



Department of Biotechnology
Ministry of Science and Technology
Government of India

DBT



National Institute of
Advanced Industrial Science
and Technology

AIST

DBT - AIST International Laboratory for Advanced Biomedicine



Since Oct. 3, 2013

Newsletter

Volume 5 (October 2017)



Background: DAILAB (DBT-AIST International Laboratory for Advanced Biomedicine) at the Biomedical Research Institute (BMRI), Tsukuba campus of the National Institute of Advanced Industrial Science & Technology (AIST), Japan is the first International laboratory in Life Sciences & Biotechnology. Emerged as a step up from bilateral MoU and aimed to promote close and effective research collaboration and networking, it was established on Oct 3, 2013. Signing and Opening Ceremony by AIST President, Dr. R. Chubachi and DBT Secretary, Prof. K. VijayRaghavan was also graced by the presence of Her Excellency Ms. Deepa Gopalan Wadhwa, Ambassador of India to Japan. DAILAB has been conducting basic to applied research on disease prevention and therapeutics for increasing the Quality of Life (with focus on old age and cancer) and has published **43 original research articles in high impact factor** International peer reviewed journals. <https://www.ncbi.nlm.nih.gov/pubmed/?term=DAILAB>. In addition, DAILAB has been achieving its goals in training young talents by embarking on a variety of interesting and motivating educational and networking activities as updated below.

❖ Highlights of activities (April 2016 - October 2017)

Imaging Workshops: Continuing with its series of one-week full residential training workshops for bioimaging (First: Jan 19-25, 2014; Second: Dec 9-14, 2014 and Third: Jan 18-23, 2016) that ranged from the principles of light microscopy to high-resolution imaging, DAILAB held its Fourth workshop from Jan 16-21, 2017. AIST experts with assistance from Nikon, Olympus, Zeiss and ATTO Corporations successfully trained 20 young selected researchers from countries including India, Indonesia, Malaysia, Thailand, Korea, China, Sri Lanka, Nepal, Nigeria and Russia. Intensive lectures in the mornings were followed by hands-on microscope training in the afternoons. A tour to Leica showroom in Tokyo was organized on the last day for providing a feel of connectivity of science to technology, and was thoroughly appreciated at all ends including organizers, trainees and industries. 50 young researchers from India have been trained in this program. Highlight of the third imaging workshop has been a joint PIKNIKH with CHANEL where scientists from AIST and CHANEL presented their research strategies and outcomes on the use of imaging technologies for functional cosmetics and health care. Highlight of the fourth imaging workshop was support by Japan Science & Technology (JST) under Sakura Science Program. Poster-BAR and Awards to the participants were thoroughly enjoyed and appreciated.

4th Imaging Workshop “Hands-on Training”



Poster Bar and Awards



◆ **DAILAB-STAR Program:** STAR (Student Training for Advanced Research) Program has been offering training in an International and highly organized environment for a period of 3-12 months. Several young researchers have been benefited by this program. Some of them have opted to stay in Japan for long term degree courses.

Learning to ask questions and recruit answers to useful ends has been a great happening through DAILAB. Thank you !



◆ **DAILAB-CAFÉ (Classroom for Advanced & Frontier Education):** Held once in about 6 weeks, **DAILAB-CAFÉ** provides relaxed CAFÉ-like environment for study and learning. It features an informal CAFÉ like atmosphere and free interaction over tea/coffee and snacks. Frontier topics selected for CAFÉ talks are presented at an educational level, and being skyped to overseas institutions including **IIT-Delhi, India; Peking Union Medical College Tsinghua University, China; Hanyang University, Korea; Brawijaya University, Indonesia; University of Sri Jayewardenepura, Sri Lanka and Manipal University, India.** Twenty two CAFÉs have been completed so far.



◆ **DAILAB-CAFÉ-PLUS (Presentation-Learning for Young Scholars):** CAFÉ-PLUS offers chance to Young Scholars to present their work and train them for “Clear, Crisp, Careful and Concise” presentations. First round of 3 CAFÉ-PLUS Series and Finale has been completed. The Grand Winner **Shayoni Datta** (IIT-Delhi) was awarded with a full board trip to DAILAB (AIST) to attend the 4th Imaging workshop.

◆ **DAILAB-PIKNIKH (Platform for Innovating Knowledge to International Know Hows):** DAILAB has been conducting informal scientific meetings/symposia/sessions to be held in Japan and overseas to promote direct personal interactions, interdisciplinary thinking, innovating opportunities and to reach remote areas in India and the world. Twenty series of PIKNIKH have been successfully completed. It has provided opportunities to Japanese scientists to travel to India and interact with Indian scientists.

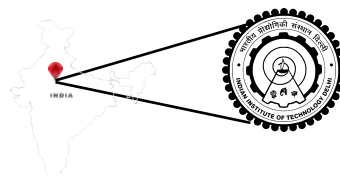


It has been a great exercise to explore my research mind after a medical degree. Thanks to DAILAB !

◆ **DAILAB-DACTOR Program:** In order to **Develop Application and Clinical Trial Oriented Research**, DAILAB has been running a **DACTOR** program. The purpose of this program is to create opportunity for students and young researchers to meet medical doctors, academia & industry experts from diverse disciplines so that the broad innovative aspects of research could be conceived and implemented. The program has received high appreciation.

◆ **DAILAB-SISTERS:** Initiating with **SISTER** (Satellite Institutes for Special Training Education and Research) DAILAB at the Indian Institute of Technology Delhi (IIT-Delhi) on November 04, 2015, DAILAB has established six SISTER Labs with unique mind and relationship of complementarity. Led by Dr. D Sundar (1), Dr. S. Vрати (2), Dr. Ranil De Silva (3), Dr. K. Satyamoorthy (4), Dr. J. P. Tamang (5) and Dr. A. Kunnumakkara (6), the SISTER DAILABs are participating in research and training activities on regular basis.

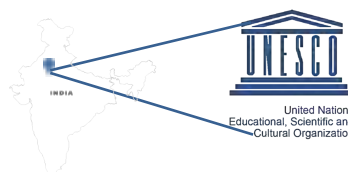
1



D. Sundar

Indian Institute of Technology - Delhi, India.
Since 4 November 2015

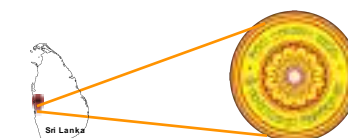
2



S. Vрати

Regional Centre for Biotechnology Faridabad, India.
Since 10 December 2015

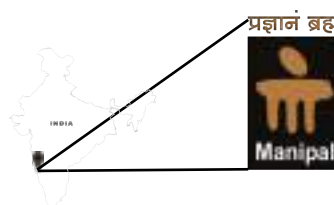
3



R. De Silva

University of Sri Jayewardenepura Nugegoda, Sri Lanka.
Since 19 April 2016

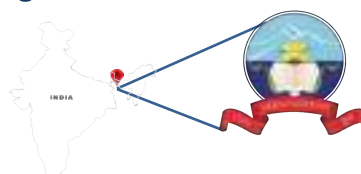
4



K. Satyamoorthy

Manipal University, Mangalore, Karnataka, India.
Since 4 August, 2016

5



J. P. Tamang

Sikkim University, Gangtok, India.
Since 26 October, 2016

6



A. Kunnumakkara

Indian Institute of Technology - Guwahati, India
Since 8 May, 2017

◆ **DAILAB-TENJI** (Teachings/Technology Exhibits & Networking to Jump to Innovation/Industrialization): DAILAB has been participating in industrial trade fairs held in India and Japan to skill technology exhibiting and networking for innovation and industrialization. Continued with participation in the 21st International Engineering & Technology Fair (IETF) at Pragati Maidan, New Delhi, India and DBT Indian Pavilion at the BioTech Japan 2015 held at Tokyo Big Sight, DAILAB participated in the BIOTech Japan, 2016 held at Tokyo Big Sight May 11-13.

◆ **DAILAB-JUKU** (Join Universities for Kindering Youth): DAILAB members have been offering training to young students in universities by serving as foreign faculties in various workshops and mentoring joint research students. DAILAB faculties also visited schools to motivate students to science careers. Visits to GD GOENKA Public School (Siliguri) and Royal Global School (Guwahati), and Assistance to Sakura Science Program in Japan and India were the highlights.



Inquisitive! Enthusiastic! Energetic! Enjoyed AIST Visit !



DAILAB & JST teams at GD GOENKA Public School, Siliguri, India



DAILAB & JST teams at Royal Global School, Guwahati, India

◆ **DAILAB- DOSTI** (Discover Opportunities for Science and Technology Innovation & Industrialization):

✧ Exploration on science innovation and industrialization initiated by visits of AIST delegation led by AIST President Ryoji Chubachi and welcomed at CSIR by Dr. Girish Sahni, Director General, CSIR & Secretary, DSIR and CSIR officials at the CSIR Science Centre, both institutions have continued on plans of executing bilateral research projects and regular joint workshops at two ends. Recent meet was held at AIST wherein DAILAB coordinated interests in the field of Materials and Chemistry.

✧ DAILAB is beginning to assist in initiating Durable Openings for Science and Technology Industries in India and Japan in academic, research and production sectors, and aims to create highly aspired youth with high-end assistance from industries.



◆ Cherished moments

❖ DAILAB members participated in Reception of Hon'ble Prime Minister Sri Narendra Modi in Kobe on Nov 12, 2016

Hon'ble Prime Minister Sri Narendra Modi's autograph in DAILAB Newsletter Vol. 4 during his visit to Kobe, Japan on Nov 12, 2016



❖ DAILAB prepared an Introductory Video

DAILAB Introductory Video released by Dr. Madhan Mohan, Adviser DBT on June 8, 2017



❖ DAILAB executives participated in India-Japan Summit Sept 12-15, 2017



- ✳ Extension of Comprehensive MoU in the field of Science and Biotechnology
- ✳ Joint Research Contract Between DBT and AIST to conduct joint research and to establish an International Center for Translational and Environmental Research (DAICENTER)



◆ DAILAB Executive Team

- Patron - K. Matsuoka, Vice President & Director-General, Life Science & Biotechnology, AIST
- Executive Director - Y. Ohmiya, Director, Biomedical Research Institute (BMRI)
- Coordinator - S. Kaul, Chief Senior Research Scientist, BMRI
- Leader - R. Wadhwa, Prime Senior Research Scientist, BMRI
- Fellow - Y. Onishi, Group Leader, Physiologically Active Substances Research Group, BMRI
- Fellow - M. Doi, Group Leader, Molecular Neurobiology Group, BMRI
- Fellow - R. Kurita, Group Leader, Nano Biodevice Group, BMRI

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