STREAM

PC: IISc Website

Hello campus researchers,

Season's Greetings! Welcome to the last edition of STREAM for this calendar year. Please drop us a line in case you have approached ORG for any grant facilitation/ submission and have been successful. Your success stories give us the impetus to do better.

We end this year's STREAM with an engaging "**In-conversation**" interview of Dr. Chandrima Home from ORG, IISC with **Ms. Rebecca Fairbairn, Director, UK Research and Innovation (UKRI), India** where we discussed UKRI partnerships with India.

We have renewed our membership with the **Shastri Indo-Canada Institute (SICI)** which brings opportunities for faculty and students at IISc. We hope this helps increase partnerships between Indian and Canadian Institutes/Universities.

Do keep track of recent **collaborative calls** for which the deadlines are in the start of the new year. These include the Indo-French collaborative research projects through CEFIPRA, the DST-GITA India Israel I⁴ Fund, and the DST-India Philippines joint call.

Please check out our ORG website for the **Women in Science page** where we showcase the achievements of women faculty from the Institute and include details on grant opportunities for women scientists.

The ORG is expanding - we extend a warm welcome to **Ms. Ramya Mohan** who joins the team as a Grants Officer! Ramya has many years of experience in grants management and worked at St. Johns Research Institute before joining the Institute.

We wish you happy holidays, and a wonderful and healthy year ahead!

For queries, write to us at office.org@iisc.ac.in

For more information, visit https://org.iisc.ac.in/

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JANUARY 2022

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IN CONVERSATION

Dr. Chandrima Home with Ms. Rebecca Fairbairn, Director UKRI, India.

India and UKRI have had a fruitful partnership since 2008 to catalyse research and innovation. Your tenure at UKRI India has been cognizant to this association. Looking back, can you summarize the key highlights from this partnership?

The first big highlight for me has been to come to India set up what was then the RCUK office. We tried to quantify the partnerships between UK and India in terms of funding for research and realised that there was hardly anything that we could capture back then. Now, 13 years down the line, I'm back as Director of the UKRI office and we are reaching towards a £400 million joint investment. For me, that's the highlight! The UK is now India's second biggest international partner, after the US. We have gone from almost nothing, to many fruitful partnerships.

Second, the range of partnerships that has been supported has been very satisfying. This includes cultural heritage, telecommunications, and engineering. In the last couple of years, and even with COVID, we have funded topics such as trade policy, electric vehicles, and solar energy. The broad and diverse community on both sides really motivates me in my current role. The strength of the partnerships that we have built with the funders in India is another highlight. In fact, the COVID-19 call, announced jointly with the DBT, was one of the outcomes of this relationship. I think the strengths of partnerships, breadth of partnerships, and the quantum of funding over time are truly the highlights.

The highest number of projects and quantum of funding during this decade-long-partnerships were between BBSRC and DBT. In contrast, scholarly output was highest in Engineering, Energy, and Material Sciences [Ref: UKRI - India Impact Analysis Report]. What were the possible reasons for this disparity? What are the repercussions for grant agencies in quantifying the impact of research using scholarly metrics? How does it influence the next phase of funding for the applicant? Do societal impacts of research play a role in this decision?

This is a tough question to answer! There are lots of ways to measure partnerships, and

Ms. Rebecca Fairbairn with Dr. Chandrima Home

most of these measures are quite blunt. As a funder, having money in projects is good but one needs to understand the context. Projects that require high tech labs or computing will cost a lot more than projects in humanities and social sciences. So, comparisons based on the quantum of funding alone does not make sense. As a funder, the money also needs to relate to value; scholarly output has been one way to measure this. Different communities however have different publishing habits, and citation practices. Measuring the impact of partnerships through scholarly metrics is only one part. We, at UKRI, want to see the actual impact of the projects we fund, the real-world changes. Intellectual property, spinouts, social, and economic impacts - these are much harder to link with research projects as ideas do not come from one funded project alone.

Looking at the societal impacts of research is difficult. UKRI funds based on prospective and retrospective measures and Research Organisations submit impact case studies that show how research has led to real changes. There have been some amazing stories which can never be captured through journal article metric. For example, hairdressers talking about chemical use while washing hair of their customers, leading to changes in attitudes of communities regarding the kind of laundry detergents to use as they hear in plain English the impacts of choices they make at home on and the environment.

So, although the impact report is useful in giving us a snapshot, funding decisions will not be determined by this sort of analysis. When a grant is submitted, our decisions are based on peer-review, and excellence of the idea, and not on the publication history of the applicant, not least as we are aware of citation biases. For example, women are cited less than men, people in senior positions cited more than early career researchers, and people of colour are cited less. We really want to make sure that we are not falling into a trap of compounding these issues.

The UKRI-India partnership has seen collaborations between Indian Institute of Science with Universities of Edinburgh and Cambridge. How did these partnerships come into place? Are there other avenues for engagement for the Institute with other Universities in the UK?

I am sure, considering the history of partnerships, a place like IISc would be "courted" by so many Universities who would want to partner with India. However, it is not until a couple of meetings that one gets to know what prospective partners are interested in, and whether this will materialize into a real partnership. I personally think that some of the strongest partnerships start from one-to-one relationships with faculty members. Although it has been difficult with COVID, interactions, such as at conferences, have been responsible for building such relationships and bringing in more strategic level of partnerships. Some of these relationships have been more fruitful in bringing together Research Centres and Departments. I see some Universities in the UK taking a very strategic approach when they are looking for international partners. They have really analysed what they can offer for partners, and it is probably these that IISc should look to build partnerships within the future.

What are some of the key areas of engagement that have been identified in the 2030 roadmap for India-UK relations that was recently launched in May 2021. Does this roadmap provide a greater thrust to academia-industry partnerships?

The new roadmap gives a greater thrust to UK India relationships which is extremely exciting for us. This is the first time that the UK had such a clear, collaboratively built (with the Government of India), and strategic vision for the future of an international relationship. We have worked with the Government of India to ensure the roadmap and I am really excited about the scope that exists for research and innovation in the coming years.

There is a whole section in the roadmap on education

research, innovation, and enterprise. We will also work on common challenges such as climate change, sustainability, and the environment. We have built an extremely strong foundation in solar energy, industrial waste and improving water quality; there is so much more that can be done in this space! There is immense scope to look at the circular economy and the creative industries (everything from sustainable fashion to literature, music, AR (Augmented Reality) and VR (Virtual Reality), cultural heritage). Currently, we have the "innovating for clean air" partnership in Bangalore, which involves IISc, and brings together SMEs in India and UK. There is a lot more that can be done on the environmental sustainability space when it comes to academia industry partnerships.

The UKRI-India partnership report clearly mentions collaborations in the UK with top tier Centrally Funded Technical Institutes (CFTI) in India. Is there is room for non CFTI universities to play an active role in these collaborations?

Absolutely, and I think the belief that this isn't possible is related to my points earlier on the bluntness of metrics such as publications and or funding quantum. Most CFTI's are likely to have a broader base, cover more disciplines, and areas of interest that attract more collaborations and therefore more investment from funders. Smaller or more focused universities may not always have such a breadth, so it looks like we invest in them less. We fund based on excellence and I truly believe that excellence can be found anywhere.

I feel that there are immense opportunities to work with smaller universities/institutes who work in niche areas such as sustainable fashion, ways of producing materials from waste, or cultural approaches to materials production.

Initiating the same start date for the projects simultaneously (UK and India) is probably a constant challenge when working with various agencies. What are some challenges in this process?

There are always bureaucratic differences between funding agencies as we're set up to meet national processes and requirements. These differences include start dates, reporting, monitoring and evaluation. The UKRI India Office was set up to navigate some of these differences. We realized that we need to build strong relationships with our Indian partners, understand how they work, their processes, and why our processes would not work for UK-India partnership. We know that everything will not work perfectly, and we continue to learn. Having an office in India really helps. Similarly, we have offices in Beijing, Washington DC and Brussels which help coordinate with funding partners there.

The UK research councils have been a coveted space for scientists based in UK and Europe. Is there scope for Indian scientists to be a part of this space as consultants/any other role?

Absolutely! We have a number of funding opportunities that welcome international partners on grants, and UKRI also

facilitates by building strategic opportunities with the Indian Government. In terms of more systemic engagement, we are always looking for peer reviewers and for people to sit in our panels and participating in decision making exercises, which is also a great way to build networks. I think we can be better in getting more people come on these platforms. Having a clear statement of research interests on university websites help us identify expertise so I really recommend people make sure this is up to date.

You have steered the leadership at UKRI for a considerable period and been in India through most of this period. What are some of the personal and professional challenges you encountered, and how did you overcome them?

The biggest challenge I face is the breadth of opportunities for collaboration because UKRI covers every element of research and innovation. I get really excited by all of the opportunities, but it is impossible to explore everything, and that can be frustrating at times. I try to manage through careful prioritizing and concentrating on areas from where we can reap the most from opportunities.

One of the biggest opportunities I have had since moving to Delhi was transforming RCUK India to UKRI India. The establishment of UKRI meant we moved from covering the seven UK Research Councils to also supporting Innovate UK and other parts of the UK research and innovation funding policy infrastructure. This had just happened when I came to Delhi, and it was a great opportunity to see what this change meant. It required a rebuilding of the understanding of who we were, and what we were here to do. I and my team had to think differently about what only we could achieve in India, and this required a lot of change management. I have a great team which made this really enjoyable!

UKRI was also a part of the recent COP 26. What are the ways in which UKRI envisions the role of research for greener solutions?

Research and innovation are going to be vital to adaptation and resilience. We are working with Indian Government agencies to explore areas with mutual priorities where we have complementary strengths such as energy, agriculture, net zero technologies, things like waste to wealth or circular economy, and other interests where we think we can align to work together.

In a post-COVID world, does UKRI visualize a significant shift in research priorities?

To an extent. While we are still in the COVID era we need to investigate the impacts of that and the issues relating to our global response, such as vaccines and pandemic preparedness, equity, and the global structure of education and work, broader and interconnected health, and environmental issues, such as AMR. We have been conscious of these, and we hope that our COVID experiences will help us think differently of our own environment and how what we do today will impact our tomorrow.

Health and environment have been priorities for us for a long time and I do not see that changing in our partnership with India.

Thank you, Rebecca for giving us your valuable time amidst your busy schedules. We are thankful that you could accept our offer to have this conversation. The information that you have out for us has been most valuable for our research community at IISc. We look forward to continued interactions with you and UKRI in the coming years.

UPCOMING DEADLINES
RESEARCH GRANTS

Conservation, Food and Health Foundation Grant
Overview: Research grant to protect natural resources, improve food production, distribution and promote public health in Asia, Africa, Latin America, and the Middle East.
Submission deadline: 1 January, 2022.

The Nestle Foundation Research Grants
Overview: Provides funding support in the form of pilot, small and large research grants in public health and nutrition.
Submission deadline: 10 January, 2022.

Amazon Research Awards (ARA) for Alexa Fairness in AI
Overview: To build and enable engaging, world-class conversational AI capabilities that are broadly accessible.
Submission deadline: 21 January, 2022.

BILATERAL RESEARCH GRANTS

DST-GITA India-Israel Industrial R&D and Technological Innovation Fund (I4F) 2021
Overview: Provides support for research projects in Agriculture, Energy, Healthcare, Information & Communication Technologies (ICT) and Water. The scheme also supports products and solutions addressing the challenges posed by the Covid-19 pandemic.
Submission deadline: 3 January, 2022.

NIH Elucidating the Effects of ART on Neuronal Function in the Context of SUD and HIV
Overview: To identify the effects of anti-retroviral therapy (ART) used for the treatment of HIV/AIDS on neuronal and glial structure and function.
Submission Deadline: 2 January, 2022.

NIH Dissemination and Implementation Research in Health
Overview: Support innovative approaches to understand and develop strategies to overcome barriers to evidence-based interventions, tools, policies, and guidelines for health research.
Submission Deadline: 5 January, 2022.

NIH Alzheimer's Clinical Trials Consortium (ACTC) Clinical Trials
Overview Invites applications to develop and implement Phase Ib to III clinical trials of promising pharmacological and non-pharmacological interventions for Alzheimer's disease (AD) and other age-related dementias.
Submission Deadline: 5 January, 2022.

NIH Clinical Characterization of Cancer Therapy-induced Adverse Sequelae and Mechanism-based Interventional Strategies
Overview: Supports collaborative research projects to address cancer therapies that persist and become chronic comorbidities or develop as delayed post-treatment effects.
Submission Deadline: 5 January, 2022.

NIH Clinical Trial Readiness for Functional Neurological Disorders (FNDs)
Overview: The call invites researchers to submit prospective clinical projects for clinical trial readiness in FNDs.
Submission Deadline: 5 January, 2022.

NIH Analytical Methods for Analyzing Diastereomer Compositions in Oligonucleotides
Overview: To develop advanced analytical methods for diastereomer compositions in phosphorothioate (PS) oligonucleotides using either TEGSEDI (inotersen) or SPINRAZA (Nusinersen) as model product.
Submission Deadline: 7 January, 2022.

NIH Identification and Characterization of Persistence Mechanisms of Select Protozoan Pathogens
Overview: To provide research tools and strategies to enable identification of novel treatments for persistent protozoan pathogens.
Submission Deadline: 8 January, 2022.

NIH Pharmacokinetics (PK) and Pharmacodynamics (PD) of THC in Cannabis and Cannabis Products (R01 & R21-Clinical Trial Optional)
Overview: Supports human and animal research on the pharmacokinetic (PK) and pharmacodynamic (PD) effects of Δ9-tetrahydrocannabinol (THC) present in cannabis and cannabis products.
Submission Deadline: 9 January, 2022.

NIH Dementia Care and Caregiver Support Intervention Research
Overview: This call specifically addresses care needs and promotes the health and well-being of persons with Alzheimer's disease (AD), Alzheimer's disease-related dementias (ADRD) and their care providers.
Submission Deadline: 10 January, 2022.

NIH Pragmatic Trials for Dementia Care and Caregiver Support
Overview: Supports pragmatic trials to improve dementia care across multiple care settings designed to address quality

of care for Alzheimer's disease (AD) and AD-related dementia (ADRD) patients and reduce disparity in dementia care.
Submission Deadline: 10 January, 2022.

DST -Technology Mission Division (Energy, Water & Others) Call for Proposals for Optimal Water Use in Industrial Sectors-2021
Overview: The call supports R&D and private sectors to work together in designing generic solutions for optimal water management in industrial sector with the following focus areas: water conservation, efficiency in water use, wastewater recovery and utilization of residues.
Submission Deadline: 10 January, 2022.

The Simons Foundation Analysis of postmortem brain tissue from the Autism BrainNet collection — Request for applications
Overview: Invites individual and collaborative applications that studies and comparisons in the gene expression for autism.
Submission Deadline: 10 January, 2022.

NIH Utilizing the PLCO Biospecimens Resource to Bridge Gaps in Cancer Etiology and Early Detection Research
Overview: To advance research in cancer etiology, early detection biomarkers and utilizing the advantages of the PLCO biorepository resources.
Submission Deadline: 11 January, 2022.

NIH Efficient and Innovative Natural History Studies Addressing Unmet Needs in Rare Diseases
Overview: Supports efficient and innovative natural history studies that advance medical product development in rare diseases/conditions with unmet needs.
Submission Deadline: 14 January, 2022.

DST- CEFIPRA Collaborative Scientific Research Programme
Overview: Supports Indo-French collaborative research projects in advanced areas of basic and applied science to nurture scientific competency.
Submission Deadline: 15 January, 2022.

NIH Administrative Supplements for Research on Dietary Supplements
Overview: Funding to investigate the role of dietary supplements and/or their ingredients in health maintenance and disease prevention.
Submission Deadline: 15 January, 2022.

NIH High Priority HIV and Substance Use Research
Overview: Support research with the potential to open new areas of HIV/AIDS research and/or lead to new avenues for prevention, treatment, and cure of HIV   for those who use drugs.
Submission Deadline: 15 January, 2022.

Endangered Material Knowledge Programme (EMKP) Small and Large grants
Overview: Grants for documentation work on material knowledge systems that are under threat and in danger of disappearing.
Submission Deadline: 16 January, 2022.

NIH Early-Stage Development of Data Science Technologies for Infectious and Immune-mediated Diseases
Overview: Funding to enable data science technologies for immune-mediated and infectious diseases research.
Submission Deadline: 17 January, 2022.

NIH Enhancement or Sustainment of Data Science Tools for Infectious and Immune-Mediated diseases
Overview: This call focuses on enhancement and/or sustaining operations and improving the user experience and availability of existing, widely adopted informatics tools and resources.
Submission Deadline: 17 January, 2022.

NIH Exploratory Data Science Methods and Algorithm Development in Infectious and Immune-mediated Diseases
Overview: Supports exploratory research focused on developing innovative methods and algorithms in biomedical computing, informatics, and data science addressing infectious or immune-mediated disease research.
Submission Deadline: 17 January, 2022.

India Philippines Joint Call for R & D Proposals
Overview: The call invites joint proposals in the areas of virology, applications of artificial intelligence on diverse areas (agriculture, health, and smart cities), blockchain technologies on government services/processes, and additive manufacturing of new materials (metal and ceramics).
Submission Deadline: 17 January, 2022.

NIH Advancing Group A Streptococcus Vaccine Discovery
Overview: Supports discovery and design of novel Group A Streptococcus (GAS) vaccine candidate and preclinical evaluation for broad protection against GAS infections.
Submission Deadline: 18 January, 2022.

NIH Fertility Status as a Marker for Overall Health
Overview: Supports exploratory/developmental research to explore the role of fertility status as a marker of the overall health.
Submission Deadline: 19 January, 2022.

NIH Prevention and Intervention Approaches for Fetal Alcohol Spectrum Disorders (FASD)
Overview: Supports research that advances prevention approaches to reduce prenatal alcohol exposure, the incidence of FASD and interventions for FASD.
Submission Deadline: 19 January, 2022.

NIH Age-related Macular Degeneration (AMD) Integrative Biology Initiative

Overview: Funds collaborative studies of patient-derived induced pluripotent stem cell (iPSC) lines generated by the NEI age-related macular degeneration (AMD).
Submission Deadline: 22 January, 2022.

NIH Discovery of the Genetic Basis of Childhood Cancers and of Structural Birth Defects: Gabriella Miller Kids First Pediatric Research Program

Overview: Invites applications to submit samples from pediatric cohorts for whole genome sequencing at a Kids First-supported sequencing center.
Submission Deadline: 24 January, 2022.

NIH- NEI Vision Research Epidemiology Grant

Overview: Supports new and innovative ocular epidemiology research.
Submission Deadline: 25 January, 2022.

FELLOWSHIPS_STUDENTS

NESTLE Foundation Training Grant

Overview: Funding support for MSc/ PhD projects in the area of public health and nutrition.
Submission Deadline: 10 January, 2022.

International Institute for Applied Systems Analysis Young Scientists Summer Program

Overview: The program is for PhD students working on a topic compatible with ongoing research at IIASA.
Submission Deadline: 14 January, 2022.

Microsoft Research Fellows Program

Overview: The program facilitates exposure of Indian students to world-class research, state-of-the-art in technology, engineering as well as entrepreneurship.
Submission Deadline: 14 January, 2022.

VISITING SCIENTIST PROGRAM GRANTS

Indian National Science Academy (INSA) Visiting Scientist Programme

Overview: Fellowship for specialized training in Indian research institution/laboratories other than the host institution.
Submission deadline: 31 January, 2022.

MEETING GRANTS

IGSTC Indo-German Bilateral Workshops

Overview: Invites proposals for organizing Indo-German workshops on areas of mutual interest for substantive interactions between scientists/researchers from academia and industry.
Submission Deadline: 31 January, 2022.

IISc Institutional membership for Shastri Indo-Canada Institute

The Shastri Indo-Canada Institute (SICI) supports bilateral links between Indian and Canadian Institutes through various funding schemes and seminar series. SICI has ongoing calls for collaborative opportunities (research grants, fellowships, and programs) which may be highly beneficial for faculty and students at the Institute.
We have recently renewed our membership for SICI, and hope this opens future collaborative partnerships of Institute researchers with Canadian Institutes and Universities. Please continue to look out for the SICI calls which we send over emails and in STREAM. For more information about SICI please refer to the website. https://www.shastriinstitute.org/.