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April 2022

In The News

Dr Rajesh S. Gokhale given Additional Charge as DG, CSIR



Dr Rajesh S. Gokhale, Secretary, Department of Biotechnology has been given additional charge of the post of Director-General, Council of Scientific and Industrial Research (CSIR)-cum-Secretary, Department of Scientific and Industrial Research (DSIR) on 29 April 2022. Dr Gokhale will handle the new responsibility from 30 April 2022 till the appointment of a regular incumbent or until further orders.

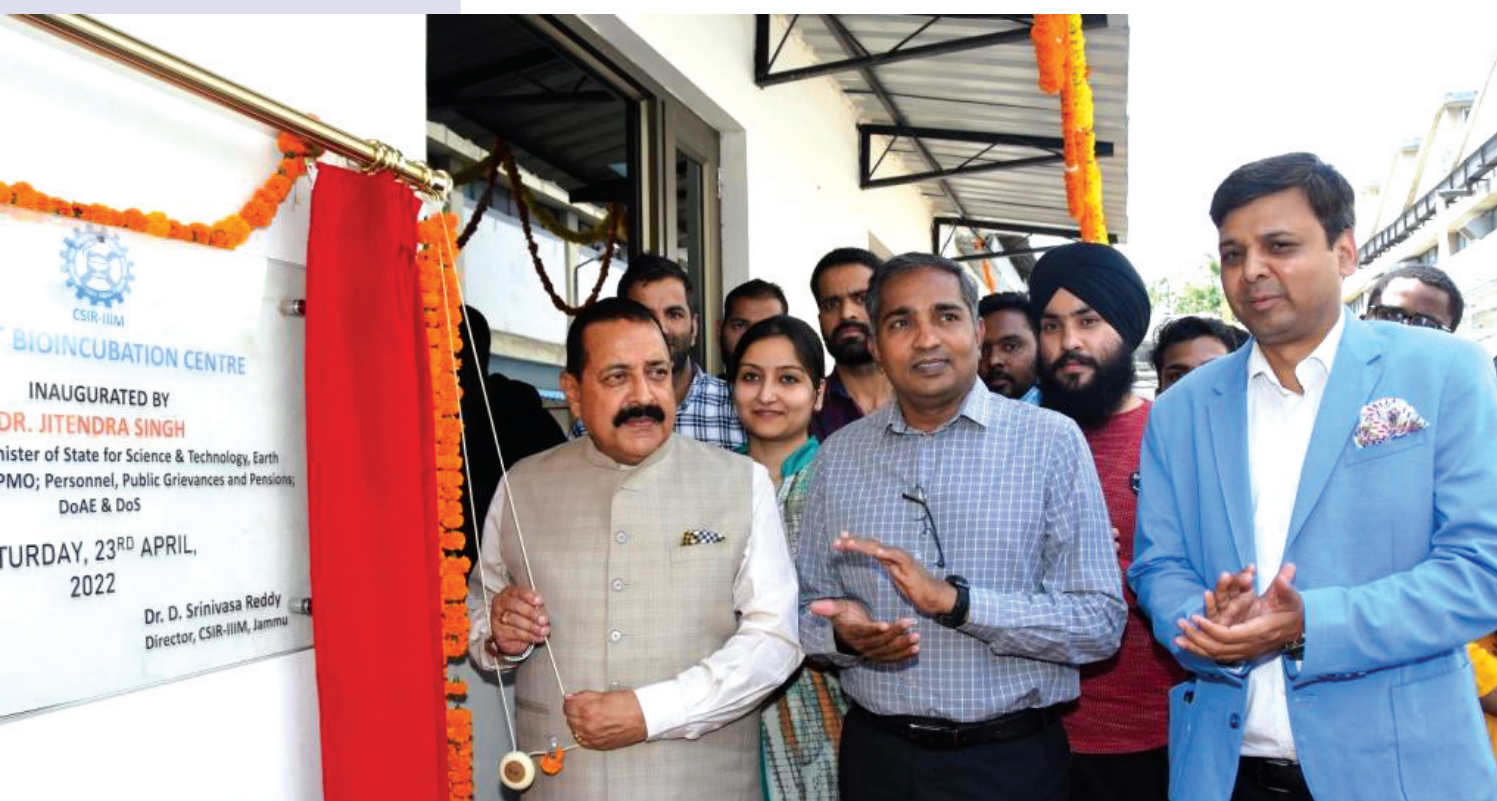
Dr Gokhale is a chemical biologist recognised for his study on *Mycobacterium tuberculosis*. Dr Gokhale graduated (BSc Chemistry) from Delhi University and an MSc in Biotechnology from the IIT Bombay, India in 1990. He obtained his PhD from the Indian Institute of Science (IISc), Bengaluru, and Postdoctoral studies from Stanford University, USA. Dr Gokhale joined the faculty of the National Institute of Immunology

(NII), Delhi in 1999. He was also the Director of CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB), Delhi, from 2009 to 2016.

Dr Gokhale has several prestigious awards to his credit including the Wellcome Trust (UK) Senior Research Fellowship (2001-2006), Howard Hughes Medical Institute (HHMI) International Research Scholarship, USA (2005-2010), Swarnajayanti Fellowship,

Department of Science and Technology, India (2006-2011), Shanti Swaroop Bhatnagar Prize in Biological Sciences, India (2006), National Bioscience Award for Career Development, India (2009), Infosys Prize in Life Sciences (2013), IIT Bombay Distinguished Alumnus Award (2014), Sun Pharma Research Award (2014) – Medical Sciences, Basic Research Award, JC Bose National Fellowship (2018-Present).

Dr Jitendra Singh Inaugurates BioNEST Bioincubation Centre at CSIR-IIIM, Jammu



The BioNEST Bioincubation Centre was inaugurated by Dr Jitendra Singh, Hon'ble Union Minister for S&T at CSIR-IIIM, Jammu. The biotech incubator is supported by BIRAC DBT, Govt. of India.

The incubator will give more credibility and nationwide opportunities to local entrepreneurs of Jammu & Kashmir to avail the

services and facilities provided by CSIR-IIIM, Jammu & BIRAC through their established networks.

The overall objective of the BioNEST Incubator is to produce successful business ventures that would create jobs and wealth in the J&K region, along with encouraging an attitude of innovation in the country as a whole.

8th Maha Sangam for Drug Research

The 8th "International Symposium on Current Trends in Drug Discovery Research" was held at CSIR-Central Drug Research Institute, Lucknow. Dr D. Srinivasa Reddy, Director CSIR-CDRI, Lucknow welcomed all the dignitaries present online as well as offline in this mega event.

In the inaugural programme, Prof. Shiv Kumar Sarin, Director, Institute of Liver & Biliary Sciences, New Delhi, India delivered the inaugural talk on "Fecal Microbiota Transplant in Alcoholic Hepatitis: A New Drug Therapy". In his oration, he said, based on recent data alcohol consumption is increasing in India and sadly cases of liver cirrhosis are also increasing. Alcohol causes inflammation in the liver leading to liver cirrhosis and liver cancer in a few cases. He talked about changing bad gut microbes to good ones in alcoholic liver disease using a transplant of faecal (stool) microbes from a healthy donor. In recent research, transplantation of faecal microbiota through naso/duodenal route for seven days reduces mortality in humans. This therapy could be an alternate therapy for alcoholic liver diseases.

Guest of Honour, Prof. Bhabatosh Biswas, Director, CTVS, Woodlands Hospital, Kolkata also addressed the audience. Prof. Bhabatosh Biswas, emphasized that Scientists and Physicians (Doctors) should work together for drug discovery and development and their dedicated association is a prerequisite. He also talked about unmet needs in research such as LDL or bad cholesterol metabolism. Alcohol, smoking and lack of nutrition are major issues today.

Later in the 2nd Session, Prof. Rama Natarajan from City of Hope National Medical Center, CA, USA

explained why some diabetic patients with prior hyperglycaemias develop complications despite subsequent sugar control. She shared her recent research on epigenetics in diabetic complications and metabolic memory and its translational implications and drug targets. Prof. Rama has used high-throughput techniques to study drug targets in diabetes. She talked about how long non-coding RNAs regulate diabetes. She is trying to target these long non-coding RNAs to treat diabetic complications.

Dr Madhu Dikshit, JC Bose National Fellow at CSIR-CDRI, Lucknow, shared her study on the development of anti-thrombotic drug which is going to enter a clinical trial. She discussed her novel findings on Collagen antagonists for the prevention of intravascular thrombosis. In her talk, she informed that Intravascular thrombosis is often accompanied with the incidence of myocardial infarction or stroke, which is a major cause of morbidity and mortality worldwide. Cardiovascular diseases (CVD) are leading cause of death globally. India accounts for 60% global burden of CVD. She drove the anti-thrombotic drug discovery program, initiated in CDRI in 1999. She further mentioned that we identified two compounds which significantly and specifically prevented the collagen mediated platelet adhesion and aggregation.

Dr N. Ravi Sundaresan from the Indian Institute of Science, Bengaluru, talked about SIRT6 as a potential therapeutic target for treating cardiac lipotoxicity and discussed how lipotoxicity (in diabetes or obesity) affects the heart. In his talk he said, Cardiac lipotoxicity is

There is an urgent need for close collaboration between Scientists and Doctors to reduce the disease burden globally: Prof. Bhabatosh.

Why do some diabetic patients with prior hyperglycemia develop complications despite subsequent sugar control? Prof. Natarajan.

Bacteria as drug (BRUG) has potential as therapeutic agent for the treatment of inflammatory and neurological diseases:
Prof. Ashutosh.

Epigenetic modulator can restore synapse, memory and behavioural defects and may be helpful in the treatment of Intellectual Disability (ID)/Autism:
Prof. Tapas Kundu.

one of the major cardiac metabolic disorders caused by the pathological accumulation of lipids in the heart. This is majorly caused by either defective oxidation or enhanced uptake. Several lipid transporters were upregulated during cardiac lipotoxicity and diabetic cardiomyopathy. However, the mechanism behind the upregulation of fatty acid transporters has been less studied. His team identified SIRT6 as a novel regulator of the expression of fatty acid transporters in the heart.

Prof. Ashutosh Mangalam from the University of Iowa Health Care, USA shared his recent research on 'Bacteria as drug (BRUG)' for the treatment of neurological diseases. He further said bacterial derived/induced metabolites have the potential to interact and influence not only the local gut environment but modulation of cells of the immune and nervous system. This Bacteria as drug (BRUG) has potential as therapeutic agent for the treatment of inflammatory and neurological diseases.

On the second day of the International Symposium, which was focused on Ageing and Neurodegeneration, Prof. Tapas K. Kundu, JNCASR, Bengaluru and Ex-Director, CSIR-CDRI, Lucknow delivered a talk on Epigenetic modulator(s) to target Intellectual Disability (ID). Coordinated function of several synaptic proteins is essential for normal brain development. Mutations in genes encoding for these synaptic proteins hamper the brain development and lead to mental retardation, Intellectual disability (ID) or Autism Spectrum Disorder (ASDs) and other neurodevelopmental diseases. Intellectual Disability (ID) needs to be addressed as about 1-3% of the global population (almost 200 million people) is suffering from it.

Intellectual disability can be caused by a problem that starts any time before a child turns 18 years old – even before birth. It can be caused by injury, disease, or a problem in the brain. He said that few studies suggest without correcting genetic mutation, by modulating the epigenetic state the disease symptoms could be reduced to a large extent. He shared his research that epigenetic modulator can restore synapse, memory and behavioural defects in mice models. He is working on a potential therapeutic drug for patients suffering from intellectual disability.

Dr Sourav Banerjee from National Brain Research Centre, Haryana shared his recent findings on Encoding the Noncode: Long Non-Coding RNAs at the Synapse and their Implications in Memory. Long non-coding RNAs (lncRNA) are a type of RNA that do not translate to proteins. He shared his research on how lncRNA act as regulators of various cognitive functions including learning and memory and sleep deprivation.

Prof. Udai Pandey, Associate Professor, Department of Pediatrics, Human Genetics & Neurology, University of Pittsburgh Medical Center, USA shared his recent research for identifying the novel variants of GEMIN5 gene in 32 unrelated neuro developmental patient families. He informed that these defective variants of GEMIN5 interfere with normal functions and result in neurodevelopmental delay and ataxia (loss of control of bodily movements). These findings collectively provide evidence that pathogenic variants in GEMIN5 perturb physiological functions and result in a neurodevelopmental syndrome.

In the sixth session, Young Investigators delivered their novel findings. Dr Dibyendu Das

from Dept. of Chemical Sciences and CAFM, IISER Kolkata explained about the Systems Chemistry and how the complexity emerges from Chemistry. Dr Jayanta Chatterjee from Molecular Biophysics Unit, IISc, Bengaluru presented his findings on A Proteomimetic which prevents SARS-Cov-2 Infection by Dimerizing the Spike Protein. Dr Vinod Tiwari from IIT(BHU), Varanasi presented his research on Mu-delta Opioid Receptor Heterodimers which is a novel & potential target for the treatment of Neuropathic Pain. This Heterodimer is a potential therapeutic target for relieving neuropathic pain, even under conditions of morphine tolerance.

Dr Murali Ramachandra, CEO, Aurigene Discovery Technologies Limited, Bengaluru delivered a talk on “Discovery and Development of Targeted Small Molecule Therapeutics for Cancer”. He emphasised on development of new targeted small molecule as novel therapeutics for Cancer.

Prof. Shikhar Mehrotra from the Medical University of South Carolina, USA shared his novel research on ERS-mediated activation of autophagy pathways modifying the mitochondrial function and

epigenetically reprogramming the T cells towards a superior anti-tumour phenotype.

Dr Dipak Datta, CSIR-CDRI, Lucknow delivered a talk on Epigenetic modulator EZH2 which alters the metastatic landscape of Triple Negative Breast Cancer (TNBC).

Dr Mone Zaidi from Icahn School of Medicine Mount Sinai, USA addressed a common problem: can we treat osteoporosis, obesity and Alzheimer's disease with a single drug? The talk was based on the idea that pituitary hormones have diverse functions beyond the unitary actions that appear traditionally in physiology textbooks.

Dr Sanjay Kumar Bhadada, from PGIMER, Chandigarh discussed Epidemiology to epigenetics: Insights from Indian PHPT registry.

Dr Ritu Trivedi, CSIR-CDRI, Lucknow talked about ageing and the pathogenesis of osteoarthritis. She said that the pathophysiology of this disease is very complex since it is a multifactorial disease. Her research team is exploring chemical, mechanical and chronic unpredictable stress as inducing factors for pathophysiological conditions mimicking knee osteoarthritis.

Long Non-Coding RNAs have a significant role in learning and Memory: Dr Sourav Banerjee.

GEMIN5 proteins interfere with normal functions and result in neurodevelopmental disease and ataxia: Prof. Udai Pandey.

Cryo-electron microscopy facility opens in Hyderabad at CCMB

A cutting-edge facility for cryo-electron microscopy was inaugurated at CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB), Hyderabad, by Dr C. Shekhar Mande, Former Director-General, CSIR. This makes Hyderabad the second city in India to host a modern cryo-electron microscopy facility. Such a facility allows scientists to look at the matter to its atomic details. A close

look at molecules such as proteins has been at the forefront of understanding the structural details of living cells and drives drug discovery. In the last two years, such insights have enabled the scientists and pharmaceutical industries to understand the coronavirus and find out potential cures.

“The modern cryo-electron microscopy facility is expected to help

us view the functioning of several molecular machines that operate in the cell that were earlier not amenable to conventional structure determination methods such as X-ray crystallography or Nuclear Magnetic Resonance (NMR)," said Dr Rajan Sankaranarayanan, an eminent structural biologist at CCMB.

"The facility on CCMB's campus is funded by the CSIR. It will be accessible to researchers in CCMB, other CSIR labs as well as in other research institutes and universities. It will also be available to the biotech and pharmaceutical industries, of which Hyderabad is a major hub. The facility

has been largely built in CCMB in the last two years during the COVID-19 pandemic, thanks to our in-house teams," said Dr Vinay K Nandicoori, Director, CCMB.

This facility will allow working with samples at cryogenic temperatures, around -173°C , and photographing individual molecules using the electron microscope. This, in addition to the confocal microscopy, NMR spectroscopy and X-ray diffraction facilities at CCMB, makes it a formidable facility for researchers to look into details of living cells like never before.

R&D

CCMB Study Unravels basis for Side Effects of Cholesterol-lowering Drug Statins



Dr Parijat Sarkar (left) and Prof Amitabha Chattopadhyay (right)

Statins are one of the top-selling drugs worldwide and are used for lowering cholesterol in patients with high blood cholesterol. These drugs act by inhibiting a key enzyme (HMG-CoA Reductase) needed for making cholesterol in our bodies. Despite their popularity, statins have been reported to give rise to severe side effects for long-term users. The molecular basis of these side effects is not clear. Recent work from Prof. Amitabha Chattopadhyay's group at the CSIR-Centre for Cellular & Molecular Biology (CSIR-CCMB), Hyderabad, shows that statins could induce changes in the architecture of cells as well, possibly leading to the side effects.

Cell architecture, called the cytoskeleton, is made of proteins such as actins, which form polymers. They lie beneath the plasma

membrane that surrounds each cell in body and help the cells maintain their shape and size. Prof. Chattopadhyay's study shows that statins could induce polymerisation of the actin cytoskeleton, in addition to cholesterol-lowering. Published in the Journal of Lipid Research (by the American Society of Biochemistry and Molecular Biology), the study shows that statins affect actins as a result of multiple cellular signalling pathways.

"Our results constitute one of the first comprehensive reports

dissecting the mechanistic basis underlying the interplay between cellular actin level and cholesterol biosynthesis, and provide a molecular basis for the reported side effects of statin treatment", said Dr Parijat Sarkar, who is the first author of the paper.

Prof. Chattopadhyay concludes, "These findings could provide vital clues in dissecting the biochemical processes that give rise to adverse effects of statins, thereby helping to develop better drugs in the future".

Prof. Chattopadhyay's study shows that statins could induce polymerisation of the actin cytoskeleton, in addition to cholesterol-lowering.

MoUs/Agreements

MoU Signed between CSIR-NIScPR and Sarvodaya Infotech Private Limited (Trucksuvidha) for Kisan Sabha & AarogyaPath

A Memorandum of Understanding (MoU) was signed between CSIR-NIScPR and Sarvodaya Infotech Private Limited (Trucksuvidha) for the transferring of Kisan Sabha & AarogyaPath to CSIR-NIScPR on 7

April 2022. The MoU was signed by Prof. Ranjana Aggarwal, Director, CSIR-NIScPR and Mr Amit Punaini, Managing Director, Trucksuvidha an entity of (Sarvodaya Infotech Private Limited).



Signing of Memorandum of Understanding (MoU) of Kisan Sabha & AarogyaPath between CSIR-National Institute of Science Communication and Policy Research & Sarvodaya Infotech Private Limited (Trucksuvidha) on 7 April 2022



Outreach Team of CSIR-NIScPR & Sarvodaya Infotech Private Limited Team

Kisan Sabha was created to connect Farmers to Supply Chain and Freight Transportation Management System. This app has been developed and launched jointly by CSIR-CRRI and Sarvodaya Infotech Pvt Ltd. It was launched by Dr T. Mohapatra, DG, ICAR & Secretary, DARE in presence of DG, CSIR Dr Shekhar Mande on 1 May 2020. Kisan Sabha has six major modules taking care of Farmers, Mandi Dealers, Transporters, Mandi Board Members, Service Providers, and Consumers. This app acts as a single stop for every entity related to agriculture.

AarogyaPath is a CSIR National Healthcare Supply Chain Portal that

aims to provide real-time availability of critical healthcare supplies that has been launched on 12 June 2020. AarogyaPath serves manufacturers, suppliers and customers. During the COVID-19 pandemic, when there was severe disruption in supply chain, and the ability to produce and deliver critical items was compromised, AarogyaPath with its vision of “providing a path that leads one on a journey towards Aarogya (healthy life)” was developed to address these challenges.

Being a leading institution in the domain of Science Communication & Policy Research, CSIR-NIScPR will be giving full support for this agreement.

CSIR Signs MoU with iCreate to Scale-up Tech-led Innovations & Entrepreneurship

Council of Scientific and Industrial Research (CSIR) and International Centre for Entrepreneurship and Technology (iCreate), Gujarat, signed a Memorandum of Understanding (MoU)

on 25 April 2022 in the presence of Honourable Chief Minister of Gujarat, Shri Bhupendra Patel. The partnership will establish a collaborative support system to scale-up tech-led start-ups by



making combined resources available for entrepreneurs and innovators in the country. Additionally, this partnership

will also enhance scientific innovation and the marketability of high-tech start-ups.

Conferences/Workshops/Seminars

CSIR-NIScPR Organises Outreach Event for Specially-abled Children

Students with special needs tend to show significantly lower achievement in science due to severe difficulties with academic skills including reading, writing, behaviour problems and limited prior understanding of core concepts. In education, finding ways to meet the learning needs of students with special needs can be challenging. Empowering these students in Inclusive Education, which fully engages all students with disabilities or other learning challenges in quality education has proven particularly effective in helping all the students learn different facets of education. Over



Such programmes can help in the behavioural development of children with special needs,.



Prof. Ranjana Aggarwal, Director, CSIR-NIScPR, visiting the centre facilities



the years, special education for these children in the form of various creative methods has been developed that can motivate students with special needs.

To take this forward & to sensitise Specially-abled children about scientific issues & create scientific temper among them, an outreach & sensitisation programme for Specially-abled children was organised by Outreach, Jigyasa, Training and HR Division of CSIR-National Institute of Science Communication & Policy Research (CSIR-NIScPR) on 29 March 2022 at the Child Development Centre, Jamia Milia Islamia University, New Delhi. The outreach programme conducted by the CSIR-NIScPR team was a great opportunity for these special students to identify their interests and gauge their learning capacity. Such programmes can

help in the behavioural development of children with special needs, an important step to minimise their social isolation and improve their communication skills and boost their minds and other skills needed by them to understand things in a better way.

Opening the event, Dr Nishat Naqvi, Director, Child Development Centre thanked Prof. Ranjana Aggarwal, Director, CSIR-NIScPR & Outreach, Jigyasa, Training and HR Division of CSIR-NIScPR for organising this wonderful event. She highlighted the facilities provided to these students by the Child Development Centre and also described various ways to connect with these children.

Mr C.B. Singh, Head, Outreach, Jigyasa, Training and HR Division of CSIR-NIScPR gave an overview of the mandate of CSIR-NIScPR and its outreach department. He emphasised that CSIR-NIScPR has always focused on motivating School students for the past many years, however, this initiative for the specially-abled children was not taken earlier. This event was the first of its kind. The focus was to connect such children with education and motivate them.

Prof. Ranjana Aggarwal, Director, CSIR-NIScPR congratulated the Child Development Centre, Jamia Milia Islamia University for doing great work for these children. She motivated children to remain focused on their



Dr Nishat Naqvi, Director, CDC, highlighted the facilities available in the centre



Mr C.B. Singh introducing the mandate of CSIR-NIScPR & this event



Prof. Ranjana Aggarwal, Director, CSIR-NIScPR, motivates the students



Children participating in Quiz & Painting Activities

goals. Prof. Ranjana highlighted that parents can help improve the motivation of students in many ways i.e. nurturing and being supportive in the home environment. She said that we should find out every possible way to motivate them every day by maximising their strengths. Prof. Ranjana Aggarwal said that CSIR-NIScPR will always be eager to help in future for the betterment of these children.

To further motivate the students, interactive activities such as on the spot Quiz & Painting were organised. The children were very responsive and eager to show their best talents in all aspects. The children participated in all the activities wholeheartedly.

Ms Farhat Azad, Principal Scientist, CSIR-NIScPR, acknowledged the need for these kinds of events. She thanked Child Development Centre, Jamia Milia Islamia University for the support & making this event successful. She also thanked



Distribution of specialised kits by Director, CSIR-NIScPR

the members of the CSIR-NIScPR Outreach team who made this event a great success & all the special children for participating in this event.

As a token of appreciation specialised kits were distributed to all the children. The children went back with smiles and confidence and to do something great in the future.

CSIR-NIScPR Organises National Workshop to Commemorate World Intellectual Property Day



WORLD INTELLECTUAL PROPERTY DAY



CSIR-NIScPR, New Delhi



26th April 2022
9:00 AM to 1:40 PM

CSIR-National Institute of
Science Communication and
Policy Research (CSIR-NIScPR)
Dr K.S Krishnan Marg, Pusa, New Delhi- 110012

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NATIONAL WORKSHOP
on
IP AND YOUTH
INNOVATING FOR A
BETTER FUTURE
World Intellectual
Property Day 2022
April 26



Presidential Remarks
Dr Shekhar C Mande
Director General, CSIR



Welcome Address
Prof Ranjana Aggarwal
Director, CSIR-NIScPR



Chief Guest
Prof Anil K Gupta
Founder, Honey Bee
Network, SRISTI,
GIAN & NIF



Guest of Honour
Dr Sameer Kumar Swarup
Deputy Controller of Patents &
Designs, Intellectual Property
Office



Coordinator
Dr Kanika Malik
Sr Principal Scientist
CSIR-NIScPR

CSIR-NIScPR organised a National Workshop on World Intellectual Property Day on 26 April 2022 for school students and innovators. The participants were young winners of the CSIR Innovation Awards.

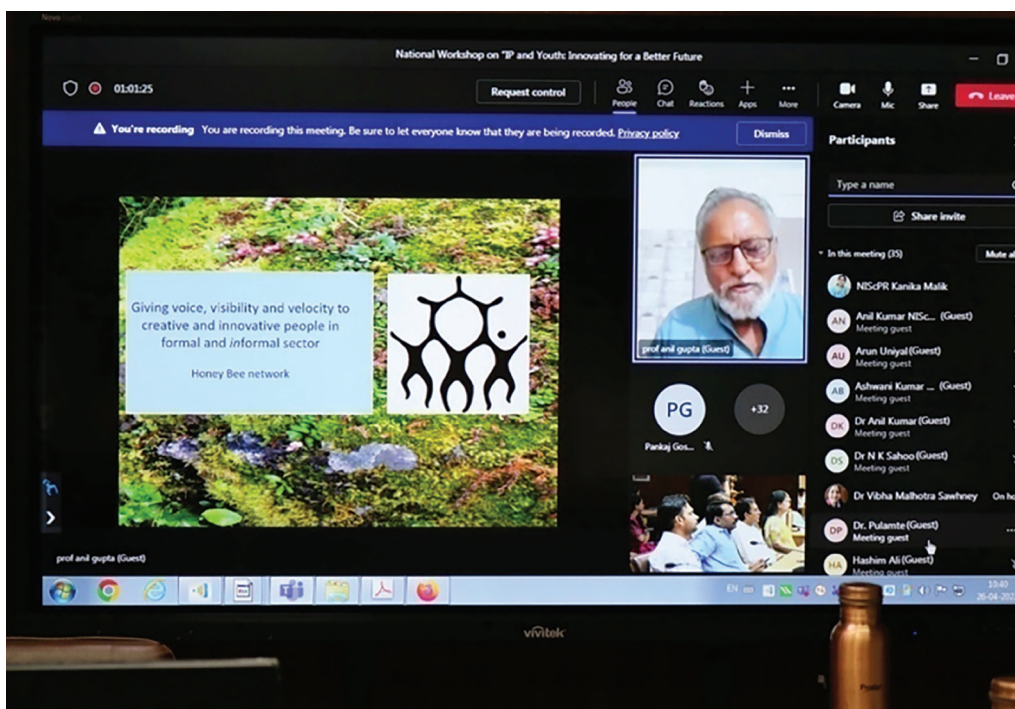
During the inaugural function, Prof. Ranjana Aggarwal, Director, CSIR-NIScPR, welcomed the gathering. She highlighted various aspects of Intellectual Property, Patents and Communication emphasising the importance of innovations and the necessity of a platform to bring the students and the experts to one

place. She added that the amount of innovations that emerged during the COVID-19 lockdown period is tremendous. COVID-19 has taught us how public-private participation has brought digital transformation to the country. The quantum of patents filed in the digital sector during the last five years speaks about the innovations that happened in the field, indicating that students could look for innovations in this sector.

The guest of honour of the inaugural was Dr Sameer Kumar Swarup, Deputy Controller of Patents & Designs, IPO,



Dr Sameer Kr Swarup speaking on IPR programs for students



Padma Shri Prof. Anil Kumar Gupta highlighted the problems solved by students

The number of inventions during the COVID-19 pandemic period was higher than the normal times. It has been observed that whenever there is a constraint the drive for innovation increases. Children are the most suited to develop innovations as they always carry fresh ideas and are always curious to know more said, Dr Sameer Kumar Swarup.

Delhi. During his speech, he mentioned that the number of inventions during the COVID-19 pandemic period was higher than the normal times. It has been observed that whenever there is a constraint the drive for innovation increases. Children are the most suited to develop innovations as they always carry fresh ideas and are always curious to know more. He highlighted the



Prof. Ranjana Aggarwal, Director CSIR-NIScPR, facilitating Mr Agnij Moitra, an A.P.J. Abdul Kalam Innovation Awardee



Group picture of the experts and student participants

importance of such workshops and said that IPR outreach programmes targeting school students have greatly increased the IP awareness among school children. He also remarked that the increase in the Indian applicants

who file for IPR in recent times is a good indicator of economic growth.

The chief guest of the programme, Prof. Anil Kumar Gupta, Coordinator, SRISTI and Honey Bee Network and Executive Vice-Chair, National

Innovation Foundation delivered his lecture on “IP and youth: strategies for engagement, empowerment and entrepreneurship”. He mentioned that the vision of Honey Bee Network is to give voice, visibility and velocity to creative and innovative people in the formal and the informal sector.

Prof. Anil Kumar Gupta focused on the difference between open innovations and intellectual property. He asked young innovators to develop sensitivity towards inefficiencies, deficiencies and problems existing in the society. Learn not to live with any problem, but find solutions, he said. He highlighted the four dimensions of innovation and how drivers of innovation can bring in changes, meeting the unmet needs. He mentioned that innovators need to look for oddities and inculcate the habit of thinking out of the box. Passion, purpose, and process will lead to performance through platforms to engage youngsters towards entrepreneurship. He stressed the need to reward innovators. He also appreciated teachers who act as mentors and extend support to these students.

The workshop also gave an opportunity to the school students and young innovators to present their

innovations in the workshop. Master Agnij Moitra, a student of Birla Vidya Niketan School who won the A.P.J. Abdul Kalam Innovation Award, was felicitated on the occasion. Agnij later gave a presentation on his design of an improvised tetra-pack where he innovated a two-slit design for tetra-pack to solve the issue of food wastage.

During the technical sessions, experts delivered lectures on various aspects of Intellectual Property Rights. Dr Sujit Bhattacharya, Chief Scientist, Advisor/Dean Policy Research, CSIR-NIScPR, spoke on Innovation and Entrepreneurship; Dr Kanika Malik, Sr Principal Scientist, CSIR-NIScPR, delivered a lecture on “Introduction to Intellectual Property Rights” and Dr Vipin Kumar spoke on “Technology Readiness Level (TRL) Assessment”.

The technical sessions were followed by presentations by students who won the CSIR Innovation Award for School Children (CIASC) 2021. The students also actively participated in the brainstorming sessions.

Dr Kanika Malik presented the vote of thanks and appreciated the students for coming out with great innovations to solve problems faced by society.

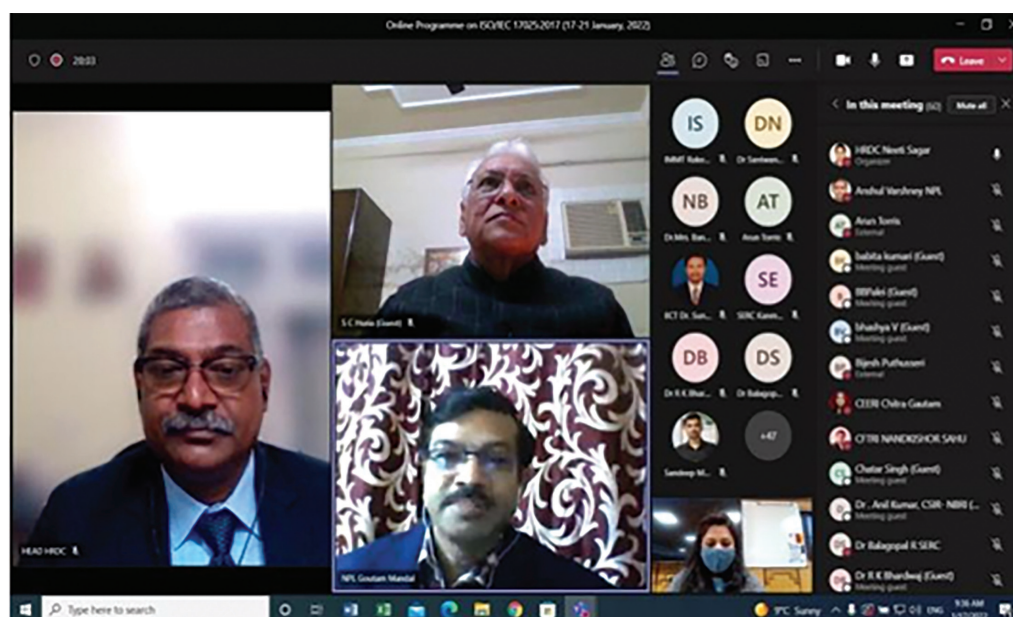


CSIR-HRDC Conducts Various Programmes

Programme on ISO/IEC-17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories

Five (Half) days programmes on “ISO/IEC-17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories” were conducted virtually by CSIR-Human Resource Development Centre (CSIR-HRDC) during 17-21 January 2022. More than 85 participants





from different CSIR Labs joined the programme. Resource persons were experts from within CSIR and other renowned institutes of India having vast experience and knowledge in this area. Shri SC Huria, Former General Manager, NCCBM was the chief guest & speaker in the programme.

Awareness Programme on Gender Sensitisation and Sexual Harassment of Women at Workplace: Prevention, Redressal and procedures

**Awareness Programme on
Gender Sensitization and
Sexual Harassment of Women
at workplace: Prevention,
Redressal and Procedures**

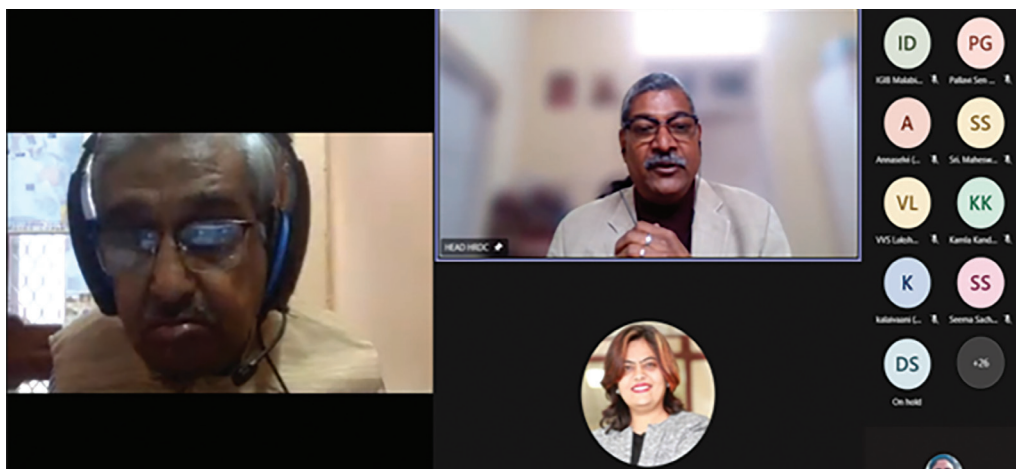
organized by:

**24 - 25
January, 2022**

**2:00 PM
Onwards**

On MS-Teams

CSIR - HUMAN RESOURCE DEVELOPMENT CENTRE, GHAZIABAD



CSIR-HRDC organised two (Half) days online Programme on “Awareness Programme on Gender Sensitisation and Sexual Harassment of Women at Workplace: Prevention, Redressal and procedures” during 24-25 January 2022. The programme was conducted online through MS-Team. The programme covered the various aspects of Gender Sensitisation,

Understanding What Constitutes Sexual Harassment and Genesis of the Act- 2013, Constitution and functions of Internal Complaint Committee (ICC), Role of ICC & Duty of Members. The resource person was Prof. LR Agarwal, former Director of GoI with several years of experience in this domain.

Honours & Awards

CSIR-NGRI Scientist Awarded Medal

Dr Subash Chandra, Sr. Principal Scientist at CSIR-NGRI, has been awarded the “Dr Sudarshan Pani-Dr. (Smt) Rama Dwivedy Medal” for the best contribution in the field of “Hydrogeology and Environmental Geochemistry” for the last ten years (2011-2021).



Dr Chandra's main research interests include groundwater, Airborne Electromagnetics (AEM), aquifer mapping and parameterization, translation of geophysical results into hydrogeological model, etc. He has significantly contributed to the development of a robust and cost-effective method to map water-saturated fractures network in hard rock terrains. This has provided the first quantitative application of AEM to estimate regional

groundwater productivity in fractured basement rocks.

His recent research work using AEM method in the Ganga Plains has led to demarcating a 45 km long, buried Paleoriver channel near Prayagraj (UP), located between Ganga and Yamuna rivers. He has also contributed to the Surat smart city project for safe and ensured water supply through French well and groundwater management in arsenic affected regions. The LCR method developed by him estimates the natural recharge in hard rock terrain.

Dr Chandra is also the recipient of the prestigious “National Geosciences Award” for his significant contribution in the field of airborne electromagnetics for aquifer mapping in the year 2017.



CSIR-CDRI, Scientist Dr Ritu Trivedi Selected for National Tech Excellence Award for Women-2022



Dr Ritu Trivedi was recently featured in "*75 under 50: Scientists Shaping Today's India*" a coffee-table book published by Vigyan Prasar, released by Dr Jitendra Singh on National Science Day 2022.

To recognise the outstanding contribution of women scientist/entrepreneurs in commercialising innovative indigenous technologies, the Technology Development Board, DST, Govt of India gives away the National Tech Excellence Award under two categories – National Women Scientist Award for Excellence in Translational Research and National Women Entrepreneurs Awards.

Dr Ritu Trivedi, Senior Principal Scientist at CSIR-Central Drug Research Institute (CSIR-CDRI), Lucknow, has been selected for the National Women Scientist Award for Excellence in Translational Research (National Tech Excellence Award for Women-2022) by DST. The award was given to her for her contribution to the development of Reunion as rapid fracture healing medicine for the management of post-menopausal osteoporosis.

Dr Ritu Trivedi was recently featured in "*75 under 50: Scientists Shaping Today's India*" a coffee-table book published by Vigyan Prasar, released by Dr Jitendra

Singh on National Science Day 2022. Of the 75 scientists under the age of 50, only 12 women are featured in this book and Dr Ritu Trivedi is one of them making CDRI proud.

In addition, earlier she has been bestowed with the prestigious, Reliance Industries Platinum Jubilee Award (2020); TATA Innovation Award 2019-20 by the Department of Biotechnology; P. Sheel Award-2019 by the National Academy of Sciences, India (NASI); Teotia Memorial Oration Award (2018); STEM Impact Award (2019) for translation of Reunion a fracture healing and post-menopausal osteoporosis medicine in the market; Technology Award (2019) for Osteoarthritis; Indira Gandhi Samman for contribution in Science in 2017; Technology Award (2016) for Dalbergia sissoo for Fracture Healing and Post-menopausal Osteoporosis.

The National Academy of Sciences, India (NASI) elected her a Fellow (FNASc) of the Academy for her contributions to science.



PGDP

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