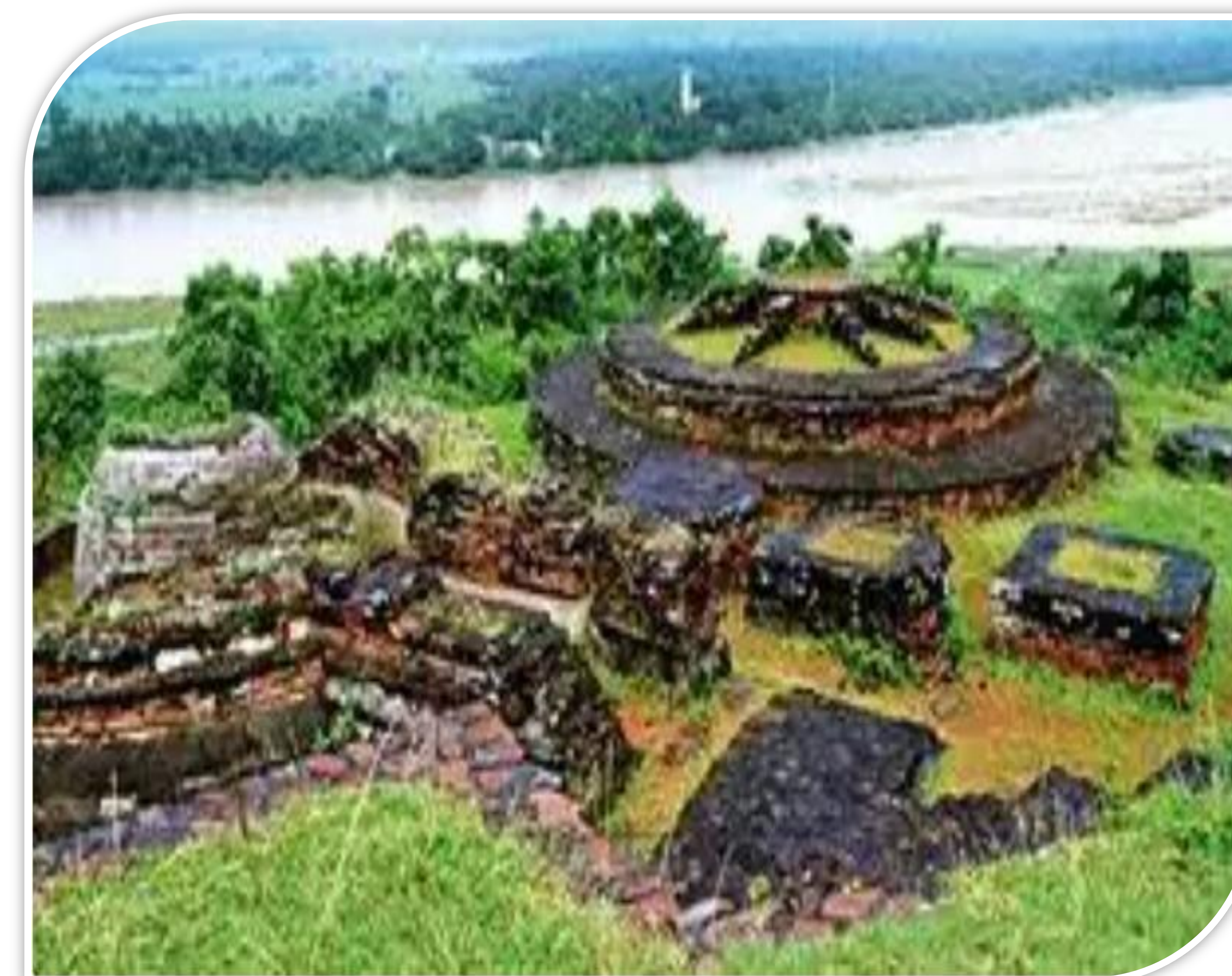


CSIR IN MEDIA



CSIR

**NEWS BULLETIN
21 TO 25 APRIL 2021**



IAF airlifts medical equipment to Ladakh to augment Covid-19 testing capacity

CSIR-IIIM

24th April, 2021

The Indian Air Force (IAF) on Saturday airlifted to Ladakh medical equipment weighing 1,700 kg, including bio-safety cabinets and centrifuges, which will help augment COVID-19 testing facilities in the union territory, officials said. The Council of Scientific and Industrial Research-Indian Institute of Integrative Medicine (CSIR-IIIM) in Jammu provided the equipment.



"The IAF's Chinook and AN-32 helicopters airlifted a payload of 850 kgs each, comprising a total of four bio-safety cabinets, two centrifuges and two stabilizers to Leh and Kargil. The items worth over Rs one crore were handed over by CSIR-IIIM Jammu for the UT of Ladakh," Jammu-based Defence PRO Lt Col Devender Anand said.

Last year, CSIR-IIIM director D S Reddy had promised the equipment to Ladakh in collaboration with Sun Pharma as part of its corporate social responsibility to augment COVID-19 testing capacity in the union territory's two districts -- Leh and Kargil.

The Union Territory of Ladakh has recorded 152 new COVID-19 cases, taking the infection count to 13,089, according to an official bulletin on Saturday. Ladakh had recorded a total of 135 COVID-related deaths -- 91 in Leh district and 44 in Kargil district -- since the outbreak of the pandemic last year.

Published in:

[Business-standard](#)

Department Of Biotechnology Organizes Public Webinar On The “Genome Sequencing Of SARS-CoV-19”

CSIR-IGIB

24th April, 2021

New Delhi: In the backdrop of reports of emergence of variants of the SARS-CoV-2, in the UK and some other parts of the world, the Government of India had established a national multi-agency consortium, Indian SARS-CoV-2 Genomic Consortium (INSACOG) in December 2020, consisting of ten laboratories of the Department of Biotechnology, Council of Scientific and Industrial Research (CSIR), Indian Council of Medical Research (ICMR) and Ministry of Health & Family Welfare (MoHF&W) with the overall aim of monitoring the genomic variations in the SARS-CoV-2 on a regular basis. The responsibility to correlate the clinical aspects and coordinate the collection of samples from states, for this purpose, was provided to National Centre for Disease Control (NCDC), MoHFW. INSACOG has a data repository at IGIB, New Delhi and NIBMG, Kalyani.

For improving the understanding of the nuances of SARS-CoV-2 genome sequencing and its public health relevance in the context of the current pandemic, the Department of Biotechnology yesterday conducted a public webinar on the “Genome Sequencing of SARS-CoV-19“. The webinar aimed at demystifying the science behind mutations in the viral genome, viral genome sequencing, and public health implications of the mutations in the viral genome. A panel of experts from various reputed institutes & organisations discussed different aspects of genome sequencing and highlighted the importance of sequencing the Genome of SARS-CoV-19, and the work done by the Indian SARS-CoV-2 Genomics Consortium in ascertaining the presence of variants of SARS-CoV-2, establishing sentinel surveillance for early detection, and determining the genomic variants in the unusual events/trends.

Dr Suchita Ninawe, Adviser/ Scientist -G, DBT welcomed all the experts and the participants to the public webinar. She also given an overview about the Genome Sequencing of SARS-

CoV-19 and highlighted that this webinar aims at simplifying the science behind mutations and genome sequencing of SARS-CoV-19 for easier understanding of common man.

Dr Renu Swarup, Secretary, Department of Biotechnology in her address said that the main purpose of this webinar was to make it easier for the public to understand the need for viral genome sequencing, the process through which viral variants emerge naturally and their relevance in terms of various aspects of public health.

Dr Shekhar C. Mande, Secretary- DSIR & DG-CSIR in his opening remarks explained different mutations and virus strains. He further said that mutations arise through spontaneous errors during the replication of the virus. Some mutations may allow the virus to survive better and evade antibody response and therefore can provide selective advantage to the virus.

Following the opening session, a technical session was held which was chaired by Dr Shahid Jameel, Chairperson of the Scientific Advisory Group of the INSACOG. In this session, eminent panellists discussed a range of themes, from virus structures to simplifying mutants, different aspects of mutation, understanding of the so-called double and triple mutations, and the public health relevance of all this.

Dr Saumitra Das, Director, NIBMG, Kalyani underscored the need for viral sequencing and gave a brief overview of the INSACOG activities. He talked about the different SARS-CoV-2 variants circulating globally and the reported spike gene mutations. Dr Sujeet Singh, Director NCDC, in his presentation talked about monitoring the genomic variations in the SARS-CoV-2 for understanding the mutations, the variants and their potential public health significance.

Dr. Anurag Agrawal, Director, CSIR-IGIB explained the process of selection of virus mutants and described the major variants which have been identified from different parts of the country. He also mentioned that the information generated by the INSACOG is being shared globally using the global databases like GISAID.

Dr Sudhanshu Vрати, Director-RCB explained the difference between the commonly used terms: mutant, variant, variant of interest and Variant of Concern (VoC). He said that a VoC may have higher transmissibility or can cause a more severe disease; or can show reduced neutralization by antibodies.

Dr. Priya Abraham, Director, ICMR-NIV spoke about how RT-PCR has been the corner stone of diagnostic ever since the pandemic started. She mentioned that RT-PCR system being used in the country is able to detect all the variants which have so far been reported from the country. She further pointed out some of the reasons behind the false-negative RT-PCR test reports, which could be sampling error, delays in the screening of individuals and non-adherence of Standard Operating Procedures during transportation of the kits. .

The session was later opened to the media persons and general public for the questions which were responded to by the Experts. During the Q&A session 'Virus mutation' and interlinked issues have been further clarified. It was well emphasized that there is no scientific term such as "double" or "triple" mutation of virus. The terms double or triple mutants are colloquial and these are used to emphasize features of a variant. Double or triple mutations as used recently in various media reports, were to signify the number of mutations which escape immunity (immune escape mutant). These variants otherwise harbour 15 lineage defining mutations. However, clinical correlations and epidemiological correlation data determines if the mutation of the virus is a Variant of Interest (VoI) or Variant of Concern (VoC). Current data does not suggest that the surge is solely due to any one variant or any one factor.

The reasons for surge are primarily due to:

- 1. Non-adherence to COVID Appropriate Behaviors**
- 2. Rising immune escape mutations and some that also increase infectivity.**
- 3. Declining immunity**

It is advisable while reporting on mutants, standard WHO's Uniform variant nomenclature be used (for example- B.1.617) when referring to such variants.

The webinar ended with formal vote of thanks by Dr. Onkar Tiwari, Scientist, DBT to all the expert panelists for this informative session that simplifying the science behind mutations and genome sequencing of SARS-CoV-19.

The webinar was seen by more than 1800 viewers through Gotwebinar and YouTube. It also has considerable number of participants from media.

Published in:

Indiaeducationdiary

Coronavirus | U.K. variant more prevalent in northern States

CSIR-IGIB

24th April, 2021

The UK variant of the coronavirus, marked by increased infectivity, is distinctly more prevalent in several northern and central Indian States when compared to the southern ones, a perusal of genome sequencing data from the National Centre for Disease Control (NCDC) shows. Two scientists from Central government labs that analyze national genome sample data told The Hindu that large gatherings in Punjab have significantly amplified transmission of the variant in Delhi, Uttar Pradesh, Haryana. Punjab has a very unique trajectory in the rise of the B.1.1.7. There were at least four major clusters (super spreader events) marriages, farmer protests from February 1 to February 28, that are responsible for large spikes. By March, Delhi was warned about a possible 15,000 critical cases,” Dr. Sujeet Singh, Director, NCDC told The Hindu.

The NCDC is the coordinator of genome sequencing data from the Indian Sars Cov2 Genome Consortium (INSACOG) — a group of 10 labs across India that is collecting a fraction of coronavirus positive samples from international travelers, their contacts as well from the local communities to check for patterns in mutations — especially known variants of concern (VoC) such as the UK variant, the South African variant (B.1.1.35) and the Brazil variant (P.1).

Though only a fraction — about 15,000 samples — of India’s caseload has been sequenced, data from 1,757 samples showed that in the northern States the proportion of the UK variant in the community was significantly higher than those isolated from international travelers and their contacts. The UK variant, according to the data available with The Hindu, comprises 1,666 of the 1,757 samples.

In Punjab, for instance, there were eight instances of the UK strain among international travelers and their contacts but 543 in the wider community; in Delhi this ratio was 91: 324.

In Himachal Pradesh and Jammu and Kashmir, there were no reported variants in those with an international travel history but 26 and 23 cases respectively in wider community. In Haryana the ratio is 6:13. In Madhya Pradesh, the ratio was 4:51 and in Chattisgarh 1:14.

However, such a pattern doesn't hold, in fact is directly reversed, in Maharashtra, Kerala and Tamil Nadu — other States with large case loads. There were more instances of the UK variant in the travelers and their contacts than in the wider community. In Maharashtra the ratio was 35: 29; in Kerala its 15:1 and in Tamil Nadu 14:1, in many instances diametrically opposite to the northern situation.

“What is unambiguous is that the UK variant was imported into Delhi and Punjab and that's not surprising because of the presence of the international airport and there were significant amplifying events in Punjab that also spread to Delhi,” said Dr Anurag Agrawal, Director, CSIR-IGIB, “It could have been mahapanchayats, the farmer gatherings in Delhi, weddings. The only way to establish this is to check with donors of all these samples if they were present at protests.”

The UK variant — by the far the most dominant Variant of Concern — is competing against the Indian strain (B.1.617), he said and is fairly established in North India. In the UK too, when it was first identified, it was characterized by an increased instances of breathlessness and demand for oxygenation. However the ongoing catastrophe in Delhi is less attributable to the variants per se and more to the number of affected people and the low per capita availability of beds, Dr. Agrawal added.

The INSACOG initiative was formally launched only in December and has sampled less than 1% of its target genomes as opposed to 5%. There is wide disparity in the number and quality of samples that are provided by States to the labs for analysis. For instance, Uttar Pradesh, India's largest State has 17 instances of the UK variant according to the data Dr. Singh

showed and no samples among the wider community. Dr. Agrawal, however, confirmed that more samples analyzed (data which is unpublished) from U.P. showed rising numbers of the UK variant.

While India grapples with an unprecedented rise in infections, experts have said that the entry of newer more infectious variants coupled with normalization of public life and massive gatherings — religious and political — have given second wind to the pandemic that has caught India unprepared. In March it was reported that 81% of coronavirus positive samples comprised the UK variant and the hospital infrastructure of the state like Delhi, Haryana and Punjab is overwhelmed.

Published in:

[Thehindu](https://www.thehindu.com)

Set up more private centers before vaccination of people in 18-45 age group begins: Centre to states

CSIR-CBRI

24th April, 2021

NEW DELHI: Ahead of the roll-out of vaccination of people aged between 18 and 45 from May 1, the Centre on Saturday asked states to register additional private vaccination centers and ensure effective crowd management at sites and stressed on inoculation through "only online registration" for beneficiaries in the age bracket.

Union Health Secretary Rajesh Bhushan and Empowered Group on Technology and Data Management to Combat COVID-19 chairman R S Sharma held a high-level meeting on Saturday to guide states and union territories on effective implementation of the new vaccination strategy (Phase-3) and to review their augmentation plans so as to strengthen the existing hospital and clinical treatment infrastructure for COVID-19 patients.

With regards to the Phase-3 vaccination strategy from May 1, the states were advised to register additional private COVID-19 Vaccination Centers (CVCs) on mission mode by engaging with private hospitals, hospitals of industrial establishments, industry associations, etc., the health ministry said in a statement.

They have also been asked to monitor the number of hospitals that have procured vaccines and have declared stocks and prices on the COWIN portal and schedule vaccination for the eligible populations for providing adequate visibility of vaccination slots on COWIN, the ministry said.

The states and UTs were asked to prioritize decisions on the direct procurement of vaccines by the State/UT Government and publicizing about the facility of 'only online registration' for the 18-45 age group.

They were also asked to train vaccination center staff about vaccination, adverse event following immunization reporting and management, use of COWIN and to coordinate with law-and-order authorities for effective crowd management at sites.

On infrastructure augmentation for effective clinical treatment of the hospitalized COVID-19 patients, the states and UTs were advised to review their existing hospital and other treatment infrastructure in light of the daily new case, daily fatality and those that would require hospitalization.

"To prepare and implement a Comprehensive Plan for Augmentation, the States were advised to identify additional Dedicated COVID-19 hospitals and prepare field hospital facilities either through DRDO, CSIR or similar agencies in the public and private sector," it said.

The Centre asked states to ensure adequacy in terms of oxygen-supported beds, ICU beds and oxygen supplies, set up centralized call center-based services for allocation of beds, deploy of requisite human resources with proper training and mentoring of doctors and nurses for management of patients and to strengthen ambulance services.

The states were also advised to maintain a real-time record for available beds and make it easily accessible to general public and create guidelines and enable states to take over private health facilities to provide COVID-19 care.

They were also asked to expand designated COVID-19 care facilities for isolation of asymptomatic and mild symptomatic patients so that all those who either cannot isolate at home and/or are willing for institutional isolation, have access to the requisite space and care.

The states were also asked to provide tele-medicine facilities for patients who are isolated at home and ensure adequate availability of oxygen, ventilators and intensive care under trained doctors, as well as access to steroids and other drugs as appropriate step up creation of in-hospital oxygen plants in large hospitals.

"Pay fair and regular remuneration to ASHAs and other frontline workers who are being engaged for COVID-19," the health ministry said in the statement. The ministry cited various steps taken by the central government to augment hospital infrastructure in the states and UTs.

"The plan to set up temporary COVID Care facilities and makeshift hospitals, including ICU beds, in coordination with the DRDO and CSIR-CBRI was re-iterated. The State/UTs were guided to co-ordinate with corporate entities/PSUs/ government departments for their CSR funds to facilitate setting up makeshift hospitals and temporary COVID care facilities," the ministry said.

"Cooperation with National Cooperative Development Corporation (NCDC) for repurposing healthcare facilities (spread across 18 regional offices) for creation of COVID facilities was also advised. They were also advised to use Railway Coaches for management of mild cases; details of availability of 3,816 such coaches, across 16 Zones of Railways have been shared with the States," the health ministry said.

Published in:

[Newindianexpress](https://www.newindianexpress.com)

Cost-Effective & Efficient Technology For Recycling Aluminium Scraps Developed

CSIR-NIIST

24th April, 2021

New Delhi: A team of Scientists has developed a cost-effective technology to recycle Aluminium scraps efficiently minimizing material losses in the process, which can be used by small and medium scale industries.

Dr. C. Bhagyanathan, Associate Professor from Sri Ramakrishna Engineering College, Coimbatore along with Dr. P. Karuppuswamy, Professor Sri Ramakrishna Engineering College and Dr. M. Ravi, Sr. Principal Scientist, CSIR-NIIST Trivandrum developed a technology system that could combine value added / non-value added and hazardous / non-hazardous wastes, Aluminium alloys and assorted scraps for industrial applications and recycle them efficiently. The technology was developed with support from the Advanced Manufacturing Technologies program of the Department of Science & Technology (DST), Government of India aligned with the 'Make in India' initiative. The developed technology can be used in tiny & cottage Industries, Small Scale Industries and MSME Aluminium foundries and recycling industries.

Conventional Aluminium recycling techniques require high investment in processing and generate dangerous residues in form of ferrous (Fe), tin (Sn), lead (Pb) and burning of Mg in the crucible red hot. The process also involves manual separation and sorting of magnesium alloys, ferrous alloys and high silicon alloys etc. Moreover the separated magnesium is hazardous to the environment. Melting of these alloys are in the form of graded Aluminium scraps. These industries sell the ingots based on chemical composition of the melt.

The new technology increases the purity and quality of recycled Aluminium melt. The technology involves washing the basic inputs — assorted Aluminium scraps (mixed), drying and preheating, removal of basic impurities in melting furnace, degassing in nitrogen

atmosphere and addition of alloying elements in holding furnace, filtering (refining) and pouring the metal into the mold. Three problems are addressed during the process. Separation of iron and silicon materials, preventing the loss of magnesium and adding of other elements like chromium, strontium, zirconium and so on to improve the mechanical properties under the prescribed limits. The conversion rate in the existing technology is 54% and with the new technology developed, the conversion rate has been increased by 70% to 80% depending on various cases of scraps dealt with.

The technology is in 7th stage of Technology Readiness Level (TRL) and Dr. C. Bhagyanathan's team has collaborated with several industrial partners in Coimbatore like Roots Cast, Lakshmi Balaji Die Cast, Enkey Engineering Works, Adhrash Line Accessories, Super Cast, Star Flow Tech, to cast various components like electrical housing bracket, automobile casings and valve components, motor housing bracket, motor impeller components etc., for further expansion. The team is also in processes of filing a patent for the technology and has also transferred it to Swayam Industries, Coimbatore, Servo Scientific Equipment's, Coimbatore.

The technology is also equipped with advanced Aluminium Melting and Holding furnaces, a degassing unit, filtering setup, an industrial washing machine and Oven.

Dr. C. Bhagyanathan's team is further working on recycling of Aluminium to suit medium and large scale industries. They are in the process of mapping the results obtained with the small scale furnaces to the large scale furnace and conducting studies on purity post Aluminium refining. This technology will be further upgraded with an advanced Aluminium induction+ furnace capable of heat recovery could be successfully implemented in the small-scale industries.

Published in:

Indiaeducationdiary

CCMB's dry swab RT-PCR test kits to hit market soon

CSIR-CCMB, NEERI

23rd April, 2021

CSIR-Centre for Cellular & Molecular Biology (CCMB) has offered to provide necessary technical know how and training to the healthcare personnel in handling the dry swab RT-PCR testing or 'DAR-PCR' for COVID-19 on Friday.

Director Rakesh Mishra informed that the dry swab test is extremely useful, particularly in the current pandemic surge when there is a need for increasing the number of testing. It has been developed in-house last year and has been tested extensively across various labs as well as hospitals in the last few months and is awaiting regulatory clearances.

It found further validation through a second advisory from the Indian Council of Medical Research (ICMR), paving the way for quick release of this method into the market. "There is no specific technique, but we are ready to help to familiarize healthcare workers on this method, which is cheaper, safer and faster," he said.

How the dry swab test scores over the traditional method of RT-PCR tests is in how the sample is stored after taking nose and throat swabs are packed and transported for testing to identify a positive or a negative patient without the need for expensive liquid Viral Transport Medium (VTM).

If the original RT-PCR test results take upto 24-48 hours or more, the dry swab test result come out in just three hours. It is because "the collection of the swab in the liquid and RNA isolation steps are dispensed with," say CCMB research scholars Sai Uday Kiran and C. Gokulan "It is very user friendly as it makes easy for the collection of samples for testing. Since no liquid is involved, there is no spillage either. We have already conducted 50,000 tests using the dry swabs successfully," testified CSIR-National Environment Engineering Research Institute (NEERI) scientist and head of the COVID testing center Krishna Khairnar.

Dr. Mishra said interested healthcare professionals or labs can mail to director@ccmb.res.in or somdattakar@ccmb.res.in, or call on 040-27160789/9773468303, for further details.

A full fledged kit developed in collaboration with the Apollo Hospitals and Meril Life Pvt Ltd., is under validation from the Drug Controller General of India (DGCI) and these could be released into the market in the coming days, he added.

Published in:

Thehindu

Preliminary study shows Covishield protects against double mutant strain: CCMB director Rakesh Mishra

CSIR-CCMB

23rd April, 2021

NEW DELHI: Preliminary results of a study have shown that Covishield vaccine protects against the B.1.617 variant of coronavirus, also known as the double mutant strain, Rakesh Mishra, director of the Centre for Cellular and Molecular Biology said on Thursday.

He said the study was conducted by the CCMB, an institute of the Council for Scientific and Industrial Research (CSIR).

"Very preliminary but encouraging result: Covishield protects against #B1617. Early results using in vitro neutralization assay show that both convalescent (prior infection) sera and Covishield-vaccinated sera offer protection against the B.1.617 variant, aka Double Mutant," Mishra tweeted.

However, Mishra was not available for further details.

Covishield, the Oxford-Astrazeneca COVID-19 vaccine, is manufactured by the Serum Institute of India (SII).

The B.1.617 variant contains mutations from two separate virus variants, namely E484Q and L452R.

The double mutant strain was found in saliva samples collected from Maharashtra, Punjab, and Delhi.

There is apprehension among experts that the new variant could also increase infection rates and easily surpass immune defenses.

Published in:

[Newindianexpress](https://www.newindianexpress.com)

CSIR-CMERI transfers Oxygen Enrichment Unit tech to Hyderabad company

CSIR-CMERI, NAL

23rd April, 2021

Research on to develop pulse dose mode capable of sensing the breathing pattern of a patient and then deliver during the inhalation only

To meet the oxygen supply chain problem of transportation and storage risks related to oxygen cylinders, CSIR-CMERI has transferred its Oxygen Enrichment technology to the Hyderabad-based Apollo Computing Laboratories



Harish Hirani, Director, CSIR-CMERI, in a statement said the unit requires easily available oil-free reciprocating compressor, Oxygen grade zeolite sieves and pneumatic components. It is capable of delivering medical air in the range of up to 15 LPM with oxygen purity of more than 90 per cent. If required, this unit can even deliver up to 70 LPM at a purity of around 30 per cent and can safely be placed in the isolation ward of the hospital for patients who are in dire need of Oxygen.

This helps in accessibility of Oxygen in remotest places and widest points of need. The Outreach Factor of Oxygen gets multiplied through the adoption of this in-situ and decentralized generation of Oxygen.

Pulse dose mode

He said further research is going on to develop a pulse dose mode which is capable of sensing the breathing pattern of a patient and then deliver during the inhalation only. This mode is supposed to reduce the oxygen demand by around 50 per cent when compared with the current version of continuous mode.

CSIR-CMERI has already invited Expression of Interest to manufacture Oxygen Enrichment Units through Technology Transfer. Jaipal Reddy of Apollo Computing Laboratories said that the first prototype would be developed within 10 days and the production would be started from the second week of May. The current manufacturing capacity is of 300 units per day which may be augmented on demand.

Mini ICUs

He also informed that their company is planning to develop the unit both as standalone as Oxygen Enrichment Unit as well as with integrated version with 'Swasth Vayu' technology of CSIR-NAL. Reddy said the unit is required as 'Mini ICUs' at small hospitals and isolation centers and at remote villages and places. By use of Oxygen Concentrators, the optimum utilization of oxygen to the needy patients may also be ensured. If this facility is provided to Covid patients at initial stage, their visits to hospitals and further ventilator support may be avoided in most of the cases.

Published in:

[Thehindubusinessline](https://www.thehindubusinessline.com)

North Andhra Pradesh's link to the Romans & South East Asia

CSIR-NIO

22nd April, 2021

VISAKHAPATNAM: Marine scientists of National Institute of Oceanography (NIO) and from the department of archaeology, Odisha have carried out explorations in north-coastal Andhra along the Vamsadhara river at Kalingapatnam, Dantapur and Salihundam, which were sites of ancient ports, trade centres and Buddhist settlements, with significant contacts with foreign countries.



Archaeological exploration and excavations of art objects, terracotta and stone ware, pottery, numismatic sources, Brahmi and Kharosthi inscriptions and Sanskrit, Prakrit literature mention the existence of a regional network of internal trade here over 2,000 years ago, which led to the beginning of international maritime trade in the Indian Ocean region. The findings also suggest Buddhism played a significant role in spreading Indian culture overseas.

A study titled 'Archaeological explorations of Kalingapatnam, Dantapur and Salihundam on the east coast of India' was undertaken by marine scientists Sila Tripathi and R Mani Murali from CSIR-NIO and archaeologist Rudra Prasad Behera and published in in 2019.

Earlier, excavations in Salihundam had yielded remains like megalithic black and red ware, inscribed pottery, red polished ware, terracotta beads, single and double mast ship motif coins issued by the Satavahana rulers between 145 CE to 194 CE, punch-marked coins, Roman coins of Tiberius (14-37 CE), Satavahana and Puri-Kushan coins, Buddhist sculptures and stupas,

viharas and chaityas dating back to the 3rd century BCE to 8th century CE. Three divisions of Buddhism, such as the Hinayana, Mahayana and Vajrayana are documented at Salihundam. These finds indicate that Salihundam port had trade relations with the Romans and Southeast Asia.

In another study prior to an underwater survey by NIO, a single-hole stone anchor from Kottapatnam port and lagoon site of Nellore was found. Here, Chinese pottery and an early 15th century coin of Emperor Taizong of the Ming dynasty, with Chinese script and a square hole, signify Kottapatnam had contacts with China from the 3rd century BCE until 15th century CE.

Published in:

[Timesofindia](https://www.timesofindia.com)

COVID genome sequencing hit by sample shortage

CSIR-IGIB, CCMB

21st April, 2021

Three months into the formation of the Indian SARS-CoV-2 Genomics Consortium (INSACOG) of top 10 regional labs of Council of Scientific & Industrial Research (CSIR), Department of Biotechnology (DBT) and Indian Council of Medical Research (ICMR) for genomic surveillance of SARS-CoV-2, they are yet to get sufficient number of samples from COVID-positive patients from both government and private healthcare centres.

“In the last few months, the funds have come by and necessary reagent purchases have been made. Coordination among the labs is improving too. However, we are not getting the required number of samples. It is about 50-60 samples a day when we can do genome sequence up to 1,000 samples. Efforts are being made for samples to be received by the labs to sequence the maximum and get the best outcome of that,” discloses CSIR-Centre for Cellular & Molecular Biology (CCMB) director Rakesh Mishra.

CCMB and Centre for DNA Fingerprinting and Diagnostics (CDFD) are among the 10 labs chosen by the Centre for genome sequencing of COVID-19 samples.

“We are supposed to get 5% of the new positive samples collected from various districts, mandals and even villages from across Telangana, Andhra Pradesh, parts of Karnataka and Goa. But, we have been receiving samples from limited geographical locations whereas the supply from the remote places is not there. It is also because the government health machinery has once again been stretched to the limit in the second wave,” he points out.

States like Karnataka and Goa seem to have preferred sending the COVID samples to the local labs. “Here, we need the help of governments and local bodies to secure more samples from those testing positive. We also need samples from private hospitals where people are getting admitted for effective and continuous monitoring,” says Dr. Mishra.

The consortium had, so far, genome sequenced up to 14,000 samples across the country finding “large number of variants of which 2,000 variants fall into the ‘concerned’ category”. “The very nature of the virus is to mutate and check into other nearby hosts. We have to continuously keep monitoring the variants to look for any potent strains which may make the available vaccines redundant or cause more rapid transmission. For that, we need to enhance our sample collection and also sequencing numbers,” he affirms.

The exercise is to ensure not a single variant arising from any remote corner escapes the notice of scientists. And, if one such dangerous variant is sighted, the particular area can be quarantined to keep it under check. “We are currently studying the double mutation variant and results should be out soon. Genome sequencing of the COVID samples will also establish whether the spike is due to superspreader events, look for high mortality, morbidity trends and co-relate with the associated symptoms. Reinfections, too, can be effectively monitored through this process,” says the CCMB director.

Other labs involved in genome sequencing are NIBMG Kalyani, ILS Bhubaneswar, ICMR-NIV Pune, NCCS Pune, InStem/NCBS Bengaluru, NIMHANS Bengaluru, CSIR-IGIB Delhi, and NCDC Delhi. Dr. Mishra had already stated that double mutation or ‘B.1.617’ variant is largely prevalent in Maharashtra (up to 50%) and UK variant in Punjab (up to 50%). These are found to be 5-10% prevalent in other places and it could mean the current spike is likely due to the commonly prevalent virus strains and lack of COVID-appropriate behavior.

Published in:

[Thehindu](https://www.thehindu.com)

CSIR-CSMCRI

21st April, 2021

The news related to upcoming webinar on COVID19 preparedness, awareness, apt behavior and importance of vaccination etc. which is scheduled for 22nd April 2020 and shall be telecast through Facebook and YouTube.

કોવિડ-૧૯ પર જનજાગૃતી માટે કાલે વિશેષ વેબીનાર

ભાવનગર, મંગળવાર | સાથે સેન્ટ્રલ સોલ્ટ દ્વારા તા. ૨૨ના રોજ ભાવનગરની જનતા કોવિડ-૧૯ના વિષય ઉપર જાગૃતી ફેલાવવાના આશય માટે ઓનલાઈન વેબીનારનું વિશેષ આયોજન કરાયું છે.

ઈન્ફેક્શનથી બચવાના ઉપાયો તથા બાળકો-મહિલાઓને ચેપથી બચાવવા હોમીયોપેથીનું મહત્વ ઉપર વક્તવ્ય

સેન્ટ્રલ સોલ્ટ મરીન રીસર્ચ ઈન્સ્ટીટ્યુટ, ભાવનગર દ્વારા આવતી ૨૨ મી એપ્રિલ, બપોરે ૪.૩૦ વાગે ઓનલાઈન માધ્યમથી ભાવનગર તથા સમગ્ર ગુજરાતની જનતાની જન જાગૃતિ માટે કોવીડ-૧૯ને યોગ્ય વર્તન, નિવારણ પગલાં અને રસીકરણના મહત્વ ઉપર ગુજરાતીમા વેબનાર યોજનાર છે. ભાવનગરની તથા ગુજરાતની જાહેર જનતાને આ મહત્વના કોવીડ-૧૯ ના ઓનલાઈન વેબનાર માં ફેસબુક તથા યુટ્યુબના માધ્યમથી જોડાવા માટે અનુરોધ છે. આ વેબનારમાં કોવીડ-૧૯ના ઈન્ફેક્શનથી બચવા, (ઈમ્યુનીટી કેવી રીતે

વધારવી, વેક્સીનેશનનું મહત્વ તથા કોરોનાથી બચવાના બીજા ઉપાયો અને બાળકો તથા િઓને ચેપથી બચવામાં હોમીયોપેથીનું મહત્વ વિષય બે ખ્યાતનામ ડોક્ટરો દ્વારા ચર્ચા અને વક્તવ્ય આપવામાં આવશે.

સંસ્થાના ડાયરેક્ટર, ડા. કમલ શ્રીનિવાસને જાહેર જનતાને આ વેબીનારમાં જોડાવવા અને તેનો પૂરતો લાભ લેવા જનાવેલ. આ વેબીનારમાં આંખના સર્જન તથા અક્ષરદીપ આઈ હોસ્પિટલ ચલાવતા વિખ્યાત ડો. જગદીપ એમ. કાકડીયા દ્વારા કોવીડના નિવારણના પગલાં માટે મીથીલીન

બલ્યુ, કલોરોહેકિસડાઈન તથા થાઈમોકિવનોન નો ઉપયોગ તથા કોવીડને યોગ્ય વર્તન, તથા રસીકરણના મહત્વ તથા રિસર્ચ ઉપર વક્તવ્ય તથા માહિતી આપવામાં આવશે. આ ઉપરાંત, ભાવનગરના જાણીતા અને પ્રયાશ હોમીયોપેથી તથા કેન્સર રીસર્ચ ફાઉન્ડેશન ના મહિલા હોમીયોપેથીક ડોક્ટર, ડો. શ્રુતી શાહ દ્વારા કોવીડ-૧૯ ના ચેપથી બચવા ઈમ્યુનીટી કેવી રીતે વધારવી, રસીકરણ મહત્વ, બાળકો અને િઓને ઈન્ફેક્શનથી બચવાના ઉપાયો તથા હોમીયોપેથીનો સંભવિત સ્થાન ઉપર પોતાનું વક્તવ્ય અપાશે.

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