



Centre for Bioscience and Nanoscience Research

Affiliated to Bharathiar University | DSIR SIRO Recognized | An ISO 9001: 2015 Certified

461/3 Amman Nagar, L&T Bypass Road, Eachanari, Coimbatore - 641021



ANNUAL REPORT 2024

உயிரியல் மற்றும் நானோ அறிவியல் ஆய்விதழ் மையம்
CENTRE FOR BIOSCIENCE AND NANOSCIENCE RESEARCH
Affiliated to Bharathiar University/Ministry of Science and Technology
(DSIR SIRO Recognized) ISO 9001:2015
461/3, Amman Nagar, L&T Bypass Road, Eachanari, Coimbatore - 641021
Tamil Nadu, India
PIN: 6422-2930408, 9629388728, Email: cbnrcindia@gmail.com, www.cbnrcindia.com

Centre For Bioscience and Nanoscience Research
Visalakshi Educational Trust



Visalakshi Educational Trust

461/3, Amman Nagar, L&T BY Pass Road, Eachanari,
Coimbatore-641 021, Tamil Nadu, India



0422-2930408, 96293 88728



cbnrcindia@gmail.com



www.cbnrcindia.com

Annual Report - 2024

About CBNR

The Centre for Bioscience and Nanoscience Research (CBNR) was established in 2010 under the Visalakshi Educational Trust, Coimbatore, with the aim of providing a collaborative platform for biologists to engage in knowledge exchange and benefit mutually. CBNR is dedicated to offering high-quality research facilities across various disciplines of life sciences. It is ISO 9001:2015 certified for its infrastructure and facilities and is affiliated with Bharathiar University, Coimbatore. The institute currently offers full-time and part-time M.Phil. and Ph.D. programs in Microbiology and Biotechnology and is recognized as a research institute by DSIR and SIRO.

CBNR is equipped with a well-furnished laboratory featuring modern automated instruments, enabling advanced research under the guidance of distinguished scientists from around the world. Our key research areas include bio-prospecting of polymer-based nanoscience, food nano-biotechnology, industrial nanoscience, and agricultural and medical microbiology.

CBNR comprises two full-time research supervisors, Six faculty members, eight Ph.D. scholars, and a technical assistant. Committed to excellence, CBNR takes a unique approach to delivering high-quality training and focus on providing innovative and customized programs tailored to meet the specific needs of students across various disciplines, including Biological Sciences, B.Tech., M.Tech., B.Sc., M.Sc., B.Pharm., M.Pharm., M.Phil., Ph.D., PDF, and other fields of life sciences.

Vision and Mission Statement

Our motto is “*Towards Excellence*”

CBNR is a premier center for higher learning in the life sciences, catering to both academic and industrial needs through research and development at an affordable cost for students. Our goal is to equip students and research scholars with essential skills in life sciences, enhancing their employability and fostering a deeper passion for the subject.

Accreditations

- ✚ Affiliated to Bharathiar University to conduct M. Phil. and Ph.D. in Microbiology and Biotechnology
- ✚ DSIR and SIRO Recognized Research Institute
- ✚ ISO 9001:2015 Certified
- ✚ MSME Approved
- ✚ BCIL Certification
- ✚ FSSAI Certified

Highlights of CBNR

- ✚ More than 200 gene sequences submitted to NCBI
- ✚ More than 115 papers published in National and International Journals
- ✚ Conducted 29 workshops & 5 Faculty Development programme
- ✚ 13 MoU with leading colleges / Industry support for the placement
- ✚ 58 students got placement so far
- ✚ Fee concession and free training for the merit & economically weaker students
- ✚ Experienced research scientist / Eminent visiting scientists from industry and academia.
- ✚ Enrichment scientific knowledge / panel discussion with scientists

Facilities

Being an Research Institute committed to do more Research works it was decided to have separate Research Lab for Microbiology, Biotechnology, Nanotechnology and Food and Nutrition by utilizing optimum space, natural light, and breeze for each lab with well equipped instruments. At present the working space of lab is more than 3500 sq.ft excluding seminar hall, library, office rooms, lounge area and garden. Free Wi-Fi campus with separate hostel for research scholars and staff members.

Benefit to the Society













In recent years, there has been a decline in the number of students opting for bioscience courses, primarily due to a lack of awareness and a limited number of technically skilled professionals in the field. To address this, we aim to raise awareness among undergraduate and postgraduate students in universities and colleges about the significance of Life science courses and its vast potential applications.

The rapid and ongoing advancements in life sciences are shaping a future fueled by innovative tools in Microbial biotechnology, Molecular biology, Food technology, and Nanotechnology. As a knowledge-driven field, Life science courses thrive on the continuous flow of new ideas and concepts, driving the development of cutting-edge research tools that contribute to a sustainable and green environment.

Area of Research work carried out in CBNR

- ✚ Molecular Biology/ rDNA technology /Medical Molecular Microbiology
- ✚ Bio nanotechnology – Synthesis of Silver/ Gold / CNTs nanoparticles and its textile/medical applications
- ✚ Plant Biotechnology/ Ethanobotany and Biopharmacological Research
- ✚ Microbial enzyme technology / Bioremediation / Food Science
- ✚ Agricultural/ Food Microbiology/ Biotechnology / Bio preservative
- ✚ Environmental Biotechnology / Aquatic stress management
- ✚ Microbial diagnosis using rDNA technology / Plasmid mediated
- ✚ Protein Engineering / All types of Bioinformatics work
- ✚ Bioactive compounds/ antioxidant/ characterization from Herbal plants/ Microbes / Phytochemistry
- ✚ Animal cell culture / cancer biology
- ✚ Herbal drug formulation
- ✚ Nanoparticle synthesis using biopolymer, biomolecules etc.

Highlights of 2024

-  **Recognized by DSIR – SIRO from June 2024**
-  **FSSAI**
-  **17 Research Article Paper published in Scopus / Web of Science / UGC approved Journals**
-  **26 NCBI gene sequence submitted**
-  **Conducted 1 national level FDP**
-  **1 National level Workshop**
-  **Signed New 3 MOU with different College/ Institutions**
-  **Trained more than 426 Students from Various college**
-  **159 Students were undergone for intership,**
-  **102 Students did their main project in different topic**
-  **7 Workshop was conducted for different college students**
-  **Patent awarded/ Granted / Published - 3**

Teaching committee

Teaching is the process of imparting knowledge, values, skills and attitudes to learners through, guidance, practice and instruction. It involves facilitating learning, fostering critical thinking, and nurturing personal and intellectual growth. Effective teaching goes beyond delivering information—it inspires curiosity, encourages problem-solving, and helps students develop the ability to apply knowledge in real-life situations. Teachers are an essential pillar of any educational institution, playing a vital role in imparting knowledge and shaping students' minds to navigate various challenges. Centre for Bioscience and Nanoscience research (CBNR) itself of having proficient and experienced faculties who work tirelessly to uphold the values and principles of the institution. The faculty members work towards creating an environment that is conducive to learning the practical knowledge, By effectively instilling discipline in students and guiding them toward the right path for a promising future.

Faculty profile

The faculty members of Centre for Bioscience and Nanoscience research have continually demonstrated excellence and distinction through their academic achievements and contributions. Their research curiosity, determination, and passion for academia have propelled them to reach new milestones.

- **Chairman**

Mrs. R. Nagarathinam

Centre for Bioscience and Nanoscience Research

- **Trustee**

Dr. R. Harshini, BAMS

BAMS Doctor,

Certified Medical Coder, Specializes in Ayurveda

Freelance writing and content creation for wellness and alternative medicine

Coimbatore, TamilNadu

- **College Committee Member (Bharathiar University Nominee)**

Dr.K. Srinivasan

Professor and Head,

Department of Physics, Bharathiar University,

Coimbatore, TamilNadu

- **Director**

Prof. Dr. R. Ragunathan., Ph.D., FSAB.,

Centre for Bioscience and Nanoscience Research

Coimbatore, TamilNadu

- **Head of the Departments - Food science and Nutrition**

Dr. Jesteena Johney., Ph.D.,

Centre for Bioscience and Nanoscience Research

Coimbatore, TamilNadu

- **Microbiology**

Dr. K. Thangamariappan., Ph.D.,

Centre for Bioscience and Nanoscience Research,

Coimbatore, TamilNadu

- **Microbiologist**
Ms. Abirami V, M.Sc.,
Centre for Bioscience and Nanoscience Research,
Coimbatore, TamilNadu
- **Biotechnologist**
Ms. Vishnu Priya R, M.Sc.,
Ms. Mridhuna Manoharan, M.Sc.,
Centre for Bioscience and Nanoscience Research
Coimbatore, TamilNadu
- **Industrial Expert**
Mr. V. Subramanian.,
Director
SynKroMax Biotech, Chennai, TamilNadu
- **Chief Executive advisory**
Dr. Natarajaseenivasan Kalimuthusamy, Ph.D.,
Professor, Department of Microbiology
Bharathidasan University
Tiruchirappalli Tamil Nadu
- **Visiting Scientist**
Dr. Girilal M, Ph.D.,
Associate Professor and Head,
Dept of Food Tecxhnology,
Saintgits College of Engineering, Kerala
- **Scientific Advisory Committee**
Mr. Arun Joy Mulackal
Sweid Foods Ltd, QA Technician
British Columbia

Ph.D awardee / Thesis submitted

- ❖ From the Department of Biotechnology, Mrs. Kalima.S has submitted her thesis and awarded Ph.D from Bharathiar University in February 2024 for her thesis titled “**Bioprospecting of *Bacillus subtilis*, *Bacillus endophyticus* and *Bacillus tequilensis* isolated from cultivated land soils and its potential applications**”.



- ❖ From the Department of Biotechnology, Mrs. Shameela Khadeeja has submitted her thesis and awarded Ph.D from Bharathiar University in April 2024 for her thesis titled **“Bioprospecting study of various bioactive compounds extracted from mangrove plants *Acanthus ilicifolius*, *Bruguiera gymnorhiza* and *Excoecaria agallocha* and its potential applications – A comparative study”**.



FDP conducted by CBNR

These sessions are designed to enhance teaching methods by reflecting on personal experiences in teaching, learning, and assessment. The initiative emphasizes professional development through conversation and the exchange of experiences.

CBNR has organized 5 days Online FDP programme on February 2024 (5 to 9) on “Perspectives Innovations and Future Developments in Biological Sciences” – PIFDB-24. Totally 46 members participated including faculty members, and research scholars from various states.



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Faculty Development Programme 2024 (Online)

5th February 2024 to 9th February 2024. (5 days)

"Perspectives, Innovations and Future Developments in Biological Sciences"

(PIFDB- 24)

About CBNR

Centre for Bioscience and Nanoscience research (CBNR) was founded in 2010 under Visalakshi Educational Trust, Coimbatore. The goal of CBNR is to render a common platform for the biologists to interact with each other mutual benefit and providing high quality research facilities in various disciplines of life sciences. It has been certified by ISO (9001-2015) for its infrastructure and facilities. It is affiliated to Bharathiar University, Coimbatore and it presently offers full time / part time M. Phil., and Ph.D., programs in Microbiology and Biotechnology. Centre for Bioscience and Nanoscience Research (CBNR) is imparting cutting-edge practical skills and knowledge to the students pursuing bachelor's, master's, and doctoral degree programmes in medicine, pharmacy, Food, agri, civil engineering, biotechnology, microbiology, biochemistry, biosciences and more. CBNR has signed MoUs with 10 educational institutes/industries and received one patent.

OBJECTIVE of the FDP (PIFDB- 24)

The key objective of this FDP is to acquire updated with the awareness on scientific developments beside with the advancement in the field of Biosciences. The PIFDB- 24 aim to prepare faculty members scientists and research scholars to grasp better how biosciences. It also focuses on the impact of scientific advancements and technological innovations in today's era. The PIFDB- 24 content is projected to provide development of recent advancement in the areas of Biosciences.

• Last date for Registration: 01/02/2024

• Registration fee: 450/Gpay

• Mode of Programme: online

• Time : 3.00 pm to 4.15 pm

Certificate will be Provided

Registration link:

https://docs.google.com/forms/d/e/1FAIpQLSfgsvj0_UQJvsgZ2LYlc5xTYMrGoOQ2kk7x2LTxFcC9b3uhA/viewform?usp=pp_url



- MAX LIMIT - 100 Participants
- Selection will be done on First Come First Serve Basis.
- Targeted Participants:
- HoDs/ Assistant and Associate professors / Scientists/BoS / IQAC coordinators /NAAC Coordinators/NBA coordinator



Social Behavior:
The Contribution of early-life Social Experience

Prof. K. Emmanuvel Rajan
Head, Department of Animal Science Chair
School of Life Sciences
Bharathidasan University, Tiruchirappalli - 620024

"Importance of research and innovation in life science education"

Prof. Basavaraj Hungund
Professor and Head, Department of Biotechnology
KLEF Technological University
Hubballi-580031, Karnataka, India



Unveiling the Potential of Phytochemicals

Dr. S. Vijayanand
Associate professor
Department of Life sciences
Kristu Jayanti College
Bangalore, Karnataka, India

Nano Science to Nano Technology:
An Innovative Path for Better Society

Dr. Davit B. Dhruv
Young Innovative Technologist, Assistant Professor,
Department of Physics, Saurashtra University
Rajkot - 360005, Gujarat, India.



Innovations in Modern Biological Sciences and Research Funds Generation

DR. Maruvloorarasi Prabhu
Innovation fellow at BIRAC EYUVA CENTRE
PSGR Krishnammal College for Women
Coimbatore

CBNR Organising Committee

CHIEF PATRON

Dr. R. Ragunathan

Director, Research Supervisor

Centre for Bioscience and Nanoscience Research
Coimbatore, Tamil Nadu, India

CONVENER

Dr. Jesteena Johnney

Head of the Institution

Centre for Bioscience and Nanoscience Research
Coimbatore, Tamil Nadu, India

MEMBER

Dr. K. Thangamariyappan

Scientist, Dept. of Microbiology
Centre for Bioscience and Nanoscience Research
Coimbatore, Tamil Nadu, India

Advisory committee

DR. Sevanan Murugan

Associate Professor
Department of Biotechnology
Karunya Institute of Technology and Sciences (Deemed to be University)
Karunya Nagar, Coimbatore- 641 114, Tamil Nadu, India

Dr. Senthil Kumar

Research Director
Sree Abirami College of Pharmacy
Coimbatore, Tamil Nadu, India



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Faculty Development Programme 2024 (Online)

5th February 2024 to 9th February 2024. (5 days)

“Perspectives, Innovations and Future Developments in Biological Sciences”

(PIFDB- 24)

Program Schedule
3.00 - 4.00 p.m.

Day I (05-02-2024)

Dr. Davit B. Dhruv

Young Innovative Technologist, Assistant Professor,
Department of Physics, Saurashtra University
Rajkot - 360005, Gujarat, India.

“Nano Science to Nano Technology: An Innovative Path for Better Society”

Day II (06-02-2024)

Dr. S.Vijayanand

Associate professor
Department of Life sciences
Kristu Jayanti College
Bangalore , Karnataka, India

“Unveiling the Potential of Phytochemicals”

Day III (07-02-2024)

Prof. Basavaraj Hungund

Professor and Head, Department of Biotechnology
KLE Technological University
Hubballi-580031, Karnataka, India

“Importance of research and innovation in life science education”

Day IV (08-02-2024)

DR. Maruvloorarasi Prabu

Innovation fellow at BIRAC EYUVA CENTRE
PSGR Krishnammal College for Women
Coimbatore

“Innovations in Modern Biological Sciences and Research Funds Generation”

Day V (09-02-2024)

Prof. K. Emmanuvel Rajan

Head, Department of Animal Science Chair
School of Life Sciences
Bharathidasan University, Tiruchirappali – 620024

“Social Behavior: The Contribution of early-life Social Experience”

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DAY 1



Membership in professional bodies

- ❖ Faculties of Dr. R. Ragunathan, Dr. Jesteeena Johney, Ms. Mridhuna Manoharan, Ms. Vishnupriya R, Ms. Abhirami V, took membership in BGR publications since October 2024.



- ❖ Dr. R. Ragunathan was certified for Premium Membership in Universal Society of Food and Nutrition from 16.12.2024.
- ❖ Dr. R. Ragunathan was a fellow member of I2OR India, International Institute of organized Research from 4th October 2024

Provided Expert Peer Review for National and International Journals

- ❖ Dr. Jesteena Johney acted as a peer Reviewer for the International Journal Food Science and Applied Biotechnology on 15 January 2024.
- ❖ Dr. R. Ragunathan acted as a Reviewer for the Asian Journal of Food Research and Nutrition on 29 January 2024.
- ❖ Dr. Jesteena Johney awarded for the Excellence in reviewing a Research paper for Journal of Advances in Biology and Biotechnology 7th December 2024.
- ❖ Dr. R. Ragunathan acted as a Reviewer for the Heliyon Journal on November 2024
- ❖ Dr. R. Ragunathan acted as a Reviewer for the Journal of Environmental Biology December 2024

Courses completed by faculty members

- ❖ Dr. . Ragunathan attended two days webinar on ‘Biomufacturing of fermented milks: a step towards health status and social well being’ organized by SMC College of diary science, Kamadhenu University, Anand (Gujarat) in association with Biotechnology Industry research assistance council (BIRAC) DBT, government of Indiaduring 18 and 19 January 2024.

Award

- ❖ **International Innovative Scientist Award – Dr. R. Ragunathan**, Director and Research Supervisor, Centre for Bioscience and Nanoscience Research, Awarded by the **Honorable Education Minister of Tamil Nadu, Mr. Anbil Mahesh Poyyamozi** in the conference “International Science Technology and Research Awards Congress 2024” on 20 December 2024.

Research Activities

Research advisory committee meeting

Centre for Bioscience and Nanoscience Research annual Research Advisory Committee (RAC) meetings to assess the progress of PhD scholars and provide guidance, feedback, and recommendations on research projects, proposals, and initiatives. These efforts aim to foster and strengthen the research culture on campus. Committee members ensure that all research activities align with best practices, ethical standards, and the institute strategic objectives. The committee consists of the following members:

1) Prof. Dr.R.Ragunathan,

**Director
Centre for Bioscience and Nanoscience Research
Coimbatore, TamilNadu**

2) Dr. JESTEENA JOHNEY

**Head of the Departments - Food science and Nutrition
Centre for Bioscience and Nanoscience Research
Coimbatore, TamilNadu**

3) Dr. Rama bhat P

**Head, Department of Biotechnology,
Alvas College Moodbidri, Karnataka**

4) Dr. G. Rajalakshmi

**Head, Department of Biotechnology,
Hindustan college of arts and science, Coimbatore, TamilNadu**

5) Dr. Dhanya V

**Assistant professor and Head
Department of Microbiology
San International College of Arts and science, Coimbatore, TamilNadu**

Research Review Meeting

Research Review meeting for the Ph.D Research scholar was conducted on 26.07.2023 at Johnas salk seminar hall, all the research scholar of Department of Biotechnology and microbiology was participated and presented their research finding. Dr. P. Selvakumar, Associate professor and Head, Department of Biotechnology and Nanotechnology, PSGIAS, Coimbatore.

DC meeting conducted for the Department of Biotechnology

- ❖ DC meeting for Mrs. Brinda C.M, Department of Biotechnology, Centre for Bioscience and Nanoscience Research was conducted on 28.06.2024, in the presence of DC member Dr. Thamarai, Department of Microbiology, Sri Ramakrishna College of Arts and Science, Coimbatore.



- ❖ DC meeting for Mrs. Linima V.K, Department of Biotechnology, Centre for Bioscience and Nanoscience Research was conducted on 10.09.2024, In the presence of DC member Dr. S. Mohandas, Department of Biochemistry, PSG College of Arts and Science, Coimbatore.



- ❖ DC meeting for Mrs. Geethu Suresh, Department of Biotechnology Centre for Bioscience and Nanoscience Research was conducted on 11.09.2024, In the presence of DC member Dr. S. Mohandas, Department of Biochemistry, PSG College of Arts and Science, Coimbatore.



Research Article Published in National and International Journal

Sl. No	Authors	Title of the work	Name of the Journal	Year, Volume, Page No.
1	RV M. Swarnalatha, R. Ragunathan, Jesteena Johney	Biogenic Synthesis of Silver Nanoparticles using <i>Chromolaena odorata</i> Leaf Extract and its Antioxidant, Antimicrobial, and Anticancer Activitie	Journal of Environmental Nanotechnology	2024. 13 (4), 59
2	Geethu Suresh , Ragunathan R, Jesteena Johney	Optimization of laccase production by <i>Pleurotus pulmonarius</i> through solid substrate fermentation of tender coconut fber: enhanced laccase production and biomass delignification	Biomass Conversion and Biorefnery	2024
3	KT Thendral, M Amutha, R Ragunathan, K Saranya	Development of manganese cobalt oxide (MnCo2O4) nanoparticle as multifunctional agents for antibacterial, anticancer and dye degradation applications	Inorganic Chemistry Communications	2024 168, 112854
4	Geethu Suresh , Ragunathan R, Jesteena Johney	Assessing the impact of corn steep liquor as an inducer on enhancing laccase production and laccase gene (Lac1) transcription in <i>Pleurotus pulmonarius</i> during solid-state ...	Nano-Structures & Nano-Objects	2024 39, 101226
	Ragunathan R, Jesteena Johney, S. Sandhya	Evaluation and characterization of vachellia leucophloea ((Roxb.) Maslin, Seigler & Ebinger using phytochemical, antioxidant, GC-MS, antibacterial, and anticancer properties	Plant science Today	2024. 11(1); 160-170
6	Ragunathan R, Jesteena Johney, C.M. Brinda	Biosurfactant production by <i>Bacillus amyloliquefaciens</i> , characterization and its potential applications	Journal of Environmental Nanotechnology	2024. 45(3); 338-348
7	K. Tamil Thendral , M. Amutha, R. Ragunathan	Versatile biopolymer–functionalized copper cobalt oxide nanocomposite (Ch/CuCo ₂ O ₄): Synthesis and applications in antibacterial, anticancer, and photocatalysis	Ceramic international	2024. 50(10); 16929-16939

8	Parvathy Menon P R Nirmala Devi N R Ragunathan Jesteena Johney	Anti-Diabetic Activity And Anti-Oxidant Activity of <i>Kalanchoe Pinnata</i> and their Characterization Studies.	Journal of Survey in Fisheries Sciences	2024. 11(4); 32-38
9	Sidharth.K Sruthy Mohan , M. Thangavel, R. Ragunathan	Characterization of the Phytochemicals and Antioxidant Properties of Extracts From <i>Wrightia Tinctoria</i> R.Br.	Journal of Advanced Zoology	2024. 45 (3); 718-725
10	Ramachandra Ragunathan Rithish Jayakumar Pranav , Sasidharan Satheesh Kumar, Pugalenthi Ragul Rangaraj , Karthikeyan Sangapillai	Exploring the therapeutic potential of cinnamon and clove essential oils for mitigating foodborne diseases: bioactivity and molecular interactions	Food Science and Applied Biotechnology	2024. 7 (1) 122-132
11	Keerthana Manoharan, P Chitra, R Ragunathan	Effect of Microencapsulation on the Antidiabetic and Antioxidant activities of <i>Elaeocarpus tectorius</i> (Lour.) Poir. Leaf extracts-An In vitro study	Research Journal of Pharmacy and Technology	2024. 17 (1); 149-155
	K Narayanasamy, S Mohan, K Baskaran, R Ragunathan	Phytometabolite Profiling Of <i>Combretum Indicum</i> (L.) Defilipps And Its Characterization Studies.	Journal of Advanced Zoology	2024 45(3)
12	N Nirmala Devi, R Ragunathan, K Baskaran	Phytochemical Profiling Using GCMS And Antioxidant Activity of <i>Alpinia Purpurata</i> Flower Extract	Journal of Advanced Zoology	2024. 45(3)
13	M Parivendhan, M Harini, A Dharaniya, N Kansiya, R Ragunathan, N Saravanan	Molecular identification of bacteria (<i>Klebsiella aerogenes</i> , PP335235) isolated from street food (Fried Rice); study of its antibiotic sensitivity pattern	International Journal of Science and Research Archive	2024. 11 (2); 1198-1216
14	R. Ragunathan Sreelekha. K. Nirmala Devi. N, K. Baskaran	Phytochemical Screening, InvitroAntioxidant, Anti-Diabetic, Anti-Inflammatory Activity of Green Tea And Black Tea Leaves Extract	Journal of Advanced Zoology	2024. 45(2); 369-376

National Level Workshop

“Bioprospecting and techniques in Aromatic Plants Research”

- ❖ Centre for Bioscience and Nanoscience Research and Salim Ali Centre for Ornithology and Natural History South India Centre of Wild life institute of India jointly organized two days Workshop on ‘Bioprospecting and techniques in Aromatic Plants Research- 21 and 22 November 2024. Totally 26 members participated from the state of Kerala, Karnataka, Andhra pradesh and Tamilnadu which includes, UG, PG, Research scholars and faculty members. On line workshop manual was published and release in BGR publication with ISSN number.



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&
Salim Ali Centre for Ornithology and Natural History
South India Centre of Wildlife Institute of India
Anakkatt, Coimbatore - 641108, Tamil Nadu
Jointly organizing Two days workshop on
Bioprospecting and Techniques in Aromatic Plants Research
21st & 22nd November 2024

Highlights and Objectives of the workshop

- Field visit to Salim Ali Centre for Ornithology and Natural History, Anakkatt, Coimbatore, Tamilnadu
- Extraction techniques for the phytoconstituents
- Importance of various aromatic plants
- Plant processing and Phytochemical analysis
 - Separation : Test tube method: Column, TLC
 - Characterization : UV-Visible, FTIR , HPLC and GCMS/LCMS
- Bioactivity assays
 - Antioxidant
 - All type of Anti oxidants and anti inflammatory (in vitro) assays
 - Antimicrobial / MIC

Programme Schedule

Day1 (21-11-24) : CBNR Research Laboratory (12/11/2024) – Plant processing, Extract preparation, Anti oxidant analysis, UV, TLC and MTT Assay

Day2 (22-11-2024) : SACON, Anakkatt, Coimbatore (13/11/2024) - Field visit and Hands on training – Sophisticated instrumentation – HPLC, LC-MS, GC & GC-MS analysis

Registration Fee Details

Students	: 2,000.00
Research Scholars and Faculty	: 2,500.00
Scientist	: 2,500.00

Fee includes: local hospitality, Workshop manual, field visit to SACON and laboratory facility.

Eligibility
Students, Staff, Research scholars and scientists in all the field of Life sciences / Chemistry, Pharmacy and Medicine.

Payment Details
Payment will be made through G Pay/PhonePe
9629388728 / 9629236319

Last date to apply: November 15, 2024 - Registration based on first-come, first-serve basis

Chief Patron
Prof. Dr. R. Raguathan
Director and Research Supervisor, CBNR
Convener - (BTAPR - 2024)

Organizing Committee
Dr. Jestena Johny
Head of the Institute, CBNR
Dr.K.Thangamariyappan,
Scientist , Dept. of Microbiology, CBNR
Dr.P.R.Arun
Senior Principal Scientist
Salim Ali Centre for Ornithology and Natural History (SACON)

Members (CBNR)
Ms. Vishnupriya R
Biotechnologist
Ms. V. Abirami
Microbiologist
Ms. M.Mriduna Manoharan
Biotechnologist

Centre for Bioscience and Nanoscience Research (CBNR)

Centre for Bioscience and Nanoscience Research was established in the year 2010, affiliated to Bharathiar University (Ph.D in Microbiology and Biotechnology), recognized by Ministry of Science and Technology, (DSIR-SIRO) and ISO - 9001: 2015 certified. Published more than 100 papers with citation index of 1700, 1 patent and two patent publication. CBNR has conducted 5 National level conferences, 2 FDP, 10 workshops and produced several Ph.D scholars. Bridging the gap between Industry and academia is the focal point of all efforts at CBNR. We are proud to introduce Coimbatore's first of its kind Integrated Biotech & Nanotech research lab, offering a research and training solutions to the students, research scholars, with state of art laboratory facilities. The laboratory facilities includes, separate lab for Microbial technology, Molecular Biology and Nanotechnology.

Salim Ali Centre for Ornithology and Natural History (SACON)

The Salim Ali Centre for Ornithology and Natural History (SACON) is the South India centre of Wild. It is a national centre for information, education and research in ornithology and natural history in India. SACON conduct research in Ornithology covering all aspects of biodiversity and natural history. Main campus of SACON is at Anakkatt, in the foothills of Nilgiri Biosphere, 24 km northwest to Coimbatore. Has two major laboratories, namely National Centre for Avian Ecotoxicology and National Avian Forensic Laboratory equipped with sophisticated scientific instruments such as HPLC, LC-MS/MS, GC, GC-MS/MS, ICP-MS, Next generation DNA sequencer, Sanger DNA sequencer, Gel Electrophoresis and PCRs to support their research.

About the Workshop –“Bioprospecting and Techniques in Aromatic Plants Research” (BTAPR- 2024)

Bioprospecting of aromatic plants involves the discovery and commercialization of new products, which have been one of the important source of medicine even since the dawn of human civilization. Medicinal plants and the derivatives play a major role in medicinal therapy in spite of advances in chemical technology and appearance of cheap synthesized, complex molecule from simple to highly specific reaction mechanism. This research field has gained significant attention due to the potential of aromatic plants in providing bioactive molecules for various applications, including cosmetics, medicine, agriculture, and food industry. Ongoing research aims to develop agro-technologies for economically important aromatic crops and address issues related to pests, diseases, and agro forestry systems. This workshop provides an overview of the current practices, techniques, and scope of bioprospecting in aromatic plant research and effectively combined theoretical knowledge with practical applications, making it a valuable resource

Contact : +91 9629388728
E-mail- cbnrindia@gmail.com
Registration Link : <https://docs.google.com/forms/d/1Mgy-Z8aNy6uijhba2vazFnFSSzucFMEZE-kRFilcHDE/edit>

We are pleased to invite you to participate in the “Bioprospecting and Techniques in Aromatic Plants Research” (BTAPR- 2024) to be held at CBNR and SACON.



Internship – Hands on Training

Centre for Bioscience and Nanoscience Research conducted 15 days Internship for 20 students, on Basic Microbial Techniques and Fermentation Technology for the Karpagam Academy of Higher Education, Eachanari Coimbatore, TamilNadu.



Module
Basic Microbial Techniques
and Fermentation Technology

Programme

- 1 Different types of Sterilization Technique
- 2 Media Preparation - Solid, Liquid, Specific media for the confirmation of bacteria (types of media simple, defined, enriched)
- 3 Different types of pure culture Technique- Maintenance and preservation of microbes
- 4 Isolation and enumeration of microorganism from Soil, water and Food Fermentation media design, desired qualities of fermentation media and formulation media and formulation strategies
- 5 Antimicrobial sensitivity test - Disc diffusion test
- 6 DNA isolation from bacteria and Agarose Gel Electrophoresis

Centre for Bioscience and Nanoscience Research
(Affiliated to Bharathiar University)
Amman Nagar, L&T Bypass Road, Eachanari
Coimbatore - 641 021
Contact No: 0422 - 293 0408 / +91 - 96293 88728
E-mail ID: info@cbnrindia.com
www.cbnrindia.com

Visalakshi Educational Trust
(Reg. No 660)
461/3, Amman Nagar, L&T Bye Pass Road, Eachanari,
Coimbatore-641 021, Tamilnadu, India

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Ministry of MSME, Govt. of India

Project

Around 58 M.Sc /B.Tech/B.Pharm students were underwent their Main project in our Research Institute

Sriramakrishna College of Arts and Science | Sari Padmavati University, Andhra University, Visakapatnam |MG University, Kerala | Nehru College of Arts and Science, Coimbatore |Avinashilingam Deemed University, Coimbatore |Sri Padmavati Mahila Visvavidyalayam, Andhra Pradesh | PSG college of Arts and Science, Coimbatore |Sam Higginbottom University of Agriculture, Technology and Sciences, Uttar Pradesh | PSGR krishnammal College for Women, Coimbatore | LRG Government Arts College for Women, Tirupoor | Royal institute of Science and Technology, University of Calicut, Kerala | RVS College of Arts and Science, Coimbatore | Kongu Engineering College, Coimbatore | Karpagam Academy of Higher Education, Coimbatore | Sri Krishna College of Technology, Coimbatore | Arunai medical college, Tiruvannamalai | Bharathiar University, Coimbatore | Hindustan Institute of Technology, Coimbatore | Bonseour's College for women, Thanjavur | Kalaighnar



Karunanidhi Institute of Technology, Coimbatore | Sri GVG Visalakshi College for Women, Udumalpet | SAN International College Arts and Science, Coimbatore | Sri Neelekanta Government Sanskrit College, Pattambi, Kerala | Dhanalakshmi Srinivasan Institute of Research and Technology, Perambalur, Tamil Nadu | Markaz College of Arts and Science, Kerala | Muthiammal Engineering College, Rasipuram | Abirami College of Pharmacy, Coimbatore VSB Enginnering College, Karur | Holy Cross College, Trichy | Vellalar College of Engineering and Technology, Erode | Gandhigrama Rural Institute, Dindigul | Cheran College of Pharmacy, Coimbatore | Government Arts and Science College, Coimbatore | Government Victoria college, Palakkad, Kerala | Sir Syed Institute for Technical Studies, Kerala | KS Rangasamy College of arts and science, Thiruchengodu | D. Y. Patil Agriculture and Technical University, Talsande

Invited Talk

Centre for Bioscience and Nanoscience Research, conducted a n Invited Talk on Awareness on Lifestyle and chronic Diseases. The sessions was held on 06 July 2024 and **Dr. Jubin Jacob., MBBS, MD** was acted as resource person and more than 20 members were attended.

The Management, Director and Staff of CBNR
Cordially invites you for the

Invited Talk on
Awareness on Lifestyle and Chronic Diseases

Saturday, July 06, 2024 | Time : 11.00 a.m.
Venue: Dr.Jonas Salk Seminar Hall

Resource Person
Dr. Jubin Jacob., MBBS, MD (Physiology)

Presided by
Prof. Dr.R.Ragunathan.,Ph.D.,FSAB
Director and Research Supervisor

All are Invited

Organized by
Centre for Bioscience and Nanoscience Research (CBNR)
Affiliated to Bharathiar University | DSIR – SIRO recognized R&D
An ISO 9001: 2015 Certified | MSME Registered
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Workshop Conducted at CBNR Campus / Jointly Organized Programmes

- ❖ Centre for Bioscience and Nanoscience Research and Department of Zoology, Sri GVG College, Udumalpet Jointly organized two days workshop on Techniques in Biomolecular analysis - 22.02.2024 to 23.02.2024, 40 students and 5 teaching and non teaching staffs were attended.



- ❖ Department of Biochemistry, Institutions Innovation Council, RVS College of Arts and Science, Sulur, Coimbatore, TamilNadu and Centre for Bioscience and Nanoscience Research Jointly organized hands on training in Application of enzymes in Industry on 24 July 2024 at Centre for Bioscience and Nanoscience Research, Coimbatore-21, Tamilnadu. Dr. R. Ragunathan was the resource person and 28 students were attended the programme.





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ARTS AND SCIENCE**
RVS CAS
Building Institutions' Capital
242, Trichy road, Sulur, Coimbatore - 641 402 | www.rvscas.ac.in


Department of Biochemistry, Institution's Innovation Council
& Centre for Bioscience and Nanoscience Research

jointly organize

Hands-on Training in Application of Enzymes in Industry




Resource Person



Prof. Dr. R. Ragunathan
Director
Center for Bioscience and Nanoscience Research
Coimbatore

July
24
2024

09:30 a.m.
Centre for Bioscience and Nanoscience Research
Coimbatore



- ❖ Dr. R. Ragunathan, Director and Research supervisor, Centre for Bioscience and Nanoscience Research, was acted as a Resource Person for the workshop on “**Citric acid production: Upstream and Down stream Processing**”, Department of Biotechnology, Hindustan College of Arts and Science, Coimbatore on 23.08.2024. Ms. Abirami, Vishnupriya and Mriduna Manoharan was also accompanied for the same and 45 students and two faculty members benefited.



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Hindusthan Gardens, Avinashi Road, Coimbatore-641028.

**DEPARTMENT OF BIOTECHNOLOGY &
CENTRE FOR BIOSCIENCE AND
NANOSCIENCE RESEARCH**
Organises
**WORKSHOP ON
CITRIC ACID PRODUCTION:
UPSTREAM & DOWNSTREAM
PROCESSING**

RESOURCE PERSON
Prof.R.Raghunathan
Director
CBNR, Coimbatore
Class : II M.Sc Biotechnology



Date:
23.08.24
& 27.08.24



Venue:
CBNR



Time:
10.30 AM

Patron
Dr. A. Ponnusamy
Principal

Convener
Dr. G.Rajalakshmi
Head

Faculty Co-ordinator
Dr. K. Kavithaa
Assistant Professor

Student Co-ordinator: S Shreevarshan

- ❖ Department of Microbiology, Hindustan College of Arts and Science, Coimbatore, organised Two days Hands on Training workshop on Chromatographic Techniques on 4th and 5th October 2024 at Centre for Bioscience and Nanoscience Research, Coimbatore, TamilNadu, totally 50 members were attended the workshop.

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hicas@hindusthan.net www.hicas.ac.in +91-422-4440555

**DEPARTMENT OF MICROBIOLOGY
ORGANIZES
TWO DAYS HANDS ON TRAINING WORKSHOP ON
CHROMATOGRAPHIC TECHNIQUES**

DATE
**04TH & 05TH
OCTOBER - 24**

VENUE
**CENTRE FOR BIOSCIENCE AND
NANOSCIENCE RESEARCH
EACHANARI
COIMBATORE**

PATRON
DR.A.PONNUSAMY

CONVENOR
DR.LALI GROWTHER

FACULTY COORDINATOR
DR.R.MANJU

- ❖ Dr. R. Ragunathan, Director and Research supervisor, Centre for Bioscience and Nanoscience Research, was acted as a Resource Person for the workshop titled “**Southern Hybridization**”, Department of Biotechnology, Hindustan College of Arts and Science, Coimbatore on 23.08.2024. Dr. Jesteena Johny, Ms. Abirami, Vishnupriya and Mriduna Manoharan was also accompanied for the same.

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Department of Biotechnology
Organizes
WORKSHOP ON
Southern Hybridization

Resource Person
Dr. R. Ragunathan
Director and Research Supervisor
Centre for Bioscience and
Nanoscience Research, Coimbatore

17 th December
10.00 am

Chanakya Hall

Patron
Dr A Ponnusamy
Principal

Convenor
Dr G Rajalakshmi
Professor & HoD

Staff Co-ordinator
M Flory sbobana
Assistant Professor

Student Coordinator
Ms J Anika Celus
M.Sc Biotechnology

Staff activities

Resource person

Dr. R. Ragunathan acted as **Resource person** for the **National Seminar** on NanoGenPro Triad: Exploring the future science, organized by Department of Microbiology and Biochemistry, St. Berchmans College, Changanassery, Kerala on 10th January 2024.

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CHANGANASSERY, KERALA

National Seminar on
"NanoGenPro Triad: Exploring the Future Science"

Organized by:
THE DEPARTMENT OF
MICROBIOLOGY AND BIOCHEMISTRY

January 10th 2024
10.00 am
Venue: Kallarackal Hall

[Click here to Register](#)

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CHANGANASSERY, KERALA

PROGRAMME OVERVIEW

Inaugural Session : 10am - 11.00 am
Tea Break : 11.00am - 11.15 am
Session 1 : 11.15 am - 12.30 pm
"How to dissect and treat a complex disease"

Moinak Banerjee, Ph.D
Scientist G
Rajiv Gandhi Centre for Biotechnology
Thiruvananthapuram

Lunch Break : 12.30 pm - 1.30 pm
Session 2 : 1.30 pm - 2.45 pm

"Impact of Probiotics in Health Care, Food and Agriculture"

Prof. Dr. R. Ragunathan, Ph.D., FSAB
Director and Research Supervisor
Centre for Bioscience and Nanoscience
Research (Affiliated to Bharathiar University)

Session 3 : 2.45pm - 4.00pm
"The Art of Nanoparticles"

Dr. Roshmi Thomas, Ph.D
Assistant Professor
Department of Microbiology
Sanatana Dharma College, Alappuzha

Tea Break : 4.00 - 4.15pm
Valedictory function : 4.15 - 4.45pm

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CHANGANASSERY, KERALA

CALL FOR ABSTRACTS

Abstract Submission guidelines:
Registered participants are invited to contribute to the seminar by submitting abstracts for oral presentation based on the theme **"Research and advancements in Biosciences"**. All the

Student Induction Programme

- ❖ **Dr. R. Ragunathan**, Director and Research supervisor was handled a **session** for Student Induction Programme, Department of Biotechnology, Microbiology, and Food Processing Technology and Management, Hindustan College of Arts and Science, Coimbatore on 05.07.2024.



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DEPARTMENT OF BIOTECHNOLOGY, MICROBIOLOGY AND FOOD PROCESSING TECHNOLOGY AND MANAGEMENT
Cordially invites you for
STUDENT INDUCTION PROGRAM

Dr.R. RAGUNATHAN
Director
Center for Bioscience and Nanoscience Research
Coimbatore

Mr.R. RAVEENDRAN
Secretary
RAAC
Residents Awareness Association of Coimbatore

Dr.C.A.KALPANA
Deputy Dean,
School of Home Science and Professor,
Food Science and Nutrition
Avinashilingam University
Coimbatore

Date: 05/07/2024
Venue: Ashoka Hall
Time: 10 am to 3 pm

Coordinators
Dr.N. Vanitha, Dept of Microbiology
Mrs.Janaranjani.D, Dept of Biotechnology
Ms. Kalamani. R, Dept of FPTM

Convenors
Dr.Lali Growther, Prof & Head, Dept of Microbiology
Dr.G.Rajalakshmi, Prof & Head, Dept of Biotechnology
Dr.MC.Anitha, Coordinator, Dept of FPTM

Patron
Dr.A.Ponnusamy
Principal

Webinar

- ❖ **Dr. R. Ragunathan**, Director and Research supervisor was the **speaker** for the webinar of the **Importance of Probiotic in Health Care** on 19 September 2024 by GBR Foundation.



GBR
Foundation



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WEBINAR 2024



19 September
6.00 PM IST

Register for free!



Participants will be provided with E certificate



Microsoft
Teams

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Topic:
Importance of Probiotics in Health Care



SPEAKER
Prof. Dr.R.Ragunathan,
M.Sc., M.Phil., Ph.D., FSAB
Director
Centre for Bio Science & Nano Science Research
Coimbatore, Tamilnadu
INDIA



MODERATOR
Dr. Sree T. Sucharitha MD
Founder and CEO
Kairos Kinetic (OPC) Pvt. Ltd.
Chennai



www.kairoskinetic.org

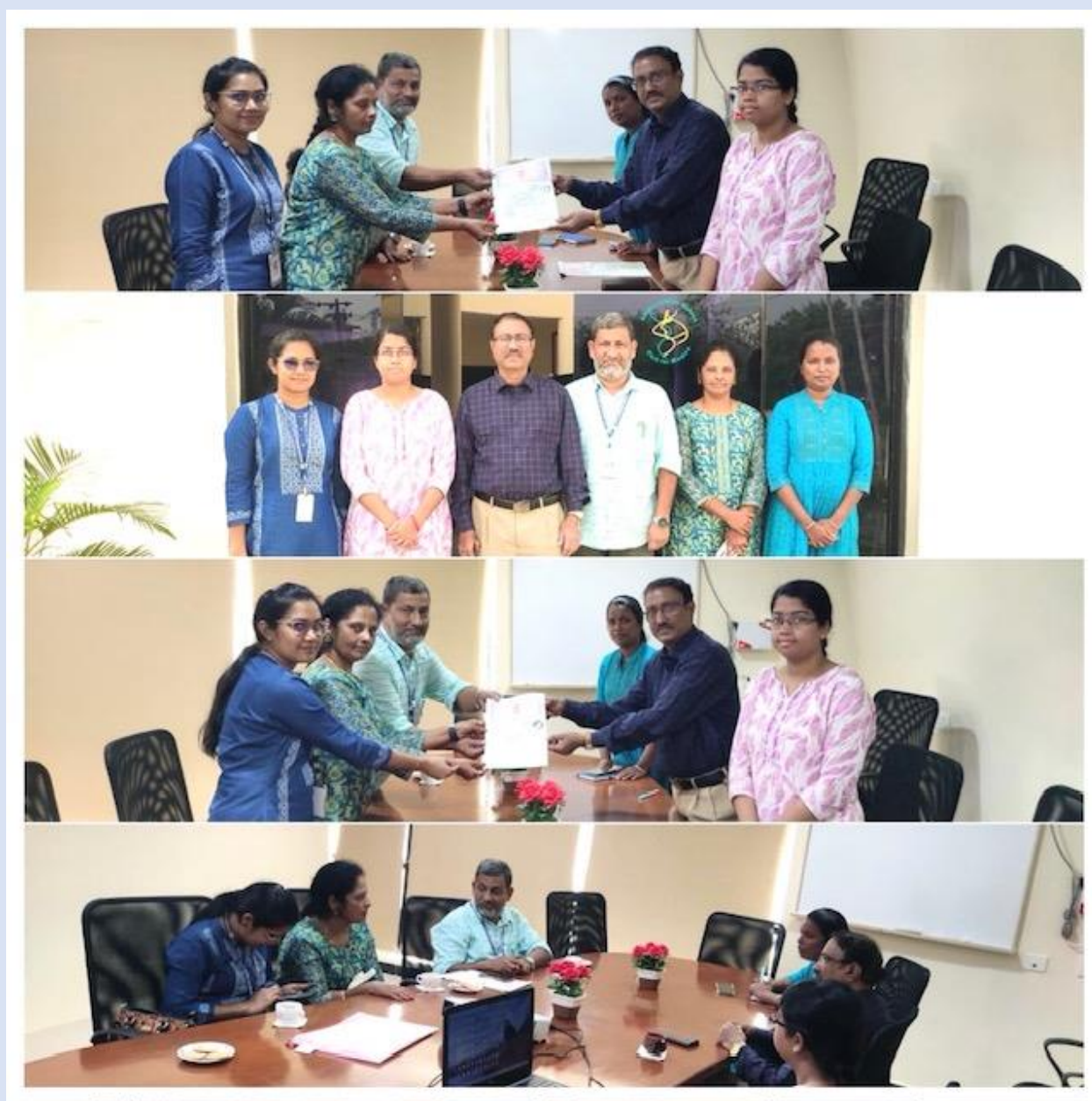
www.gbrfoundation.org

MOU Signed

- ❖ Department of Biochemistry, Institutions Innovation Council, RVS College of Arts and Science, Sulur, Coimbatore, TamilNadu and Centre for Bioscience and Nanoscience Research was signed MOU on 24July 2024 for the period of three years, MOU was signed with the presence of 25 students And two faculty members.



- ❖ Golden Jubilee Biotech Park for Women Society, Chennai, TamilNadu and Centre for Bioscience and Nanoscience Research has signed MOU on 20 December 2024 and discussed about new product development and industrial needs. Dr. R. Ragunathan, Mrs. R. Nagarathinam, Dr. Jesteeena Johney from Centre for Bioscience and Nanoscience Research and Dr. D. Sudhakaran Ph.D., General Manager, Ms. C. Priyadarshini Technical Manager – Scientific, Ms. V. Priyadharshini Technical Associate from Golden Jubilee Biotech Park for Women Society were present, this will be effective for the period of three years.



Visit / Discussion

- ❖ Sri Venkateswara University, Tirupati, Andhra Pradesh Visited Centre for Bioscience and Nanoscience Research on 29.01.2024 for the discussion of MSME programme, 15 students and two faculties were attended.



Visitors

- **Mr. S. SatheeshKumar**
Department of Biotechnology,
Karpagam Academy of Higher Education, Coimbatore, TamilNadu
- **Dr. G. Rajalakshmi**
Head, Department of Biotechnology,
Hindustan college of arts and science, Coimbatore, TamilNadu

Infra structure

New lab inauguration successfully inaugurated a new research room for Food technology works at Centre for Bioscience and Nanoscience Research on 30 August 2024. This state -of -the -art facility is designed to foster innovation research and knowledge sharing among our researchers, students and industry partners. The new lab is a significant addition to our research institute infrastructure, providing a dedicated space for researchers and students to conduct experiments, to analyze data and to develop new ideas.



Celebrations at CBNR

Republic day

75th Republic Day was celebrated on 26th January 2024 at CBNR campus.



Independence Day Celebration

To mark the 78th Independence Day Celebrations of India's freedom, The National Flag was hoisted by the director Dr. Ragunathan along with Chairman Mrs. R. Nagarathinam, staffs and other dignitaries and students.



Saraswathi Pooja Celebration

Saraswathi Pooja has been celebrated in the presence of chairman, director and other staff members on 11th October 2024.



Onam Celebration

Onam, the harvest festival was celebrated with great enthusiasm and fervor at Centre for Bioscience and Nanoscience Research on 14 September 2024. The celebration was begun with a traditional pookkalam and the courtyard was transformed into a vibrant and colorful space filled with the sweet fragrance of flowers followed by served Kerala Sadya and Payasam to all.



Annual Report Preparation and Editing

- **Director**

Prof. Dr. R. Ragunathan., Ph.D., FSAB.,
Centre for Bioscience and Nanoscience Research
Coimbatore, TamilNadu

- **Head of the Departments - Food science and Nutrition**

Dr. Jesteena Johny., Ph.D.,
Centre for Bioscience and Nanoscience Research
Coimbatore, Tamil Nadu

- **Microbiologist**

Ms. Abirami V, M.Sc.,
Centre for Bioscience and Nanoscience Research,
Coimbatore, Tamil Nadu

- **Biotechnologist**

Ms. Vishnu Priya R, M.Sc.,
Centre for Bioscience and Nanoscience Research,
Coimbatore, Tamil Nadu

- **Ph.D Research Scholar**

Linima V.K
Department of Biotechnology
Centre for Bioscience and Nanoscience Research,
Coimbatore, Tamil Nadu

