

United Nations
Educational, Scientific and
Cultural Organization



क्षेत्रीय जैव प्रौद्योगिकी केन्द्र
Regional Centre
for Biotechnology

Regional Centre for Biotechnology

A UNESCO Category II Institution | Institution of National Importance

Presents

BioPulse

The rhythm of research, innovation, and impact at RCB



SEP-NOV 2025, ISSUE 2

Regional Centre for Biotechnology



About RCB

The Regional Centre for Biotechnology (RCB) is a premier institute, established & funded by the Department of Biotechnology, for advanced education, training, and research in biotechnology. RCB fosters interdisciplinary collaboration by integrating biotechnology with engineering, medicine, and life sciences to address critical challenges in health, agriculture, and environmental sustainability.

RCB ranks among India's Top 10 Research Institutes in Biological Sciences according to the Nature Index 2025, RCB has been recognized among the top ten academic institutions in India for research in biological sciences—an achievement that reflects the Centre's commitment to excellence in science.

Academic Highlights

PhD Viva-Voce

16 September 2025 | Mr. Niraj Kumar

17 September 2025 | Ms. Deepika

19 November 2025 | Ms. Simran Chhabra

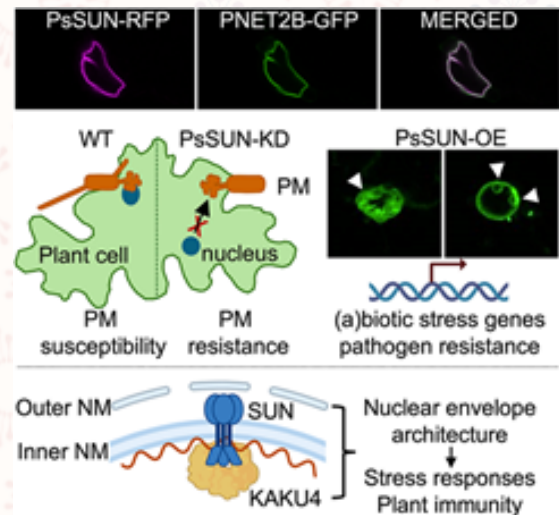
Research Highlights

An inner nuclear membrane protein links nuclear shape and plant stress responses

Plant cell nucleus plays a crucial role in immunity and stress responses, providing new insights for enhancing crop resilience.

Reference:

Sharma, Akriti, et al., *Molecular Plant Pathology*
2025 Oct 15.



One Factor, Two Fates: How NFATc1 Controls Orai3 in Pancreatic Cancer

NFATc1 regulates both transcription and degradation of Orai3 oncochannel in pancreatic cancer cells. This dichotomous regulation depends on the epigenetic state of the MARCH8 promoter.

Reference:

Raju, Sharon, et al. *The EMBO Journal*.
2025 Sep 29.

mTORC2 Driven Metabolic-Epigenetic Rewiring of Gangliosides Promotes Breast Cancer Progression

A tightly coordinated metabolic and gene regulatory circuit linking ganglioside synthesis with the RICTOR-AKT-ZFX-UGCG-GD3-EGFR axis.

Reference:

Ansari, Mohammad Nafees, et al. *Plos Biology*,
2025 Sep 11.



INITIIS'25

News and Events



-The Scientific Communication Workshop (19-22 Nov 2025), organized by Dr. Karthigeyan Dhanasekaran and Dr. Prashant Pawar, was led by NCCS faculty Dr. Jomon Joseph and Dr. Gaurav Das for i3 BRIC-RCB PhD, RCB-PhD, and Integrated MSc students, focusing on oral communication through interactive activities.

-On 21-Nov-2025, a Letter of Intent (LoI) was signed between Kathmandu University, Nepal and RCB, Faridabad.

- RCB implemented Zero Initiative with Humana People to People India (HPPI).

- Lal Path Lab organised a health awareness camp at RCB on 16-Nov-2025.



-A Design Thinking Workshop was conducted by V. Ramakrishnan and Shailendra Chauhan from the School of Design Thinking, Intellect Design Arena for i3C-BRIC-RCB PhD students, on 7-8 Nov 2025. The workshop, coordinated by Dr. Deepti Jain and Dr. Divya Chandran, combined hands-on activities and collaborative exercises to strengthen problem-solving skills and promote the application of Design Thinking concepts in research.



-Mr. Jaydeep Sharma, a PhD student in the Developmental Genetics Laboratory, was awarded the 'Sun Pharma Science Scholar Fellowship in Pharmaceutical Sciences for 2025', on 5-Nov-2025.

-The faculty, staff and students celebrated the Vigilance Awareness Week by taking the integrity pledge (27 Oct-02 Nov 2025).

- Prema's Life Sciences and Uncoded conducted a scientific lecture and quiz for the i3c BRIC-RCB PhD students.



- हिंदी पखवाड़ा 2025-क्षेत्रीय जैवप्रौद्योगिकी केन्द्र (RCB), फरीदाबाद में 17 से 30 सितम्बर 2025 तक हिंदी पखवाड़ा 2025 का आयोजन किया गया, जिसका समापन समारोह 08 अक्टूबर 2025 को कार्यपालक निदेशक डॉ. अरविंद के. साहू की अध्यक्षता में संपन्न हुआ। समारोह के पश्चात आयोजित कवि सम्मेलन में हास्य कवि श्री दीपक गुप्ता, श्री विनोद पाल एवं श्री यशदीप कौशिक ने अपनी हास्य रचनाओं से सभी श्रोताओं का मन मोह लिया।

-The RCB family came together to warmly welcome the new batch of students with a freshers' party-INITIIS' 25 on 12-Sep-2025.





Talks at RCB



Leadership Talks

13 September 2025 | Dr. Rajesh S. Gokhale, Secretary, Department of Biotechnology (DBT), delivered the first leadership talk for second batch of i3c BRIC-RCB PhD in Biosciences students.

01 November 2025 | Prof. Sudhir Sopory, Emeritus Senior Scientist, ICGB | Academic Journey: Lessons Learned and Learning Still

15 November 2025 | Dr. Manjula Reddy, J. C. Bose Fellow, CSIR-CCMB | Passion and Persistence: My Journey in Science

29 November 2025 | Dr. R Balasubramaniam, Member (HR), Capacity Building Commission | Understanding Leadership



IISF 2025 Curtain Raiser

On 20-Nov-2025, RCB proudly hosted the Curtain Raiser Program for the India International Science Festival (IISF) 2025. Dr. Uma Kumar, Professor & Head, Dept. of Rheumatology, AIIMS, delivered an inspiring lecture titled, "From Lab to Life: Translating Research into Real-World Impact"

Research Talks

17 September 2025 |

DNA Replication in human malaria parasite *Plasmodium falciparum*: unique characteristics and possible intervention
| Prof. Suman Kumar Dhar, TERI University

7 October 2025 |

Polycomb-mediated 3D- genome organization controls replication timing | Prof. Supriya G Prasanth, UIUC, USA

14 October 2025 |

Structural Biology Techniques in Studying Biological Molecules
| Prof. B. V. V. Prasad | Baylor College of Medicine, USA

27 October 2025 |

Small-molecules-induced intestinal regeneration as therapeutic strategy for leaky gut associated diseases
| Prof. Praveen Kumar Vemula, BRIC-inStem



26 Sep 2025 | Around 50 students of B.Sc. (Hons.) Zoology from Deshbandhu College, University of Delhi visited RCB's state-of-art facilities and Dr. Arup Banerjee's Lab, learning about Immunology and various immunological techniques.

29 Sep 2025 | More than 50 students of Class XII from Delhi Public School (DPS), Vasant Kunj visited RCB's advanced research facilities at ATPC and IBDC.



30 Oct 2025 | Students from Holy Child Public School, Faridabad explored the MSc lab, ATPC and greenhouse.

13 Nov 2025 | Students from Sharda University, Greater Noida, visited ATPC, MSc lab and IBDC.



26 Nov 2025 | M.Sc. and B.Sc. Forensic Science students from K.R. Mangalam University, Gurugram, visited RCB for an educational excursion. The students explored the Advanced Technology Platform Centre (ATPC) and the Indian Biological Data Centre (IBDC), gaining exposure to cutting-edge research facilities, high-end instrumentation, and the role of data-driven science in modern biotechnology.



Upcoming Events

Certificate Course on Data Analysis for Systems Biology

19 Jan 2026 - 6 Feb, 2026 (Online)
09 Feb 2026 - 20 Feb, 2026 (Offline)

Organizers: Indian Biological Data Centre (IBDC)
Prof. Deepak T. Nair | Dr Arvind K Sahu
Visit www.ibdc.dbtindia.gov.in/ucsd to know more.

4th convocation of Regional Centre for Biotechnology
Mr. Adil Zainulbhai (Chairman, Network 18) will deliver the convocation address.
Dr. Rajesh Gokhale (Chairperson, Board of Governors, RCB & Secretary, Department of Biotechnology) will preside over the ceremony.
December 19th, 2025
11:00 AM
MK Bhan Auditorium
NCR Biotech Science Cluster, Faridabad

HANDS-ON TRAINING WORKSHOP ON Gene Editing in Plants: From CRISPR Design to Analysing Edited Lines
Focus on:
• Introduce principles and advances in plant genome editing technologies.
• Train participants in designing, assembling, and delivering CRISPR/Cas components.
• Provide practical exposure to plant tissue culture, transfection/delivery, and genotyping.
• Discuss regulatory and ethical aspects of genome editing in crops.
• Build national capacity for gene editing-based
January 6-10, 2026

Hands-on Training Workshop 6-10 January 2026

Application deadline -15 December 2025
Organizer: Dr. Ramu Vemanna
Co-organizers: Dr. Divya Chandran, Dr. Prashant Pawar, Dr. Saikat Bhattacharjee

REGIONAL CENTRE FOR BIOTECHNOLOGY
An Institute of National Importance & UNESCO Category-II Centre
SCIENCE DAY
FEBRUARY 28, 2026

Science Day at RCB 28 February 2026

Registration deadline for nukkad natak- 9 February 2026
Organising Committee: Dr. Sam Mathew, Dr. Saikat Bhattacharjee, Dr. Ramu Vemanna, Dr. Nidhi Adhlakha, Sh. Ramesh Chandiramauli, Dr. Neha Sachdeva and Dr. Nimisha Roy
Registration form link-
<https://bit.ly/4qXVe66>

Regional Centre for Biotechnology,
NCR Biotech Science Cluster Faridabad Gurugram Expressway, Haryana – 121001
www.rcb.res.in

STUDENT TESTIMONIALS



"RCB provided an enriching experience that brought together people from diverse verticals through a highly practical learning environment. Most importantly, it fostered a strong sense of community and a lasting network that continue beyond the program"

-L Rithwick Surya, i3C BRJC RCB PhD Batch 2025

My experience at RCB has been both inspiring and transformative. The multidisciplinary research and teamwork fostered by our i3c BRJC-RCB program have facilitated my development both as a researcher and as a team member.

– Ayushi Singh, i3c BRJC-RCB PhD Scholar Batch 2025



My experience in RCB has been a wonderful one, with a structured academic coursework, state-of-the-art infrastructure and a very vibrant and engaging environment. The most valuable aspect I found is the people I got to know in RCB who made the environment fun, engaging, and pleasant.

- Yeswant G R, i3c BRJC PhD student Batch 2025



Alumni Speaks



I feel great that I was part of RCB for my master's. Being at RCB really helped me grow scientifically and secure a PhD in Europe. The scientific knowledge I gained during my time helped me publish high-impact papers during my PhD. I would like to specially thank my supervisor Prof. Sudhanshu Vratil for his guidance, which was instrumental in shaping my research career.

-Sonia Trikha (Int-PhD Batch 2018-2020)