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# DEPARTMENT OF BIOTECHNOLOGY

# NEWSLETTER

July 2025

## About Us

The Biotechnology Department was incepted in the year 2002 and Accredited by NBA.

Having a state-of-art laboratory, the department offers both Bachelors and Ph.D courses which are affiliated with Anna University, Chennai

## Vision

To provide a world-class department to facilitate learning, training and research in Biotechnology by providing infrastructural facilities and competent faculty leading to technological innovations to serve the global society

## Mission

The Mission of the Department is to provide quality education to students and to produce competent Biotechnologists to meet the challenges faced by industry and mankind.

To inculcate high moral and professional standards among our students.

To develop the overall personality of the students.

# School Campus Connect Program

## School Program

A total of **164 students** from **St. John's Matric Higher Sec School, Guduvancherry** and **214 students** from **Saraswathi Matric Higher Sec School, Urapakkam** visited our campus



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**DEPARTMENT OF BIOTECHNOLOGY**  
**Glimpses of School Outreach Program**

**Outcome of Alumni Talk:**

The Department of Biotechnology was privileged to host 214 enthusiastic students from Saraswathi Matric Hr. Sec. School, Urapakkam, for an interactive exposure visit aimed at sparking scientific curiosity and awareness about the world of biotechnology. The visit successfully ignited scientific interest among the students and gave them a glimpse into the exciting possibilities of life sciences.



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# STUDENT ACHIEVEMENTS





















## Semester Results


Our department students have excelled in the university examinations, bringing pride to the institution with their outstanding results



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**DEPARTMENT OF BIOTECHNOLOGY**  
Student Toppers Secured 8.5 CGPA and Above (Up to VI Sem)  
BATCH 2022 – 2026

 Rithashri N 312322214039 9.30	 Anusha S 312322214005 9.15	 Amsaprabha A P 312322214004 9.07	 Thomas Santhoshini J 312322214053 9.06	 Subashini S 312322214048 8.97	 Sai Srinivas S 312322214041 8.86	
 Sashmitha R B 312322214044 8.85	 Aromika A M 312322214007 8.79	 Bhavasri S 312322214010 8.76	 Mayuri Aravind 312322214033 8.73	 Nithya R 312322214035 8.69	 Ilakya T 312322214018 8.68	 Hallina M 312322214015 8.65
 Krithika V 312322214031 8.63	 Keerthana SL 312322214028 8.61	 Srimathi P 312322214046 8.61	 Keerthana A 312322214027 8.56	 Akshaya A 312322214003 8.54	 Rufina Priey 312322214040 8.53	 Joselin Reina J 312322214021 8.51

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# STUDENT ACHIEVEMENTS



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## DEPARTMENT OF BIOTECHNOLOGY

**Student Toppers Secured 8.5 CGPA and above (up to IV sem)**

**Batch 2023-2027 (III Year)**



**JAFFERIN D R**  
312323214020  
9.71



**NANDITA**  
312323214034  
9.70



**HARSHITHA P**  
312323214019  
9.67



**KARPAGAM R**  
312323214026  
9.07



**SOWMIYA M**  
312323214048  
8.88



**MADEEHAH**  
312323214030  
8.85



**VARSHINI B**  
312323214057  
8.85



**VIJHAY KRISHNAA B**  
312323214059  
8.80



**SUSMITHAA S**  
312323214051  
8.75



**KAVINDRA L**  
312323214027  
8.61



**KOWSHICA N**  
312323214029  
8.60



**ABIRAMI S**  
312323214001  
8.55



**ANJANHA R**  
312323214005  
8.51



**DEEPIKA M**  
312323214009  
8.50



**NITHYASHREE P G**  
312323214035  
8.50



**VAAISHNAVI C**  
312323214053  
8.50



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**PRADEEPTHIKA K H**  
312324214039  
CGPA : 9.41



**KEERTHANA R**  
312324214022  
CGPA : 9.33



**RASHMIKA**  
312324214046  
CGPA : 9.12



**SABRIN H**  
312324214048  
CGPA : 9.10



**SMERA ATHIBAN**  
312324214053  
CGPA : 9.10



**PRIYADHARSHIKA M**  
312324214042  
CGPA : 8.98



**SRI VIDYAA A B**  
312324214054  
CGPA : 8.94



**ARUNA P**  
312324214006  
CGPA : 8.90



**HARINI S-R**  
312324214017  
CGPA : 8.82



**HARINI M**  
312324214016  
CGPA : 8.78



**NETHRA**  
312324214032  
CGPA : 8.76



**VARNIKA S**  
312324214059  
CGPA : 8.76



**ANGELIN ASHNA A S**  
312324214003  
CGPA : 8.73



**HARSHITHA R**  
312324214019  
CGPA : 8.71



**MONIKA S**  
312324214029  
CGPA : 8.69



**SANDHIYA**  
312324214050  
CGPA : 8.69



**ADDELENE PONSIYA K**  
312324214001  
CGPA : 8.63



**SURIYA TEJAL S**  
312324214056  
CGPA : 8.63



**MERCY SHALIN A**  
312324214028  
CGPA : 8.61



**ROSHIKA V**  
312324214047  
CGPA : 8.61



**MADHUMITHA K**  
312324214026  
CGPA : 8.59



**AKSHAYA S**  
312324214002  
CGPA : 8.57



**NIVEDHITHA V S**  
312324214035  
CGPA : 8.57



**NITHYASHREE G**  
312324214034  
CGPA : 8.51

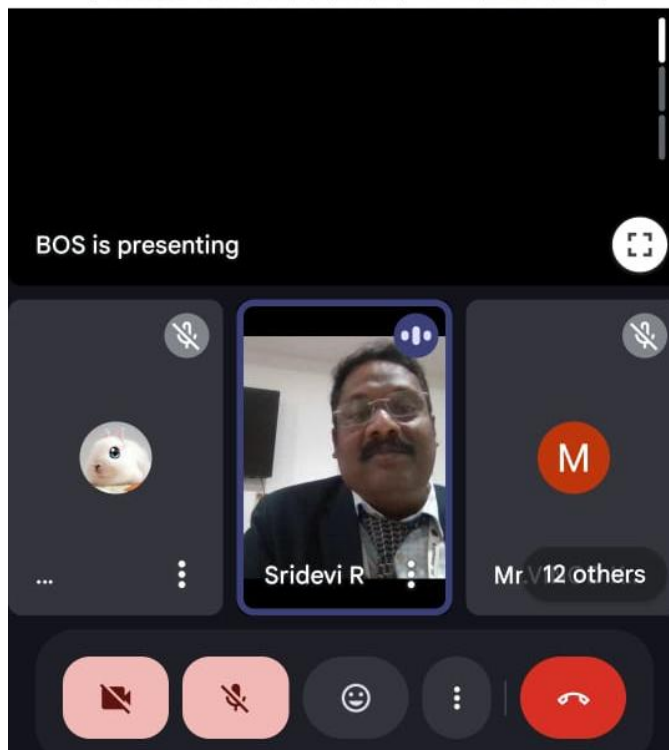
# Board of Studies Meeting

The Board of Studies (BoS) meeting for the Department of Biotechnology was conducted on 22nd July 2025, with the participation of subject experts.

R 2025 - Curriculum Guidelines									
Semester	1	2	3	4	5	6	7	8	Total
Category	Credits (Number of Subjects)								
Theory	18(6)	14 (5)	16(5)	16 (5)	9(3)	9 (3)	9 (3)	-	91(30)
Lab	4(2)	4(2)	4 (2)	4 (2)	2(1)	2(1)	2(1)	-	22(11)
Lab Integrated	3(1)	3(1)	3(1)	3(1)	3(1)	3(1)	3(1)	-	21(7)
Professional Electives	-	-	-	-	3 (1)	3 (1)	3 (1)	6 (2)	15 (5)
Open Electives	-	-	-	-	3 (1)	3 (1)	3 (1)	-	9 (3)
VAC (Credits Over and above)	-	-	-	-	-	2*(1)	-	-	2*(1)
Project Work	-	-	-	-	-	-	-	10 (1)	10 (1)
Internship	-	-	-	-	2 (1)	-	2 (1)	-	4 (2)
Seminar	-	-	-	-	-	1 (1)	-	-	1(1)
Skill Development Courses One Credit Courses	-	-	-	-	1(1)	1(1)	-	-	2(1)
Audit Course (Mandatory)	-	-	-	0(1)	-	-	-	-	0(1)
<b>Total Credits</b>	<b>25</b>	<b>21</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>22</b>	<b>22</b>	<b>16</b>	<b>175</b>
Number of University Theory Exams	7	6	6	6	5	5	5	2	42

Lab Integrated	L	T	P	C	End Sem Theory	End Sem Lab	Refer R2025
3 Credits (I, II, III & IV Sem)	2	0	2				Clause 10.2
3 Credits (V, VI & VII Sem)	1	0	4				



# Biotechnology Popularization and Skill Development Program

A total of 50 students from various schools have participated in the program. The program was a resounding success, drawing enthusiastic participation from talented school students.

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**DEPARTMENT OF BIOTECHNOLOGY**

**Glimpses of School Workshop**



**Highlights**  
A total of **10 schools** participated, with **48 students** attended the event. Students engaged in keynote lectures and hands-on sessions on **diagnostic staining, blood typing, and DNA electrophoresis**. A **Scientific Exhibition Contest** was conducted, and Best Oral Presentation and Best Model Demonstration awards were presented.

**Oral Presentation Winners**

1. St. Joseph's Garden School, (Grade XI)
2. PSBB Millennium School, DLF City (Grade XII)
3. Sri Sankara Senior Secondary School, Adyar (Grade XII)

**Model Demonstration Winners**

1. Velammal Vidhyashram, Mambakkam (Grade XII)
2. Saraswathi Matriculation Hr. Sec. School (Grade X)

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# Guest Lecture

The Department of Biotechnology organized a guest lecture on **“Safety Evaluation Studies of Drugs/Industrial Chemicals in Animal Models”** on 22nd July 2025. **Dr. U. Mani**, PTO & Associate Professor from **CSIR-CLRI**, delivered an insightful session highlighting key preclinical safety protocols.



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DEPARTMENT OF BIOTECHNOLOGY



## Guest Lecture

### Safety Evaluation Studies of Drugs/Industrial Chemicals in Animal Models



**22nd July 2025**  
12 pm - 1:30 pm



**AV Hall, Library**

**Dr. U. Mani**

PTO & Associate Professor  
(CSIR-CLRI)



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# Alumni Talk

The Department of Biotechnology hosted an engaging Alumni Talk highlighting **the role of IT in healthcare and life sciences on 30.07.2025**. The session provided students with valuable insights into emerging job roles, digital skills, and industry expectations.



## Outcome of Alumni Talk:

Students gained awareness about:

- The growing integration of IT in healthcare and life sciences.
- Emerging job roles and skill requirements in digital health, data analytics, and consulting.
- The importance of adaptability, continuous learning, and cross-disciplinary knowledge.



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# Guest Arrangement

The department of Biotechnology has arranged a guest speaker for a school outreach program. Mrs. Ranjitham Elango is a seasoned IT professional with over 16 years of experience in the industry. Currently working as a Project Manager and SAP Delivery Lead at a leading multinational IT organization, she brings deep expertise and strategic insight to her role.



# NGO Visit

Our final year students visited **Ashirwadh Care Homes** as a part of our NGO Visit on **3<sup>rd</sup> July 2025**



# NGO Visit

Our third year students visited **Faith Home** as a part of our NGO Visit on **24<sup>th</sup> July, 2025**



# Industrial Visit

Our final year students visited **OPRL Bioscience Pvt. Ltd., Chennai** a leading company in the field of biosciences and biotechnology solutions for an enlightening industrial tour on **17.07.25**.



# Industrial Visit

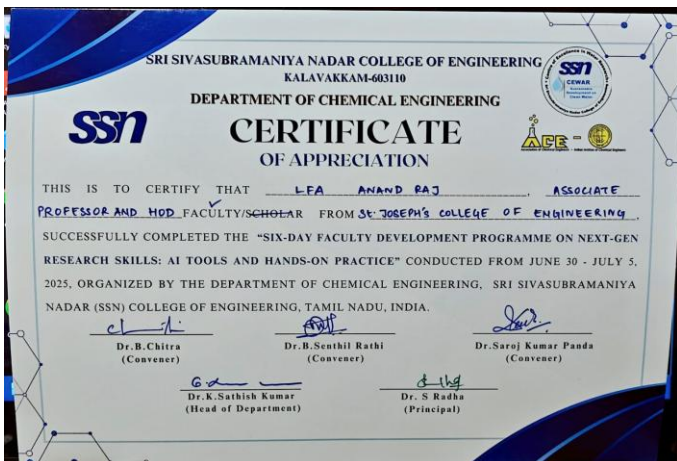
Our third year students visited **Appasamy Ocular Pvt. Ltd., Pondicherry** a leading company in the field of pharmaceutical and ocular devices for an industrial visit on **29.07.25**.



# STAFF ACHIEVEMENTS

## FDP & Paper Publication

**Dr. L. F. A. Anand Raj** has attended an online **FDP on NextGen Research Skills: AI Tools and Hands-on Practice** held at SSN College of Engineering from June 30<sup>th</sup> to July 5<sup>th</sup>. He has also presented a paper entitled **“Probiotic Intervention in Colorectal Cancer: The Protective Role of Bifidobacterium Against Gut Dysbiosis”** on 13<sup>th</sup> July.



# STAFF ACHIEVEMENTS

## FDP

**Dr. S. Justin Packia Jacob** has attended an online **FDP on Patent Agent Professional Training** from July 4<sup>th</sup> to July 21<sup>st</sup> 2025.



**TURNIP**

## CERTIFICATE OF COMPLETION

Awarded To

**Dr. S. JUSTIN PACKIA JACOB**  
(Professor, St. Joseph's College of Engineering)

For successfully completing the **18-Day Patent Agent Professional Training**; Course organised by **Turnip Innovations** and facilitated by **Dr. Prachi Pandey**

Course date(s): 04 Jul 2025 to 21 Jul 2025  
Certificate Number: 929469  
Certificate URL: [turnip.co.in/Certificates/v2srX4/](https://turnip.co.in/Certificates/v2srX4/)  
Issue Date: 22 Jul 2025



**RAHUL KAPOOR**  
Founder, Turnip Innovations

Turnip Innovations, Mani Casadona, 6WS9, TCS GP Main Rd, New Town AA 2F, Kolkata 700156, India

# STAFF ACHIEVEMENTS

## Taiwan Alumni Association Day 2025

**Dr. G. Baskar** has been participated in "Taiwan Alumni Association Day 2025" organized by Taipei Economic and Cultural Center (TECC), Chennai. Where, met Mr. Stephen S S Hsu, Director-General, TECC, Chennai, Mr. Vijay kumar IRS, Regional Passport officer, Chennai was the Chief-Guest, and Mr. Chozha Naachiyar Rajasekar President, The Tamil Chamber of Commerce, Chennai



# STAFF ACHIEVEMENTS

## Resource Person at K-Club Conference

**Dr. G. Baskar** has participated in the **Korean Club, World Conference** held at **Korea** on **July 4<sup>th</sup> 2025** as a **resource person**

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**OUR FACULTY JOINS GLOBAL EXPERTS AS  
RESOURCE PERSON**

**K-CLUB**  
World Conference

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INTERNATIONAL CONFERENCE**

**AT SEOUL,  
SOUTH KOREA**

**KOREA UNIVERSITY**  
1949

**3<sup>rd</sup> & 4<sup>th</sup> July 2025**

**K-CLUB**  
World Conference

**DR. G. BASKAR**  
PROFESSOR, DEPARTMENT OF BIOTECHNOLOGY AND HEAD GLOBAL NETWORKING

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# STAFF ACHIEVEMENTS

## Industrial Internship

**Dr. G. Baskar** has attended an industrial internship on **Phytochemistry and Drug Discovery** from Institute of Innovations.

### CERTIFICATE

Certificate Number : 2025PHYTOC001



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Tiruvannamalai, Tamilnadu, India

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Udyam Registration Number : UDYAM-TN-29-0056772



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Ministry of MSME, Govt. of India

This is to certify that

**DR. BASKAR G**

*Professor, Biotechnology*

*St. Joseph's College of Engineering, Chennai*

has successfully completed 15 days

**Internship on "Phytochemistry and Drug Discovery"**

on "Phytochemistry and Drug Discovery" during 16-30 June 2025. This certificate has been presented based on the candidate's satisfactory performance in the final assessment.

**R. Praveen Kumar**

*Managing Director*

*Institute of innovations, Tiruvannamalai*

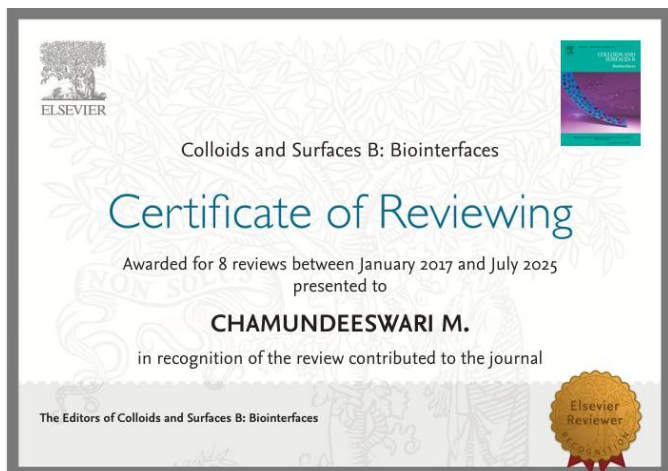
30.06.2025

<http://innovationinstitute.co.in/>

# STAFF ACHIEVEMENTS

## Reviewer Certificate

**Dr. M. Chamundeeswari** has received reviewer certification for her contribution to **Colloids and Surfaces B: Biointerfaces** and **BMC Biotechnology**



# STAFF ACHIEVEMENTS

## Patent Published

**Dr. M. Chamundeeswari** has published a patent entitled on **“An Eco-smart, cost effective and non-invasive saliva based diagnostic system for H.pyroli”**

(12) PATENT APPLICATION PUBLICATION	(21) Application No.202541050188 A
(19) INDIA	
(22) Date of filing of Application :26/05/2025	(43) Publication Date : 06/06/2025
(54) Title of the invention : An Eco-smart, Cost-effective and Non-invasive Saliva-based Diagnostic System for Helicobacter pylori - An Early Detection Screening Strategy	
(51) International classification -A61K0031120000, A61P0001040000, C07C0049255000, C01G0009020000, G06T0019200000	(71)Name of Applicant : <b>1)Dr. M. Chamundeeswari</b> Address of Applicant :OMR, Chennai ----- Name of Applicant : NA Address of Applicant : NA
(86) International Application No :NA Filing Date :NA	(72)Name of Inventor : <b>1)Dr. M. Chamundeeswari</b> Address of Applicant :OMR, Chennai ----- <b>2)Gayathri R</b> Address of Applicant :Department of Biotechnology, St. Joseph's College of Engineering, OMR, Chennai- 600119, Chennai ----- <b>3)Dr. M. Barathi</b> Address of Applicant :Professor, Department of Computer Science and Engineering, Ganapathy Tulsis Jain Engineering College, Kaniyambadi, Vellore-632102, India, Vellore-----
(87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA	
(62) Divisional to Application Number :NA Filing Date :NA	
(57) Abstract : Helicobacter pylori (H. pylori) infection affects over half the global population and is strongly associated with gastric ulcers, malignancies, and autoimmune-like complications caused by immune cross-reactivity. Early, easily accessible identification is essential to avoid long-term harm. While nanomaterial-based diagnostics offer excellent sensitivity, they are typically expensive, invasive, or technically demanding. This invention proposes a simple, nature-inspired detection method using curcumin-functionalized Zinc Oxide quantum dots (ZnO QDs) in a colloidal format. Curcumin acts as a selective, natural binder to H. pylori surface proteins, eliminating the need for antibodies or complex reagents. When a saliva sample containing H. pylori is mixed with the sensor solution, a distinct fluorescence signal is generated, easily visualized using a smartphone. The formulation is shelf-stable, user-friendly, and cost-effective, with an estimated price of ₹15-₹20 per test vial. Preliminary laboratory results support its effectiveness, and the system is now positioned for extended field validation and product development.	
No. of Pages : 15 No. of Claims : 3	

# STAFF ACHIEVEMENTS

## International Conference

**Dr. M. Chamundeeswari** has participated in Asian Pacific 12<sup>th</sup> International Congress on Contemporary Scientific Research with an oral presentation entitled **“Exploring Microplastic Contamination and its Management**



# STAFF ACHIEVEMENTS

## Paper Publication

**Dr. M. Chamundeeswari** has published a research paper entitled on **“Green synthesis and optimization of iron oxide nanoparticle as MRI contrast agent**

7/7/25, 7:29 PM

Green synthesis and optimization of iron oxide nanoparticles as MRI contrast agent | Green Materials

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[Home](#) [Green Materials](#) [List of Issues](#) [Volume 13, Issue 3](#) Green synthesis and optimization of iron oxide nanoparticles as MRI contrast agent



### Green Materials

ISSN 2049-1220 | E-ISSN 2049-1239

Volume 13 Issue 3, July 2025, pp. 170-182

[< Prev](#) [Next >](#)

#### Green synthesis and optimization of iron oxide nanoparticles as MRI contrast agent

Authors: [Sathyamoorthy Yuvvaranji](#), MTech [Balaji Amnita](#), BTech [Sathvaraj Weslen](#) ... [Show All](#)

<https://doi.org/10.1680/jgrma.23.00089>

Published Online: May 11, 2024

Keywords: [biology and medical physics](#) [biomedical application](#) [contrast agent](#) ... [Show All](#)

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#### Abstract

Iron nanoparticles (FeNPs) derived from herbal plants are being explored as potential magnetic resonance imaging (MRI) contrast agents due to their biocompatibility and ability to perform targeted drug delivery. For the first time, the usage of various novel combinations of leaf extracts such as those of *Azadirachta indica* and *Piper betle* and extracts of two other Ayurvedic herbs – namely, *Asparagus racemosus* and *Symplocos* – was attempted for eco-friendly green synthesis of FeNPs. The nanoparticles were coated onto nanofibers made from a banana pseudo-stem (FENPs-NF) to enhance their biocompatibility. The synthesis process was optimized using response surface methodology, and techniques such as ultraviolet–visible (UV–Vis) spectroscopy, vibrating-sample magnetometry, atomic absorption spectroscopy (AAS), field-emission scanning electron microscopy (FE-SEM), energy-dispersive X-ray spectroscopy (EDX) and Fourier transform infrared spectroscopy (FT-IR) were used for characterization. Hemolytic and immune cell assays, 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay and MRI analysis were carried out. A peak at 325 nm observed in UV–Vis spectroscopy, AAS, FE-SEM, EDX and FT-IR proved the presence of FeNPs. Hemolytic and immune cell assays indicated biocompatibility, and the MTT assay (MCF-7) showed inhibition at 250 µg/ml. FeNPs and FeNPs-NF showed a good signal loss in MRI analysis at 1.5 T, proving their contrast agent nature. Thus, FeNPs synthesized from herbal plant sources may open a new door for potential application in the biomedical field as a chemical-free and biocompatible MRI contrast agent.

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# DEPARTMENT OF BIOTECHNOLOGY

**July 2025**

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Dean-Research  
**Dr. A. Chandra Sekar,**  
M.E., Ph.D.

Dean-Academics  
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M.Sc., M.Tech, Ph.D.

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M.Sc., M.Tech, Ph.D.,  
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