

# CSIR Jigyasa Newsletter

Lab  
Spotlight  
CSIR-IICB

Special Highlight

Ride with Science  
by CSIR-CCMB



72  
Programmes  
Conducted

13975  
Students  
Benefitted

919  
Teachers  
Benefitted

31  
Labs  
Covered



## Hon'ble Prime Minister's Vision: Student – Scientist Interaction

### A Vision that became a reality



CSIR Society Meeting (6 April 2016)

“CSIR to create a vibrant student- scientist interaction”

**Shri Narendra Modi**

(President, CSIR and Hon'ble Prime Minister of India)

“Laboratories to become Centre of attraction for children and maximum opportunity to students to perform research at CSIR laboratories.”

**Shri Narendra Modi**

(President, CSIR and Hon'ble Prime Minister of India)



CSIR Foundation day (26 Sept 2016)



104th Indian Science Congress  
(03.01.2017)

“Scientific Social Responsibility needs to be inculcated to connect our leading institutions to all stakeholders, including schools.

**Shri Narendra Modi**

(President, CSIR and Hon'ble Prime Minister of India)

“Our **Scientists** have been asked to develop programmes on **science teachings** in our schools across the country. This will also involve training teachers”

**Shri Narendra Modi**

(President, CSIR and Hon'ble Prime Minister of India)



Nobel Prize Series Exhibition  
at Gandhinagar on 9th January 2017



CSIR Society Meeting (14th February 2020)

“Develop **virtual labs** so that science can further be taken to all segments of the students in each and every corner of the country”

**Shri Narendra Modi**

(President, CSIR and Hon'ble Prime Minister of India)





**Shri Narendra Modi**

Hon'ble Prime Minister of India  
and President, CSIR

".... I have an idea for this, which you can call 'One Day as a Scientist'. That is, you should try to spend one day as a scientist. You can choose any day as per your convenience and choice...."

119th #MannKiBaat



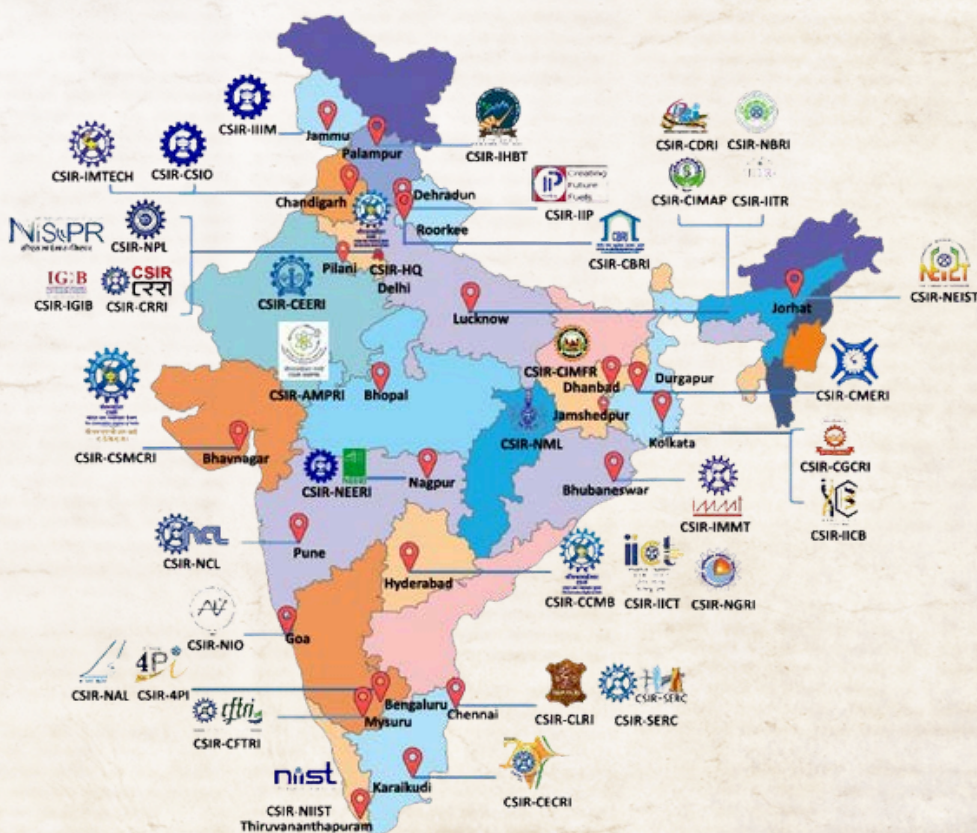
**Dr. Jitendra Singh**

Hon'ble Minister of Science  
& Technology  
& Vice President, CSIR



**Dr. (Mrs.) N. Kalaiselvi**

DG, CSIR & Secretary, DSIR





## Message from DG, CSIR & Secretary, DSIR



सत्यमेव जयते

डॉ. (श्रीमती) एन. कलैसेल्वी

सचिव

वैज्ञानिक और औद्योगिक अनुसंधान विभाग, तथा  
महानिदेशक

Dr. (Mrs.) N. Kalaiselvi

Secretary

Department of Scientific & Industrial Research, and  
Director General



सत्यमेव जयते  
भारत का नवाचार इंजन  
The Innovation Engine of India

भारत सरकार

विज्ञान और प्रौद्योगिकी मंत्रालय

वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्

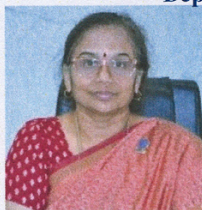
वैज्ञानिक और औद्योगिक अनुसंधान विभाग

Government of India

Ministry of Science and Technology

Council of Scientific & Industrial Research

Department of Scientific & Industrial Research



### Message

Dear Students,

With immense pride and joy, I connect with each of you through the CSIR Jigyasa Newsletter. The Jigyasa program was launched in 2017, under the visionary guidance and direction of the Hon'ble Prime Minister of India and President, CSIR, who emphasized the need for scientist – student connect and nurture scientific temper in young minds across the nation. Since its inception in 2017, CSIR Jigyasa programme has grown into one of the largest outreach programme of CSIR and the most impactful science outreach initiatives in the country benefitting almost 13,50,000 students and 80,000 teachers PAN India.

Each scientist was once a student just like you—already curious and deeply eager to learn. A researcher's journey, from a student to the laboratories, is an inspiration to many young minds. I feel a sense of pride and joy as I see how the CSIR Jigyasa programme is illuminating the path towards the realms of science, technology, and innovation for the young aspiring students. Under this initiative, CSIR aims to demonstrate that science is not simply something that resides within the pages of textbooks but a fun-filled adventure that is driven by wonder and yearning to explore. Your engagement in activities such as visiting the labs, attending lectures, and participating in practical sessions, interacting with researchers and scientist, reflects the true spirit of scientific exploration, which our country values immensely.

As you embark on your scientific journey, remember: every great discovery begins with a question. Continue to ask and explore, for science is not solely about finding answers, it's about the courage to ask, to explore, and to imagine a better world.

I encourage you to dream big, stay curious, and never stop learning. The future of Indian science is in your hands—and it looks incredibly bright.

With best wishes and great hope,

July 21, 2025  
New Delhi

  
(N. Kalaiselvi)



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# Eminent Scientist Column

## Bridging Molecules and Medicine: Dr. Mrinal Kanti Ghosh's Quest to Outsmart Cancer

"CANCER" is a single disease, as generally thought. But, to cancer biologists like **Dr. Mrinal Kanti Ghosh**, Chief Scientist, Scientist-in-Charge of CSIR-Indian Institute of Chemical Biology (TRUE Campus), Kolkata, cancer is a network of thousands of molecular miscommunications—a puzzle demanding both precision and imagination to solve.

In the last two decades, Dr. Ghosh has been decoding the tangled web of cellular signaling that drives tumor growth and therapy resistance. From his early discoveries at the Lerner Research Institute, Cleveland Clinic Foundation, USA, to his pioneering leadership at CSIR-IICB, he has built an integrative platform that unites molecular biology and nanotechnology to design targeted therapies against lethal cancers like glioma, breast, and colorectal carcinoma.

### Decoding the Cancer Circuitry

Dr. Ghosh's research unravels how key signaling molecules — p53, PTEN, MDM2, USP7 (HAUSP), CHIP, and RNA helicase p68 (DDX5) — communicate within cancer cells. His lab has wonderfully demonstrated that when these molecules lose cellular threshold evade cancer hallmarks.

One of his most impactful contributions is identifying the USP7-p53/MDM2 regulatory axis as a critical vulnerability in cancer. By targeting this pathway, his team has proposed front-line innovative combinatorial nanotherapeutic strategies that reactivate dormant tumor suppressors while silencing oncogenic signals — offering new hope for drug-resistant brain cancer patients.



**Dr. Mrinal Kanti Ghosh**  
Chief Scientist, CSIR-Indian Institute of  
Chemical Biology

mrinalghosh@iicb.res.in

### Turning Nanotechnology into Medicine – A translational approach

At CSIR-IICB's Translational Research Unit of Excellence (TRUE) platform, Dr. Ghosh sets an icon in medical science. His research team designs smart nanocarriers that can cross the blood-brain barrier and deliver peptide or small-molecule drugs directly to tumor cells—an achievement that could revolutionize the treatment of brain tumors across the Blood-Brain Barrier (BBB). Recent advances from his laboratory show the power of dual-loaded nanoparticles carrying temozolomide (TMZ) and bioactive compound diindolylmethane (DIM), which synergistically kill resistant tumor cells while minimizing side effects.

His projects funded by CSIR, DST-SERB, DBT, and ICMR reflect a consistent vision: to merge molecular insight with therapeutic innovation for cancer intervention. Whether developing PARP inhibitors (PARPi) or exploring nanoparticle-assisted delivery of peptide therapeutics in brain and breast cancers, Dr. Ghosh's work stands at the crossroads of chemistry, biology, and medicine.

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# Eminent Scientist Column

## Bridging Molecules and Medicine: Dr. Mrinal Kanti Ghosh's Quest to Outsmart Cancer

### Mentorship and Leadership

As Chief Scientist and In-Charge of the CSIR-IICB (TRUE) Campus, Dr. Ghosh is willing to transform the facility further into a vibrant ecosystem for translational research. Under his mentorship, a cluster of young, bright researchers and women scientists who are under the national fellowship programs (WIDUSHI, WoS-DHR, WoS-DST, and WISE-PhD), explore new frontiers in cancer biology and the development of nanotherapeutics.

Beyond the laboratory, he serves on various National committees of ICMR, DST, and CSIR, contributing to policy, ethics, and scientific assessment. His leadership reflects a blend of rigorous science and compassionate mentorship qualities that inspire the next generation of Indian biomedical researchers.

### Science with Social Purpose

For Dr. Ghosh, science is not confined to journals or conferences—it is a commitment to improving human health through mechanistic exploration of disease biology. His research team is continuously working on discoveries in signaling crosstalks, proteostasis, and discrepancies of tumor microenvironment (TME), which are paving the way for personalised cancer therapy. His popular lectures reach out to students and the public in simple, relatable terms.

### Five Takeaways for Young Minds

- See the Big Picture — Every molecule tells a story; connect them to understand disease.
- Bridge Disciplines — True innovation happens where biology meets technology.
- Think Translationally — Aim for discoveries that can reach patients.

- Value Mentorship — Science grows when knowledge is shared.
- Stay Curious and Compassionate — The best research serves the humanity.

### Looking Ahead

Dr. Mrinal Kanti Ghosh envisions a future where targeted, nanotechnology-driven therapies make cancer treatment more precise, effective, and affordable. His journey from deciphering molecular pathways to developing real-world therapeutics is an embodiment of CSIR's Vision and Mission for the Society.

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# Student Column

## A unique Participation Experience in "Jigyasa Programme"



**Mofajila Shaikh (Class IX)**  
Kachiamara Hemchandra High School  
Kultali, South 24 Parganas, West Bengal

Hands-on learning always leaves a stronger impression than reading from books—especially in science! Coming from a remote village school in South 24 Parganas, West Bengal, where, we often lack infrastructural facilities that deter us from having practical knowledge. Yet our teachers always try to give us a feel of real science through practical experiences.

On August 29, 2025, fifty of us from classes IX and X joined the CSIR–Jigyasa Programme at Panchuakhali High School, conducted by CSIR–Indian Institute of Chemical Biology (IICB), Jadavpur. Meeting Dr. Sarita Ghosh, Dr. Rupasri Ain, and a research fellow was truly inspiring.

Dr. Rupasri Ain's talk on "Stem Cells and Regenerative Medicine" opened my eyes to a whole new world of possibilities in science. Then, Dr. Sarita Ghosh magically turned Chemistry—once my toughest subject—into something fascinating through her simple explanations and interactive presentation.

This experience sparked a deep curiosity in all of us. Now, we can't wait to visit the CSIR–IICB laboratory and explore the exciting world of science firsthand!

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## The CSIR Jigyasa Programme, 2025



**Apala Moitra (Class XII)**  
Satish Chandra Memorial School,  
Chakdaha, West Bengal

Satish Chandra Memorial School, Chakdaha, Nadia proudly hosted the 'Jigyasa ODAS-25 Programme' organized by the Council of Scientific and Industrial Research (CSIR) on 7th July 2025. The five-hour seminar, a part of the One Day as a Scientist initiative, offered students a rare opportunity to interact with leading scientists.

Dr. Sarita Ghosh, Senior Principal Scientist, CSIR–IICB, conducted the event, featuring insightful lectures by Dr. Tanaya Bose on Artificial Intelligence (AI) and Dr. Debasis Nayak on Oncology.

Dr. Bose introduced students to the evolution, applications, and ethical dimensions of AI across research, healthcare, and automation, while Dr. Nayak's session deepened their understanding of cancer biology, its causes, treatments, and breakthroughs in immunotherapy and personalized medicine.

The CSIR Jigyasa Programme 2025 successfully inspired curiosity, critical thinking, and a passion for science, bridging the gap between theoretical learning and real-world research exposure among young learners.

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# Mentor / Nodal Column

## Learning beyond Textbooks; My Journey with CSIR Jigyasa

It gives me immense satisfaction to be a part of the CSIR Jigyasa programme as the nodal person from CSIR-IICB, Kolkata. The primary objective of the programme is to extend classroom learning into research laboratory-based learning, enabling students to gain firsthand exposure to real scientific environments and experimental methods.

We have meticulously planned our activities to ensure active participation from students. Our focus is on creating interactive sessions that inspire curiosity and promote a scientific temper among school students. School students and teachers participate in two engagement modules by either visiting the laboratories of CSIR-IICB or inviting CSIR scientists to their schools. During these interactions, scientists interact directly with students, raising curiosity, sharing research insights, and inspiring scientific learning through hands-on experiences and discussions. Hands-on experiments, science demonstrations and quiz competitions have received an enthusiastic response.

This is well known that while city schools have access to numerous facilities and opportunities, rural schools often lack such resources. Therefore, after taking up the responsibility as the nodal officer, I have made it my priority to reach out to schools where such opportunities are limited. The CSIR-IICB Jigyasa team has wholeheartedly supported me in this endeavour. CSIR-IICB scientists have also come forward to participate in this programme as part of their scientific social responsibility. Our goal is not merely to conduct a one-day outreach programme but to create a lasting impact—to inspire students to see science as a part of



**Dr. Sarita Ghosh**  
Senior Principal Scientist  
& Head, Publication & Information Division  
CSIR-IICB, Kolkata

s\_ghosh@iicb.res.in

their lives and as a pathway for building their future careers.

These programmes have not only created awareness about the institute's research and social commitment but have also strengthened our connection with the community. One of the most rewarding aspects of these programmes is witnessing the active engagement of students, which motivates us to organize more such programmes in the future.

I extend my sincere gratitude to all CSIR-IICB Jigyasa team members, scientists, staff, and research scholars whose active participation enabled us to make the CSIR Jigyasa programme a success. A special thanks to the CSIR Headquarters team—without their help, I could not have taken a single step forward.

The CSIR Jigyasa Programme reaffirms the importance of scientific outreach as a bridge between research institutions and society. I am confident that such initiatives will continue to inspire and nurture young minds in the years to come.

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# CSIR-CCMB: Ride with Science (Special Highlight)

## Making Science Simple, Accessible, and Inspiring



Gene-Health Connect mobile exhibition

We are living in the age of science and technology, especially of biotechnology. Discoveries that helped us understand our genetic material and how the genetic material actually shapes our characteristics changed the way we looked at ourselves and at life around us. We started understanding diseases not just in terms of their symptoms but from their root causes. We developed newer kinds of testing molecules in our bodies that can predict our health outcomes. We also developed a plethora of new-age therapeutics that made lives longer and healthier for people. Be it insulin for the diabetics in the country or vaccines to prevent infections, they all use biotechnology.

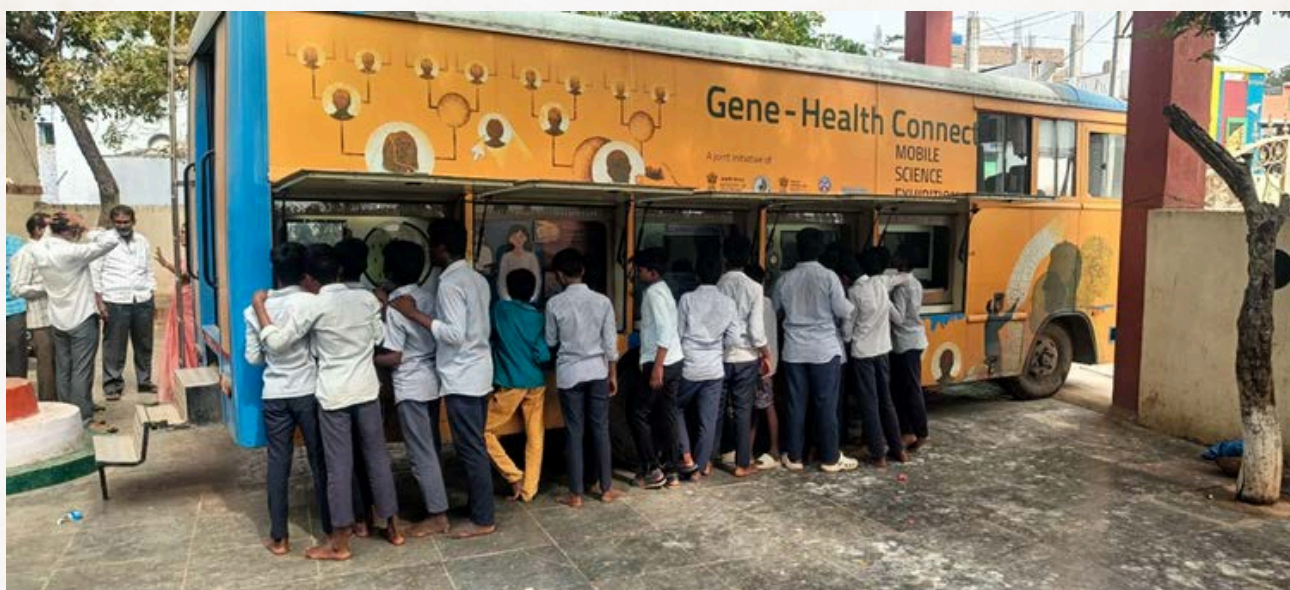
The rapid developments among scientists and technologists unfortunately did not reach the masses as well. This gave rise to many myths and misconceptions around people. People are struggling to understand how vaccines work and if they can trust their safety. They are misusing medicines like antibiotics. These are not only harmful for an individual but for overall society. For example, if one doesn't use vaccines, infections spread across communities harming everyone's health. If antibiotics are not used properly, we give bacteria many opportunities to evolve and become resistant to the action of antibiotics. Such bacteria are difficult to get rid of when they infect us, and such infections can be not only expensive, painful but also fatal.

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# CSIR-CCMB: Ride with Science (Special Highlight)

## Making Science Simple, Accessible, and Inspiring



A similar case is of genetic disease prevention and mitigation too. CCMB's extensive studies have shown that there are many population-specific genetic diseases in India. That means different communities in India suffer from different diseases. These are genetic in nature, that is they pass from parents to their children because of the genetic material that they share. If parents undergo genetic testing at the correct time, they can prevent such diseases from passing to their children. Or at least be better prepared on how to manage such diseases if their child has such diseases. CCMB scientists have also developed faster ways of testing sickle cell anemia, a common genetic disease in India.

Despite these developments, we need young people in India to understand the problem as well as the available solutions. They should ideally also be able to frame the unresolved problems for their communities and communicate it to scientists. Only then we can truly hope to build bridges between science and society. The mobile science exhibition, Gene-Health Connect that CCMB built with Visvesvaraya Industrial and Technological Museum aimed to do these under CSIR's Jigyasa program.

The exhibition was set in a bus and went across cities, towns and villages of Telangana and Andhra Pradesh. It went to schools, colleges, medical hospitals, community centres and residential communities to inform the visitors on how genes function, how changes in them

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# CSIR-CCMB: Ride with Science (Special Highlight)

**Making Science Simple, Accessible, and Inspiring**



can sometimes give rise to diseases, how such diseases can be inherited as well as how they can be prevented. The exhibition was able to do so through 20 interactive exhibits in the bus. Some enjoyed understanding how our biological sexes are determined by our genes. And, some wanted to understand how sonography helps detect genetic diseases in fetuses.

Similar to this, there are various programs happening now in India, thanks to the Jigyasa program across CSIR labs in the country. Some help young people understand nutrition and health better, and some the new-age agricultural tools and techniques. Some programs allow young people to work on their own innovations under the mentorship of scientists. And, some help them become better communicators of science and influence their communities.

Have you checked the different Jigyasa programs happening around you and which one aligns with you?

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# Jigyasa Monthly Highlights

Lab Name	No. of events	Total no. of Students benefitted	Total number of Teachers benefitted	Engagement Activities
CSIR-CCMB	1	80	20	Field Visit, Oral & Poster presentation.
CSIR-CDRI	2	407	11	School Visit, Popular Lecture, Competition, Quiz, Demonstration & Day of Importance.
CSIR-CFTRI	1	135	9	School Visit by Scientists, Popular Lecture & Demonstration.
CSIR-CIMAP	3	620	28	Lab Visit, Popular Lecture, Demonstration, Field Visit, Workshop & Quiz.
CSIR-IGIB	1	75	5	Lab Visit, School Visit, Popular Lecture & Teacher Training.
CSIR-IHBT	4	274	19	Foundation Day, Lab Visit, Popular Lecture, Field Visit & Workshop.
CSIR-IICB	1	267	24	Lab Visit & Demonstration.
CSIR-IIIM	2	81	222	Lab Visit & Workshop.
CSIR-IMTECH	1	60	3	Lab visit, popular Lecture, & Demonstration.
CSIR-IITR	9	4500	41	Lab Visit, Demonstration & DIY kit Demonstration.
CSIR-NBRI	5	559	28	Lab Visit, DIY kit demonstration & School Visit.
CSIR-CSMCRI	1	177	11	Open Day, Foundation Day, Lab Visit & Demonstration.
CSIR-CIMFR	1	100	6	Day of Importance & School Visit.
CSIR-NCL	2	339	22	Open Day, Foundation Day, Popular Lecture, Demonstration, Quiz & Lab Visit.
CSIR-NEIST	5	395	25	Popular Lecture, School Visit, Workshop, Teachers Training & DIY kit demonstration.
CSIR-NIIST	5	1365	74	Lab Visit, Popular Lecture, Open Day & Quiz.
CSIR-AMPRI	2	110	35	Popular Lecture, School Visit & Demonstration.
CSIR-CBRI	2	142	10	Lab Visit, Competition, Quiz, Popular Lecture & Demonstration.
CSIR-CGCRI	1	450	50	School Visit, Popular Lecture, Demonstration & Quiz.
CSIR-CMERI	1	66	4	Lab Visit, Demonstration & Foundation Day.
CSIR-CRRI	2	200	8	Lab Visit, Demonstration & Field Visit.
CSIR-IMMT	4	261	50	School Visit, Teacher Training, Competition, Lab Visit & ATL Activity.
CSIR-NAL	3	631	19	Lab Visit, Popular Lecture, Demonstration, Competition, Quiz & DIY kit demonstration.



# Jigyasa Monthly Highlights

Lab Name	No. of events	Total no. of Students benefitted	Total number of Teachers benefitted	Engagement Activities
CSIR-NML	2	207	9	Lab Visit & Demonstration.
CSIR-NEERI	2	1398	93	Foundation Day, lab Visit, Popular Lecture, Demonstration, Open Day Field Visit, Competition & Workshop.
CSIR-SERC	2	500	40	School visit, Popular Lecture, Demonstration, ATL Activity, Lab Visit, Competition, Workshop & Day of Importance.
CSIR-CSIO	3	263	35	Lab Visit, School Visit, Popular Lecture, Demonstration, Open Day & Workshop.
CSIR-CEERI	3	268	17	Lab Visit, Popular Lecture, Demonstration & ATL Activity.
CSIR-NPL	1	45	1	Lab Visit & Popular Lecture.
<b>Total</b>	<b>72</b>	<b>13975</b>	<b>919</b>	



# Monthly Highlights

## CSIR-IICB, Kolkata

**October 14, 2025**

- 267 students and 24 teachers from 11 different schools visited the lab for an Open House Programme on the occasion of the 84th CSIR Foundation Day celebration.



## CSIR-NAL, Bengaluru

**October 06-10, 2025**

- 5 day student scientist connect programme was organized for 28 students from different schools in Bengaluru.

**October 17, 2025**

- 60 students and 3 teachers attended a lab visit programme from Jyothi Kendriya Vidyalaya.

**October 27-31, 2025**

- Interschool drawing competition was conducted for 543 students and 16 teachers from 9 different schools in and around Bengaluru.



## CSIR-IIIM, Jammu

**October 15, 2025**

- On the occasion of World Students' Day 2025, 81 students and 2 teachers from JNV Gharota visited the lab and interacted with scientists.

**October 26, 2025**

- 220 teachers from 161 schools in Srinagar attended a teachers training programme.





# Monthly Highlights

## CSIR-IITR, Lucknow



### October 06, 2025

- 520 students and 5 teachers from Rajkiye Government High School participated in an educational lab exposure visit.

### October 09, 2025

- Experiential lab visit was conducted for 460 students and 4 teachers of Rajkiye Government High School.

### October 10, 2025

- 530 students accompanied by 5 teachers from Rajkiye Government High School took part in the interactive Jigyasa programme.

### October 13, 2025

- 470 students with 4 teachers from Rajkiye Government High School visited the laboratory.

### October 14, 2025

- Outreach session was organized for 480 students and 4 teachers of Rajkiye Government High School.

### October 17, 2025

- 510 students and 5 teachers from Rajkiye Government High School engaged in a science interaction programme.



### October 27, 2025

- 440 students and 5 teachers from Government High School, Ahmad Nagar participated in a lab visit.

### October 29, 2025

- Lab visit was arranged for 550 students and 5 teachers from Rajkiye Government High School.

### October 31, 2025

- Scientists visited Kasturba Government Girls School and interacted with 540 students and 4 teachers.



# Monthly Highlights

## CSIR-NBRI, Lucknow



**October 06, 2025**

- Lab visit was organized for 60 students and 5 teachers from PM Shri Jawahar Navodaya Vidyalaya, Kanpur Nagar.

**October 07, 2025**

- Outreach programme was conducted for 78 students and 7 teachers from PM Shri Navodaya Vidyalaya, Amithi.

**October 08, 2025**

- 131 students and 9 teachers from PM Shri Jawahar Navodaya vidyalaya, Barabanki visited the lab.

**October 13, 2025**

- DIY kit demonstration was organized for 80 students and 4 teachers from PM Shri Navodaya Vidyalaya, Sitapur-II.



**October 14, 2025**

- Scientists visited PM Kendriya Vidyalaya Ayodhya Cantt and interacted with 210 students and 3 teachers.



# Monthly Highlights

## CSIR-IMMT, Bhubaneswar

**October 13, 2025**

- Scientists interacted with 150 students and 3 teachers at KV4, Bhubaneswar.

**October 14, 2025**

- 38 teachers attended a teachers training program at ZIET of Kendriya Vidyalaya Sangathan and connected with scientists.



**October 15, 2025**

- An event on “Quantum Age Begins: Potentials and Challenges” was organised for 30 students and scientists by Regional Science Center, Bhubaneswar.

**October 31, 2025**

- Open day programme was carried out for 81 students and 9 teachers from Odisha Adarsha Vidyalaya, Keonjhar.

## CSIR-CRRI, New Delhi

**October 14, 2025**

- Lab visit was organized for 95 students and 4 teachers from KV INA colony

**October 15, 2025**

- 105 students and 4 teachers from KV KNN Ghaziabad attended DIY Lab Demonstrations.





# Monthly Highlights

## CSIR-NEIST, Jorhat

**October 15, 2025**

- Scientists visited Cinnamara Higher Secondary School and connected with 200 students and 10 teachers

**October 23, 2025**

- Hindi and Assamese essay writing competition was organized for 40 students and 5 teachers from 14 different schools in Jorhat.

**October 24, 2025**

- Student scientist connect programme was conducted for 40 students and 3 teachers from Air Force School, Jorhat.



**October 28, 2025**

- Outreach activity was coordinated for 40 students and 3 teachers from Gorumora High School, Jorhat.

**October 29, 2025**

- Jigyasa programme was organized for 75 students and 4 teachers from Jawahar Navodaya Vidyalaya, Tinsukia.

## CSIR-CIMFR, Dhanbad

**October 24, 2025**

- Scientists visited Utkramit High School, Kasiatand and interacted with 100 students and 6 teachers.





# Monthly Highlights

## CSIR-NIIST, Trivandrum



**October 8, 2025**

- Lab visit was conducted for 34 students and 2 teachers from Saraswathy Vidyalaya, Vattiyoorkaavu (TVM).

**October 17, 2025**

- Higher Studies Expo 2025 was organized for 1170 students and 60 teachers from 28 different schools.

**October 18, 2025**

- Higher Studies Expo 2025 was organized for 100 students and 10 teachers.

**October 28, 2025**

- GK Quiz Competition was conducted for 50 students and 2 teachers from victory vocational higher secondary school.



**October 30, 2025**

- 3 students from Class 11 from GMHSS Punnamood, mentored by scientists, won sub-district first prizes for their light-theory experiment and pest-ID app, and also secured an A grade at the district-level competition at Government HSS, Amaravila.



# Monthly Highlights

## CSIR-CEERI, Pilani



**October 06, 2025**

- Student scientist programme was conducted for 70 students and 2 teachers from PM SHRI Govt. Senior Secondary School, Udaipurwati (Jhunjhunu).

**October 09, 2025**

- Lab visit was organized for 48 students and 5 teachers from Shri Begraj Rathi Govt. Senior Secondary School, Gopalpura (Churu).

**October 31, 2025**

- 150 students and 10 teachers from Govt. Senior Secondary School, Khudania took part in a lab visit.

## CSIR-CSIO, Chandigarh

**October 08, 2025**

- 137 students and 9 teachers from 7 different schools in Chandigarh participated in a Jigyasa programme.

**October 24, 2025**

- Lab visit was organized for 100 students and 2 teachers from CHD Girls Battalion NCC, Chandigarh.

**October 30-31, 2025**

- 26 students and 24 teachers from 24 different schools took part in the INSPIRE - MANAK Mentorship Workshop.





# Monthly Highlights

## CSIR-NPL, New Delhi



October 29, 2025

- Outreach programme was conducted for 45 students and 1 teacher from Green Fields School, Safdarjung Enclave, New Delhi

## CSIR-CBRI, Roorkee

October 14, 2025

- Inter-school quiz competition was organized for 40 students and 4 teachers from 4 different school in Roorkee.

October 27, 28, 2025

- 102 students and 6 teachers from PM Shri Kendriya Vidyalaya, ITBP, Dehradun visited the lab and interacted with scientists.



## CSIR-CSMCRI, Bhavnagar



October 8, 2025

- To commemorate the CSIR Foundation Day, 177 students and 11 teachers from 4 different schools visited the lab.



# Monthly Highlights

## CSIR-CDRI, Lucknow



**October 17, 2025**

- Student scientist connect programme was conducted for 290 students and 8 teachers from 2 different government schools.

**October 29, 2025**

- 117 students and 3 teachers from Government High School, Jethra, Lakhimpur Kheri were invited for a lab demonstration.

## CSIR-CIMAP, Lucknow

**October 07, 2025**

- Field visit was organized for 65 students and 2 teachers from Lucknow Public College, Sahara States.

**October 08, 2025**

- Inter-school quiz competition was organized for 293 students and 16 teachers from 7 different schools

**October 13, 2025**

- Scientists visited City Montessori School and connected with 262 students and 10 teachers.



## CSIR-IGIB, New Delhi



**October 03, 2025**

- 75 students and 5 teachers from 3 different school attended a popular lecture.



# Monthly Highlights

## CSIR-NML, Jamshedpur



**October 24, 2025**

- One Day visit was conducted for 149 students and 6 teachers from 2 different schools in Jamshedpur.

**October 30, 2025**

- 58 students and 3 teachers from Kendriya Vidyalaya Tatanagar visited the lab and interacted with scientists.

## CSIR-CGCRI, Kolkata

**October 16, 2025**

- Student enrichment programme was conducted for 450 students and 50 teachers from 10 different schools in West Bengal.



## CSIR-CMERI, Durgapur



**October 15, 2025**

- To commemorate the CSIR Foundation Day, 66 students and 4 teachers from JNV, Durgapur visited the lab.



# Monthly Highlights

## CSIR-NEERI, Nagpur



**October 7, 2025**

- To commemorate the CSIR Foundation Day, 1388 students and 83 teachers from 24 different schools were invited for a field visit.

**October 15, 2025**

- "Student Research & Innovation Expo 2025" was organized for 10 students and 10 teachers from 10 different schools.

## CSIR-IMTECH, Chandigarh

**October 09, 2025**

- Popular science lecture was conducted for over 60 students and 3 teachers from Vivek High School, Mohali.



## CSIR-CFTRI, Mysore



**October 29, 2025**

- Scientists visited Govt High School, Doddahajjuru (tribal school) and interacted with 135 students and 9 teachers.



# Monthly Highlights

## CSIR-IHBT, Palampur



**October 08, 2025**

- To commemorate the CSIR Foundation Day, 38 students and 2 teachers from Shaheed Major Sudhir Kumar Walia Government Senior Secondary School, Banuri were invited for a lab visit.

**October 15, 2025**

- Outreach Programme was conducted for 108 students and 7 teachers from PM SHRI Jawahar Navodaya Vidyalaya, Basohli.

**October 15, 2025**

- Engaging workshop was organized with CSIR-NIScPR for 50 Students and 3 teachers from PM SHRI Jawahar Navodaya Vidyalaya, Paprola.

**October 29, 2025**

- Lab Visit was arranged for 78 students and 7 teachers from PM SHRI GSSS Samloti.



## CSIR-CCMB, Hyderabad



**October 07, 2025**

- Oral & poster presentation competition was organized for 80 students and 20 teachers from 10 different schools.



# Monthly Highlights

## CSIR-NIScPR, New Delhi



October 14-15, 2025

- Engaging workshop was organized at CSIR-IHBT for 50 Students and 3 teachers from PM SHRI Jawahar Navodaya Vidyalaya, Paprola.

## CSIR-NCL, Pune

October 27, 2025

- 306 students and 17 teachers from 9 different schools participated in an event organized in celebration of CSIR Foundation Day.

October 29, 2025

- Lab visit was planned for 33 students and 5 teachers from Kanya Shala, Yede Nipani.



## CSIR-SERC, Chennai



October 15-16, 2025

- Scientist visited 4 different schools and interacted with 450 students and 15 teachers.

October 31, 2025

- Student scientist connect programme was conducted for 50 students and 25 teachers from 25 different school.



# Monthly Highlights

## CSIR-AMPRI, Bhopal

**October 09, 2025**

- Scientists interacted with 60 students and 30 teachers during ICETPLS-2025 organized by Uchcha Shiksha Utkrishta Sansthan, Bhopal.

**October 13, 2025**

- Scientists visited PM SHRI Kendriya Vidyalaya No. 3 and interacted with 50 students and 5 teachers.



## CSIR-4PI, Bengaluru



**October 27, 2025**

- Winners of the online Jigyasa Essay Competition held in August were announced.



# Lab Spotlight

## CSIR-Indian Institute of Chemical Biology (CSIR-IICB), Kolkata



The CSIR-Indian Institute of Chemical Biology (CSIR-IICB), Kolkata, stands as a leading centre for biomedical research and chemical biology in India. Established in 1935 as the Indian Institute of Medical Research and integrated into the Council of Scientific and Industrial Research (CSIR) in 1956, the institute has made significant contributions to national and global health. The CSIR-Indian Institute of Chemical Biology (CSIR-IICB), Kolkata, has its roots in a nationalistic vision to address India's pressing health problems like cholera, malaria and leishmaniasis through indigenous scientific research. Motivated by a sense of patriotism, Dr. J.C. Ray and his colleagues took the courageous step of founding this institute. With a visionary approach toward interdisciplinary research, the institute was renamed the Indian Institute of Chemical Biology in 1982. Among its landmark achievements is the development and clinical trial of an oral cholera vaccine.

Presently, CSIR-IICB operates through six major research divisions - Cancer Biology & Inflammatory Disorders, Cell Biology & Physiology, Infectious Diseases & Immunology, Pharmacology & Drug Discovery, Organic & Medicinal Chemistry, and Structural Biology & Bioinformatics. CSIR-IICB has a state-of-the-art Central Instrument Facility, Animal Resource Centre, and BSL-2 facilities. To accelerate the Translational Research, the Translational Research Unit of Excellence (TRUE) was established at its Salt Lake campus.

CSIR-IICB has developed an oral vaccine for cholera, herbal products for prostate enlargement and asthma, diagnostic kits for leishmaniasis and rheumatic heart disease, and an AI-ML-based diagnostics platform for stroke and Alzheimer's diseases. CSIR-IICB is actively engaged in developing affordable drugs for ovarian cancers, viral diseases, antimicrobial-resistant organisms, CAR-T cell therapy for solid tumors, autoimmune diseases, respiratory diseases, phyto-pharma for Parkinson's disease, targeted drug delivery systems, protein chemistry, enzymology, and isolating bioactive substances from natural sources. Through the CSIR Jigyasa programme and CSIR Integrated Skill Initiative, the institute is actively involved in organizing various outreach programmes for school students, graduate and post-graduate students, providing them with laboratory-based learning, and thus enriching their skills and knowledge and increasing job opportunities for them.





## Upcoming Activities

### Jigyasa Aero Fest 2025 (22-24 December)



#### About Aero Fest 2025

The Jigyasa-Aero Fest, a Three-day national event, will be organized by Jigyasa, CSIR-National Aerospace Laboratories, Bangalore-17. It is a fest to acquire knowledge in the aerospace field for the students & it ignites the students ideas to design, develop & prepare the project report on “The Sky Without Limits: UAVs Empowering Modern Aviation”. This event aims to create scientific temper among the school students of classes 9-12 all over India to take up aerospace science as their career. It is planned to conduct this event every year in the third week of December at CSIR-NAL. This event includes a one-day science tour, Project report, General knowledge quiz, Aero quiz, Collage making, Cultural, Project presentation, and aeromodelling in the individual, team, and group categories.







# Upcoming Activities

## Jigyasa Aero Fest 2025 (22-24 December)

### Instructions

A team of 3 students from classes 9-12 can participate as a group. Each team should submit Project Report on **"The Sky Without Limits: UAVs Empowering Modern Aviation"**. The report should cover various aspects about UAVs and its civilian applications. The report's length should be less than 25 pages, and the similarity check should be less than 15%. The project report should reach the Convener by 03 Nov. 2025 before 10AM through the nomination form link. Based on the reports, a panel of three subject experts will select the best 20 teams from all over India. These best teams will participate in a 3-day 'Jigyasa-Aero Fest' in Bangalore from 22-24 December 2025. You may contact the convener for any queries.

E-mail: [jigyasanal@gmail.com](mailto:jigyasanal@gmail.com)

### Theme

The theme "The Sky Without Limits: UAVs Empowering Modern Aviation" aims to inspire students to explore how Unmanned Aerial Vehicles (UAVs) are revolutionizing the aviation industry. The team has to delve into the innovative applications of drones in civil aviation, including aerial mapping, emergency response, logistics, environmental monitoring, and airspace management. Encouraging students to think about creativity and technology working together in aviation, the event highlights how UAVs are breaking traditional boundaries to enhance safety, efficiency, and sustainability in the skies. This presentation should explore how these intelligent flying systems are shaping a limitless and innovative future for modern aviation.

Nomination form link: <https://forms.gle/FNbXj9Nz3QBdob3q7>  
or Scan QR code



### Important Days

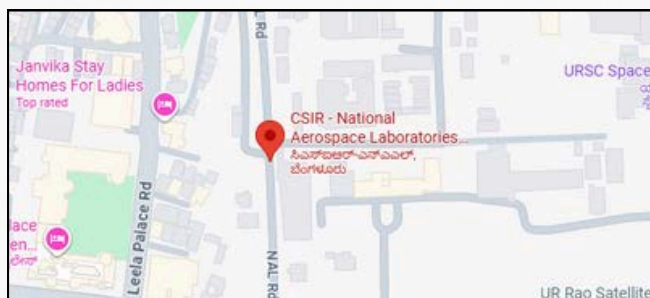
**Deadline for project report submission:** 03 Nov. 2025 before 10:00AM  
**Announcement of selected teams:** 04 Nov. 2025 by 05:00PM  
**Jigyasa -AeroFest:** 22-24 Dec. 2025

### Venue

CSIR-National Aerospace Laboratories  
PB No. 1779, Bangalore-17

### Address for Communication

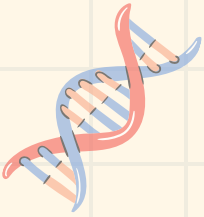
Dr. VPS Naidu, Nodal Officer, Jigyasa  
CSIR-National Aerospace Laboratories  
PB No.1779, Bangalore-17  
E-mail: [jigyasanal@gmail.com](mailto:jigyasanal@gmail.com)  
Phone: +91 9449019458, 080-2251 4121





# The Curious Corner

## BIOLOGY



**Which part of the cell is known as the "powerhouse" of the cell?**

- A) Ribosome
- B) Chloroplast
- C) Mitochondria
- D) Nucleus

**What is the main function of xylem in plants?**

- A) Transport of food
- B) Transport of water and minerals
- C) Photosynthesis
- D) Storage of starch

**The process by which green plants prepare their own food is called:**

- A) Respiration
- B) Photosynthesis
- C) Transpiration
- D) Fermentation

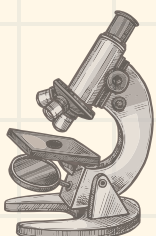
**DNA is mainly found in which part of the cell?**

- A) Cytoplasm
- B) Ribosome
- C) Nucleus
- D) Cell membrane

**Which part of the cell is known as the "powerhouse" of the cell?**

- A) Ribosome
- B) Chloroplast
- C) Mitochondria
- D) Nucleus

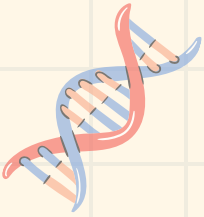
Answers will be shared in the next months Newsletter





# The Curious Corner

## BIOLOGY



**Which of the following cell organelles contains its own DNA and ribosomes?**

- A) Ribosome
- B) Mitochondria
- C) Endoplasmic reticulum
- D) Golgi apparatus

**What will happen if a plant cell is placed in a hypertonic solution?**

- A) It will swell and burst
- B) No change will occur
- C) It will lose water and shrink (plasmolysis)
- D) It will gain water and become turgid

**Which of the following best explains why enzymes are specific in their action?**

- A) They are made of fats
- B) Their active sites fit specific substrates like a key in a lock
- C) They are destroyed after one reaction
- D) They work only in alkaline pH

**Which process in the human body produces both energy and carbon dioxide?**

- A) Photosynthesis
- B) Aerobic respiration
- C) Fermentation
- D) Glycogen synthesis

**Which of the following correctly represents the flow of energy in an ecosystem?**

- A) Ribosome
- B) Chloroplast
- C) Mitochondria
- D) Nucleus

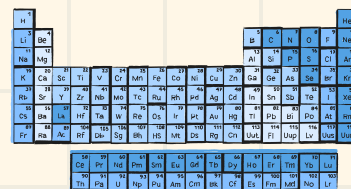
Answers will be shared in the next months Newsletter





# The Curious Corner

## CHEMISTRY



**Which of the following is a compound?**

- A) Air
- B) Iron
- C) Water ( $H_2O$ )
- D) Hydrogen

**The Law of Conservation of Mass states that:**

- A) Energy can be destroyed
- B) Mass changes with temperature
- C) Mass is created during reactions
- D) Mass can neither be created nor destroyed

**What is the pH value of pure water at room temperature?**

- A) 5
- B) 6
- C) 7
- D) 8

**Rusting of iron is a:**

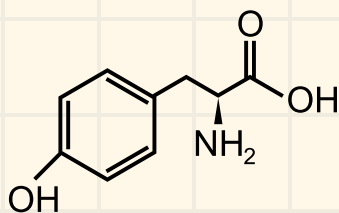
- A) Physical change
- B) Chemical change
- C) Temporary change
- D) Reversible change

**Which of the following is a weak acid?**

- A) Hydrochloric acid ( $HCl$ )
- B) Nitric acid ( $HNO_3$ )
- C) Acetic acid ( $CH_3COOH$ )
- D) Sulphuric acid ( $H_2SO_4$ )

**The same element can exist in different physical forms due to:**

- A) Isomerism
- B) Isotopy
- C) Allotropy
- D) Polymorphism



Answers will be shared in the next months Newsletter





# The Curious Corner

## CHEMISTRY



**Which of the following is NOT a characteristic of a chemical equilibrium?**

- A) Forward and backward reactions occur at the same rate
- B) Concentrations of reactants and products remain constant
- C) Reactions stop completely
- D) It can be affected by temperature or pressure changes

**Which of the following explains why ionic compounds have high melting points?**

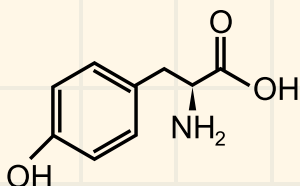
- A) They have weak forces between molecules
- B) They are formed by covalent bonds
- C) They have strong electrostatic forces between ions
- D) They are made of neutral atoms

**Why does the pH of rainwater sometimes drop below 5.6?**

- A) Due to dissolved carbon dioxide only
- B) Due to the presence of acid-forming oxides like  $\text{SO}_2$  and  $\text{NO}_2$
- C) Because of dissolved oxygen
- D) Because of bacterial action

**Which of the following statements about metals is true?**

- A) Metals gain electrons to form positive ions
- B) Metals lose electrons to form positive ions
- C) Metals are poor conductors of electricity
- D) Metals have low melting points



Answers will be shared in the next months Newsletter



# Answer to previous month's quiz



1. Safe Structures
2. Stone
3. Brick
4. Building



1. B. Sand
2. C. To activate the cement and make it stick together
3. C. 28 Days
4. C. It is strong and durable
5. B. Iron and Carbon
6. B. Reinforcement Bar (Rebar)
7. C. It doesn't rust easily
8. C. It is mixed with carbon to improve strength
9. C. Solar energy
10. C. Water treatment



# CSIR Jigyasa's Partners



Jigyasa programme Launched in Collaboration with HRD Ministry on 6th July, 2017



CSIR signed MoU with Navodaya Vidyalaya Samiti (NVS) for under Jigyasa programme on 11th March, 2020



Statement of Intent signed between CSIR and AIM NITI Aayog on 05th June, 2020



MoU was signed between CSIR and National Council of Science Museum, Ministry of Culture on 29th September, 2021



CSIR Jigyasa collaborates with IITB on 22nd November, 2021



CSIR's MoU with the Karnataka Science & Technology Academy to enable a richer, inclusive Virtual Lab ecosystem on 10th June, 2022



CSIR- CDO Bulandshahr signed MoA in the august presence of Hon'ble CM Shri Yogi Adityanath ji on 27th August, 2022



CSIR Mou with The Royal Society of Chemistry signed on 22nd September, 2022



CSIR-IICT hosted an MoU exchange event with the Cipla Foundation on 27th August, 2024



# CSIR Jigyasa's Highlights



**CSIR Jigyasa's Virtual Lab Launched by the Hon'ble Minister of S&T, Dr. Jitendra Singh on 22nd November 2021**



**25th February 2022 – Announcement of Jigyasa Vigyan Mahotsav 2022 winners by the Hon'ble Minister of S&T, Dr. Jitendra Singh**



**Hon'ble Minister for S&T virtually launched First of its kind Indian Sign Language (ISL) enabled Astronomy Lab on 17th April 2023 located at Karnal**



**Hon'ble Ministry for S&T launched Jigyasa Mobile App on 17th April, 2023**



**DG CSIR launched the Science Mobile Lab on 08.05.2023 an exhibit-rich bus developed by CCMB and the Vishvesvaraya Museum**



# Student Engagement






# CSIR Jigyasa in Media (October 2025)

**CSIO JIGYASA**  
@CsioJigyasa

INYAS GIRL Event held at CSIR-CSIO, Chandigarh on 8th October 2025 brought together inspiring talks, hands-on learning, and amazing women leaders, motivating the next generation to grow, ignite, and re-imagine their paths in science. #INYAS #CSIRCSIO #Jigyasa #WomenInSTEM



**CSIR - Institute of Himalayan Bioresource Technology, Palampur**  
8 October at 23:11

CSIR-IHBT celebrated the 84th CSIR Foundation Day on 08 October 2025 with fervor and gaiety. Dr. Sudesh Kumar Yadav, Director CSIR-IHBT, welcomed all the guests and wished them on the occasion. He highlighted the role of CSIR and the activities of the institute towards nation-building. Prof. RP Tiwari, Hon'ble Vice Chancellor, Central University of Punjab, Bathinda, was the Chief Guest of the function. He complimented the CSIR and the institute on its glorious journey. He exhorted the gathering to adopt a nature-friendly lifestyle and play a role in the conservation and management of Himalayan bioresources. He referred to Himalaya as the living laboratory that provides goods and services for human well-being. Dr. Ravikrishna Chebolu, Distinguished Scientist and Head of the CSIR-Innovation Complex, Mumbai, was the Guest of Honor. He delivered the keynote address on Global Trends in Healthcare and India's Alignment. Dr. Ravikrishna lucidly expressed the opportunities and advantages that India has in this sector and how it can promote global good. He emphasized the emergence of personalized healthcare and the role of artificial intelligence in this context. On the occasion, the institute signed 3 technology transfer agreements and 2 MoUs for collaboration and facility creation. A nutrition kit for TB patients under the TB Mukht Bharat Abhiyaan, in association with the State Health Department, district Una, was also launched. Staff members who had superannuated from the institute during the current year were felicitated. The function also saw felicitation of wards of the staff member who had excelled in sports. 38 students and 02 teachers from Shaheed Major Sudhir Kumar Walla Government Senior Secondary School, Banuri, Palampur (Distt. Kangra, H.P.), attended the program and visited the institute on the day under the CSIR-Jigyasa Program. The celebrations were attended by the staff, students, guests, and other dignitaries from the nearby organizations. The event ended on a great note with a cultural event organized by the Institute featuring dance performances and live music. #84YearsOfCSIR #FoundationDay CSIR, India Sudesh Kumar Yadav

**Csir Cdr**  
13 October at 18:23

During the #AyurvedaDay2025 celebration a #Student\_Scientist\_Connect program was organized for a batch of 400+ students of Class 10th-12th and 20 faculty members from #government #intercollege #LakhimpurKheri #UttarPradesh. The visit aimed to motivate young minds to pursue careers in science and explore the world of drug discovery & research through interactive sessions. CSIR, India Department of Science and Technology, Government of India Ministry of Ayush, Government of India CSIR Jigyasa @CSIR\_NIScPR @Madhyamik\_UP Madhyamik Shiksha Vibhag,UP @basicshiksha\_up @UPGovt @upboardprj @CSTUP1975 #AyurvedaDay2025 #AyurvedaForPeopleAndPlanet #PublicHealth #traditionalmedicine #HealthForAll #naturalhealing #healthylifestyle




**75 Azadi Ka Amrit Mahotsav**

**CSIR-SERC organises the Student-Scientist Connect Programme for Government school students in Krishnagiri District**

Posted On: 16 OCT 2025 7:09PM by PIB Chennai



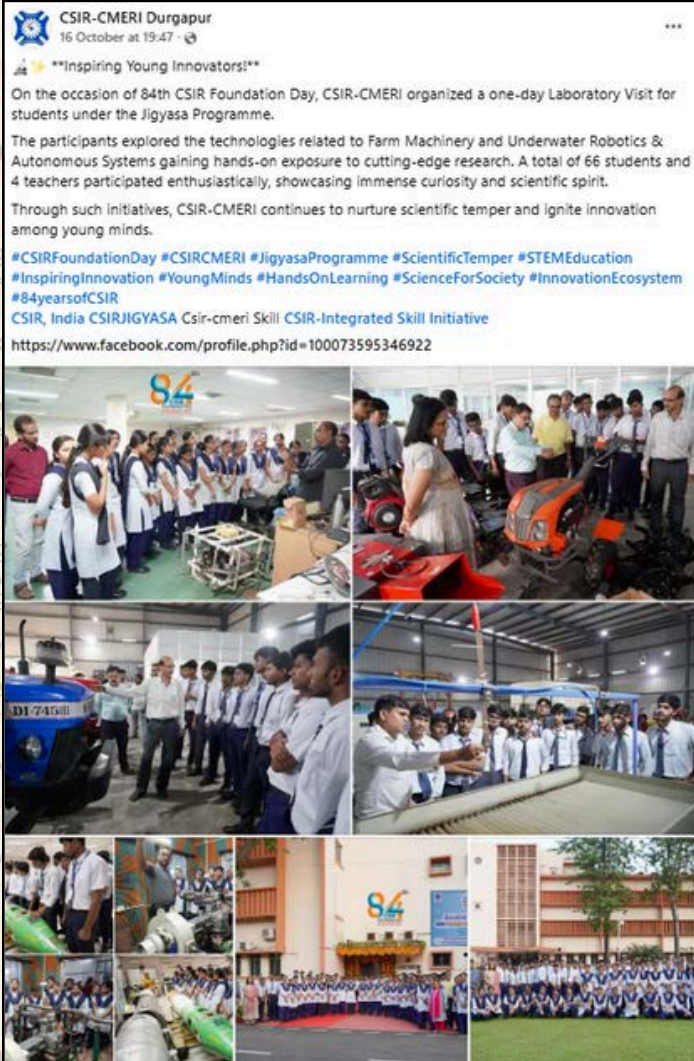


# CSIR Jigyasa in Media (October 2025)



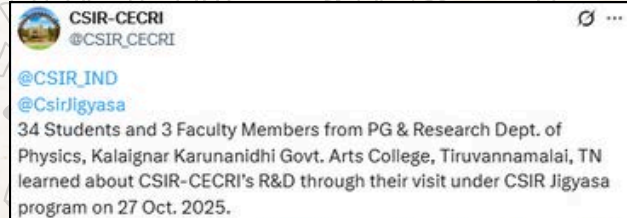


# CSIR Jigyasa in Media (October 2025)



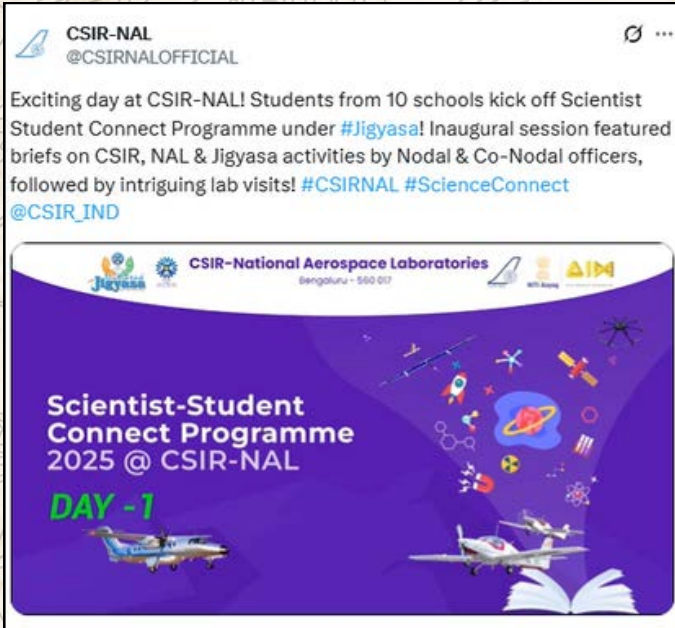


# CSIR Jigyasa in Media (October 2025)





# CSIR Jigyasa in Media (October 2025)





## Contact us for contribution to this Newsletter



**Dr. Parthasarathi Ramakrishnan**

Head, CSIR-Human Resource Development Group  
CSIR Complex  
Library Avenue, Pusa  
New Delhi 110012  
Email: head.hrdg@csir.res.in



**Dr. K. Shreedhar**

Senior Principal Scientist & Jigyasa Programme Coordinator  
CSIR-Human Resource Development Group  
CSIR Complex, Library Avenue, Pusa, New Delhi-110012  
Email: jiggyasa.hrdg@csir.res.in

### Jigyasa Coordinating Team

**Mr. S. Vinayagamoorthy**

Sr. Technical Officer, CSIR-HRDG

**Ms. Raina Dua**

Principal Project Associate, CSIR-HRDG

**Mr. Aniket Arora**

Principal Project Associate, CSIR-HRDG

**Mr. Jatin Bhardwaj**

Executive Assistant, CSIR-HRDG



<https://jigyasa-csir.in>



<https://x.com/CsirJigyasa>



<https://www.youtube.com/@JIGYASACSIR>



<https://www.facebook.com/profile.php?id=100076640628018>



<https://www.instagram.com/csirjigyasa/>



<https://www.linkedin.com/in/csir-jigyasa-b9a67b222/>



CSIR Complex, Library Avenue, Pusa, New Delhi-110012



CSIR - JIGYASA

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