Responsible

Mission

- 1.To provide quality education by creating appropriate teaching learning ambience.
- 2.To train and develop graduates in the field of Biotechnology through research to meet the societal proliferating demands..
3. Inculcate professional skills and ethics to produce responsible Biotechnology graduates.

Programme Educational Objectives (PEOs).

To make students

1. Graduates will possess necessary knowledge in the emerging areas of Biotechnology
2. Graduates are capable of working in the field of Health, Agriculture and Environment, considering the social implications
3. Graduates having adequate skills to pursue higher education and research in relevant areas with professionalis

Programme Specific outcomes (PSOs).

1. Graduates will be capable of applying fundamental principles of Biotechnology to maintain the sustainability in the environments
- 2.Learn the applicability of Biological Engineering techniques to enhance employability and entrepreneurship to meet global competitiveness
3. Demonstrate the research activities to solve a wide array of societal problems

Contents:

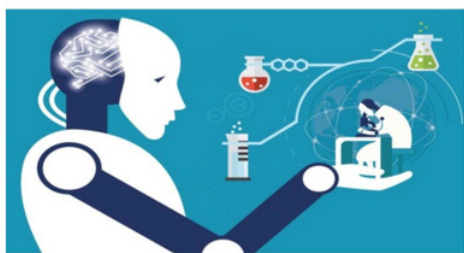
1. Artificial Intelligence in Medicine
2. Plant based Vaccine
3. Post Harvest Pathology losses and control
4. The Evolution of Clinical trials
5. Oncolytic virotherapy, "Cancer eating virus"
6. NGS in waste water treatment
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8. Departmental Activities
9. Students achievements
10. University Results



ARTIFICIAL INTELLIGENCE IN MEDICINE”

“The science of today is the technology of tomorrow”

-Edward Teller



Artificial Intelligence

The artificial intelligence is defined as the combination of science and the engineering on creating intelligent computer systems that are able to perform tasks without receiving any instructions directly from the humans.

Although artificial intelligence and machine learning are not considered as biotechnologies, I think they deserve to be mentioned due to their impact in the medical field. As we all know that now a days this AI is growing very significantly and research interest in AI- based medicinal applications has also grown significantly over the past decades. In earlier days there were only a very little (over 70) market approved AI algorithms for the medical application, according to a study conducted by the university of Groningen and the Medical Futurist Institute. A number of these applications use image based machine learning algorithms for the analysis of diagnosis, analysis or assessment of diseases.

The AI has many applications in the field of healthcare like:

- AI is used in disease prediction.
- It is used in drug manufacturing.
- Used in taking treatment decisions.
- Also used in some AI assisted surgeries.
- Used in preliminary diagnosis.
- Used in discovering new drugs.
- In virtual nursing assistant.

The AI medicine can be of two subtypes like virtual and physical. The virtual mode can range from applications such as electronic health record systems to neural network based guidance in treatment. Whereas the physical part deals with robots assisting in performing surgeries, intelligent prostheses for handicapped people, and elderly care. Many case studies and trial are also been carried out regarding this use of artificial intelligence in medicines and healthcare. Many of the artificial intelligence based application in medicine and healthcare make use of some software's and one such example is the use of Qlarity Imaging's QuantX software which is an aid for radiologists to more quickly and accurately identify abnormal spots on breast MRI images. Now a days research interest has especially grown for developing fully autonomous medical robots, which currently are being trained to complete very specific tasks. The IDx-DR device, developed by Digital Diagnostics, captures retinal images to diagnose diabetic retinopathy, a cause of blindness in diabetic patients.

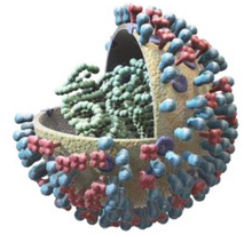
Conclusion

The primary aim of AI in healthcare is to analyze the relationship between or treatment techniques and patient outcomes. AI can achieve fast and accurate diagnostics. This AI is also very helpful in reducing the human errors as well as the cost of treatment. AI also promises to change the practice of medicine in many unknown ways, but many of its applications are still in their infancy and need to be explored and developed better. Even the medical professionals also need to understand and get update themselves to this type of advanced technologies for better healthcare delivery and services to the mass of people.

Soujanya S More

Department of Biotechnology

Plant based Vaccine



Plant-based vaccine technologies involve the integration of the desired genes encoding the antigen protein for specific disease into the genome of plant tissues by various methods. Agrobacterium-mediated gene transfer and transformation via genetically modified plant virus are the common methods that have been used to produce effective vaccines. This paper reviews the existing conventional methods as well as the development efforts by researchers in order to improve the production of plant-based vaccines. Several challenges encountered during and after the production process were also discussed.

Vaccines help in stimulating the antibodies production in human and animals and provide immune protection against several diseases. However, the unavailability of vaccines for the treatment of fatal diseases has caused problems and driven global attention towards production of safer, easier, and more effective vaccines. Generally, there are three types of Vaccine production methods, namely, the egg-based vaccines, cell based vaccines, and vaccines produced using investigational-manufacturing systems. The most common example of egg-based vaccine is the influenza vaccine produced in 9-to-12-day-old embryonated eggs. This conventional method has been applied for over 60 years and it involves the injection of virus particles into the eggs and further incubation for several days to allow the replication of virus particles. In order to produce a vaccine, the antigen isolated from the purification process of the eggs containing vaccine virus particle would undergo additional procedures. of influenza virus are able to replicate in embryonated eggs, hence affecting the amount of vaccine produced in the eggs.



Globally, researchers are undertaking significant efforts to design and develop effective vaccines, therapeutics, and antiviral drugs to curb the spread of coronavirus disease 2019 (COVID-19). Plants have been used for the production of vaccines, monoclonal antibodies, immunomodulatory proteins, drugs, and pharmaceuticals via molecular transient expression system and are considered as bioreactors or factories for their bulk production. These biological products are stable, safe, effective, easily available, and affordable. Plant molecular farming could facilitate rapid production of biologics on an industrial scale, and has the potential to fulfill emergency demands, such as in the present situation of the COVID-19 pandemic. This article aims to describe methodology ,basics of plant biopharming, in addition to its prospective applications for developing effective vaccines and antibodies to counter COVID-19.

Chinmayi N Ramgiri
Department of BIOTECHNOLOGY

POST HARVEST PATHOLOGY LOSSES AND CONTROL

The diseases which develop on harvested plants or seeds, fruits and vegetables are the post-harvested diseases. The harvested products may be infected because of the storage methods before their final consumption. The plant may get infected in the field, but expression of symptoms may take place later.

The plant may get infected by microorganisms and cause rotting or decaying either partially or totally. The quantity of plant products becomes reduced due to these infections. The seeds or grains may get damaged by accumulation of toxic substance, the mycotoxin produced by the infected microorganisms and mainly due to storage pests.

The fruits and vegetables like tomato, banana, citrus, strawberries, rhizome of ginger, bulb of onion, tuber of potato etc., may get damaged. This results in reduction of quantity, quality or both and affects the products.

The damage depends mainly on the pathogens involved on the condition of the products and the condition of storage.

The pathogens involved are mainly fungi like Rhizopus, Aspergillus and some bacteria like Pseudomonas, Erwinia, etc.

Classification of Post harvest Disease

1. Field pathogen
2. Storage pathogen.

1. Field Pathogen:

The field pathogens are those that cause infection during development of plants or their products before harvesting.

2. Storage Pathogen:

The pathogen which cause infection during storage are the storage pathogen.

Types of Post harvest Disease

1. Diseases of dry and bulk materials such as seeds and grains.
2. Diseases of fleshy storage organs, such as vegetables (tubers, rhizomes, bulbs etc.) and fruits.

The real cause of the spoilage of vegetables and fruits in transport and storage are due to high moisture, high temperature and injuries caused during marketing. But the seeds and grains can be stored for long time after harvesting due to low moisture content.

Disease of stored seeds and food grains

The fungi produce mycotoxins during storage that cause great damage to both animals and human beings. Fungi like Aspergillus and Penicillium produce aflatoxin and other toxins.

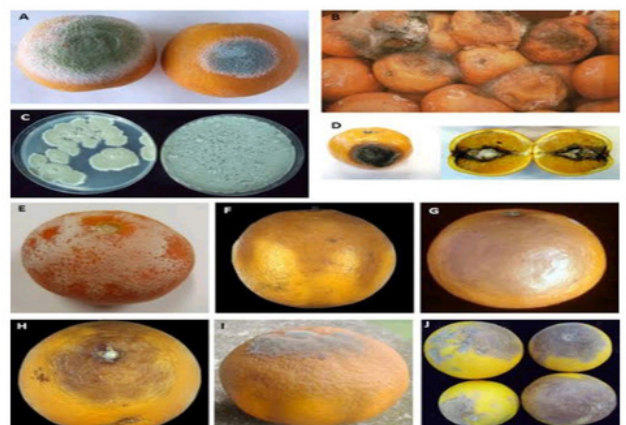
Control – These post harvest losses can be controlled by maintaining low moisture, low temperature, sanitation, ventilation and by use of insecticides .

Disease of Vegetables and Fruits

Different members of Ascomycotina and Deuteromycotina families can cause major post-harvest diseases in fruits and vegetables.

Control of Post harvest Disease

1. The fruits and vegetables should be harvested and handled carefully.
2. The infected region on the vegetables should be cut off to avoid further infection.
3. Storage container and warehouses should be properly cleaned with CuSO₄, formaldehyde etc. to avoid contamination.
4. The crop should be stored and transported properly.
5. Proper ventilation reduces the development of disease.
6. The crops should be free from pests.
7. These chemicals help to prevent infection and suppress the development of pathogens.



Pallavi K E

7th sem Biotechnology



Synthite



Fi Food ingredients
Europe

Synthite

28 - 30 November 2017
Messe Frankfurt, Germany



THE EVOLUTION OF CLINICAL TRIALS

- Medical research studies involving people are called clinical trials.
- There are two main types of trials or studies interventional and observational.
- Interventional trials aim to find out more about a particular intervention, or treatment. People taking part are put into different treatment groups, so that the research team can compare the results.
- Observational studies aim to find out what happens to people in different situations. The research team observe the people taking part, but they don't influence what treatments people have. The people taking part aren't put into treatment groups.

Types of clinical trials:

- Prevention trials:

These trials can be for the general population or for people who have a higher than normal risk of developing a certain cancer. This could include people with a family

- Screening trials:

Screening means testing people for the early signs of cancer before they have any symptoms. As with prevention trials, screening trials can be for the general population.

- Treatment trials

Treatment trials are done in stages, called phases. The early phases aim to find out more about the safety and side effects of a new treatments. Later phases aim to see if a new treatment works better than the current treatment.

- Multi-arm multi-stage (MAMS) trials

A multi arm trial is a trial that has several treatment groups (arms) as well as the standard treatment group (the control group).

- Cohort studies

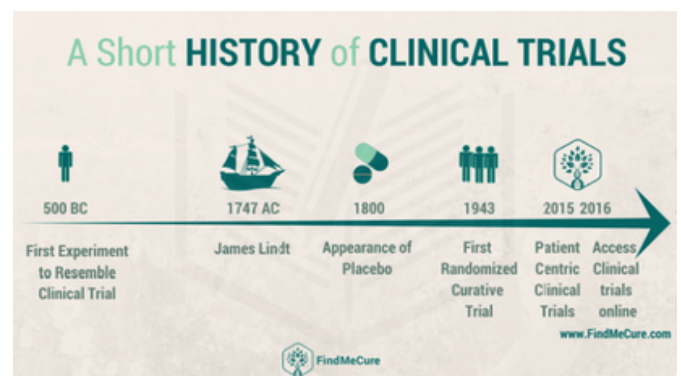
A cohort is a group of people, so cohort studies look at groups of people. A cohort study follows the group over a period of time.

History of Clinical Trials:

When talking about the history of clinical trials one name always pops up – that of James Lind who conducted the famous scurvy trial in 1747. A range of technological advances has transformed the clinical trial process. The year is 1747 and Lind, a surgeon on a ship decides to test out the most promising cures for scurvy, describing a process closely resembling our modern day controlled clinical trials. He chose a group of similar cases on one and the same diet and gave different medicine in pairs – cider, vitriol, vinegar, sea water, oranges, and lemons. Of course, as you know, the oranges and lemons “won” with the cider following closely but here's what happened next: oranges were far too expensive to be recommended as treatment despite the high levels of mortality.

Phases of Clinical Trials:

- Pre-clinical(toxicity testing, PKPD, pharmacological effects)
- Phase 0(first in human trials)
- Phase 1(volunteers)
- Phase 2(patients)
- Phase 3(large scale multi-centre)
- Phase 4(post registration monitoring)

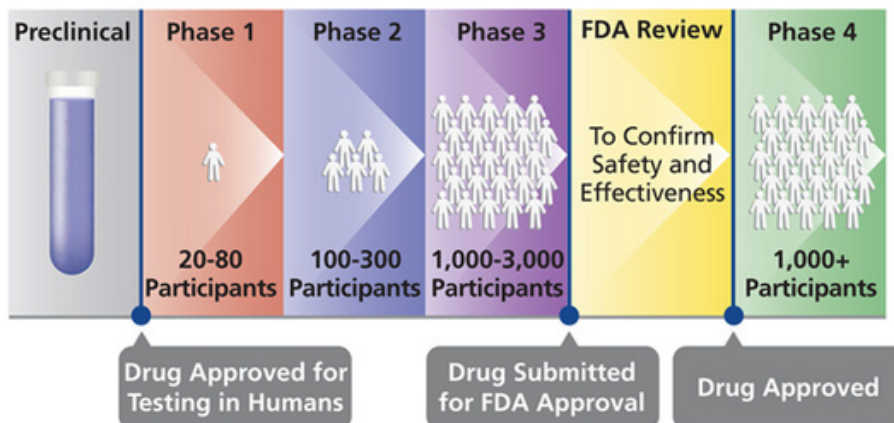


Conclusion:

- Advances in biomedical research have produced significant opportunities to improve cancer prevention, detection, and treatment.
- Insights about the genomic and molecular mechanisms of disease have enabled basic scientists to identify new therapeutic targets and develop new agents that are changing the paradigm of cancer research from nonspecific, broadly toxic chemotherapies to highly targeted combinations of therapies.
- However, the ability to translate biomedical discoveries into advances in care for patients with cancer remains dependent on the clinical trials system. Clinical trials provide an essential link between scientific discovery and clinical practice.
- These trials are crucial to the translation of new knowledge into tangible benefits for patients, and the knowledge gained in a clinical trial can also inform and guide further research into the biology of the disease.



Clinical Trials



- Tasbianjum. A. P
7th sem Biotechnology

Oncolytic virotherapy, “Cancer eating virus”.

With the world still in the grip of a devastating pandemic, it's hard to imagine viruses as something other than hostile enemies to be vanquished.

But in a recent review article for the journal *Cancers*, Masmudur Rahman and Grant McFadden describe a class of viruses that act to combat rather than cause deadly disease. Such oncolytic viruses as they are known, have a remarkable ability to target and destroy cancer cells, while leaving healthy cells untouched. The field of oncolytic virotherapy today is advancing rapidly as clinical trial data accumulates and regulatory approvals continue to accrue.

Cancer remains a leading killer globally and is anticipated to cause 1.9 million cases and 608,570 fatalities in 2021 in the US alone, according to the American Cancer Society. The discovery of cancer-killing or oncolytic viruses has opened a new door to cancer therapies that may fulfil the elusive goal of eradicating cancer while leaving healthy cells and tissues unharmed.

Natural Born Killers

Today, a variety of oncolytic viruses are being explored for cancer therapy. While many such viruses can directly attack and terminate malignant cells, their primary strength may lie in their ability to alert an inactive or disabled immune system to the presence of cancer. When successful, the oncolytic virus triggers the patient's own cellular sentry dogs of immunity to sniff out cancer and destroy it, as they would a foreign pathogen.

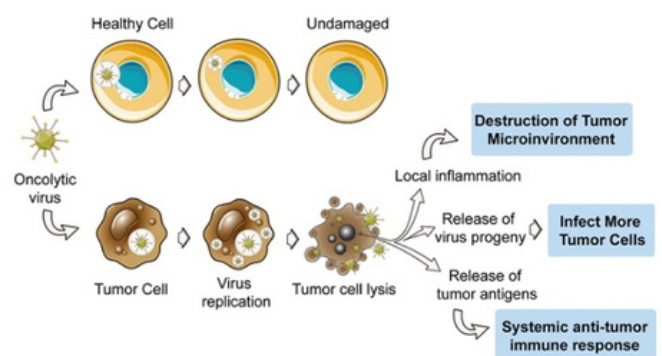
Researchers have learned to reengineer oncolytic viruses to sharpen their lethality to cancer cells as well as their ability to stimulate the immune system. Two primary methods are used in such viral gene tinkering, known as knockout and knock-in approaches.

Knockout refers to the removal of viral genes, prior to introducing the virus into patients. Knock-in methods involve the introduction of novel genes,

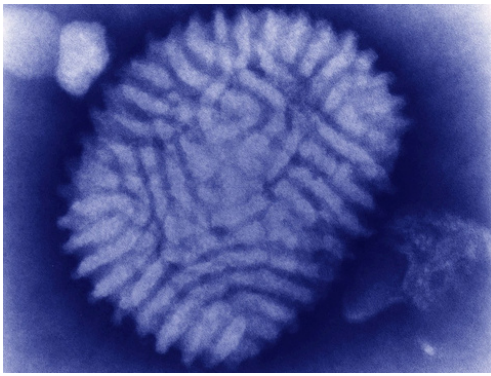
known as transgenes, into naturally occurring oncolytic viruses.

Building better viruses

At the Biodesign Institute, McFadden, Rahman and their colleagues work with myxoma virus, an oncolytic virus that shows considerable promise. Myxoma is a member of a large family of viruses known as poxviruses. Myxoma is close to 100% lethal to European rabbits, producing an aggressive disease known as myxomatosis. When introduced into a bed of cancer cells, myxoma attacks and kills them. Yet the virus is completely harmless to non-cancerous human cells (or those of any other non-rabbit species). The deletion of these viral death modulator genes in an oncolytic virus can enhance its ability to kill cancer cells and more effectively expose antigens in the tumor, triggering a stronger anti-tumor response from the immune system. Other modifications involving transgenes can further enhance the ability of oncolytic viruses to recruit immune system cells to recognize and target the tumor.



massive tumor regression and long term, disease-free survival."

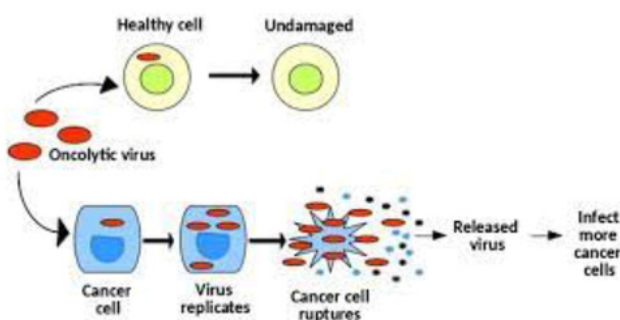


Myxoma is a double-stranded DNA poxvirus. Like most others in this vast virus group, it has a relatively large genome, made up of over 160 thousand genetic base pairs, which code for 171 viral genes.

One reason viruses like myxoma are attractive candidates for oncolytic virotherapy is that their large genomes are amenable to improvements using genetic modification. One such alteration in myxoma involves removing viral genes that delay or prevent a cell infected by the virus from terminating itself. Such cell suicide is one way an infected organism tries to limit the spread of virus throughout the body.

Therapy goes viral

The full potential of oncolytic viruses will almost certainly involve combining them with existing cancer treatments such as radiation, chemotherapy, and various forms of immunotherapy. One of the most promising new treatments is a form of immunotherapy using so-called checkpoint inhibitors.



Checkpoint proteins are produced by the immune system's T cells. These regulatory agents act to prevent an overresponse by the immune system, which over time, can damage healthy cells and tissues. Cancer often exploits this system, making use of checkpoint proteins to protect themselves from immune assault.

Checkpoint inhibiting drugs can switch the immune system back on, allowing T cells and other immune components to vigorously attack the cancer. "When patients respond to checkpoint inhibitors, it's often like magic," McFadden says. "They can undergo m"New approaches like immune checkpoint inhibitors are very effective in reducing the tumor burden and improving survival, but it works only in a small number of patients -- only 10-20%." While only four oncolytic viruses have thus far been approved globally for clinical use, many more, including myxoma, are in pre-clinical trials, as the field rapidly advances.

Summary: In a recent review article researchers describe a class of viruses that act to combat rather than cause deadly disease. Such oncolytic viruses as they are known, have a remarkable ability to target and destroy cancer cells, while leaving healthy cells untouched.

By
Manjunath sonnada,
Department of biotechnology,
G M institute of technology, Davangere.

NGS IN WASTE WATER TREATMENT

ABSTRACT:

Water quality is an emergent property of a complex system comprised of interacting microbial populations and introduced microbial and chemical contaminants. Studies leveraging next-generation sequencing (NGS) technologies are providing new insights into the ecology of microbially mediated processes that influence fresh water quality such as algal blooms, contaminant biodegradation, and pathogen dissemination. NGS technologies can provide new and holistic insight into microbial communities and their functional capacities in water and wastewater systems, thus eliminating the need to develop a new assay for each target organism or gene. In addition, sequencing methods targeting small subunit (SSU) rRNA hypervariable regions have allowed identification of signature microbial species that serve as bioindicators for sewage contamination in these environments. We analyse next generation sequencing (NGS) data of wastewater treatment plant (WWTP) in the North Water facility for revealing the role of 1236 different genera of microorganisms in the aeration basin to the measured process data. Microorganisms are responsible for the conversion and breakdown of organic compounds and contaminants in bioreactors designed for the treatment of different types of waste.

Organized in highly complex communities, they are the heart of every wastewater treatment plant and solid residue landfill. Until recently, only a fraction of the microbial diversity could be assessed, limited by the available sequencing technology, which was not suited for a high-throughput implementation. With the introduction of the recent next-generation sequencing (NGS) methods, an enormous advance has taken place allowing researchers in microbial ecology to generate large amounts of phylogenetic data in a short time and at relatively low costs

INTRODUCTION:

The development of next generation sequencing (NGS) techniques has enabled researchers to study and understand the world of microorganisms from broader and deeper perspectives. NGS generation sequencing technologies are increasingly used in many fields. In overview to wastewater treatment microorganisms are responsible for the conversion and breakdown of organic compounds and contaminants in bioreactors designed for the treatment of different types of waste. It has been recognized that wastewater forms a significant part of waste human activities and it requires treatment before its environmentally safe to be discharged to the natural water resources. When it is discharged untreated, it pollutes water resources and can lead to disastrous ecological, environmental, as well as, economical impacts. Wastewater comes from two major sources:

1). Human sewage systems 2). From manufacturing industries.

This treatment was introduced early twentieth century. It involves the deployment of confining naturally occurring bacteria at very high concentrations in tanks. The concept is simple but the control of the treatment process is very complex because of large number of variables that affect. These include changes in the composition of the bacterial flora in the treatment tanks and changes in the sewage flowing into the plant. The input can variation in the flow rate, and as well as in chemical compositions, PH and temperature which in turns influence the population dynamic and metabolic process of the activated sludge. Some industrial wastewater which are used by some plants that are difficult degrade by the activated sludge, those contains extreme properties such as low or high PH or high concentration that can inhibit the of functioning of activated sludge.

. To describe the dynamic process in WWTP there are many models are established such as Activated Sludge Models from International Water Association. These models have some uncertainties' such here the influence of activated sludge are lumped to kinetic law/rate of few WWTP process variables. And the unknown parameters are a fusion of metabolic activities of various microorganisms and consequently they have a large degree of uncertainties. For improving the reliability and applicability of these models, it is recognized that the knowledge and real-time indispensable for enriching the ASM models. In particular, the high-throughput data of microorganisms that are obtained from Next Generation Sequencing(NGS) it helps in adapt the uncertain parameters and decrease the uncertainties of the models.

Organized in highly complex communities, they are the heart of every wastewater treatment plant and solid residue landfill. Until recently, only a fraction of the microbial diversity could be assessed, limited by available sequencing technology, which was not suited for a high- through output implementation. With the introduction of the recent next-generation sequencing (NGS) methods, an enormous advance has taken place allowing researches in microbial ecology to generate large amounts of phylogenetic data in a short time and at relatively low costs. In this review, we present and discuss how the increase in available information has influenced recent research and the results available phylogenetic data has produced in the field of wastewater treatment. Furthermore, we introduce the data processing of NGS- based experiments, which has become more complex as the millions of sequences that a single sample can yield require the effective use of computational resources and human bioinformatics skills. Next Generation Sequencing (NGS) of the 16S rDNA gene from the bacteria in sludge samples is used to analyze the microbial communities. The analysis of the NGS data shows the presence and abundance of the microorganisms in the sludge based on the millions of DNA sequence data. The frequency of the occurrence of the same sequence in the NGS dataset is related to the abundance of a specific microorganism in the sludge sample.

What is NGS?

NEXT-GENERATION SEQUENCING

Introduction to NGS

Learn how the technology works and what it can do for you

What is NGS?

Next-generation sequencing (NGS) is a massively parallel sequencing technology that offers

ultra-high throughput, scalability, and speed. The technology is used to determine the order of nucleotides in entire genomes or targeted regions of DNA or RNA. NGS has revolutionized the biological sciences, allowing labs to perform a wide variety of applications and study biological systems at a level never before possible.

Today's complex genomics questions demand a depth of information beyond the capacity of traditional DNA sequencing technologies. NGS has filled that gap and become an everyday tool to address these questions.

What NGS Can Do For You

NGS technology has fundamentally changed the kinds of questions scientists can ask and answer. Innovative sample preparation and data analysis options enable a broad range of applications. For example, NGS allows labs to: Rapidly sequence whole genomes

Deeply sequence target regions

Utilize RNA sequencing (RNA-Seq) to discover novel RNA variants and splice sites, or quantify mRNAs for gene expression analysis or Analyse epigenetic factors such as genome-wide DNA methylation and DNA-protein interactions

Sequence cancer samples to study rare somatic variants, tumor subclones, and more

Study the human microbiome

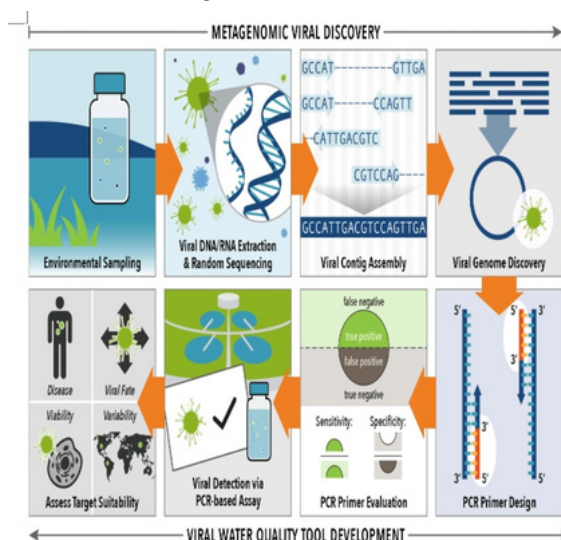
Identify novel pathogens.

Review of NGS Technologies and Analysis Methods:

Advances in NGS enabling massively parallel analysis of DNA sequence information from PCR amplicons, or environmental nucleic acids, ushers in a new era of proxy development for water quality assessment. In clinical research, massively parallel sequencing (MPS) has been demonstrated as a screening tool used to complement or circumvent conventional diagnostic methods (e.g., culturing, microscopy and Gram-staining) for the detection and identification of etiological agents in disease. While quantitative tests for water quality assessment (e.g., qPCR, culture-based FIB quantification kits) are appropriate for estimating exposure to biological risk agents or sewage contamination, application of NGS surveys can be a first step to focus on more specific exposure assessment of appropriate targets.

Surveys of waterborne microbial communities using NGS thus far, have relied upon targeted sequencing of the hypervariable regions of SSU rRNA gene (e.g., V1, V3, V4, V6 regions) and Large Subunit (LSU) rRNA gene. Apart from SSU and LSU rRNA genes, other genes with taxonomic signals such as nirS (denitrification) and nifH (nitrogen fixation) indicative of biochemical cycles, as well as plastid SSU rRNA have also been adopted for NGS-based microbial profiling.

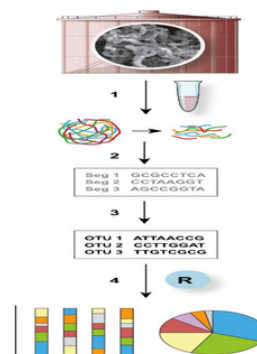
In order for NGS to become a useful tool for water quality monitoring purposes, long term sequence data collection and management will be crucial in establishing databases that are important for inter-laboratory data comparison and comparative metagenomics studies. Using a combination of NGS approaches (e.g., metagenomics, meta transcriptomics, single-cell genomics, and comparative genomics) in systematic studies of freshwater microbiomes can be expected to yield a wealth of information crucial in water quality assessment and management.



WORKFLOW OF AN NGS EXPERIMENT:

The biomass bioreactors mainly consist of microorganisms.

- 1). Samples of biomass are collected, the cells are disrupted, total DNA is extracted and 16S rRNAs are amplified by PCR.
- 2). A fragment of the 16S rRNA genes is sequenced by a high-throughput sequencing technique producing a set of reads.
- 3). Sequences are processed by using different software packages and the suitable sequences are clustered into operational taxonomic units (OTUs) and compared with the data bases.
- 4). Statical and graphical evaluation is performed with statistical computer programs and dedicated functional libraries.



Advantages of NGS:

- Higher sensitivity to detect low-frequency variants^{1,2}.
- Faster turnaround time for high sample volumes³.
- Comprehensive genomic coverage.
- Lower limit of detection^{4,5}.
- Higher throughput with sample multiplexing.
- Ability to sequence hundreds to thousands of genes or gene regions simultaneously.

Disadvantages of NGS :

- High cost
- Low throughput
- Time consuming
- Insufficient
- Sensitivity to identify somatic variants in tumor samples.

CONCLUSION:

Currently, NGS technology stands out as one of the most powerful and effective approach for DNA/RNA sequencing. And also, Next-Generation Sequencing (NGS) technologies are providing new insights into the ecology of microbially mediated processes that influence fresh water quality. NGS technologies can provide new and holistic insight into microbial communities and their functional capacities in water and wastewater systems, thus eliminating the need to develop a new assay for each target organism or gene.

USHA G. V
RAKSHITHA R KAMATH
5th sem Biotechnology

Major Instrumentation Facilities

- UV visible Spectrophotometer
- Electrophoresis
- BOD incubator
- Deep freezer
- Microscope
- Magnetic stirrer and hot plate
- Bacteriological Incubator
- Hot Air Oven
- Microscopes
- Digital colony counter
- Laminar air flow
- Autoclave
- High speed refrigerated centrifuge C24
- High speed refrigerated centrifuge C12
- Clinical centrifuge Microscopes
- Cyclomixer
- UV Transilluminator
- UV Cabinet PCR
- Sonicator
- ELISA counter
- Incubator Shaker
- Tissue homogenizer
- CO₂ incubator
- Fermenter
- RTD Module
- Flow measurement trainer
- Flow process analyzer
- Pressure process analyzer
- Air Compressor
- Interacting system
- Non-Interacting system
- Gyrotory sieve shaker
- Diffusivity measurement apparatus
- Steam distillation
- Ball mill
- Leaf filter setup
- Tray drier
- Simple distillation
- Double distillation unit
- Isothermal Batch Reactor
- Mixed flow reactor
- Plug Flow Reactor
- Process control measurement equipment
- Calorimeters
- Visible Spectrophotometer
- Tray drier Batch, distillation setup



Department of Biotechnology.

Current Faculty Details 2019-2020



Dr. Gurumurthy H
Professor & Head



Dr. Prakash. KK
Associate Professor



Dr. Gurumurthy DM
Assistant Professor



Mrs. Keerthi S
Assistant Professor



Dr. Pavan KJ
Assistant Professor



Mr. Rakesh NR
Assistant Professor



Mrs. Deepthi Pallada
Assistant Professor



Mr. Sachin CL
Assistant Professor

Departmental Activities 2019-2020

- The Department of Biotechnology conducted three days industrial visit to "Paul Johns Distilleries" Goa from 30th September to 2nd October 2019
- Conducted three days workshop on "Soft skill development Training" from 16th to 18th October 2019 by Mr. Prakash Kumar O, Training and development consultant Davangere
- Technical talk on "Recombinant DNA Technology" by Dr. Raghavendra Ramappa, Scientist, Dept. of Biology, IISC, Kundapura, Chalkere on 27th August 2019
- Technical talk on "Biotechnology and Forensic science" by Dr. PM Nagaraju, Resource person from Regional Forensic science, Eastern range, Davangere. On 06/02/2020
- Technical talk on "Drug Discovery and Development Process" by Dr. Girish Bolakatti, M. Pharma, Ph. D, Principal, GM Institute of Pharmaceutical science and Research, Davangere on 19/02/2020
- Conducted Awareness program on Flu by the Documentary on 11th March 2020

KSCST Sponsored projects

- Production of biofuel and biosorption of heavy metals by microalgae using industrial waste water. Guided by Dr. H Gurumurthy. Grant amount: 10,000.
- Biogas recovery and generation of electricity from landfill pharmaceutical waste. Guided by Mr. Rakesh NR. Grant amount: 7,000.
- Preparation of anti-diabetic momordica charting (bitterground) chocolate (avishkar- teqip scheme). Guided by Dr Prakash KK. Grant amount 5,000

- Vermicomposting and production of bio ethanol using prees mud and molasses from sugar industry. Guided by Dr. H. Gurumurthy . Grant amount 7500.
- Biodegradable plastics a waste reduction . Guided by Mrs. Keerthi. S . Grant amount 5,000.
- Lignocellulose rich bio-compost for production of thermostable functional enzymes . Guided by Dr . DM Gurumurthy . Grant amount 5,500

Faculty Paper Publications

- Dr. DM Gurumurthy published a paper on Cell wall associated DEET for Fe(3) reduction from Geobacillus sp. in an anoxic environment. Extremophiles
- Dr. DM Gurumurthy published a paper on Cynoxanthomycin, a bacterial Antimicrobial compound Extracted from Thermophilic Geobacillus sp. Iso5. Jordan J Biol Sci. 13(5):
- Dr. DM Gurumurthy published a paper on Novel Geobacillus thermoleovorans KNG 112 thermophilic bacteria from Bandaru hot spring : A potential producer of thermostable enzymes. Asian J Pharma Clin Res . 13: 134-141
- Dr. DM Gurumurthy published a paper on EPS bound flavins driven mediated electron transfer in thermophilic Geobacillus sp. Microbiol.Res.229: 126324.doi.org/10.1016/j.micres.2019.126324
- Dr. H Gurumurthy published a paper on Biofuel Production and Biosorption In Industrial Waste water using Microalge. International Journal of Emerging Technologies and Innovative Research (JETIR),Volume 6,Issue 6, PP 525-529,2019.
- Mrs. Keerthi S published a paper on Determinants of Capital structure: Evidence from Indian Pharmaceutical Companies. International (ISBN:978-1-943295-11-1) AIMS Journal


University Results:

Toppers 2019-2020

	NAME OF THE STUDENT WITH USN	SEMESTER	SGPA	
1st toppers	Nivedita BM	3rd	9.25	
	Monisha G	5th	9.62	
	D Sunaina	7th	9.25	
	Nivedita BM	4th	10	
	Monisha G	6th	10	
	Meghana L	6th	10	
	R Dhanyashree	6th	10	
	Yashaswini DB	8th	9.3	

Results 2019-2020

YEAR	SEMESTER	STUDENTS APPEARED	OVER ALL %
2019-2020 ODD	3rd	36	83.33%
	5th	31	100%
	7th	35	100%
2019-2020 EVEN	4th	36	100%
	6th	31	100%
	8th	35	100%



If You Are Working On Something That
You Really Care About, You Don't Have
To Be Pushed. The Vision Pulls You.

- Steve jobs