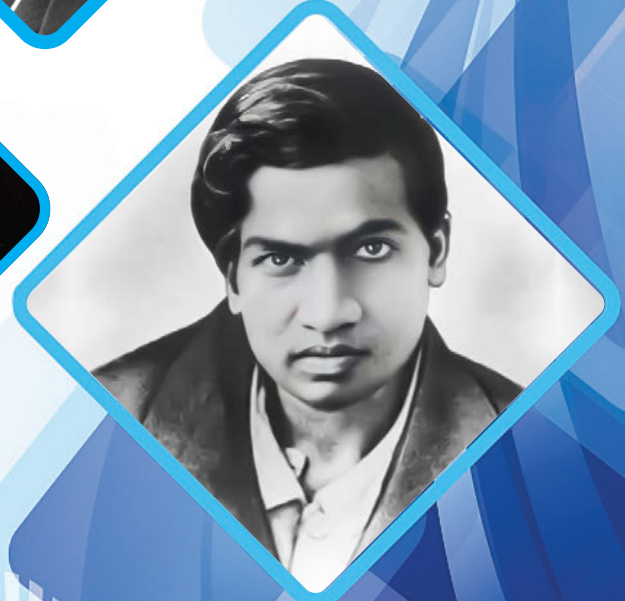




DEPARTMENT OF  
**SCIENCE & TECHNOLOGY**  
GOVERNMENT OF JAMMU AND KASHMIR

# ACTIVITY REPORT 2022-23



**JK SCIENCE, TECHNOLOGY & INNOVATION COUNCIL**

DEPARTMENT OF SCIENCE & TECHNOLOGY, GOVERNMENT OF JAMMU & KASHMIR

[www.jkstic.jk.gov.in](http://www.jkstic.jk.gov.in)





**Dr. Arun Kumar Mehta, IAS**  
**Chief Secretary**  
**Jammu & Kashmir**



## **MESSAGE**

I am pleased to know that the Jammu & Kashmir Science, Technology & Innovation Council is bringing out an Activity Report based on the programmes/ activities carried out by it over a period of one year.

JKST&IC is proactively engaged in creating awareness and inculcating scientific temperament amongst the student community in particular and masses in general. I am sure that this publication would help other sections of the society, including those in the far-flung areas, to be aware of the activities being carried out by JKST&IC across Jammu & Kashmir.

I appreciate the efforts of the JKST&IC team in conducting these activities across J&K and also documenting such activities in the form of this publication.

I wish JKST&IC success in future endeavors.

**Dr. Arun Kumar Mehta**  
**(IAS)**



**Shri Saurabh Bhagat, IAS  
Commissioner Secretary to  
Govt. Science & Technology  
Department**



## MESSAGE

It is a matter of pride to know that the JK Science, Technology & Innovation Council is bringing out an Activity Report on the various S&T activities being carried out under multiple schemes. It gives me immense pleasure to know that almost 60 S&T activities under Science popularisation in various educational institutions, colleges, and universities in the UT of Jammu & Kashmir for inculcating Scientific temperament among students and the general masses have been conducted during the financial year 2022-23. It has also come to my notice that 54 local innovators have been provided seed money for the development of prototypes out of their innovative ideas during the year 2021-22 and 2022-23. All the innovators are presently working under the mentorship of leading institutions like IIT Jammu, NIT Srinagar, SKUAST-J and SKUAST-K, Kashmir University, S.P College Srinagar, etc.

In addition to this, the JK Science Technology and Innovation Council has sponsored 123 Research & Development Projects of local importance in various R&D Institutions/Universities/Colleges of the UT of J&K. The program also envisages providing employment to a good number of Research scholars and students. Furthermore, JKST&IC has started work on three major flagship projects in UT of J&K, including the establishment of a sub-Regional Science center at Lalmandi Srinagar, which is set to be completed in March 2024, and the Establishment of two industrial biotechnology parks, one each at Kathua Jammu and Handwara Kashmir. This Report will usher in a new era of development for the department and will prove very beneficial to various stakeholders and educational institutions.

I congratulate the team of officers of JK Science, Technology & Innovation Council for their sincere efforts in releasing this Report and wish them great success in future endeavors."

**(Saurabh Bhagat) IAS**





**Dr NASIR SHAH**  
**Additional Director, JKST&IC**  
**DST J & K government**



## INTRODUCTION

J&K Science Technology and Innovation Council (erstwhile J&K State Council for Science & Technology) was established during the year 1989 under the Department of Science & Technology, with the objective of promoting science popularization, promoting new areas of Science & Technology and to play a role of a nodal Department for organizing and promoting S&T activities, Research & Development through Universities /R&D labs with special emphasis on emerging areas, promote Science Popularization among the student community, encourage students through award of scholarships, confer Young Scientist Awards (YSA) & Young Scientist Fellowships (YSF) to the in-service scientists / academicians respectively.

The other objectives include:-

Coordination and integration of areas of Science & Technology having cross-sectoral linkages in which a number of institutions and departments have interest and capabilities.

Matters relating to the Scientific Advisory Committee

Promote innovation and encouragement of novel ideas through R&D / premier institutions like NIT/ IIT etc, facilitate innovators for taking their innovation forward by providing financial support under seed money.

Promote awareness on Patents /Intellectual Property Rights (IPR)

Promote transfer and dissemination of new and relevant Technologies in diverse fields like industry Agriculture, Horticulture, Rural Development, IT Research and Education.

Strengthening State-Centre coordination, collaboration mechanism in building robust STI Ecosystem and promoting innovation and entrepreneurship.

I am pleased to inform that JKST&IC is in process of Establishment of Industrial Biotechnology Parks at Ghatti, Kathua, Jammu and Handwara, Kupwara, Kashmir.

Sponsored Research & Extension Programme

Establishment of Regional Science Centres at Srinagar and Jammu.

Establishment of Medicinal and Aromatic Demonstration Farms in various districts of J&K.

Information, Education and Communication with sub schemes Science Popularization, Technology Transfer, Innovation & Patent Filing etc.

Science Talent Promotion Scheme

I on behalf of JKST&IC take this opportunity to extend my sincere thanks to Shri Saurabh Bhagat, IAS, Commissioner/Secretary to Govt., Science & Technology Department for his gracious support, valuable suggestions bestowed upon us while implementing schemes / activities of JKST&IC for the overall development of UT of J&K. I also extend my thanks to the entire team of JKST&IC for their hard work to make this report published.

(Dr Nasir Shah)

## NOTES



The Department of Science and Technology's JKST&IC acknowledges the significant contributions made in the fields of science and technology, which have helped us gain valuable insights into pressing issues and make landmark discoveries. Disseminating scientific knowledge and awareness among the masses, especially students, is crucial in achieving desired outcomes in science and technology. To this end, the JKST&IC is publishing a book of activities based on programmes held across J&K, providing an opportunity for students, scientists, researchers, and educational institutions to share their knowledge, research findings, ideas, and opinions in various fields of science and technology.

The report will also highlight progress made in fields such as agriculture, life and animal sciences, and bio-processing. The JKST&IC welcomes esteemed Commissioner Secretary to Government, Mr Saurabh Bhagat, for his contribution to this initiative and extends warm wishes to colleagues.

Bilal Ahmad  
Joint Director (B)



The JKST&IC is responsible for promoting a scientific and technological spirit among students, scholars, faculties, and society at large in Jammu and Kashmir through various programmes and initiatives. These include fostering a culture of scientific exploration, promoting environmental awareness, offering exclusive programmes for women, providing incentives for innovation and start-ups, and celebrating important scientific days and weeks. The council also provides financial assistance to researchers and scientists for conducting research and surveys, as well as scholarships for students at the +10, +12, and PG levels.

The annual report of JKST&IC during the FY 2022-23 was made possible with the guidance and support of Shri Saurabh Bhagat (IAS), Commissioner Secretary to Government, Government of J&K. I hope that the JKST&IC continues to inspire a passion for science and technology amongst all.

Sanjay Kumar Kharoo  
Joint Director

The Jammu & Kashmir Science, Technology & Innovation Council (JKST&IC) is dedicated to promoting scientific and technological education, awareness, and research in J&K.

Through JKST&IC, we are proud to conduct outreach programs in schools, colleges, and universities, aiming to foster a culture of scientific inquiry and innovation. We also organize events and celebrations, such as National Science Day, World Health Day, and Environment Week, to raise awareness and promote engagement with science and technology amongst all citizens. Additionally, JKST&IC provides financial support to researchers and scientists for conducting research and surveys on local issues while also offering scholarships to students at various educational levels. As part of our endeavour to make technology accessible to all, we recently collaborated with premier institutes like IITs to sponsor the effort of successfully transferring technology from lab to land. Overall, our core mission is to disseminate scientific knowledge and awareness in an informed, evidence-based manner, with the ultimate aim of contributing to the socio-economic growth and development of J&K.

Sunita Razdan  
Joint Director

## SCIENCE TALENT PROMOTION PROGRAM

The programme is aimed at encouragement and recognition of scientific talent and development of human resources by awarding scholarships, fellowships, young scientist awards etc.

- 126 scholarships during the F.Y. 2021-22 have been awarded to the meritorious students at three different levels viz. +10 level for a period of two years (passed 10th exam and pursuing 11th), +12 level for a period of three years (passed 12th and pursuing under graduation), Post Graduate level for a period of two years (passed graduation and pursuing Master's degree)



- Process for inviting applications from the eligible students for the F.Y.2022-23 for award of scholarships has already begun. It is expected that JKST&IC will award around 150 scholarships to the meritorious students.

## ESTABLISHMENT OF INDUSTRIAL BIO-TECHNOLOGY PARKS (IBTPS) AT SRINAGAR AND JAMMU.

- The scheme is aimed at strengthening research and infrastructure facilities by way of establishment of centers of excellence (CoE) in the field of Bio-Technology.
- Department of Bio-Technology, Ministry of Science & Technology (MoST), G.O.I has sanctioned two Industrial Bio-Technology Parks (IBTPs) for the UT of J&K at an estimated cost of Rs 84.66 Cr on 70: 30 sharing basis of funds between Department of Biotechnology, GOI and JKST&IC, S&T Department. The two sites were identified at Industrial Estate, Ghati, Kathua and one at Handwara, District Kupwara, Kashmir.
- IBTP at Gatti, Kathua was inaugurated by the Hon'ble Minister for S&T, Atomic



- Energy & PMO (Independent charge) Dr Jitendra Singh. The Biotechnology Park at Handwara, shall be inaugurated by the end 3rd quarter of F.Y. 2022-23.
- IIIM (CSIR), Jammu is the knowledge partner for the project.



## A BRIEF PROFILE

**J**&K Science, Technology & Innovation Council (erstwhile J&K Council for Science & Technology) was established during the year 1989 under Department of Science & Technology J&K government, with the objective of promotion and dissemination of science, technology and innovation in the UT of J&K, Science & Technology innovation council also plays role of a nodal Department for organizing and promoting S&T activities across the length and breadth of J&K.



## WHAT WE DO

**P**romotion of Research & Development and innovation through Universities / R&D labs with special emphasis on emerging areas in S&T, Science Popularization among the student community, encourage students through award of scholarships, confer Young Scientist Awards (YSA) & Young Scientist Fellowships (YSF) to the scientists/ academicians.

The broad objectives of JKST&IC are:

- Coordination and integration of areas of Science & Technology having cross-sectoral linkages in which a number of institutions and departments have interest and capabilities.
- Promote innovation and encouragement of novel ideas through R&D / premier institutions like NIT/ IIT etc, facilitate innovators for taking their innovation forward by providing financial support under seed money.
- Promote awareness on Patents / Intellectual Property Rights (IPR).
- Promote transfer and dissemination of new and relevant Technologies in diverse fields like industry Agriculture, Horticulture, Rural Development, IT Research and Education.

## SCIENCE EXHIBITION AT GOVT HSS URI KASHMIR





# SCIENCE POPULARIZATION / AWARENESS PROGRAM







- The scheme is predominantly designed for inculcating the scientific awareness among the student community in particular and society in general through the conduct of various Science & Technology programmes/ activities across the UT of Jammu & Kashmir. The science activities include conduct of Science Model Exhibitions at various levels, Science Debates / Quizzes / Seminars / Symposiums / Poster Makings / Painting competitions / Trainings for skill development / Workshops / Study tours to R&D Institutions etc.
- Celebrations of some important scientific days / weeks like Environmental Weeks / Wild life Week / National Science Day/ National Mathematics Day / National Technology Day / World AIDS Day / No Tobacco Day / World Ozone Day / some important days pertaining to health issues etc.
- Brain storming sessions on core issues of Science & Technology.
- Providing financial support for organization of National / International Conferences in collaboration with various R&D Institutions/ Universities & Colleges

## LAUNCHING OF INNOVATION CHALLENGE

Programme is aimed at promotion of innovation and encouragement of novel ideas/ submission of patents in science and Technology. 11 number of Innovators are presently working on different innovations / ideas in various technical institutions of UT of J&K. The programme is being implemented under the supervision of Director, National Institution of Technology, Srinagar / Dean, Research, Islamic University of Science & Technology (IUST), Awantipora, Kashmir / Principal, Govt. College of Engineering & Technology (GCET), Jammu and Principal Govt. Degree College, Bandipora, Kashmir.

The following inovators are presently working on different innovations under the program of JKST&IC

S. No.	Name of Innovator	Innovation Title
01.	Ishfaq Ahmad	Apple Catcher
02.	Er. Ahmer Basher Shah	Instant conversion of human hair wastes from salons and poultry wastes in to NPK rich novel organic liquid fertilizer for instant use in JK Agriculture
03.	Dr Barkat Hussain	Pheromones for the future and other non chemical approaches
04.	Wardah Shah	Service and Product based company for all the indoor and outdoor landscaping needs
05.	Saliga salwath	Up-scaling of low cost light traps and other non chemical approaches for turf grubs in Royal Spring Golf Course and other non chemical approaches for their management
06.	Bushra Chowhan	Fabrication of affordable UV-Chamber for killing Covid 19 using locally available UV-Lamp
07.	Dr Sarabjeet Singh	Industry 4.0 and SMEs..an Innovation for the improvement of SMEs in. North India with specific consideration to Industry 4.0 design principles
08.	Wani Sageer	Development of low-cost effective Goniometer
09.	Akshay B	Development of low-cost spin coater To provide functional data
10.	Dr Nasarual Islam	To provide functional data base on mathematical description and stimulations for stoppage to
11.	Jawaaz Ahmad	Covid 19 spread Design and Fabrication of low-cost PAPER for medical practition





## SPONSORED RESEARCH AND EXTENSION PROGRAMME

- The programme is aimed at promoting and sponsoring of Research projects, scientific studies, surveys in various R&D and technical institutions of UT.
- 123 R&D projects based on local specific issues / problems of UT in collaboration with various R&D institutions, colleges, universities have been provided with financial support at a total cost of Rs 8.00 Cr for conduct of research. The projects / scientific studies have been recommended by the Scientific Advisory Committee / Technical Committee of JKST&IC for the said purpose & approved by the Government for a period of two years.
- During the current FY.2022-23, 500 R&D project proposals for seeking financial support have been received by JKST&IC which are under screening phase at present.
- The research findings / outcome of the research undertaken for different issues would be implemented for solving the problems so that society at large would be benefitted by the scheme.

### PROJECTS SPONSORED BY JK SCIENCE TECHNOLOGY AND INNOVATION COUNCIL FOR A PERIOD OF 2 YEARS 2021-22 & 2022-23

S. No	Name of Principal Investigator with Contact Details E-mail / cell No.	Institution / Organization	Title of the Project Proposal
1	2	3	4
1	Prof. Gh. Jeelani, Head of Department, geojeelani@kashmiruniversity.ac.in	Earth Sciences, School of Eath and Environmental Sciences Hazratbal Srinagar	Slope Stability Assessment of Road Cuts Along Jammu Srinagar National Highway
2	Dr.Yudhbir Singh, Assistant Professor 9419124021 yudhbirjammu@gmail.com	Department of Geology, University of Jammu, Jammu	Identification of Active fault segments vis-à-vis potential landslides along the Mughal road, J&K , A sustainable development perspective
3	Prof. S.K Pandita, Professor, sundeep.pandita@gmail.com / 9419137162	Department of Geology, University of Jammu, Jammu	Geomorphic and Palaeoseismic studies along the Kishtwar Strike-Slip Fault, Kishtwar Region
4	Dr. Zahoor Ahmad Pampori, Prof./ Chief Scientist drzap64@gmail.com & drzap64@skuastkashmir.ac.in 0194-2262458 (office)	Division of Veterinary Physiology, Sher-e-Kashmir University of Agricultural Science & Technology of Kashmir (SKUAST-K) Shuhama, Srinagar	Circadian bias in immune responses : immune -endocrine interplay in cattle
5	Dr. Dilruba Hasin, Associate Prof., dhasin7@gmail.com 9419354608 / 0194-2262458 (O)	Division of Veterinary Physiology, Sher-e-Kashmir University of Agricultural Science & Technology of Kashmir (SKUAST-K) Shuhama, Srinagar	Effect of Dandelion / Haandh (Taraxacum officinate) supplementation during puerperium period on reproductive performance and milk yield in crossbred dairy cattle in Kashmir
6	Dr. Shahzada Mudasir Rashid, Asstt. Prof., mudasir@skuastkashmir.ac.in/ 9622464045	Deptt. Of Veterinary Biochemistry, Sher-e-Kashmir University of Agriculture Sciences & Technology of Kashmir	Development of Diagnostic and Therapeutic Protocols for Advanced pregnancy Related Recumbancy in cows of North Kashmir

7	Dr. Ovais Aarif, Asstt., Professor ovaisaarif@gmail.com 7006563675	Deptt. Of Division of Veterinary Physiology, F.V.Sc. & A.H. Shuhama, Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir (SKUAST-K)	Deciphering herbal galactogogues-an innovative technology to increase milk production in dairy cattle in temperate Kashmir
8	Dr. showkat UI Nabi, Asstt. Professor dmakhdoomi@gmail.com / 911942262212	Deptt. Of Veterinary Medicine Ethics and Jurisprudence, F.V.Sc and A.H, Sher-e-Kashmir University of Agricultural Science & Technology of Kashmir (SKUAST-K)	Ethno-veterinary survey and evaluation of unexplored herbal remedies from Himalayan areas of Gurez
9	Dr. Shah Jahan Wani, Asstt. Professor Drsjwani@gmail.com 7006976696	Sri Pratap College M.A Road Srinagar	Applications of Cellular Automata in Image Analysis and Quantum Dot Nano - Structures
10	Prof. S Muzaffar Ali Andrabibi, Dean School of Engineering, muzaffar2000@gmail.com / 9419009372	Institute of Technology, Zakura Campus, University of Kashmir.	Synthesis and Characterization of Bimetallic Nanoparticles and Treatment /Purification of Water using Modified and Unmodified Bimetallic Nanoparticles
11	Sh. Ashaq Hussain Dar, Joint Director / Office in-charge (NIELIT) Srinagar, ashiq@nielit.gov.in / 94190008345	Deptt. Of Technical, National Institute of Electronics and Information Technology (NIELIT) Srinagar / Jammu	Applied Research in Design and Development of Prediction of Nutrients (N, P,K) in soil using Color Sensor with GIS
12	Dr. Mohd Hanief, Asstt. Professor haniefdu@gmail.com 78889584665	Department of Botany, Baba Ghulam Shah Badshah University, Rajouri	Assessing the Floristic Diversity and Ecosystem Level Carbon Sequestration Potential of Pir Panjal Region of Rajouri, J&K
13	Shujaat Hussain, Asstt. Professor shujaabuch@gmail.com 91-9469153304	Deptt. Of Civil Engineering, Islamic University of Science & Technology (IUST) Awantipora J&K	Effective Thermal Insulation of Contemporary Houses in Kashmir
14	Dr. Shabir Ahmad Parah, Sr. Asstt. Professor shabireltr@gmail.com / 91956529991	Deptt. Of Electronics & IT, University of Kashmir, Hazratbal Srinagar (J&K)	Development of Lightweight security algorithms for IOMT based smart health applications
15	Dr. Burhan Khurshid, Asstt. Professor burhan32.lust@gmail.com / 9797875163	Deptt. of Electronics and Communication Engineering, National Institute of Technology, Srinagar	Design and Development of Low- Memory Discrete Wavelet Transforms for low-cost IoMT Devices
16	Dr. Liyaqat Nazir, Asstt. Professor liyaqat_02phd13@nitsri.net/ 919682544371	Deptt. Of Electronics and Communication Engineering, Islamic University of Science and Technology, Awantipora	A Computer Vision based Real-Time portable fruit grading and sorting system through quality evaluation and classification
17	Dr. Farida Khursheed, fklone@nitsri.net 6005041584	National Institute of Technology Srinagar, Hazratbal	Recognition of Identical Twins Using fusion of Multi- Biometric Traits
18	Dr. Parvinder Kumar, Sr. Asstt. Professor parvinderkb2003@gmail.com 9419195384	Department of Zoology University of Jammu	Molecular genetic study of Kidney stone (Nephrolithiasis) in Jammu region of J&K UT
19	Dr. Shahkar Ahmad Nahvi, Asstt. Professor s.a.nahv@gmail.com 919797836555	Deptt.of Electrical Engineering, Islamic University of Science and Technology, Awantipora	Design and Analysis of a Bag Value Mask based Frugal Ventilator
20	Dr. Zamrooda Jabeen, Asstt. Professor zjabeen19@nitsri.net 7889301990	Deptt. Of Mathematics, National Institute of Technology (NIT) Srinagar, Hazratbal	Towards Prevention of Counterfeiling Saffron Quality by Smart Contract : A way Forward Through Blockchain



21	Dr. Saad Parvez, Associate Professor saadparvez@nitsri.ac.in 9797757234	Deptt.of Mechanical Engineering and Head, Innovations, Incubation & Entrepreneurship Development Center (HED Center) National Institute of Technology Srinagar	Identification and Ergonomic Design Interventions, of musculoskeletal disorders in Carpet industrial workers of Kashmir
22	Dr. Sheikh Javed Iqbal, Associate Professor nitsri.net 9419984644 jvd@	Deptt. Of Electrical Engineering, National Institute of Technology (NIT) Srinagar, Hazratbal	Transition towards clean, affordable and reliable electricity from the Renewable Energy based Distributed Generation resources for residential building electrification
23	Dr. M. S. Charoo, Asstt. Professor shaficharoo123@nitsri.net 9797793483	Deptt. Of Mechanical Engineering Department, National Institute of Technology Srinagar	Development & Tribological Testing of Nanolubricants for automotive Applications
24	Dr. Altaf Ahmad Bhat, Asstt. Professor altaf.u786@gmail.com 7006503781	Deptt. Of Mathematical Sciences, Islamic University of Science and Technology, Awantipora	A Study of basic hypergeometric functions and their applications with special reference in Integral Transforms
25	Dr. Qudsia Gani, Asstt. Professor qudsiagani6@gmail.com 9797702166	Deptt. Of Physics, Womens College M.A. Road Srinagar	Neutrino Interactions: Flux and Cross -sections Measurements
26	Dr. Ahmed Sharique Anees, Asstt. Professor shariq.anees@islamicuniversity.edu.in 9911793321	Deptt. Of Electrical Engineering, Islamic University of Science & Technology Awantipora	Development of Green Technology based hybrid Space Heating system for Kashmir Valley
27	Dr. Salman Ahmad, Asstt. Professor salman.ahmad@islamicuniversity.edu.in 9149648984	Deptt. Of Electrical Engineering, Islamic University of Science & Technology Awantipora	Design and implementation of reduced switch count multi level inverter for unified power flow controller solar intermittency and power quality
28	Dr. Shaima Qureshi, Asstt. Professor shaima@nitsri.ac.in 7006512314	Deptt. Of Computer Science & Technology, National Institute of Technology, Srinagar.	Effect of IoT Enabled farming infused with AI based Early disease detection on Apple production with particular focus on J&K
29	Er. Shafat Ahmad Khan, Asstt. Professor shafat.khan43@gmail.com 9596228774	Deptt. Of Food Technology, Islamic University of Science & Technology Awantipora	Design and Development of Phase Change Material based Greenhouse Solar Dryer for Walnut Drying
30	Dr. Riaz Ahmad Khan, Asstt. Professor riaz.khan@islamicuniversity.edu.in 7006110081	Deptt. Of Electronics, and Communication Engineering, Islamic University of Science and Technology, Awantipora	A Light Weight Security Mechanism for IoT based Healthcare Systems
31	Dr. Khurshed Ahmad Shah, Asstt. Professor drkhursheda@gmail.com 91-7006875969	Deptt.of Nano-Technology, University of Kashmir.	Modelling and Simulation of Silicene Nanoscale Electronic Devices and Their futuristic Applications
32	Dr. Bilal Ahmad Malik, Scientific Officer, bilalmalik@kashmiruniversity.ac.in 9149511050	Deptt. Of Electronics and Communication Engineering Institute of Technology Zakura Campus University of Kashmir	Early Detection and Efficient Prevention of Breast Cancer Using Machine Learning Techniques.
33	Dr. Feroz Ahmad Mir, Asstt. Professor famirnit@gmail.com 917780887961	Department of Physics, Baba Ghulam Shah Badshah University	Synthesis and characterization of Dye Sensitive Solar Cells (DSSCs) based on natural dyes available in the region

34	Dr. Sandeep Arya, Asstt. Professor snp09arya@gmail.com 9419156254	Department of Physics, University of Jammu	Synthesis and characterization of Nickel based nanowires for developing self-charged supercapacitors
35	Dr. Roohi Mush- taq, Sr. Asstt. Professor rohikhan400@gmail.com 773869	Biotechnology and Bioinformatics, Sri Pratap College, Cluster University Srinagar	Metabolite Profiling of some Important Medicinal Plants of Jammu and Kashmir
36	Dr. Yash Pal Sharma, Professor yashdbm3@yahoo.co.in / 9419157412	Department of Botany, University of Jammu	Database Development on Diversity and ethnomycology of wild edibel mushrooms in Bhadarwah forest division, J&K
37	Dr. Harish Chander, Asstt. Professor harishchander@jammuuniversity.co.in	Department of Botany, University of Jammu	Status survey eco-taxonomy and ecological modelling of Doctylorhiza hatagirea (D.Don) Soo in J&K
38	Dr. Samantha Vaish- navi, Asstt. Professor samanthavaishnavi@gmail.com 91-94191-65680	Central University of Jammu	Effect of Developmental Activities on Vegetation Composition and Floral Diversity in District Samba
39	Dr. Ankit Kathuria, Asstt. Professor writetokathuria@gmail.com / ankit.kathuria@iitjammu.ac.in 91-8447871233	Department of Civil Engineering, Indian Institute of Technology Jammu (IIT Jammu)	Developing Driver Behaviour Profiling Criteria for Improving Matador Driver Behaviour
40	Dr. Ajaz A. Wani, HOD, Zoology, drajazwani@rediffmail.com 9797588390/ 9419110443	Department of Zoology, Govt. Degree College Doda	Study on Knowledge, Survey and Awareness about Tuberculosis in Chenab region of Jammu & Kashmir
41	Dr. Mushtaq Ahmad Rath- er, Associate Professor marather@nitsri.ac.in 8803970037	Deptt. Of Chemical Engineering, National Institute of Technology Srinagar	Reduction of open smoke emissions in traditional earthen cook stove (chulha) in rural areas of Kashmir
42	Dr. Javaid Iqbal, Senior Asstt. Professor iamjavaid@gmail.com 91-7006436048	P.G Deptt. Of Computer Sciences, University of Kashmir, Hazratbal Srinagar	Algorithm Design and Mathematical Modelling of Software Testing Effort Consumption
43	"Mir Aijaz Ahmad, Sr. Assistant Professor miraijazahmadcivil@gmail.com 9469633997 "	Department of Civil Engineering, Islamic University of Science & Technology	Passive Noise Control- Acoustical properties of material and its applications
44	Dr. Parvaze Ahmad Sofi, Assoc. Professor parvazesofi@gmail.com 7006659749	Genetics & Plant Breeding, Sher-e-Kashmir University of Agricultural Science & Technology of Kashmir (SKUAST-K), Wadura Sopore	Harnessing Rajmash (Phaseolus vulgaris L) Landrace diversity of Kashmir for Climate Resilience
45	Dr. Asha Nabi, Asstt. Professor aishakabli@yahoo.in 9622676090	Plant Pathology, Faculty of Agriculture SKUAST- K Wadura Sopore	Climate change impact on dynamics of various diseases of cereal and pulse crops in Kashmir Valley
46	Dr. Shabir Ahmad Bhat, As- stt. Professor / Jr. Scientist, drsabseri@gmail.com 7780885407	Division of Sericulture Crop Improvement College of Temperate Sericulture Sher-e-Kashmir University of Agricultural Science and Technology of Kashmir Mirgund Srinagar	Screening of different insect pests of mulberry and other agricultural crops for pathogenic microbes and their cross infectivity to the silkworm Bombyx mori L
47	A.M Chalkoo, Associate Professor amchalkoo@gmail.com 01952-234214 (O)	Govt. Degree College Baramulla	Prospects of Saffron Cultivation in District Baramulla
48	Dr. Humaira Qadri, Asstt. Professor qadrihumaira@gmail.com 9797794867	Deptt. Of Higher Education, Sri Pratap College Cluster University Srinagar	Development of Phytoproteins in aquatic weeds under stressful environs as tool for phytoremediation and Biofertilization

49	Dr. A. R. Malik, Asstt. Professor malikrashid2@gmail.com 9797711194	Deptt. Of Divison of Forest Products and Utilization Faculty of forestry, Sher-e-Kashmir University of Agricultural Science & Technology of Kashmir (SKUAST-K) Shalimar Srinagar	Ecological Niche modelling and Ex-situ conservation of Rare and Endangered Chilgoza pine (Pinus gerardiana Wall) in Indian Western Himalayas
50	Dr. Munib Ur Rehman, Associate Professor munib11.mr@gmail.com 91-8491844123	Division of Fruit Science,, Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir (SKUAST-K)	Elucidating nutraceutical Properties of traditional apple cultivars of kashmiras potential functional food
51	Dr. Amir Farooq Bhat, Asstt. Professor fabamir@gmail.com 9149634303	Deptt. Of Division of Wildlife Sciences, Faculty of Forestry Benhama Ganderbal, Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir Benhama Ganderbal	Climate change vulnerability and socio-socio-economic transformation in protected forest of environmentally fragile areas of Kashmir Himalayas
52	Dr. Saba Bandy, Asstt. Professor sababandy@gmail.com 09419069686	Deptt. Of Plant Pathology, Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir (SKUAST-K)	Bacterial Endophytes of grapes: A new approach for bio control of diseases
53	Dr. Sajad A Ganai, Asstt. Professor ganie@gmail.com 7006877240	Deptt. Of Divisioin of Entomology, Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir (SKUAST-K)	Morphological and Molecular Diversity of Fruit flies from Kashmir Himalayas
54	Dr. Sajad Mohd Wani, Asstt. Professor wanisajad82@gmail.com 9858445878	Deptt. Of Division of Food Science and Technology, Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir (SKUAST-K)	Exploring the Nutraceutical Potential of Wild Edible Plants of Northern Himalayas and their Utilization for Development of Value Added Products
55	Dr. Imtiyaz Murtaza, Professor cum Chief Scientist, Head, murtazaimtiyaz18@skuastkashmir.ac.in 858705068	Deptt. Of Division of Basic Sciences & Humainties, FOH, Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir (SKUAST-K)	Development of Antioxidant Rich Strawberry Powder as Value Added Product with Potent Nutraceutical Properties
56	Dr. Skarma Nonzom, Asstt. Professor skarmanunzom@yahoo.com 09419524725 / 7006552309	Department of Botany, University of Jammu	Diversity ecology and psychrozyme potential of cold tolerant cultivable fungi from high altitude cold arid regions of the trans - Himalyan region
57	Ritu Mahajan, Asstt. Professor ritufeb@gmail.com 91-9796221378	School of Bio-Technology, University of Jammu, Jammu	Development of simple sequence repeat markers in wild pomegranate and their cross species transferability
58	Dr.Khursheed Ahmad Dar, Asstt. Professor, khursheedseri@yahoo.com 9682618030	College of Temperate Sericulture CTS, SKUAST-K Mirgund, Baramulla	Sericulture-Option for Livelihood Security and Employment Generation in Tribal Areas of Kashmir
59	Dr. Shabir Ahmad Sofi, Head of Deptt. & Asstt. Professor sabir@nitsrin.net 9419009971	Deptt. Of Information Technology, NIT Srinagar Hazratbal J&K	Crop Disease Prediction using IoT Data Analytics and Machine Learning Approaches
60	Dr. Nasarul Islam, Asstt. Professor nasarul.chsf@gmail.com 7889819905, 9419345723	Deptt. Of Chemistry, Hassan Khoyihami Memorial Degree College Bandipora J&K	Multiscale Computational Studies on Optoelectronic Response of Heterostructural Fullerene Molecules (MCSOR-HFM)

61	Dr. Sajad Ahmad Bhat, Asstt. Professor sabbutt@gmail.com 7006937995	Deptt. Of Chemistry, Islamic University of Science and Technology, Awantipora	Fluorescence and Colorimetric Chemo-sensors for Environmental Mercury (Hg <sup>2+</sup> ) and Fluoride (F <sup>-</sup> ) Detection
62	Dr. Abdul Roouf Bhat, Asstt. Professor abroouf@gmail.com 9906722677	Deptt. Of GP Chemistry, Sri Pratap College Cluster University Srinagar	Targeting the Cancer and Related Diseases Growing in the Valley, Use of Natural and Synthetic Molecules as Antidotes
63	Dr. Tanveer Rasool, Sr. Asstt. Professor tanveer@nitsri.in 7006899026	Deptt. Of Chemical Engineering, National Institute of Technology Srinagar	Co-pyrolysis of Biomass waste and Municipal Waste, Product evaluation and Kinetic study
64	Dr. Hamida-Tun-Nisa Chisti, Associate Professor hamida@nitsri.net 8899907053	"Deptt. Of Chemistry, National Institute of Technology Srinagar	Synthesis, characterization and Development of Nanocomposite sensors for heavy metal ions
65	Dr. Niyaz Ahmad Mir, Asstt. Professor mirniyaz@gmail.com 09740371146	Govt. Degree College, Anantnag	Addressing the physiochemical properties of blockbuster drugs using crystal engineering approach
66	Dr. Mohammad Hanief, Associate Professor hanief@nitsri.net 7006161837	Deptt. Of Mechanical Engineering, National Institute of Technology Srinagar	Conversion of Bio-oils cultivated in J&K to lubricants by enhancing tribological characteristics
67	Dr. Mushtaq Ahmad Tantray, Asstt. Professor varmulcollege@gmail.com 01952-234214	Deptt. Of Chemistry, Govt. Degree College (Boys) Baramulla	Design and Synthesis of Novel Benzimidazole-based Derivatives for the Development of Potent Anticancer Agents
68	Dr. Aabid Hussain Shalla, sheenf@gmail.com 919419355988	Islamic University of Science & Technology Awantipora	Nanomaterial reinforced Smart Tri-azole based Hydrogel Systems for removal of Antibiotics, Polyaromatic Hydrocarbons and Toxic Heavy Metal ions
69	Dr. Javid Ahmad Ba day, Associate Professor javaidbanday@nitsri.net 9906626635	Deptt. Of Chemistry, National Institute of Technology Srinagar	Synthesis of Natural Product Based Polymer Composites as Potent Anti-microbial Entities
70	Dr. Monika Gupta, Sr. Asstt. Professor monika.gupta77@rediffmail.com 9419623841	Department of Chemistry, University of Jammu, Jammu	Fabrication characterization of modified grapheme based nanocatalysts and investigation of their catalytic potential in organic transformations
71	Dr. Gowhar Hamid Dar, Asstt. Professor dargowharhamid@gmail.com 7006082223	Deptt. Of Higher Education, Sri Pratap College, School of Sciences for Cluster University Srinagar	Evaluating the mechanism and devising possible control measures of disease incidences in fish fauna of Trans- Himalayan environs for enhancing the quality and productivity
72	Dr. Fayaz Ahmad, Professor & Head, rajafayazali@gmail.com, 7006725416	Deptt. Of environmental Science, University of Kashmir, Hazratbal Srinagar (J&K)	Evaluation of Physiological, immunological and parasitological factors of native and exotic fishes as an environmental risk assessment (ERA) tools of some water bodies of Kashmir Valley
73	Dr. Imtiyaz Qayoom, Asstt. Professor drimtiyazqayoom@skuastkashmir.ac.in 9419022770	Aquatic Environment Management, Sher-e-Kashmir University of Agricultural Science & Technology of Kashmir (SKUAST-K)	Evaluation and Bio-concentration of Pesticides in Dal and Anchar Lakes of Kashmir Himalayas

74	Dr. Tariq Hussain Bhat, Associate Professor, tariqhussain@skuastkashmir.ac.in /9906546997	Deptt.of Division of Post-Harvest Technology faculty If Fisheries, Rangil, Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir (SKUAST-K)	Quality evaluation of fish and fish products available in Kashmir valley
75	Dr.Piyush Malaviya, Professor piyushmalaviya@rediffmail.com/ piyushmalaviya@rediffmail.com 9419106740	Department of Environmental Sciences, University of Jammu	Optimizing fertigational quality of distillery waste water for agricultural use with special reference to Pisum sativum L
76	Dr. Deepika Slathia, Sr. Asstt. Professor dsenviron2012@gmail.com 9419146611	Department of Environmental Sciences, University of Jammu, Jammu	Ecological and Socio-Economic valuation of some riverine wetlands of Jammu for conservation and sustainable use
77	Dr. Mohammad Yaqoob Lone, Asstt. Professor varmulcollege@gmail.com 01952-234214	Govt. Degree College (Boys) Baramulla	Evaluation of edible mushroom (Tremella fuciformis & Pleurotus cystidiosus) as antidiabetic potential in streptozotocin induced diabetic mice
78	Dr. Showkat Ahmad Ganai, Assistant Professor showkatganie@kashmiruniversity.ac.in 91-9419972678	Department of Clinical Biochemistry, University of Kashmir, Hazratbal Srinagar (J&K)	Oxidative stress and diabetes, a correlated study by using active extract of Inula obtusifolia
79	Dr. Mohd Ashraf Ganie, Professor ashraf.endo@gmail.com 91-9419041546, 91-9968856888	Deptt. Of Endocrinology , Sher-i-Kashmir Institute of Medical Sciences, Srinagar	Evaluation of Clinical, Metabolic, and Genetic Determinants of family members of women with PCOS in the background of highly consanguineous population
80	Dr. Ghulam Hassan Dar, Asstt Professor ghbiochm@gmail.com 6005906518	Deptt. Of Biochemistry, Govt. Degree College Bandipora, Hassan Khoyihami Memorial Degree College Bandipora J&K	Evaluation of various environmental and biological factors responsible for widespread occurrence of thyroid disorders in Jammu Kashmir
81	Dr. Amatul Muhee, Associate Professor / Senior Scientist, amatulmuhee@gmail.com 7006401598	Division of Clinical Veterinary Medicine, FVSc & AH, Shuhama, Alusteng, Sher-e-Kashmir University of Agricultural Science & Technology of Kashmir (SKUAST-K)	Molecular identification and characterization of antimicrobial resistance genes of bacteria isolated from cases of Bovine Mastitis in Kashmir valley
82	Dr. Adfar Yousuf, Asstt. Professor adfar@rediffmail.com 9906644882	Deptt. Of Biotechnology, Sri Pratap (SP) College, Cluster University Srinagar	Role of CXCL1-CXCR2 and CXCL8-CXCR2 chemokine-chemokine receptor axis in the pathogenesis of gastric cancer in Kashmiri Population
83	Dr. Tabasum Ismail, Deptt. Of Chemical Sciences, tabsismail@gmail.com 09419482354	Deptt. Of Chemical Sciences, Sri Pratap (SP) College, Cluster University Srinagar	Design and synthesis of novel multi-target-directed coumarin derivatives as potent anti-alzheimer and antioxidant compounds
84	Prof. Mohammad Afzal Zargar, Professor, zargarma@gmail.com 9419016466	Deptt. Of Biotchnology, Central University of Kashmir Ganderbal	Development of Creams Containing Broad Acting chelating Agents for the Topical Treatment of Wounds
85	Prof. Masood Tanvir, Professor & Head, masoodtanvir@gmail.com 9419002644	Deptt. Of Medicine GMC, Government Medical College Srinagar	Evaluation of Corticosteroids Vs Pirfenidons therapy for preventing the pulmonary fibrosis in severe COVID-19 pneumonia patients



86	Dr. Abid Hamid Dar, Associate Professor abidhamid@cukashmir.ac.in 91-9419245425	Deptt. Of Biotechnology, Central University of Kashmir Ganderbal	Modulation of PI3K-AKT-mTOR-axis mediated microenvironment in the gastric cancer development via selective virulent factors of H. pylori strains for possible therapeutics
87	Dr. Manzoor Ahmad Mir Sr. Assistant Professor / Head drmanzoor@kashmiruniversity.ac.in 9622901319	Deptt. Of Bioresources, University of Kashmir, Hazratbal Srinagar (J&K)	Targeting drug resistant cancer stem cells by combinational delivery of Paclitaxel and Quercetin/ Zerumbone in breast cancer
88	Dr. Hilal A Makroo, Asstt. Professor hilalmakroo@gmail.com 91-9435285672	Deptt. Of Food Technology, Islamic University of Science and Technology, Awantipora	Extraction characterization and antimicrobial activity of walnut hull : Studies on its food and non food applications
89	Dr. Asif M. Iqbal qureshi, Asstt. Professor asifquresh@gmail.com 7889365151	Deptt. Of Genetics & Plant Breeding, Sher-e-Kashmir University of Agriculture Sciences & Technology of Kashmir Shalimar (SKUAST-K)	Saffron Improvement for Yield and Quality - The Heritage Crop of Jammu and Kashmir
90	Dr. Hidayatullah Tak, Sr. Asstt. Professor drhidayattak@yahoo.com 9419456456	Deptt. Of Zoology, University of Kashmir, Srinagar	Hydatidosis in Kashmir valley: An urgent need for its control & management
91	Dr. Muzamil Ashraf Makhdoomi, Asstt. Professor muzamilbiochem@gmail.com 9149678723	Deptt. Of BioChemistry Govt. College for Women, M.A. Road Srinagar	Prevalence and Genetic Susceptibility to thyroid disorders among female students of Srinagar Colleges
92	Dr. Mohd Altaf Bhat, Asstt. Professor altafbhat@uok.edu.in 9797862135 / 9797862135	Deptt. Of Biotechnology, Government Medical College Srinagar	Elucidation of the Epigenetic Landscape of Type 2 Diabetes & Related complications in Kashmir Population
93	Prof. Dr. Nahida Tabassum, Professor & Head, n.tabassum.uk@gmail.com	Deptt. Of Pharmaceutical Sciences, University of Kashmir Hazratbal Srinagar	Evaluation of Hepatoprotective Potential of Some Promising Locally Available Natural Herbs
94	Dr. Sobia Nisar, Assistant Professor sobianisar78@gmail.com 9999735118	Deptt.of Medicine, Govt. Medical College, SMHS Hospital Srinagar, J&K	Evualation of Prevalence, risk factors and contribution of SLC29A2 and SLC19A3 polymorphism in thiamine deficiency in pregnancy and lactation and asesment of the optimal dose of thiamine for treating the thiamine deficiency states
95	Dr. Rakesh Kumar, Asstt. Professor rakeshpanjaliya@jammuuniversity.ac.in; Panjaliya82@gmail.com 9419155790	Department of Zoology University of Jammu	Micro RNAs expression profiling for exploring their potential use as diagnostic molecular biomarker in human prostate cancer
96	Dr. Rakesh Kumar, Sr. Asstt. Professor, drakeshthusoo@gmail.com 9419279629	Shri Mata Vaishno Devi University Kakryal Katra Jammu	To study the genetic patterns among different cancers in Jammu & Kashmir Population India
97	Dr. Arif Tasleem Jan, Asstt. Professor atasleem@gmail.com / atasleem@bgsbu.ac.in 7006716454	School of Bio-Sciences & Bio- Technology, Baba Ghulam Shah Badshah University, Rajouri	Pharmaco-therapeutic evaluation of medicinal plants of Pir Panjal region for elucidating their efficacy and possible mechanism of action in the treatment of waterborne infectious diseases
98	Dr. Nisha Kapoor, Asstt. Professor nisha2208@gmail.com 9622049666	School of Bio-Technology, University of Jammu, Jammu	Screening of Potential genes for their tag SNPs that are responsible for susceptibility to Schizophrenia and generation of LD maps in Dogra population of Jammu region

99	Dr.Asif Ali Banka Asstt. Professor asifbanka@icloud.com 8803002995/ 9419589901	Deptt. Of Computer Science and Engineering, Islamic University of Science & Technology Awantipora J&K	An Approach to model Covid-19 outbreak
100	Dr. Assif Assad, Asstt. Professor assifassad@gmail.com 917889589200	Deptt. Of Computer Engineering, Islamic University of Science and Engineering Awantipora J&K	Using Longitudinal data for Early Detection and Progress Monitoring of Alzheimer's Disease
101	Dr. Tawseef Ahmed Teli, Asstt. Professor mtawseef805@gmail.com 7006447562	Deptt. Of Computer Sciences, Amar Singh College Cluster University Srinagar	A Fuzzy GRA/AHP based Comprehensive Analysis of Opportunities, Challenges and Implementation of IoT with an Indian Perspective
102	Prof. A. Arif Wani, Professor, awani@uok.edu.in 7006276302	P.G Deptt. Of Computer Sciences, University of Kashmir, Srinagar (J&K)	Smart Apple Disease Detection (SADD): A Deep Learning based smart android app for identification of Apple diseases
103	Dr. Kaiser Javeed, Asstt. Professor kaiser.giri@islamicuniversity.duc.in 9419167696	Deptt. Of Computer Science, Islamic University of Science & Technology Awantipora	Design and Development of Domain Specific Machine Translation System for Kashmiri Language
104	Zahoor Ahmad Ganie, Asstt. Professor zahoor.fifi@gmail.com 7006652445	Deptt. Of Electrical Engineering, Islamic University of Science & Technology Awantipora	Data Gathering Analysis and Protection of Privacy through Randomized Response Algorithm
105	Dr. Roohie Naaz, Asstt. Professor naaz310@nitsri.net 7006687815	Deptt. Of Computer Science & Technology, NIT Srinagar Hazratbal J&K	Risk analysis of Post COVID-19 symptoms using Artificial Intelligence
106	Mr. Idris Afzal Shah, Asstt. Professor idrisshah@yahoo.com 9596011541	Deptt. Of Computer Science and Engineering, Islamic University of Science and Technology, Awantipora	Learning Drug Associations Using Convolutional Neural Networks
107	Dr. Sajid Yousuf Bhat, Asstt. Professor bhatsajid@uok.edu.in 9070142309	Deptt.of P.G Computer Sciences, University of Kashmir Hazratbal Srinagar	Computer Numerical Control Machine for Making Small Wood-carving Articles
108	Dr. Muzafar Rasool, Asstt. Professor muzafar.rasool@islamicuniversity.edu.in 8825069068	Deptt.of Computer Sciences, Islamic University of Science and Technology, Awantipora	Authenticating Kashmiri Pashmina Using Deep Learning (Artificial Intelligence)
109	Mr. Adil Bashir, Asstt. Professor adilbashir.445@gmail.com 9797544265	Deptt. Of Computer Science Engineering, Islamic University of Science and Technology, Awantipora	Smart and Secure Healthcare System for Patient Monitoring and Diagnosis of Diseases in integrated IoT and fog computing environments
110	Dr. Manmeet Singh, Asstt. Professor msingh@bgsbu.ac.in 9797658158	Department of Information Technology & Engineering, Baba Ghulam Shah Badshah University Rajouri	Development of Blockchain based Smart Electricity Monitoring and Measurement System for Smart Cities
111	Dr. Ahsan Hussain, Asstt. Professor ahsan.hussain@islamicuniversity.edu.in 91-9039920998	Computer Science and Engineering, Islamic University Science and Technology, Awantipora	Blockchain University : An immutable e-learning assessment platform using blockchain



## PROJECT K-5000 (ESTABLISHMENT OF DEMONSTRATION FARMS OF AROMATIC AND MEDICINAL PLANTS)



- The scheme is aimed at establishment and demonstration of Aromatic and Medicinal plant farms at District Kupwara in the first instance. The establishment of demonstration farms of Aroma Cash Crops Project K-5000 in District Kupwara was approved by the Govt. of J&K as the joint venture between the JKST&IC and IIM(CSIR), Jammu at a total project cost of Rs.5.00 Cr with the sharing basis of 50:50.
- The Project sanction was accorded for cultivating and setting up of demonstration farms of Medicinal and Aromatic Plants on community owned / Kacharai land in the District Kupwara. Around 1500 kanals of kahchari / State land has been brought under the cultivation of Aromatic and Medicinal plants by JKST&IC in collaboration with IIM, Jammu up to F.Y. 2020-21, as against the cultivation of 5000 kanals.
- The project has been extended up to F.Y. 2023-24 and the department has initiated the process for resumption of Phase II of the project. Under the Phase II of the project, the department intends to develop two nurseries of Lavender and Rose crops for its propagation, distribution and dissemination among the farming community of the district. The project shall be replicated in four districts of UT, two each from Jammu and Kashmir regions respectively.



## ESTABLISHMENT OF SUB REGIONAL SCIENCE CENTRE AT LAL MANDI, SRINAGAR.



- The Programme is aimed at establishment of Sub- Regional Science Centres in UT of J&K. National Council for Science Museums (NCSM), Ministry of Culture, GOI has sanctioned Sub - Regional Science Centre (Category-II) and Innovation Hub for Srinagar in UT of J&K at an estimated cost of Rs 20.00 Cr. Land development process for the proposed SRSC, soil testing and contour mapping, boundary walls etc of the site has been completed through Roads and Bridges Department, Kashmir.
- Site plan / drawing and the cost estimates of the upcoming Science Centre at Lal Mandi, Jawahar Nagar, Srinagar have also been completed and stands approved by NCSM, MoC, GoI. The said centre would serve as Hub for popularization / dissemination of scientific knowledge among the student community and general masses. The centre would have an educational and recreational appeal. The centre is expected to be completed by FY 2023-24.
- Identification of land for setting up of Sub-Regional Science Centre, Jammu was identified at various locations but due to certain technical reasons could not be transferred in favour of JKST&IC. Very recently, team of officers from the NCSM, Delhi visited the site at Birpur, Bari Brahmana, district Samba but was not found suitable in terms of the guidelines framed by the Ministry of Culture for setting up of Science Centre / Science City etc.
- The process for re-initiation of identification of suitable land for the Science Centre, Jammu has started.
- 10 Other Programmes / Activities / Projects
- Setting up of Patent Information Centre (PIC) in UT of J&K in collaboration with SEED division, DST, GoI. Revised proposal for seeking grants under Patent Facilitation Programme of DST, GoI stand submitted after it has been approved by the technical committee of DST on Patents in -principal.
- Process initiated for seeking grants under Core Grant Support for the Development of Infrastructure / Manpower etc. for the JKST&IC.
- JKST&IC has conducted many programmes / activities / celebrations of some years as scientific years on subjects from time to time



## NEW INITIATIVES OF JKST&IC

- Establishment of Fossil Park at Konmoh , Kashmir
- Establishment of Training cum Incubation Centre for Marble and Lignite Extraction.
- UT level Innovators Meet of Innovators, for on-the-spot verification and recommendation of Innovative ideas/ proposals.
- Climate Cell in UT of J&K
- New Schemes have been proposed by the JKST&IC during the FY 2022-23 viz. S&T for Women Empowerment, Courses for Forensic Sciences, creation of Centre of Excellence (CoE) on some core issues.
- **ESTABLISHMENT OF RESEARCH INSTITUTE FOR CLIMATE CHANGE & ENERGY (A CENTRE OF EXCELLENCE)** with an aim to Generate and Disseminate Research & Independent Holistic Information & Opinion on CLIMATE CHANGE & ENERGY ISSUES.
- **ESTABLISHMENT OF PATIENT INFORMATION CENTRE IN COLLABORATION WITH DST, GoI.**
- **ESTABLISHMENT OF WOMEN TECHNOLOGY PARKS IN COLLABORATION WITH DST, GoI,** Where all necessary support is made available to Women form a single platform for improving the livelihood through application of Science & Technology.
- **ESTABLISHMENT OF INSTITUTE OF FORENSIC SCIENCES** with an aim to educate and train students through Graduate/Post-Graduate/ Doctorial Degrees and Short-Term Training Programmes, currently JKUT does not have any such facility/institution available. The Proposed Centre shall be



joint venture of JKST&IC, DST, GoI & Universities of JK.

- **ESTABLISHMENT DISSEMINATION CENTRE**
- **ESTABLISHMENT OF AROMA FARMS**
- **SPONSORING OF 250 R&D PRODUCTS DURING THE YEAR 2023-24**
- **CELEBRATION OF NATIONAL SCIENCE DAYS, WEEKS, MATHEMATICS DAY, WORLD OZONE DAY**
- **ORGANISING OF NATURE STUDY CAMPS FOR STUDENTS, CAPACITY BUILDING PROGRAMMES**
- **BUILDING HUMAN RESOURCES AND LABORATORY INFRASTRUCTURE** for preparing Youth of J&K with Science & Technology background for absorption in industries in the field of Electronics System Design & Manufacturing-System on Chip. In this regard, matter has been taken up with IIT-Jammu, Mumbai, CII, various colleges under higher Education and DST, GoI.



# NEW INITIATIVES



Training programme for farmers at SKUAST Mirgund, organised by JKST&IC



Science model exhibition at Jammu.



Science model exhibition at Uri.



Science model exhibition at Udhampur.



Inauguration of Bio technology park at Ghati Kathua





Shri Saurabh Bhagat, IAS Commissioner Secretary to Government, S&T Department giving away the prize to best speaker during two day seminar on Conservation of Water Bodies at GDC Eidgah Srinagar.



Book release function of R&D Projects of JKST&IC by the august hands of Dr. Arun Kumar Mehta, IAS, Chief Secretary Jammu and Kashmir.





Book release function of R&D Projects of JKST&IC by the august hands of Dr. Arun Kumar Mehta, IAS, Chief Secretary Jammu and Kashmir.



Farmers during training programme on Aromatic and Medicinal plants at SKUAST-K organised by JKST&IC



Meeting with VC Kashmir University



Site Inspection at Sub regional Science center Srinagar



## Free breast cancer screening-cum-awareness programme jointly organized by Jammu Kashmir Science Technology and Innovation Council (JKST&IC) and Department of Bioresources, University of Kashmir on 3rd November 2022 at University of Kashmir (Gandhi Bhawan)

Free breast cancer awareness-cum-screening programme was organized by the Department of Bioresources, University of Kashmir and Jammu Kashmir Science Technology and Innovation Council (JKST&IC) in continuation with the month-long breast cancer awareness programme held in 15-degree colleges across Kashmir Valley. The theme of the Program was Free breast cancer awareness-cum-screening among the general public including college and university students. The program was attended by more than 400 participants representing universities and various Degree colleges of the valley. The special guests who delivered speeches at the occasion include HVC Kashmir University Prof. Neelofar Hassan Khan, HVC Central University of Kashmir Prof Farooq A Shah, Director SKIMS Prof. Parvaiz A Koul, Commissioner Secretary Science

Technology and Innovation Council Govt of J&K (UT) Shri Saurabh Bhagat and Registrar Kashmir University Dr Nissar A Mir and Dean Research besides Registrars of IUST, CUK and Principals of various Degree colleges. The programme was inaugurated by Honorable vice chancellor university of Kashmir, Prof Neelofar Khan who in her inaugural address stressed upon the need for academic and medical institutions in the UT to collaborate in raising awareness on breast cancer which is "rising alarmingly" in the country. Prof Neelofar praised the Department of Bioresources for taking these efforts to develop awareness among the

masses of Jammu and Kashmir. She continued that young minds who were educated during the month-long programme about breast cancer must become ambassadors in the community to spread their learning in the society. "The twin cause of advocacy and awareness is our responsibility towards our society and we at the University will do our best to collaborate with other local and national institutions to make this process a continuous one," she said. The program witnessed the release of a com-



prehensive documentary on Breast Cancer Awareness which has covered the entire scenario of breast cancer in Kashmir valley and expert opinions from the leading oncologists and researchers of the valley. A compact and elaborative Breast Cancer Website [breastcancer@uok.edu.in](mailto:breastcancer@uok.edu.in) was also launched during the programme. Besides two Books authored by Dr Manzoor A Mir Head Department of Bioresources University of Kashmir and Organizing secretary of the Programme entitled 1. Combination therapy in Triple negative breast and 2. Role of tumor microenvironment and targeted therapies were also released.



# POST TRAINING REPORT OF JKSTIC FUNDED PROJECT



Two days JK Science Technology & Innovation Council funded workshop on Skill Training of Rural Youth has been conducted by College of Temperate Sericulture on "Sericulture-A viable option for Enterpreneurship" from 06th-7th December 2022. The Aims and objectives of the training programme were to impart Skill based training to participants regarding adoption of various Low cost Technologies in sericulture for sustainable livelihood security and employment generation. The training programme was organized to prepare them as job providers instead of job seekers. The training also aimed at making the concept of various Low cost technologies to the participants successfully developed by college of Temperate Sericulture, so that these technologies can be made available to the Sericulture farmers at doorsteps and participants can also establish their small units for earning their Livelihood. About 10 new Technologies were demonstrated to the participants so that all these technologies will be transferred to the farmers level at a faster pace. The main attention of training was on cocoon crafting and participants developed many crafts of different designs during the training program. Forty Two participants attended the train-



ing and 04 lectures in addition to full day practical sessions were arranged by eminent experts to acquaint the participants regarding techniques of Preparation, Advantages and scope of these Low cost Technologies at field Level. The participants exhibited enthusiasm and had active interaction with the experts during the training session. The participants were highly satisfied which was evident from their verbal feedback during the valedictory function. The participant also desired to organize more such programmes in near Future. The program was attended by Director Planing SKUAST-K, Joint Director DST Mr Bilal Ahmad Bhat sb, Assoc. Dean CoTS, HoD Zoology GDC Pattan, Distt Officer NABARD, Heads of Divisions and students of GDC pattan.



## BRIEF REPORT OF TECHFEST ROSHNAAS-22

**R**OSHNAAS-22 a five (5) day Techfest, scheduled from 8th to 12th December, 2022 was successfully conducted by Institute of Technology, University of Kashmir. This 5-day Techfest saw huge participation of students from various schools, colleges and universities from all over the Union territory of J&K. ROSHNAAS-22 was a special series of events with more than 30 exciting competitions, project presentations, workshops, and seminars. A diverse group of expert panellists which include innovators, scientists, engineers, academicians, administrators, artists, and entrepreneurs lead a wide array of conversations sharing their experiences, endeavours, and insights amongst the youth of Jammu and Kashmir. ROSHNAAS-22 offered platform to all the students across the wide domain from school level to university level to showcase their technical abilities, entrepreneurial ventures and ideas. Innovators from all over the UT of J&K showcased the prototypes of their innovations. Efforts have been made by the institute to offer a platform to incubate these ideas and innovations for further processing and product development. The speakers included the likes of Prof. Nilofar Khan (Vice Chancellor, University of Kashmir), Shri Saurabh Bhagat (Commissioner Secretary DST, J&K Govt), Prof. Shakeel Ahmad Ramshoo (Vice Chancellor, IUST Awantipora), Prof. Rakesh Sehgal (Director NIT Srinagar), Prof. Gowhar Bashir Wakil (Director, IOT, University of Kash-



mir), Prof. Zafar Ahmad Reshi (Dean School of Biological Science, University of Kashmir), Dr. Vipin Kumar (Director and Chief Innovation Officer National Innovation Foundation), Dr Javid

Ahmad Wani (Director NIFT Srinagar), Dr. Nisar Ahmad Mir (Registrar, University of Kashmir), Mr. Bikram Singh (Director Scintillation, Research & Analytics), Dr. Hussain Kancwalla (Assistant Professor, IIT Delhi) and Mr. Ab Rahim (Director, Rahim Greens) among many other scholars, scientists and Entrepreneurs. The Techfest ROSHNAAS-22 saw participation of 83 innovators who presented the working models/ prototypes of their novel innovations and 27 different start-ups showcased their business model in this event. The total cost of the bills raised over the successful completion of this event were in tune of around 15.4 Lakh.

## LIST OF IEC ACTIVITIES CONDUCTED BY JKSTIC

- Stall of J&K Science, Technology & Innovation Council was displayed at Gram Panchayat, Village Palli, District Samba during the exhibition on 24.04.2022 on the occasion of National Panchayat Day Conference (NPDC). Various publications and the achievements of JKST&IC was showcased during the exhibition which was attended by large number of people besides the delegates of all the R&D Institutions of India outside the UT of J&K.
- Industrial Bio-Technology Park. Ghati, Kathua was inaugurated by the Hon'ble Union Minister of State for Science & Technology (Independent Charge) on 28.05.2022. On the sidelines of the inaugural function, among other start-ups, departments, JKST&IC also participated in the exhibition wherein stall was displayed highlighting the achievements of the organization under various schemes.
- An "Industry Academia Conclave" was organized by IIT, Jammu w.e.f 20-21st May, 2022 in which JKST&IC actively participated. Various faculty members of the IITs, R&D Institutions of the country and JK Industries Department participated. A power point presentation was given by Joint Director(SK) highlighting the role of S&T in the UT of J&K. Brief about the various schemes of JKST&IC was also discussed.
- One Day College Level Science Exhibition on "Green Earth and Sustainable Development" was organized in collaboration with Govt. Girdhari Lal Dogra College, HiraNagar, Samba on 16.07.2022.
- One Day Workshop was organized on "Health and Sanitation" in collaboration with Udhampur Campus, Jammu University, Garnai, Udhampur on 25.07.2022. Various Resource persons from Health Department, Udhampur were invited to deliver lectures on Health & Hygiene, Health & Sanitation in order to make the students as well as the common masses especially the women folk aware about the benefits of maintain the personal health and hygiene.
- One Day Awareness lecture & Exhibition on "Genetic Disorders" was organized in collaboration with Human Genetics Department, University of Jammu on 22.08.2022. The programme was inaugurated by the former Vice-Chancellor of Jammu University. On this occasion, former Vice-Chancellor delivered the lecture on human genetics disorders besides the expert from the Punjab Agriculture University, Ludhiana and Pediatrician from GMC, Jammu. Exhibition was also held in which various models depicting the genetic disorders made by the various students of the schools were displayed.
- One Day Awareness programme on "Inculcating Scientific Approach about Viral Infections" among the students was organized in collaboration with Govt. College for Women, Udhampur on 27.08.2022. On the side lines of the programme, Science Poster Competition for the students on the said theme was also organized besides an invited talk on How to manage different viral infections. Around 200-300 students got benefitted with the programme.
- One Day Awareness Programme on "Water Management" in collaboration with Govt. Degree College, Ram Nagar, Udhampur on 26.08.2022. Science symposium / poster competitions on the said there were also organized for the college students.
- Regional conference on specialty in the context of farm of Himalayan regions was organized in collaboration with SKUAST-J w.e.f 21-22 Sept., 2022.
- One Day National Level conference on "Emerging trends in Genetic Engineering & Molecular Biology" was organized in collaboration with Central University of Jammu, Jammu on 29.09.2022.
- One Day Workshop on "Introduction to Patent Filing & Innovation" was organized in collaboration with Govt. P.G. College for Boys, Udhampur on 11th of Oct.2022. Various experts from Jammu & Central Universities delivered awareness lectures on patents.
- International Conference on "Recent Advanc-



es in Chemical Sciences (RACS-2022)" was organized in collaboration with Central University of Jammu, Jammu on 10.11.2022.

- Science Model Exhibition and Debate Competition on "Internet and its Impact on Younger Generation" was organized in collaboration with Govt. Higher Secondary School, Garhi, Udhampur on 11.11.2022.
  - One Day Seminar was organized in collaboration with SKUAST-J on the occasion of World Food Day on 19.11.2022.
  - Poster competition was organized on the theme "Reduce, Re-use and Re-cycle" at SCTM HSS Girls, Udhampur on 22.11.2022. Presentation of the students on the above said theme was also organized.
  - Science Exhibition was organized in collaboration with Govt.Higher Secondary School, Tikri, Udhampur on 30.11.2022. Multiple activities were organized under the ambit of Science Exhibition like Science Painting Competition on "Clean India Green India", Science Symposium on "Ecology and Environmental Protection" & Science Working Models from various educational institutions.
  - Award Distribution function for the awardees of Science Talent Promotion Scholarships of Jammu Division for the FY.2021-22 was organized at Human Genetics Department, University of Jammu on 30.11.2022. 62 awardees ( 25 scholarships at +10 level, 25 Scholarships at +12 level & 12 Scholarships at PG level) of Jammu division were given the certificate of appreciation apart from the scholarship amount at all the three levels. Inter-active panel discussion on "Advance Research for providing Human Genetic Counseling to the people of UT of J&K – way forward" was also held
  - One Day Seminar was organized in collaboration with SKUAST-J on the occasion of World Soil Day on 05.12.2022. The seminar was organized by the Hon'ble Vice-Chancellor, SKUAST-J. University students participated in the seminar and the lectures were delivered on this occasion for making the students aware about the importance of keeping the soil healthy for betterment of the humankind.
- Visit to various divisions of SKUAST-J was also organized in order to explore the possibility for implementation of programmes of mutual interest on collaborative basis.
- A symposium on "Celebrate Science & its wonderful secrets" was organized in collaboration with Govt. Higher Sec. School, Jaganoo, Udhampur on 06.12.2022.
  - An Inter-active session with the Research & Innovation Council, SMVDU was organized in collaboration with SMVDU, Katra on 06.12.2022. The interactive session was chaired by Shri Saurabh Bhagat(IAS), Commissioner / Secretary to Government, Science & Technology Department. Various issues of mutual interest were discussed. Besides this, separate meeting was held with Hon'ble VC, SMVDU .
  - Award Distribution function of Science Exhibition was organized at Govt. Higher Secondary School, Tikri, Udhampur on 09.12.2022.
  - One Day Awareness Programme on "Bio-Technology and its Applications in day to day life" was organized in collaboration with Govt. Higher Secondary School, Garhi, Udhampur on 16-12-2022. Various resource persons were drawn from Govt.PG. College for Boys, Udhampur for delivering the lectures on the theme to the students.
  - One day Symposium on "Plastic Waste Management was organized in collaboration with Govt. Higher Sec. School, Battal Balian , Udhampur on 16-12-2022 .
  - One Day Workshop on "Introduction to Patent Filing and Presentation of Innovative Ideas" was organized in collaboration with Govt. P.G. (MAM) College, Jammu on 06.12.2022. On this occasion; expert lectures from eminent scientists from IIM, Jammu and registered Patent agent of UT of J&K were delivered to the college students. Besides this, presentation of new innovative ideas by the students was also organized
  - One day Interactive cum Awareness programme with farmers from Technology transfer from Lab to Land was organized in collaboration with Zoology Department, University of Jammu on 16.12.2022.



# TWO DAY WORKSHOP ON LAKES AND WATERSHEDS: FROM EXPLOITATION TO CONSERVATION ORGANIZED BY FACULTY OF FISHERIES SKUAST-K RANGIL GANDERBAL



**T**wo day workshop on "Lakes and Watersheds: From Exploitation to Conservation" was organized by Division of Aquatic Environmental Management (AEM), Faculty of Fisheries SKUAST- K, Rangil Ganderbal. The workshop was based on a theme of imparting awareness among the students, all stakeholders including people residing around the lake banks about the importance of lake management and conservation. The program was sponsored by Jammu and Kashmir Innovation Council, Department of Science and Technology in collaboration with Lake Conservation and Management Authority (LCMA). On First day 15th Nov. 2022 in the inaugural ceremony Dr. Imtiyaz Qayoom, organizing secretary gave a brief review about the activities to be carried in the workshop. Prof. (Dr) Adnan Abubakr, HOD, AEM briefed the technical aspects about lake management



and conservation. Prof. (Dr) Farooz A. Bhat, Dean, Faculty of Fisheries, spoke about the importance of lakes in terms of ecology and service to mankind. He emphasized on the need of the hour to conserve our waterbodies for future generations. He also congratulated the organizing secretary and the Division for conducting such kinds of workshops. After inaugural function, one expert lecture was deliv-

ered by Dr. Mubashir Jeelani, Assoc. Prof. GDC, Sumbal who not only impressed upon the causes of lake deterioration but also on the key points that will help in their restoration, rehabilitation and conservation. The lecture was followed by intra faculty debating competition held in the Faculty of Fisheries on the same theme in which UG and PG students of the faculty shared their ideas.



On 2nd day 16th Nov 2022, an awareness drive was conducted by the Division of AEM in collaboration with LCMA along the banks of Dal Lake. The drive was conducted by the students of Faculty of Fisheries along with the organizing secretary, Dr. Imtiyaz Qayoom, the DFO LCMA, Mrs. Gazalla Abdullah, Assistant professors from Faculty of Fisheries and various officials from LCMA. This drive included a rally in which placards and banners were displayed by students followed by an interactive session with the local residents, shikara riders, shopkeepers, local vendors and passing by people to imbibe in them the sense of awareness about lakes conservation.

A keynote lecture on the strategies adopted for saving Dal Lake, restoring its water quality and rehabilitating its banks was delivered in online mode by the Vice Chairman of LCMA, Dr. Bashir Ahmad Bhat (IRS) before the au-

gust gathering of scientists and students of the faculty followed by the interactive Q&A session. He also spoke about the achievements of LCMA in rehabilitating the various lake sites and its beautification in the periphery and catchment.

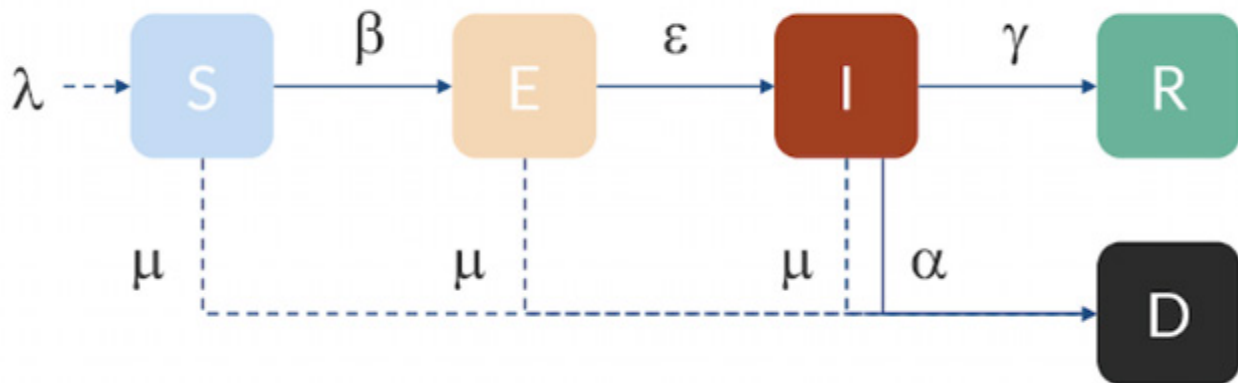
Valedictory function was held at the Faculty of Fisheries presided over by Hon'ble Vice Chancellor SKUAST-K, Professor (Dr) Nazir Ahmad Ganai, Mr. Saurabh Bhagat (IAS), Commissioner Secretary JKDST, Professor (Dr) Sarfaraz Wani, Director Research, SKUAST-K, Professor (Dr) Farooz Ahmad Bhat, Dean, Faculty of Fisheries, Dr. Nasir A. Shah, Additional Director JKST&IC, Mr. Bilal A Bhat, Joint Director JKST&IC and Prof. (Dr) Adnan Abubakr, HoD, Division of AEM.

Dr. Adnan Abubakr gave program briefing, while as Dean formally welcomed the guests, teachers, students and participants. Mr. Saurabh Bhagat

(IAS), Commissioner Secretary JKDST who was guest of Honour, gave a key note speech about the funding mechanisms of JKDST, their success stories and opportunities for researchers to work with JKDST for their innovative research ideas. Chief Guest of the function, Hon'ble Vice Chancellor SKUAST-K, Professor Nazir Ahmad Ganai, in his address admired the organizers for conducting this workshop and inspired the students and scientists to conduct innovative research to contribute to society and science. On the occasion prizes and certificates were distributed to 1st, 2nd and 3rd winners of the debating competition by Chief Guest and Guest of Honour in presence of other dignitaries. At the end, organizing secretary, Dr. Imtiyaz Qayoom delivered a formal vote of thanks to all dignitaries, sponsoring and collaborative agencies and all who worked for the success of this program.



# A MATHEMATICAL AND COMPUTATIONAL MODEL FOR COVID-19 WITH SPECIAL REFERENCE TO J&K-INDIA



**T**he global threat posed by the coronavirus (COVID-19) pandemic increases as a result of its alarming trend of continual growth. The Corona Virus Disease 2019 (COVID-19) virus infection was initially identified in Wuhan City, China, in December of that year and quickly spread to about 213 countries worldwide. About 62,69042 persons in India have COVID-19 instances that have been confirmed. The US, Brazil, India, Russia, South Africa, Mexico, and Peru are among the worst-affected nations. As soon as the first confirmed incidence of the current virus was detected in Kashmir on March 9, 2019, it also spread to Jammu & Kashmir (UT), where as of right now, more than 30,000 people have been afflicted with COVID-19. The government

has implemented a number of preventive measures to contain the virus, including lockdowns, social withdrawal, travel bans, home and self-isolation restrictions, and hospital quarantines.

Under this project title, we designed an epidemiological compartment model that accounts for the super-spreading phenomena of some individuals. It is based on a model put forth by Kim et al. and takes into account the occurrence of super-spreaders in the family of coronaviruses. Additionally, we take into account a compartment for fatalities related to virus-associated deaths. The model was developed with the understanding that exposed and infected people are interacting with vulnerable people at a constant rate.



## MOU SIGNED BETWEEN JK SCIENCE TECHNOLOGY AND INNOVATION COUNCIL, GOVT. OF UT OF J&K AND UNIVERSITY OF KASHMIR THROUGH DEPARTMENT OF BIORESOURCES DURING ONE-WEEK LONG FACULTY DEVELOPMENT PROGRAMME (FDP) FOR COLLEGE AND UNIVERSITY TEACHERS



**A** One Week workshop on “Hands on Basic Molecular Biology Techniques-Faculty Development Programme” sponsored by JK Science Technology and Innovation Council, Govt. of UT J&K was organized jointly by Department of Bioresources, University of Kashmir in collaboration with HKM GDC, Idgah Srinagar. The workshop was organized under Azadi ka Amrut Mahotsav from 20- 26th September 2022 at University of Kashmir, Srinagar. During this FDP an MoU was signed between University of Kashmir, Hazratbal, Srinagar and JK Science, Technology and Innovation Council, Department of Science & Technology, Govt of J&K (UT) with the noble vision to harness the potential of Science & Technology as an instrument of socio-economic change by leveraging the competencies of each other to bring societal benefits. The collaboration will be used to promote scientific culture and gross root level and innovations through Science & Technology in various domains of industrial and service sectors.

This 7-day hands on training workshop enabled participants (faculty members from research institutes, universities and colleges) acquire the knowledge of basic molecular techniques required for success in scientific research. This FDP workshop included theory as well as hands on sessions on basic techniques used in molecular biology at the Department of Bioresources which is well equipped with Molecular Biology and immunology related instruments.

The workshop was inaugurated by Prof. Neelo-

**DEPARTMENT OF BIORESOURCES  
UNIVERSITY OF KASHMIR  
and  
HKM Govt. Degree College Idgah Srinagar**  
is organizing  
**One week "Hands on Basic Molecular Biology Techniques"**  
Sponsored by  
**JK Science Technology and Innovation Council  
Govt. of UT J&K**  
under  
**Azadi Ka Amrut Mahotsav  
20-26th September, 2022**

**Chief Patron  
Prof. Nilofer Khan  
Vice chancellor  
University of Kashmir**

**Patron  
Prof. Yasmeen Ashai  
Director College**

**Convenor  
Prof. Mohd Yaqoob Baba  
Principal HKM GDC Eidgah  
Srinagar**

**Guest of Honour  
Shri Saurabh Bhagat  
Administrative Secretary  
JKST&IC Department**

**Organizing Secretary  
Dr. Manzoor Ahmad Mir  
Department of Bioresources  
University of Kashmir**

**Organizing Secretary  
Dr. Javid Ahmad Parray  
HKM GDC Eidgah, Srinagar**

**RNA**

far Khan, Honorable Vice Chancellor, University of Kashmir, and in her inaugural speech she congratulated the JKST&IC and Department of Bioresources for organizing the event of importance concerning the faculty from different colleges and institutes for their active and practical learning.

In his special remarks, Shri Saurabh Bhagat, Commissioner/Secretary to Government Science & Technology Department deliberated upon the importance of Govt. authorities and universities in acting as Ambassadors of science and technology to broaden the research and technology-based ideas among faculty of different academic and research and institutions.

# One Day Technical Workshop

9<sup>th</sup> March, 2023



भारत 2023 INDIA

वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE



## INNOVATION INCUBATION And ENTREPRENEURSHIP



**Organised by**

GOVT. DEGREE COLLEGE, BARAMULLA

(AUTONOMOUS)

NAAC "A" Grade

(College with Potential for Excellence (CPE) Status)

**In collaboration with**

J&K SCIENCE TECHNOLOGY AND INNOVATION COUNCIL, SRINAGAR

DEPARTMENT OF SCIENCE AND TECHNOLOGY

# One Day Technical Workshop

9<sup>th</sup> March, 2023



In a scenario where we are witnessing a longer queue of job providers than job seekers, NEP-2020 aims at **promoting economic development of the country by supporting** Innovation and Incubation centres at higher educational institutes thus supporting **start-up companies**. The increment of companies in the local market leads to job creation and economic growth of the country. The higher educational institutes have a significant role to play in the growth of India as they are the breeding grounds for future entrepreneurs. The country is in need of young graduates with creative thinking to develop and manufacture new products to address the challenges faced by the industry and society. The setting up the innovation and incubation centres at higher educational institutes shall allow the small industries to gain access not only to leading edge technologies, but also highly trained students, professors and infrastructure facilities while the higher education institutes shall be benefited from building links with local bodies and improving their objectives regarding student employability. Involvements of the industry in the academic programs of the higher educational institutes are a major mechanism for knowledge transfer. Role in knowledge transmission has been the motivation for the development of Innovation and incubation Centres at higher educational institutes.

In order to create this innovation and incubation culture in the higher educational institutes, students must be developed with all the cognitive levels of learning, every lab in the institute must be equipped with latest gadgets that are used in the industry and the students must be given open ended experiments in laboratories which are design/algorithm based. The product development must be part of their curriculum and should be encouraged with the multi discipline research projects in every area of technology such as internet of things, big data analysis, robotics, cyber security and non-conventional energy resources. This should be supported with the involvement of experts from industry in order to handle few courses for the development of innovative thinking of students which leads to incubation at the higher educational institutes.

With this background, Govt. Degree College, Baramulla is organising one day Technical Workshop on Innovation, Incubation and Entrepreneurship in collaboration with J&K Science Technology and Innovation Council on 9th March, 2023. The workshop is aimed to sensitize students towards Innovation and Incubation and give them a know-how of the various innovation ideas, incubation options and entrepreneurship schemes. This workshop shall help to stimulate the thinking of the students in the domain of generating employment for themselves and for others leading to eradication of the unemployment in the region.

## Patron:

(Dr) Nasir A. Shah, Additional Director, JKST&IC

## Co-Patron:

Mr. Bilal Ahmad Bhat , Joint Director JKST&IC

## Director:

Prof. (Dr) Mohammad Farooq Rather

## Advisory Committee

1. Prof. Shagufta Nasreen
2. Prof. Tariq Chalkoo
3. Dr. Romisa Khan

## Organising Secretaries:

1. Dr. Humaira Qadri
2. Dr. Abdul Roouf Bhat

## Organising Committee:

1. Dr. Humaira Qadri (EVS)
2. Dr. Abdul Roouf Bhat (Chemistry)
3. Dr. Nuzhat Jabeen (Botany)
4. Dr. Danish Nabi (Media Studies)
5. Dr. Shahzadi Wafai Naw Bahaar (EVS)
6. Dr. Syed Mutahar Aaqib (Compt. Sci.)
7. Dr. Mir Irfanullah (Chemistry)
8. Dr. Mohammad Sideeq (Chemistry)
9. Prof. Zahid Ahmad Wani (Zoology)
10. Dr. Tanveer Ahmad Bhat (PTI)

## For more details and information:

Website:[www.baramullacollege.net](http://www.baramullacollege.net)  
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Edit and Design by: Shabir Ahmad Bhat (T/A Department of Media Studies, GDC Baramulla)



## PROGRAMS / PROJECTS OF JK SCIENCE TECHNOLOGY & INNOVATION COUNCIL UNDER IMPLEMENTATION

### INFORMATION EDUCATION AND COMMUNICATION (IEC)

The scheme is aimed at Enhancing Public awareness through the conduct of various Science & Technology programmes/ awareness activities.

#### **a. Science Popularisation/ Awareness Scheme.**

Main activities: -Conduct of S&T programmes/activities like Debates, Quizzes, celebration of important scientific days / weeks, National science Days, Environment Day/ weeks Mathematics days/ AIDS day Seminars, science Awareness camps, Nature study camps/tours capacity building programmes, workshops, Training programs etc in different educational institutes of the UT of JK. Conduct of science congresses ( Women's / Agriculture / Medical science) publications of reports / journals/ preparation of documentaries etc payment of honorarium / hiring of services for data management etc

The scheme is aimed at promoting quality of science education, innovation and research in schools, colleges, Technical R&D Institutions.

#### **b. Support for Innovation and Patent Filing Scheme.**

Main Activities :- Financial support in terms of seed money for development of prototypes and Patent Filing charges/fees to the innovators. Organising of Awareness programmes on IPR, JK innovators meet, innovation camps, in different Educational, Technical and R&D institutes of the UT of J&K are covered under the scheme.

The Programme aimed at Transfer and dissemination of new, affordable and relevant Technologies in diverse fields like Agriculture, Horticulture, Rural Development, FT, Research and Education.

#### **c. Technology Transfer Intervention scheme.**

Main Activities: - Introduction Demonstration, dissemination and Transfer of New cost/ labour efficient Technologies in varied fields of S&T like introduction and transfer of High yielding and High-density crops, Hi-Tech Solid waste management technologies. Technology introduction in IT sector, like Spatial data infrastructure (Geo-Portal), Demonstration and transfer of rural Technologies, Development of People friendly Apps/ websites/ programmes in IT sector etc

### **Sponsored Research and Extension programme**

The scheme is aimed at promoting and sponsoring of local specific Research Projects, scientific studies and surveys in various R&D and Technical institutions of UT of J&K.

Main Activities: -Sponsoring of small, medium level and short-term scientific studies/ research projects up to 2 years duration, through open advertisements. It also covers sponsoring of short-term scientific studies, Surveys (Survey on Tribal medicinal and Aromatic plants in both divisions of J&K) etc. The Expenditure on account of Consultancy fees, DPRs charges for New Projects/ Honorarium for screening/Technical/ Advisory committees/ hiring of services for data management is also covered under the said scheme.

### **Science Talent Promotion scheme**

The scheme is aimed at encouragement of scientific talent and development of Human resource by awarding scholarships, Fellowships, science Awards, etc

Main Activities:- Award of science/ merit scholarships at +10, +12 and PG levels, Fellowship to the working scientists of 3-6 months to the students/ scientists, and young science/ innovators Awards to the Researchers/ scientists of J&K.

## **Plan and Execution of Activities for Establishment of Bio-Technology Parks**

The scheme is aimed at strengthening research and infrastructure facilities by way of Establishment of centres of Excellence in the fields of Bio- Technology. Main Activities:- Department of Bio-Technology, G.O.I has sanctioned two Industrial Bio-Technology Parks (IBTP) for the UT of J&K at an Estimated cost of Rs 8466 lacs on 70:30 sharing basis of funds between Department of Biotechnology, GOI and Department of S&T ,J&K. The parks are being Established at Ghati, Kathua, Jammu and Baripora, Handwara, Kashmir at an estimated cost of Rs 4200.00 lacs and 4266.00 lacs respectively.

## **Establishment of Demonstration Farms of Aroma Crops**

Demonstration and Establishment of Aromatic and Medicinal plant Farms at District Kupwara and other districts of J&K to feed the Industrial Biotechnology Parks.

## **Development of land/ site for Establishment of Sub Regional Science Centre**

The scheme is aimed at Establishment of Sub Regional Science Centres in UT of J&K. Main activities:- J&K Science, Technology and Innovation Council, Department of Science and Technology (JKST&IC) is in the process of Establishment of Sub Regional Science Centre (SRSC) at Lal Mandi Srinagar, in collaboration with National Council for Science Museums (NCSM) Kolkata, Ministry of culture , Gol. The proposed allocation is for the completion of teaming work of land development and landscaping . The expenditure on account of Building permission fee and construction of low cost hut on modern technologies through building centre Srinagar is also covered under the

## **Establishment of Innovation dissemination center at Srinagar (New)**

The scheme is aimed at creating necessary incubation facilities for innovators and scientists and boarding/lodging infrastructure for the Scientific fraternity visiting the UT of J&K in connection with various Scientific events and activities of Sub Regional Sconce Centre. "he proposed allocation is meant for construction of the said centre of Excellence.

## 2-DAYS NATIONAL CONFERENCE ON SCIENCE POPULARIZATION, INNOVATION & EXTENSION AT GDC ANANTNAG

The Department of Zoology in collaboration with Debate & Seminar Committee, Government Degree College, Anantnag conducted 2-Days National Conference on "Science Popularization, Innovation and Extension" on 2nd-3rd November, 2022 which was Sponsored & Funded by JK Science Technology & Innovation Council, Department of Science & Technology, J&K (UT). The aim of the National Conference was to develop scientific temperament, provide community members with the ability to make informed decisions and encourage scientific thinking. The conference provided aspiring scientists, scholars, faculty members & students with a platform to explore the principles of science and innovation, as well as their practical applications. This programme also bolstered the NEP-2020 initiative to popularize science and technology in colleges, encourage aspiring scientists to assume leadership roles in science and technology for the benefit of society as a whole, and improve the culture of collegiate research through motivational science speeches and hands-on instructions. The National Conference kick-started with the inaugural session on 2nd Nov. 2022 in which Dr. Altaf Bhat, Director CIRI, University of Kashmir & Dr. Muktar Khanday, Director (South Campus) University of Kashmir were the chief guests. The Principal, Govt. Degree College Anantnag, Prof. Muzafar Ahmad Bhat in his inaugural remarks



highlighted the importance of Science Popularization in the current scenario and impressed upon the youth to take science as career option for inclusive development. He further appreciated the efforts made by the JK Science Technology & Innovation Council for promoting science and innovation in higher education. The programme highlights of the conference were presented by the co-convenor & organising secretary, Dr Ummer Rashid Zargar, Deptt. of Zoology. Two important sessions conducted on the Day 1 (2nd of Nov., 2022), which included Plenary session and 'Meet Our Innovators/ Ideation session'. In the first plenary session, Dr. Altaf Bhat presented his motivational science talk by explaining some exciting aspects of biological and molecular science. In the second session of Day 1, innovators of J&K (UT) demonstrated their innovations which was followed by ideation programme presented by Dr. Ummer Rashid Zargar to select

best and creative ideas from the idea holders. On the second day, three technical sessions were conducted which covered Life Sciences, Physical Sciences, Material science, Environmental Science, Arts and Humanities. Later on 'Workable Science Model Exhibition' was held in which students from schools and colleges of South Kashmir participated. The 2-Days National Conference finally ended with scintillating valedictory function. The best achievers of the conference were felicitated with mementoes and certificates under different categories. The 2-Days National Conference finally concluded with the remark by the esteemed Principal, Govt. Degree College Anantnag, that the students and faculty should be motivated towards science and innovation through creation of innovation ecosystem in the colleges. The worthy principal appreciated organising secretaries of 2-Days National Conference, Dr. Ummer Rashid Zargar & Dr. Sabzar Ahmad Dar for organising this event.





Intracation Session at Central University Kashmir



Workshop on Aromatic and Medicinal plants at SKUAST-K auditorium conducted by JKST&IC and SKUAST-K





Interaction session with innovators at NIT Srinagar.



Science exhibition at GDC Hiranagar Jammu



Mulberry Farm at Tarbal Gurez Project Sponsored by JKST&IC



Interaction with innovator at IUST Kashmir





Nature Study Camp at Barmulla conducted by GDC Baramulla and JKST&IC



Interacting with innovators and startups at ICREATE Gujrat



Shri Saurabh Bhagat Com. Secy S&T Deptt facilitating at GDC Nawakadal Srinagar.



Addl Director S&T Dr. Nasir Shah Receiving appreciation award from Hon'ble VC Kashmir University.





During Interaction session with VC Gujrat University and VC Kashmir University



During Science popularisation activity at GDC A'nag



Meeting with VC IUST Kashmir



Science exhibition at SKUAST Jammu



Science exhibition at SKUAST Jammu





Signing of MoU between IUST and JKST&IC during interaction session with PI's of R&D project.



Audience at a function GDC Chari Sharief



Comm. Secy S&T Shri Saurabh Baghat addressing the Science conclave at Ahmedabad





Interaction with professor Trivedi VC Junagadh university Gujrat at Kashmir Univeristy.



Intoduction of Sericulture farming at Gurez



Workshop at Central Univeristy Jammu



Program on Technology transfer at Jammu



Workshop on innovation at SP College Srinagar.





Science Model exhibition at Jammu





J&K Innovator at Science conclave Ahmadabad Gujrat.



Industry Academia Conclame 2022 at Jammu





Officers of S&T with Union Minister Dr. Jitendra Science City Ahmadabad



Meeting with Dr. Arun Kumar Mehta (IAS), Chief Secretary Jammu & Kashmir.



Release of S&T publication at Ahmadabad



Officers of JKST&IC with former Vice Chancellor Jammu University Prof. Manoj Dhar during exhibition at Jammu



## Degree College Hiranagar organises Science Exhibition

Excelsior Correspondent

KATHUA, July 16: Govt GLDM Degree College Hiranagar today organised science exhibition on the theme 'Green Earth and Sustainable Development'.

The exhibition was sponsored by J&K Sciences, Technology and Innovation Council, Department of Science and Technology.

More than 300 students from different schools and colleges and also from University of Jammu (JU) participated in the event.

Prof. (Dr.) Anil K. Raina, Rector of Bhadarwah Campus

JU was the chief guest whereas Prof. Sanjay Sharma, Assistant Professor, Department of Environmental Sciences at JU and Dr. Neeraj Sharma, Senior Assistant Professor, Faculty of Life Sciences, Bhadarwah Campus graced the occasion as the resource persons.

The participants displayed their scientific models & charts.

The Adjudicators for the competition were Dr. C.P Sharma, Dr. Neeraj Kumar, Dr. Ram Singh, Prof. Rakesh Jasrotia, Associate Professor, Chemistry and Dr. Rakesh Attri, Assistant Professor,

Department of Environmental Science at JU.

Shruti Sharma, Assistant Director, J&K STIC, DST was also present on the occasion.

Welcome address was delivered by Dr. Pragya Khanna, Principal of the College.

Newsletter of the College for the year 2022 branded as 'PRATIBIMB' was also released during the event.

The event concluded with the prize distribution ceremony wherein the participants were awarded with cash prizes along with medals and certificates of merit.

## SKUAST-K organises awareness programme for Fishermen Community at B'pora

Hybrid Solar Electric Dryer Inaugurated



BANDIPORA: The SKUAST-K organises awareness programme for Fishermen Community at B'pora. Hybrid Solar Electric Dryer Inaugurated.

Rafiq Ahmad Sofi, Assistant Director Fisheries Shokat A. Bhat, Head division of Social Sciences, Prof. (Dr) Bilal A. Bhat, Head division of ADM, Prof. (Dr) Aman Abubakar, Head division of FPM, Dr. T.H. Shah, senior scientist, coordinator of the programme, Dr. Riwan Malik and PC KVK, Dr. Manjusha.

Speaking on the occasion, the ADC Bandipora Shokat A. Bhat said that the District Administration is committed to uplift the fishermen community through various schemes. He said the Administration has taken up steps to boost all sections involved in economic output.

He also urged the youth to be forward and take benefits of SKUAST-K. Prof. (Dr) Sarfaraz A. Bhat, Additional Deputy Commissioner Bandipora Westin by more than 200 fishermen of B'pora, Deputy Director Fisheries, Laharwalpale Village.

## Training on "Introduction to Python Programming for Machine Learning begins at SKUAST College of Agricultural Engineering & Technology

SRINAGAR: Officially enhance employability and entrepreneurship skill of the students. Prof. M.A.A. Siddiqui, Course Director and I.C. today on inaugurated a two weeks hands on training on "Introduction to Python Programming for Machine Learning". The increasing agricultural two weeks hands on training on productivity and importance programme sponsored under of python programming. IPF-NABEFT project is being a skill upgradation and employability generation. Agricultural Engineering & Technology in association and COPEL NABEFT, Prof. with Centre for Artificial Intelligence & Machine on use of AI & ML and Learning. SKUAST-K automation in all fields of Agricultural Sciences. Course Coordinator, Dr. (B.Tech) M.Tech students are Rashed Mohammad trained participating in said hands about overview of python programming. M.A.A. Siddiqui emphasized the role of mechanization of python programming. Prof. J. Khushboo presenting the Artificial Intelligence & Machine of data highlights the importance and necessity of automation in industry. The programme in enhancing the impact such training the skill development course by students of other faculties. He also, the main objective of Rashed hosted the inaugural such hands on training in function.

## GCW Parade, GDC Chenani organize two day webinar

EARLY TIMES REPORT

JAMMU, Dec 17: Government College for Women, Parade Ground, Jammu and Govt. Degree College, Chenani jointly organized a two day webinar on "Harnessing Science and Technology for Women Welfare in Jammu region" on 16-17 December, 2020. The event was sponsored by J & K Science Technology and Innovation Council, Department of Science and Technology, Govt. of Jammu and Kashmir.

The Webinar was planned essentially to bring the women of the region to the forefront of Science, Engineering, Technology, Industrial Entrepreneurship and Management to empower them to create a frontline of women scientists and with an aim to attract and retain more women in the domain of science and bring about cohesive solidarity amongst them. The proceedings of the Day 1 began with the talk by Dr. Sharda Potukochi, Head, Department of Bio-



A view of Webinar.

technology, SMVDU, Kokryal, who spoke at length about various sectors with the proficient role of women scientists, as also discussed about evolutionary science, transgenesis of plants and animals, genetically engineered food, scope of biotechnology, advances in health sector, etc. Dr. Suresh Bihari Lal, Professor in Mo-

hanlal Sukhadia University, Udaipur, the second speaker elaborated at length about STEM, Nanotechnology and the various programmes and schemes introduced by CSIR, UGC, UNESCO, DST and many other organizations to tap the potential of youth and train them in the field of Science and Technology.

## SKILL, STAR UP AND ENTREPRENEURSHIP Empowering the Nation!



DR. PRAGYA KHANNA

It is my plea that all Entrepreneurs with the help of the skilled staff, can explore better prospects, efficiently utilize the resources, and produce innovative goods and services. Today, India needs to create a large number of jobs each year for its people and the start-up and new-age businesses can actually contribute to large scale employment generation. For the start-ups to flourish and grow there must be perfect sync between visionary entrepreneurs and technically skilled workforce.

The Government of India, recognizing the significance of entrepreneurship, has been providing financial support to the budding entrepreneurs through programs like 'Make in India', 'Startup India', 'Atal Innovation Mission', 'Pradhan Mantri Kaushal Vikas Yojana', and 'National Skill Development Mission'. Ministry of Skill Development and Entrepreneurship (MSDE) is also persevering its agenda of 'Skill India' through the 'National Skills Qualification Framework' (NSQF). All these efforts can push the Indian Economy in the future. Additionally, this is the combined responsibility of individuals and organizations to step ahead and take the lead to create a sustainable skill development framework for India where globally India can lead the world to realize the SDGs (Sustainable Development Goals) defined under 'Agenda 2030'.

Think about the convenience of an e-commerce marketplace, or the ability to call a taxi or book a room at a travel agency, while paying through a mobile wallet. Seems a great Leap! India has already entered the realm where it can truly become a start-up 'Nation'. Since 2010, the Indian technology start-up scene has seen a marvellous growth towards creation of innovative start-ups and this country, a home to a new breed of young start-ups, has evidently evolved to become the third largest base of technology start-ups in the world.

Startup India campaign is based on an action plan aimed at promoting bank financing for start-up ventures to boost entrepreneurship and encourage start ups with jobs creation. The campaign was first announced by Prime Minister Narendra Modi in his 15 August 2015 address from the Red Fort.

The Ministry of Human Resource Development and the Department of Science and Technology have agreed to partner in an initiative to set up over 75 such startup support hubs in the National Institutes of Technology (NITs), the Indian Institutes of Information Technology (IIITs), the Indian Institutes of Science Educa-

tion and Research (IISERs) and National Institutes of Pharmaceutical Education and Research (NIPERs).

The Reserve Bank of India said it will take steps to help improve the 'ease of doing business' in the country and contribute to an ecosystem that is conducive for the growth of start-up businesses.

A startup company is an entrepreneurial venture which is typically a newly emerged fast-growing business that aims to meet a marketplace need by developing or offering an innovative product, process or service.

Startup is usually a company such as a small business, a partnership or an organization designed to rapidly develop a scalable business model. With job uncertainty increasing by the day, there has been a flurry of start-ups in the recent years. While no start-up is ever guaranteed to succeed, a number of innovative ideas have come to light in the process.

The key benefits of Start-up India campaign are: i) Single Window Clearance even with the help of a mobile application ii) 100 crore fund of funds iii) 80% reduction in patent registration fee iv) Modified and more friendly Bankruptcy Code to ensure 90-day exit window v) Freedom from confusing inspection for 3 years vi) Freedom from Capital Gain Tax for 3 years vii) Freedom from tax on profits for 3 years viii) Eliminating red tape ix) Self-certification compliance x) Innovation hub under Atal Innovation Mission xi) Starting with 5 lakh schools to target 10 lakh children for innovation programme xii) New schemes to provide IPR protection to start-ups and new firms xiii) encourage entrepreneurship.

Today India has become one of the top five start-up ecosystems in the world, alongside the other developed countries. The country today is home to a strong angel investor network, with the sector witnessing active participation from every major venture capital or private equity firm. Over the same period, the start-up sector has attracted nearly \$20 billion of capital and today employs about 100,000 people. Furthermore, over a 100 active incubators help entrepreneurs experiment with new ideas by offering them functional expertise and resources.

This recent expansion of the Indian start-up ecosystem is the result of a convergence of multiple factors. On the demand side, there has been a substantial upsurge of consumer spending, coupled with their craving for consumption makes them a highly attractive captive consumer base. On the supply side, there has been an enormous inflow of entrepreneur-

ial and technology talent. The creation of marquee start-ups in India has made "business" a highly lucrative career beyond the traditional mercantile community. Nearly 40% of India's start-up founders and leaders come from premier engineering colleges and business schools, such as the IITs, IIMs, and ISB. This trend has reversed the nation's "brain drain" by not only retaining the best and brightest in India, but also by attracting top quality talent from Indian-origin backgrounds across the globe. And finally, large capital inflows from global investors have helped fuel the entrepreneurial spark in our country. The vibrant start-up ecosystem we see today is the result of all these positively reinforcing mega trends.

E-commerce companies such as Flipkart, Snapdeal, and ShopClues have put small businesses on an inevitable and unbelievable podium. Ola and OYO Rooms have helped thousands of taxi drivers and hundreds of small hotel owners attain considerably higher productivity. Likewise, Rivigo is primarily improving the livelihood of its fleet pilots (i.e., truck drivers). It is this capacity to inspire transformation of the grass-roots level that gives Indian start-ups a truly unique character.

None think of this innovation and energy can be directed to areas such as literacy, skill development, healthcare and sanitation, financial inclusion, and natural resources. It can work wonders for the nation.

2015 was a year filled with widespread recognition and debate about technology-led start-ups in India. We are only at the beginning of an upsurge in the growth, relevance, and impact of startups on the life of every Indian. However, having a look at the successes in the recent past is really overwhelming.

Consider PayTM! What started off as a phone plan recharge company has been omnipresent in 2020. From a strong push in retail payments and e-commerce to becoming a new-age bank, PayTM is on track to becoming one of India's most prevalent home-grown consumer technology companies. The daily commute for most Indians hasn't evolved in a long time. While taxi apps like Uber and Ola have brought on the first stage of change, we are about to witness another paradigm shift in commuting. Startups like Share, CovoRide, and incumbents like Ola (with Ola Shuttle) operate charter buses on dynamic routes with 10 to 200 passengers. At a time when pollution, traffic congestion, and safety are a top priority for India, shuttle services enabled with smart technology are going to take off in a big way anytime soon.

"Who is a good plumber in my neighborhood?" "Where can I go to learn Hindi?" Common questions like these have long been answered by friends or family members by just a Dial of course. But that is the

old way. With the proliferation of smartphones, one company is leading the charge in re-imagining the answer to that question. UrbanClap is a whole new interface to find trustworthy, healthy living services in this network for a lot of reasons, but mostly for the fact that it is very useful. The app gives you everything from the relatively more basic health tips to something that is generally ignored, the side-effects of medicines.

However, for me, the most useful thing it offers is the name of substitute medications. It suggests, most of which are cheaper than what the doctor ordered. This information did not exist in a consolidated manner anywhere on the internet till now. There are a vast number of such start-ups on the list and are being added every day. While India is a land of many unique problems, its greatest assets include its brainpower and resilience. By exploiting these, it can conquer a wide range of challenges through innovative solutions. Startups provide an outstanding environment to nurture talent as well as to leverage the power and scale of the latest technologies. In doing so, some of them hold the promise of transforming the country and potentially becoming the next set of Indian technology giants. Now is the time for all stakeholders to come together to make this vision a reality and to unlock the real value of Indian start-ups.

My purpose behind this write up is to bring you home this message that Govt. Degree College, Chenani has some unconventional startup ideas that can become really successful businesses. These ideas have emerged as a result of the research project (sponsored by JKSTIC, DST) recently undertaken by the College and have already been communicated to the Dept. of Higher Education, Govt. of J&K and J&K Science Technology and Innovation Council, DST. The associated benefits of self-employment can make the effort of launching a startup worth it. Considering the skills you already have, coupled with clear objective, sales plan, market analysis and financial projections, you are free to contact the author for insights into the Startup ideas.

"Success is where preparation & Opportunity meet!"

The author is Principal, Govt. Degree College, CHENANI, Distt. Udhampur.



## National Conference begins at CUJ

*Excelsior Correspondent*

JAMMU, Sept 28: Two days 'National Conference on Emerging Trends in Genetic Engineering and Molecular Biology (ETGEMB-2022)' was organized by the Centre for Molecular Biology, Central University of Jammu (CUJ), here today.

The conference was organised in collaboration with J&K State Science and Innovation Council, DST. The inaugural session commenced with a welcome address by the Director, Prof. Mushtaq Ahmed.

Vice Chancellor CUJ, Prof. Sanjeev Jain presided over the event and felicitated the guests. He addressed the pool of intellectuals, scholars and students and emphasized more on the quality of research and innovations.

Prof. Manoj Dhar, former Vice Chancellor, University of Jammu was the chief guest. He advised the students to focus on the concepts of basic sciences before going towards advanced research.

Moreover, Prof. HB Singh, former Professor, Institute of Agricultural Sciences, BHU Varanasi was the invited guest of honour. He is also known as the Man of Patents and pioneer in Trichoderma research enlightened the young minds

about the importance of traditional Ayurveda and plant sciences thereby connecting it to modern research.

The inaugural session started with the Sarasvati Vandana and Lamp lighting, wherein several delegates from different institutions namely ICGEB Delhi, IIIM-Jammu, SKUAST-Jammu and Kashmir, participated in the conference.

Prof. BS Bhat, Dean School of Life Sciences CUJ graced the occasion, while Dr. Shelly Sehgal, co-convenor of the conference proposed the formal vote of thanks.

The first technical session began with a keynote lecture by Prof. Manoj Dhar on the topic, "Technologies in Demystifying Saffron; the Golden Spice", followed by another invited lecture by Prof. HB Singh titled "Intellectual Property Rights and their Importance in Research." The invited speakers of the technical sessions were introduced by Dr. Audesh Bhat.

The second technical session began with the keynote address of Dr. Kancherla Prasad, Senior Sr. CSIR IIIM as well as Dr. Mohd Jamal Dar, Principal Sr. CSIR IIIM. Both the esteemed speakers were introduced by Dr. Ashok Yadav. Prof. H.B Singh presided over the valedictory event.

## J&K Science Council To Set Up Centre To Facilitate Patent Filing

*Press Trust Of India*

JAMMU: Jammu and Kashmir Science, Technology and Innovation Council (JKST&IC) is setting up a centre to help researchers protect their intellectual property rights, officials on Saturday said.

The facilitation-cum-information centre is being set up in collaboration with the Union government's department of Science and Technology (DST), a senior government official said.

Saurabh Bhagat, Commissioner Secretary, Science and Technology department, said the centre will encourage the researchers to protect their intellectual Property Rights (IPR).

Speaking at a startup expo inaugurated by Union minister Jitendra Singh here, the official said the JKST&IC is actively trying to partner with other science and tech councils and the DST for strengthening the science, technology, and innovation ecosystem in the Union Territory.

JKST&IC has started the support for innovation and patent filing scheme wherein it provides financial support to the innovators in the form of seed money that would help them start, he said.

He said many institutions have been taken into a loop for identifying the innovators here in NIT, IIT and other research institutions, so that their ideas could be examined by a scientific advisory committee or technical Committee.

The aim is to link them with the International Centre for En-

trepreneurship and Technology (Icreate), Ahmadabad, if their ideas are found worthwhile for further incubation and convert their ideas into businesses.

Bhagat said the JKST&IC has been able to provide financial support to the tune of Rs 5.50 crore to 123 short-term and mid-term research and development projects from various universities.

He requested the Union minister to support the council to take up more R&D projects, as many problems are still to be addressed, especially among the rural population.

The commissioner secretary said that the Jammu administration has recently identified a site measuring nearly five hectares in Chowadi-Sunjan to set up a Sub-Regional Science Centre-cum-Museum in collaboration with the National Council of Science Museums of the Ministry of Culture.

He also urged Singh to help the council set up other parks, such as Robotics Park, Life Science Park, Aquatic Gallery, S&T Park, and Nature Park on lines of those that exist in Science City, Ahmadabad.

He expressed gratitude to the Union minister for helping the administration establish two Industrial Biotechnology Parks (IBTPs), one each in Ghazi, Kathua and in Handwara, Kupwara district of Kashmir.

The IBTP in Kathua was inaugurated by Singh in May 2022. The IBTP in Handwara is expected to be inaugurated by February, 2023, he said.

## One week Skill Development Programme on Cultivation of Medicinal & Aromatic Plants kick-started at KVK Ganderbal



One week Entrepreneurship Skill Development Programme on Cultivation of Medicinal & Aromatic Plants was formally inaugurated at KVK Ganderbal on 15th March 2023. The programme has been organised in collaboration with Directorate of Extension under the sponsorship of J&K Science Technology & Innovation Council. The programme was graced by Prof. S.A. Gangoo, Dean Faculty of Forestry, Benhama and attended by Scientific and Supporting staff of KVK Ganderbal, prospective farmers and rural youth. At the outset, Dr. Rafiya Munshi, Scientist KVK Ganderbal welcomed the participants. Dr. Ishfaq Abidi, Senior Scientist & Head, KVK Ganderbal gave a detailed overview of the programme & informed the participants that it has been structured to meet the skill need of farmers/youth associated with MAP sector. He described the importance of Medicinal & Aromatic Plants and highlighted their huge scope for income generation for educated, unemployed youth. Dr. Abidi gave a detailed PowerPoint presentation about MAPs and emphasised their importance as herbal drugs which can be utilized in therapeutic, aromatic, culinary & cosmetic industry. In the first

technical session, Prof. S.A. Gangoo, Dean FoF, Benhama gave a comprehensive PowerPoint presentation about the present status and scope of medicinal & aromatic plants. He highlighted the huge scope of these plants and the need to promote their cultivation for enhancing income. Dr. Gangoo emphasised on the huge scope of lavender, rosemary, thyme & dandelion cultivation in District Ganderbal and described their value in national as well as global trade. In the second technical session, Dr. Tahir Mushtaq, Assistant Professor FoF, Benhama gave a detailed PowerPoint presentation about importance, chemical

characterization & uses of MAPs. He highlighted the chemical composition of traditional MAPs and their benefits. Dr. Ejaz Ahmad Dar, SMS KVK Ganderbal gave a comprehensive lecture regarding use of Agro technology for cultivation of MAPs in District Ganderbal. The E-SDP will continue for a week and the participants will be thoroughly trained regarding nursery raising, propagation, conservation, value addition post-harvest management, production & post production process of MAPs. The trainees will also benefit from exposure visits to faculty of Forestry, Benhama, & IIIM Field Farm at Boniyar Pulwama in order to understand practical aspects of cultivation of MAPs. The day long session concluded with Interaction cum Feedback, wherein the participants raised various queries regarding the technical aspects of cultivation. More than twenty participants have registered for the E-SDP. Senior Scientist & Head thanked DST and Directorate of Extension for sponsoring such innovative & skill oriented programme for youth of District Ganderbal. The session ended with formal vote of thanks by Dr. Shafat Ahmad Banday, Scientist, KVK Ganderbal.



## Saurabh reviews setting up of Regional Science Centres at Jammu, Srinagar

Excelsior Correspondent

NEW DELHI, Feb 9: Commissioner Secretary, Science and Technology, Saurabh Bhagat, today convened a high level meeting at National Science Centre, a Unit of National Council for Science Museums (NCSM) Union Ministry of Culture, regarding setting up of Regional Science Centres at Jammu and Srinagar.

The meeting was attended by Dr.N.Ramdas Iyer, Director, Dr. Vijay Shanker, Consultant, Dr. Rakesh Mohan Singh, Senior Technical Officer, National Science Centre, Sanjay Kharoo, Joint Director, JKST&IC and other officers of the centre.

The meeting deliberated upon various issues especially with regard to themes to be established in the Srinagar Centre.

Saurabh Bhagat, emphasized inclusion of themes in the Srinagar Centre which would highlight the importance of Kashmir valley.

He discussed identification of land for Jammu centre and assured NCSM that land measuring 100 kanal has recently been identified at Chowadi, Jammu and more sites would be identified in due course of time.

Regarding construction of Science Centre, Commissioner Secretary revealed that the work shall start by end of the March, 2023. However, the land Development and other modalities have been completed by Science and Technology Department J&K.

During the meeting, an MoA was also signed between Department of Science and Technology J&K Government and NCSM.

## CS unveils two volumes on research programmes of S&T Deptt



Chief Secretary, Dr. Arun K Mehta & others unveiling research programmes.

### STATE TIMES NEWS

JAMMU: Chief Secretary, Dr. Arun K Mehta, unveiled two volumes on research programmes of the Science and Technology Department conducted by JK Science and Technology Council in collaboration with 7 Universities of Jammu region.

These R&D projects included action research on contemporary and cutting-edge areas by University of

Jammu, Central University of Jammu, IIT Jammu, BGSBU Rajouri, SMVDU, GDC Jammu and Cluster University. The program was conceived and implemented by Saurabh Bhagat, Commissioner Secretary, Science and Technology Department and Additional Director, JKSTIC Nasir Shah.

As an outcome of these projects, 7 patents have been

registered and 11 startups have been created. This shall be followed by a new tranche of 200 research projects in various prestigious institutions of JK UT. The documentation was appreciated by Chief Secretary, Shri Arun Kumar Mehta who is also a prime mentor and guide for the latest initiative. These initiatives are aimed at increasing the investment in R&D on Local technology and building an ecosystem for scientific startups and entrepreneurship among the youth of JK. The Senior Officers including all Administrative Secretaries and Officers of the Science & Technology Department including Rashmi Deepita, Financial Advisor, Science & Technology Department and Sh. Sanjay Kharoo, Joint Director, JKSTIC were also present during the launch.

## Programme to promote scientific temper held at GDC Anantnag

GK NEWS NETWORK

**Srinagar, Nov 4:** The two-day national conference on science popularisation, innovation and extension concluded at Government Degree College (GDC) Anantnag.

The conference was organised by the Department of Zoology in collaboration with Debate and Seminar Committee, Government Degree College, Anantnag and was sponsored and funded by JK Science Technology and Innovation Council, Department of Science & Technology, J&K (UT).

The aim of the national conference was to develop scientific temperament, provide community members with the

ability to make informed decisions and encourage scientific thinking. The conference provided aspiring scientists, scholars, faculty members and students with a platform to explore the principles of science and innovation, as well as their practical applications.

"This programme also bolstered the NEP-2020 initiative to popularize science and technology in colleges, encourage aspiring scientists to assume leadership roles in science and technology for the benefit of society as a whole, and improve the culture of collegiate research through motivational science speeches and hands-on instructions," the college statement read. The national

conference kick-started with the inaugural session on 2 Nov in which Dr. Altaf Bhat, Director CIRI, University of Kashmir and Dr. Muktar Khanday, Director (South Campus) University of Kashmir were the chief guests.

The Principal GDC Anantnag Prof. Muzafar Ahmad Bhat in his inaugural remarks highlighted the importance of science popularization in the current scenario and impressed upon the youth to take science as a career option for inclusive development. He further appreciated the efforts made by the JK Science Technology and Innovation Council for promoting science and innovation in higher education.



# Department of Bioresources, University of Kashmir in collaboration with the Indian Cancer Society and J&K Science Technology and Innovation Council (JKSTIC) holds Breast Cancer Awareness cum Screening mega event at Gandhi Bhawan, University of Kashmir

BY SURKHAB ZEHR

On the occasion of Breast Cancer Awareness Month being celebrated in October every year, from breast cancer awareness cum screening program organised by the Department of Bioresources under the leadership of Dr. Manzoor Ahmad Khan, Head of Department of Bioresources in association with Indian Cancer Society and JKSTIC, Technology and Innovation Council (TIC) in continuation with the month-long breast cancer awareness program held in 10-degree valleys across Kashmir Valley. The theme of the program was breast cancer awareness cum screening. The department had already started the breast cancer awareness campaign in the month of October and this event was a part of it. The mega event held at Gandhi Bhawan, University of Kashmir was a commendable programme of awareness raising breast cancer awareness campaign. These efforts will educate public about the signs and symptoms, researchers and different dignitaries also gave the breast cancer awareness cum screening.

The programme was inaugurated by the vice-chancellor of University of Kashmir, Prof. Nadeem Khan. Prof. Nadeem Khan in his address addressed the need for academic and medical institutions in the UT to address the rising awareness on breast cancer which is "rising alarmingly" in the country. Prof. Nadeem praised the Department of Bioresources for taking these efforts to develop awareness among the masses of Jammu and Kashmir. She continued that young minds who are educated during the early years of their life are the ones who can make the most impact in the society. The vice-chancellor also said that the University will do its best to collaborate with other local and national institutions to make this process a continuous one, she said.

Dr. Manzoor Ahmad Khan, the organizing secretary and Head of Department of Bioresources said the department aims to link up research on cancer with the society and the current month-long programme is a step in that direction. He also stated for the department, research and medical institutions and developing a comprehensive strategy on cancer awareness on breast cancer. Further, he said to see that people are aware of the signs and symptoms of breast cancer, but today we are victims in the age group of 40 to 60 and 70, he said. Dr. Manzoor gave the overall overview of breast cancer and said that all should work together to create a national strategy for awareness and early detection of breast cancer that reduces the principles of research informed clinical practice. He said that breast cancer awareness is associated with individual and societal attitudes. Dr. Manzoor said that there is an alarming increase of 40% in cancer cases every year with breast cancer as per the latest data from State cancer registries of J&K. Breast cancer awareness is an effort to raise awareness and reduce the impact of breast cancer through education on symptoms and treatment. The goal of this programme is to raise the public's "breast awareness" for breast cancer, its detection, its treatment, and the need for a reliable permanent cure. He said that the need to put and share our resources, time, and technologies for the disease, treatment and prevention about breast cancer, he said. Dr. Manzoor also projected the launch of the breast cancer society and opening up at a breast of Indian Cancer Society Srinagar. Furthermore, Dr. Manzoor Ahmad Khan highlighted a comparative documentary on breast cancer, which was prepared by the Hon. "able vice-chancellor Prof

**Breast Cancer Awareness**

**1 in 8 women will be diagnosed with breast cancer in her lifetime**

**There are more than 2.3 million breast cancer cases in the world**

**1 in 8 women will be diagnosed with breast cancer in her lifetime**

**There are more than 2.3 million breast cancer cases in the world**

**Signs & Symptoms**

- Nipple discharge
- A lump or thickening in or near the breast or underarm
- A change in the size, shape or colour of the breast
- A change in the way the breast feels
- Swelling of the breast
- Pain in the breast
- Spontaneous asymmetry of the breast
- Itchy or flaking of the breast or around the areola
- Redness, warmth, or swelling of the breast
- A change in the way the breast feels

**Prevention Tips**

- EXERCISE
- TAKE VITAMIN D
- EAT ORGANIC
- DRINK LESS
- REDUCE STRESS
- KNOW THE SIGNS
- GET A THERMOGRAM

**Be Aware. Get Involved. Show Support.**



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# Need Scientific Solutions To Various Issues Of Local Importance: CS

## Launches 3 Online Services Of Science & Tech Dept



**Srinagar, April 7 :** Chief Secretary, Dr Arun Kumar Mehta today launched three online services in presence of Commissioner Secretary, Science and Technology, Saurabh Bhagat. These include Sponsored Research & Extension Programme, Support for Innovation & Patent Filing scheme, and Science Talent Promotion Scholarship Scheme.

All these schemes are offered by the J&K Science, Technology and Innovation Council (JKSTIC) and are primarily meant for inculcating the scientific culture among students/scientific community in particular and common masses in general.

Chief Secretary stressed the need for scientific solutions to various issues of local importance such as waste

management, biomass energy, plastic to fuel stressing need to run a waste to wealth campaign. He complimented the Science & Technology Department for establishing Industrial Biotechnology Parks, Sub Regional Science Centre, and instructed for establishment of various Centre of Excellences across UT of Jammu & Kashmir.

He enjoined upon the Department to collaborate with other departments for innovative solutions to problems faced by people in their day to day life. He said that Science and Technology should contribute to ease of living. He made out that our focus should be on innovations for larger public interest so that the knowledge actually gets transferred from lab to land. **[More on P11]**



The dignitaries about the documentary were very much satisfied. Mr. Nadeem Khan, IAS, CEO, JKSTIC, who was a guest of honor, said screening such initiatives are better in rural areas compared to urban hubs and it is therefore important to step up awareness for doing away with "breast" associated with discussing breast cancer, he said.



The event also witnessed the presence of Dr. Manzoor Ahmad Khan, the organizing secretary and Head of Department of Bioresources. He said that the department aims to link up research on cancer with the society and the current month-long programme is a step in that direction. He also stated for the department, research and medical institutions and developing a comprehensive strategy on cancer awareness on breast cancer. Further, he said to see that people are aware of the signs and symptoms of breast cancer, but today we are victims in the age group of 40 to 60 and 70, he said. Dr. Manzoor gave the overall overview of breast cancer and said that all should work together to create a national strategy for awareness and early detection of breast cancer that reduces the principles of research informed clinical practice. He said that breast cancer awareness is associated with individual and societal attitudes. Dr. Manzoor said that there is an alarming increase of 40% in cancer cases every year with breast cancer as per the latest data from State cancer registries of J&K. Breast cancer awareness is an effort to raise awareness and reduce the impact of breast cancer through education on symptoms and treatment. The goal of this programme is to raise the public's "breast awareness" for breast cancer, its detection, its treatment, and the need for a reliable permanent cure. He said that the need to put and share our resources, time, and technologies for the disease, treatment and prevention about breast cancer, he said. Dr. Manzoor also projected the launch of the breast cancer society and opening up at a breast of Indian Cancer Society Srinagar. Furthermore, Dr. Manzoor Ahmad Khan highlighted a comparative documentary on breast cancer, which was prepared by the Hon. "able vice-chancellor Prof

Daily Headlines Today team in general and its editor in chief S. Jahangir Bukhari was also appreciated for month long extensive coverage of the Breast Cancer Awareness Campaign by Department of Bioresources University of Kashmir







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Department Of Science & Technology  
Govt. of Jammu & Kashmir