



CNRS IN INDIA

JULY-AUGUST 2024

A word from the Delhi Desk

'Les vacances' and 'jeux olympiques' were most likely the preoccupation of a majority of French colleagues, but elsewhere, the business was almost as usual.

The good news for scientists in EU and for our collaborators from the Council of Scientific and Industrial Research (CSIR), India, came in the form of the announcement of the co-funding to promote EU-India research cooperation under the Marie Skłodowska-Curie Actions Staff Exchanges, part of the EU's research and innovation programme, Horizon Europe. Via this scheme, CSIR, India proposes to extend support to the selected MSCA Staff Exchanges projects, enabling CSIR institutes to engage in joint research projects with European and international partners and second their scientific and technical staff to European research organisations for knowledge sharing and research activities. We urge the CNRS scientists to consider this new scheme for their cooperation with India.

The next call will open on the 19th September 2024, and closes on the 5th February 2025.

Early summer, Cyril Botté and his ApicoLipid Group of CNRS UMR5309 from Institut Jean Roget at La Tronche, and their collaborators from ICgeb, New Delhi India, organized a CEFIPRA-funded Indo-French Workshop on Host-Pathogen Metabolic Interactions & Malarial Drug Resistance, which was highly interactive and was a perfect platform for constructive discussions for future cooperation.

A mini workshop was organized at IIT Dharwad by Prof. Jean-Christophe Nallatamby (XLIM Lab, France) and Dr. Raphael SOMMET (XLIM Lab, France), the coordinators of an IRP (MEMS and GaN Development Through Complementary Collaboration, MEGATRON). The workshop highlighted tools and mechanisms of cooperation with CNRS. Young colleagues from IIT Dharwad shared their experience and success stories of collaboration with CNRS thus sending highly positive signals to students and faculty towards strengthening cooperation with CNRS.

Angela Giangrande and her collaborator Tina Mukherjee, the coordinators of another IRP "MACHUB - Macrophages, key systemic sensors and signaling hubs in development and physiology" are all set to host an exciting workshop in Bangalore in September!

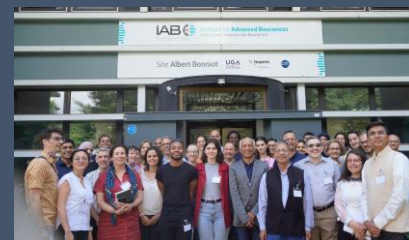
The coordinators of another IRP 'Classical and quantum dynamics in out of equilibrium systems (DynoutSys)' have aligned an interesting workshop also funded by CEFIPRA in December at the International Centre for Theoretical Sciences, Bangalore. Thierry Dauxois and several well-known scientists from both the countries are awaited.

Several other equally exciting events involving CNRS scientists are unfolding both in France and India. The Bureau is also looking forwards eagerly to working with the new scientific attachés in Bangalore and Chennai. Thus, *la rentrée* following summer pause carries along all the enthusiasm and positive vibes. We hope the same is true for all of you.

Enjoy the newsletter!



A brief walk into the fascinating history of Ladakh with Quentin Devers, a passionate CNRS archeologist.



Indo-French Workshop on Genomics and Omics Strategies to target drug resistant malaria at Institut Jean Roget, Grenoble on 1-2 July 2024



Mini-workshop on "Opportunities and Mechanisms of Scientific Cooperation and Higher Education with EU, France and CNRS" on 21st August 2024 at IIT Dharwad.

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Indo-French Workshop on Genomics and Omics Strategies to target drug resistant malaria at Institut Jean Roget

An International Scientific Meeting and Workshop, entitled "Indo-French Workshop on Host-Pathogen Metabolic Interactions and Malarial Drug Resistance," was held on 1-2 July 2024, at Grenoble Alpes University, Rhône-Alpes, Grenoble. The workshop was funded by the Indo–French Centre for the Promotion of Advanced Research (CEFIPRA/IFCPAR).

The primary objectives of the workshop were:

- To bring together Indian and French experts in emerging omics technologies for vaccine and drug development.
- To facilitate brainstorming within the scientific community and develop strategies to combat drug resistance in malaria.
- To disseminate knowledge generated by ongoing Indo-French collaborative research activities and foster new research collaborations aimed at developing novel anti-malarial strategies.

The workshop also featured participation from industrial partners in India and France, providing a platform for developing industry-academia collaborations. These partners shared their expertise in applying advanced techniques in infectious disease research, particularly in genomic and omics approaches. Young researchers benefited significantly from the workshop, gaining insights that will help them apply these techniques in their respective research endeavors.

Visit to Indian Institute of Technology (IIT) Dharwad and Indian Institute of Information Technology (IIIT) Dharwad

The Director was invited as the keynote speaker at the mini-workshop "Opportunities and Mechanisms of Scientific Cooperation and Higher Education with EU, France and CNRS" conducted on 21st August 2024 at IIT Dharwad.

Prof. Jean-Christophe Nallatamby (XLIM Lab, France), Dr. Raphael SOMMET (XLIM Lab, France), Prof. P. Vigneshwara Raja (IIT Dharwad), Prof. Sagnik Sen (IIT Dharwad), Prof. Satyapriya Gupta (IIT Dharwad) were also present at the workshop and shared their experiences on Indo-French research collaboration, complementary work carried out by both parties, and the obtained benefits.

The director of the Bureau also made a presentation on "Higher Education and Research Opportunities in the EU & France: Tools and Mechanisms." at Indian Institute of Information Technology (IIIT) Dharwad. He introduced a range of scholarship and fellowship schemes, along with academic collaboration opportunities that France offers to international students and researchers. The event was highly interactive, fostering meaningful discussions and enthusiasm for future collaborations. IIIT Dharwad is eager to leverage these opportunities to strengthen global academic connections.

R&I Regional Visit to Chandigarh and Horizon Europe R&I Info Day 2024

The Director of the Bureau participated in the Research and Innovation (R&I) Regional Visit to Chandigarh organized by the Delegation of European Union to India and Euraxess India on 29th August 2024. He visited the four specialized institutes in Chandigarh and presented the bilateral R&I and funding opportunities. The Institutes visited were:

- CSIR-IMTECH: Health Research & Medical Technologies
- SCL: Semiconductor, Chips, and Quantum Technologies
- INST: Advanced, Raw, and Nano Materials
- IISER: Multidisciplinary – Energy, Climate, Health, ICT, etc.

The Director also participated in the Horizon Europe R&I Info Day 2024 organized by the Delegation of European Union to India and Euraxess India on 30th August 2024. More than 150 researchers and students participated in the event. The event gave strong testimony to the excellent EU-India partnership in R&I. It featured lively exchanges between participants and representatives from EURAXESS India, EU in India, Marie Skłodowska-Curie Actions, and European countries, expanding opportunities for Indian researchers and innovators within the EU's Horizon Europe programme and bilateral schemes offered by European countries.

Visit to the newly established All India Institute of Medical Sciences at Bilaspur.

The Director of the Bureau CNRS, along with Dr Pierrick Fillon-Ashida, First Counsellor, Head of Section - Research & Innovation, European Union Delegation to India and Bhutan and Dr Vivek Dham, Advisor for Research & Innovation, Delegation of the European Union to India, visited the newly established All India Institute of Medical Sciences at Bilaspur, in Himachal Pradesh on Saturday the 31st August 2024. The Director Prof Vir Singh Negi who has had longstanding collaboration with France, the representatives of the EU delegation and the Director of the bureau coordinated a workshop "Opportunities and Mechanisms of Scientific Cooperation and Higher Education with European Union, France, and CNRS".

A brief walk into the fascinating history of Ladakh with Quentin Devers, a passionate CNRS archeologist.

Quentin Devers, a CNRS scientist affiliated to the 'Centre de recherche sur les civilisations de l'Asie orientale' CRCAO-UMR8155, CNRS in Paris. Quentin Devers has been studying archaeology of Ladakh for the last several years. His research is centered around the documentation of all the archaeological sites in Ladakh. The objective is to understand the diversity of material cultures that coexisted and succeeded one another in the region, their chronology, and the evolution of their territorial extensions and overlaps. Through his investigation, Quentin Devers has compiled a series of volumes on the heritage of the six subregions of Ladakh, in collaboration with INTACH (Indian National Trust for Art and Cultural Heritage). It is a unique privilege to visit different sites and points of interest such as monasteries, temples, fortresses, tombs, masjid ruins, buddhist carvings, a wide range of petroglyphs with the expert.

NEWS HIGHLIGHTS

S & T Minister unveils Indo-French Liver and Metabolic Disease Network

Union Minister of Science & Technology (S&T) Dr Jitendra Singh launched Indo-French Liver and Metabolic Disease Network (InFLiMeN), a virtual node to prevent and cure metabolic liver diseases at Institute of Liver and Biliary Sciences in New Delhi, on 5 July.....[read more](#)

Budget 2024: New directions for India's green energy future

Energy, particularly energy transitions, have been a consistent focal point in most budget announcements by the current Finance Minister (FM) Nirmala Sitharaman. This year too, 'energy security' was one of the nine priority areas identified in the Budget. This is a slightly different from last year where green energy featured under the broader pillar of 'green growth'. The shift in focus from green to security is in line with the broader focus on self-sufficiency in this Budget. The announcements related to energy in this Budget point to some interesting trends.....[read more](#)

Budget 2024: FinMin announces Critical Mineral Mission; what we know so far

Presenting the Union Budget for 2024-25 on July 23, Finance Minister Nirmala Sitharaman announced the Critical Mineral Mission to boost the domestic output and recycling of critical minerals like copper and lithium. It also aims to create an impetus for acquiring such minerals abroad.....[read more](#)

Railways supports 23 innovation projects by startups

Indian Railways has awarded startups with 23 innovation projects worth Rs. 43.87 crore to improve services. Solutions target various concerns like elastomeric pad design, light weight wagons, rail stress monitoring, and track inspection technologies.....[read more](#)

India Maritime Centre (IMC) moves closer to reality under the Maritime India Vision 2030

The IMC will serve as a central platform for collaboration, innovation, and policy advocacy, ensuring sustainable growth and enhancing India's position in the global maritime community: Shri TK Ramachandran, Secretary, MoPSW.....[read more](#)

Union Cabinet approves India's signing of the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement

The Union Cabinet, chaired by Prime Minister Narendra Modi, has approved India to sign the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement. This landmark decision marks a significant step towards the conservation and sustainable utilisation of marine biological diversity in areas beyond national jurisdiction.....[read more](#)

Delhi to upgrade weather forecast system amid climate change concerns

Union Minister Dr. Jitendra Singh announced a significant upgradation of Delhi's weather forecast system during a high-level meeting. The initiative includes adding new radar and automatic weather stations aiming to modernize predictions and ensure public safety amid the ongoing monsoon season.....[read more](#)

Cabinet approves IndiaAI Mission with outlay of ₹103.72 billion: 7 key features

IndiaAI Mission seeks to showcase to the international community the positive applications of the revolutionary technology for societal benefit, thereby elevating India's global competitiveness.....[read more](#)

New Bioeconomy policy rolled out by the Modi Govt is set to place India as a global leader in the years to come

"The new Bioeconomy policy rolled out by the Modi Govt is set to place India as a global leader in the years to come", said Union Minister Dr. Jitendra Singh while briefing the media about the recent Union Cabinet decision on the ambitious BioE3 (Biotechnology for Economy, Employment, and Environment) Policy, heralding a transformative shift in India's manufacturing sector.....[read more](#)

India prepares Rs 11.5 billion research roadmap for EVs; aims to localize EV techs in next 5-7 years

A central government science advisory body has come out with a Rs 11.5 billion road map to aid India leapfrog into an electric vehicle era by developing technologies needed in four different verticals including EV batteries.....[read more](#)

Indian scientists discover new probiotic with potential health benefits

Scientists at the Agharkar Research Institute (ARI) in India discovered a new strain of lactic acid bacteria, dubbed MCC0200, while investigating the genetic makeup of a different strain of *S. thermophilus*.....[read more](#)

How does jamun help with diabetes? IISER-Bhopal offers clues with 1st genome sequencing of plant

Researchers from the Indian Institute of Science Education and Research (IISER)-Bhopal have performed the first complete genome sequencing of the jamun plant (*Syzygium cumini*), an evergreen native to the Indian subcontinent, with high cultural and ornamental significance.....[read more](#)

Indian scientists develop open-source tool to generate infrared star catalogue for Thirty Meter Telescope

A new online tool to create a comprehensive star catalogue for the Adaptive Optics (AO) system of the upcoming Thirty Meter Telescope (TMT), can enable this ground-based telescope-- one of the largest to be operational in the next decade, generate sharper astronomical images.....[read more](#)

New Technique Reveals Dynamics of Alzheimer's Progression

A team at the S.N. Bose National Centre for Basic Sciences is using a Covalent Magnetic Tweezer (CMT) fabricated in their lab, to study physical and chemical properties of protein molecules and action of chaperones on how these molecules fold and function. This approach has provided insights into the intricate dynamics of chaperone-assisted protein folding. Their findings have revealed novel mechanisms of molecular chaperones and provided insights into their functioning and implications for protein homeostasis and human diseases.....[read more](#)

Indian researchers claim 'Quantum Leap' in data encryption

Indian scientists have developed a novel method to generate truly unpredictable random numbers, crucial for strengthening encryption in quantum communications. The research, led by the Quantum Information and Computing (QuIC) lab at Raman Research Institute (RRI) in Bengaluru, could have wide applications beyond cybersecurity.....[read more](#)

IISc team develops method to reduce bias in AI images

A team of scientists at Indian Institute of Science (IISc) has made a breakthrough in addressing fairness concerns in AI-generated images. The research, conducted at Vision and AI Lab of the Department of Computational and Data Sciences, offers a novel approach to mitigating bias in popular image-generative models without the need for additional data or model retraining.....[read more](#)

'Space sector contributed ₹200 billion to India's GDP over the last decade'

India's space sector has directly contributed about \$24 billion (₹200 billion) to India's Gross Domestic Product over the last decade. It has directly supported 96,000 jobs in the public and private sector. For every dollar produced by the space sector, there was a multiplier effect of \$2.54 to the Indian economy and India's space force was 2.5 times "more productive" than the country's broader industrial workforce.....[read more](#)
