# CSIR IN MEDIA

## CSIR

## NEWS BULLETIN
## 16 TO 20 MARCH 2021

# SARS-CoV-2 Genomics Consortium set up for surveillance

CSIR-CCMB-IGIB

20th March, 2021


The Indian SARS-CoV-2 Genomics Consortium (INSACOG) has been set up for genomic surveillance of SARS-CoV-2 across the country. In a written reply in Lok Sabha on Friday, Harsh Vardhan, Union Minister for Science & Technology, Earth Sciences and Health & Family Welfare, said, "The consortium involves ten Regional Genome Sequencing Laboratories (RGSLs) – NIBMG Kalyani, ILS Bhubaneswar, ICMR-NIV Pune, NCCS Pune, CSIR-CCMB Hyderabad, CDFD Hyderabad, InStem/NCBS Bengaluru, NIMHANS Bengaluru, CSIR-IGIB Delhi, and NCDC Delhi."

The RGSLs are currently utilising their internal funds and resources for undertaking the activities of the consortium. The proposal for sanction of fund is under the financial appraisal process in the Department of Biotechnology.

In INSACOG, 10 laboratories were designated in India for Whole Genome Sequencing (WGS) with the objectives: to ascertain the current status of new variant of SARS COV-2 in the country; to establish a sentinel surveillance for early detection of genomic variants with public health implication; to determine the genomic variants in the unusual events/trends (super spreader events, high mortality/ morbidity trend areas etc).

It was initially proposed to sequence five per cent of all positive samples from each state in order to identify potential outbreaks and related strains as part of continuous surveillance with priority given to Covid-19 laboratories/ hospitals in urban areas and tertiary care

District Hospitals as per the defined Standard Operating Procedure (SOP).

As of March 10, 2021, a total of 19,092 RT-PCR positive samples for SARS CoV-2 have been received from various states/UTs (across the 10 designated RGSLs), in which 4869 samples have been processed.

Among the processed samples, 284 samples have been detected to be positive for the 'UK strain' and 11 samples positive for the 'South African strain' and one sample positive for the 'Brazil strain'.

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Thehindubusinessline

# Coronavirus | Need to expand scope of vaccination beyond identified groups, says CSIR-CCMB Director

CSIR-CCMB

20th March, 2021

The two vaccines for coronavirus — Covishield of Oxford University-AstraZeneca and made by Serum Institute of India (SII) and Covaxin made by Bharat Biotech — cleared by the regulatory authorities and the government should be made available, if sufficient stocks are at hand, to all those coming forward for the jab, suggests CSIR-CCMB Director Rakesh Mishra.

"Already more than four crore people have taken the vaccine and if we can consider it to be a safety trial, it has been successful. We need to increase the timings and open up for allowing vaccinations outside the hospitals too," he maintained in a recent exclusive interaction. In the first part of the interaction, which was published on March 18, Mr. Mishra explained how the surge in COVID-19 cases is due to social behaviour and not any new virus variant.

"If the vaccines are available and the identified age groups are not coming forward, it is better to invite all those interested as it is not wise to waste doses and vials or delay for those willing to take," he affirmed. Vaccine hesitancy and the 'weird' stories about dangers of vaccination coming even from the advanced nations is "deplorable", he said.

First, he advises that 'politics' of any hue should be shunned and people should be informed that there is evidence of antibodies against the virus lasting for several months as the number of reinfections have been negligible so far.

"We can also be reasonably assured that the vaccine will give us a year's protection or maybe more because the body's memory cells are capable of fighting any intruder later on. So, there is no need to fret over whether we need another dose next year or if something will happen to the bodies five years later," said Mr. Mishra.

"While we cannot completely rule out that nothing will happen years later, we have to remember that these two vaccines have been made through time-tested reliable platforms that have been proven to be safe and effective in the past," he explained.

Taking the vaccine is "our social responsibility", because otherwise, unwittingly and asymptomatically, one may spread the infection to someone more vulnerable. "The safety part has been proven, let's not get into the nitty-gritty. If we do not take the vaccine and do not strictly follow disciplined ways of social vaccine, one more lockdown is looming over us which could cause more devastation," warned the CCMB Director.

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Thehindu

CSIR-NBRI

20th March, 2021

# तीन हजार पार्क ग्रीन लंग्स बन रहे हैं: दुर्गा शंकर मिश्र

लखनऊ | प्रमुख संवाददाता

केन्द्रीय आवास एवं शहरी विकास मंत्रालय के सचिव दुर्गा शंकर मिश्र ने कहा कि हमारी संस्कृति वनों एवं प्रकृति से जुड़ी है। इनका संरक्षण अत्यंत आवश्यक है। इसीलिए केन्द्र सरकार ने अमृत योजना में 500 शहरों में लगभग 3000 पार्क बनाए हैं। उन्हें ग्रीन लंग्स के रूप में विकसित किया जा रहा हैं। यह बात उन्होंने भारतीय वानस्पतिक सोसायटी के 43वें अखिल भारतीय वानस्पतिक सम्मेलन (शताब्दी समारोह) एवं भारतीय वनस्पति उद्यान सम्मेलन के उद्घाटन पर कही।

एनबीआरआई में विशिष्ट अतिथि सीएसआईआर के महानिदेशक डॉ. शेखर सी. मांडे ने कहा कि देश में जैव विविधिता के संरक्षण के लिए बहुआयामी दृष्टिकोण की आवश्यकता है। इस अवसर पर भारतीय वानस्पतिक सोसायटी के सचिव प्रो. सेशु लवानिया ने शताब्दी समारोह के अंतर्गत दिए जाने वाले पुरस्कारों की जानकारी दी।

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Dainik Jagran

CSIR-NBRI

20th March, 2021

# 'Holistic approach needed for biodiversity conservation'

All-India Botanical Conference of IBS and Indian Botanic Garden Conference underway at NBRI on Friday Pioneer

PNS ■ LUCKNOW

The joint '43rd All-India Botanical Conference of Indian Botanical Society (IBS) and Indian Botanic Garden Conference were inaugurated at NBRI on Friday. The theme of the conference is 'Sustainable development of plant resources and conservation of threatened plants in botanic gardens.

Secretary, Union Ministry of Housing and Urban Affairs, Durga Shanker Mishra was the chief guest at the inaugural function. "Our culture system has evolved in the forests and has always been nature-orientated. Therefore, its protection is very important for our life," he said. He said 3,000 parks have been built in 500 cities under the Central government's AMRUT scheme.

CSIR DG Dr Shekhar C Mande, who was the guest of honour, said a holistic approach is required for biodiversity conservation. He also appreciated the efforts of NBRI and IBS in promotion of botanical sciences. Organising secretary Dr TS Rana said that 300 delegates from different states are participating in the conference. There are six lead lectures, 74 oral presentations and 111 poster presentations scheduled in the conference. Besides, four medal lectures and three memorial lectures will also be delivered by different experts.

Secretary, IBS, Prof Seshu Lavania presented the report of the society and informed the gathering about the centenary celebrations of IBS. She also spoke about the felicitations by IBS. Lifetime achievement award, HY Mohan Ram award for excellence in teaching and advancement of plant sciences and PC Trivedi Medal award for editorial excellence will be given away to Prof SVS Chauhan (Agra), Prof Debashis Banerji (Devas) and Prof T Pullaiah (Anantapur), respectively. Director, Botanical Survey of India, Dr AA Mao informed the gathering about the GOI scheme for financial assistance of the botanic gardens to help them in conservation of plant diversity. He also talked about the Indian Botanic Garden Conference and its genesis. He said it is sponsored by the Union Ministry of Environment, Forest and Climate Change.

NBRI director Prof SK Barik also underlined the objectives of the conference. He said that expert members of Botanic Garden Committee will brainstorm and finalise the recommendations for improved implementation of guidelines for botanic gardens.

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The Pioneer

# CSIR-IIIM organizes one-day training programme on cultivation, marketing of Aromatic plants in Bandipora

CSIR-IIIM 19th March, 2021

Bandipora: CSIR- Indian Institute of Integrative Medicine (IIIM) on Thursday organised a day-long Awareness-cum-Training program on cultivation, processing and marketing of aromatic plants.

Additional Deputy Commissioner Zahoor Ahmad Mir inaugurated the programme and interacted with the farmers. He appreciated the efforts of CSIR IIIM with special mention of Director, CSIR – IIIM, Dr. D. Srinivasa Reddy for conducting such training programmes to develop skill and interest among poor farming community.

He urged the farmers to take advantage of such training programmes to improve and polish their skills so that they can produce more crops with less but focused efforts.

More than 250 farmers, entrepreneurs, students and other stakeholders attended the programme. The programme was held in two main sessions, Inaugural and Technical session followed by interaction with local marginal farmers, other growers and young unemployed youth.

On the occasion the farmers interacted with the scientists and learned various techniques regarding processing, cultivation and marketing of aromatic plants besides other things.

Dr. Shakir P. Sultan welcomed all the guests, participants, media personnel and all associated functionaries involved in this event. He apprised the participants about the objectives and focus of the event. Dr. Muzamil Ahmad gave an overview of CSIR – IIIM mandate & activities and highlighted the role of IIIM towards Research and development activities under Aromatic plants sector.

Dr. Qazi Parvaiz Hassan, Co-Nodal Officer, Aroma Mission II, gave a detailed overview of CSIR Aroma mission and its importance for cultivating medicinal and aromatic plants for better returns and income generation. Dr. Qazi while conveying the message of the Director

CSIR – IIIM informed local farmers, growers, and entrepreneurs to actively participate in such programs for skill development towards large scale cultivation of these high value cash crops as an alternative source to boost their income and employment generation.

Chief Agriculture Officer, Bandipora, Mr. Rafiq Ahmad Kukru also inform the audience about the importance of Medicinal and Aromatic plant cultivation and its scope in revenue and income generation.

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Kashmirreader

# Intellectual Property Right Training at NML

CSIR-NML

19th March, 2021

A three-day virtual training programme on 'Intellectual Property Right' is being organised by CSIR- National Metallurgical Laboratory, Jamshedpur. The entire event was supported by two groups of employees of CSIR-NML-CSIR Integrated Skill Initiative and CSIR-NML IPFC.

The main objective of this training program is to make people aware of the importance of Intellectual Property Right (IPR) in the current scenario of India and to provide information regarding implementation of it.

On completion of this training, the participants are expected to have: Enhanced knowledge in intellectual property right, Improved knowledge of patent & design registrations, Competence in Copyright and Trademark, Better Understanding of Udyam Registration and other MSME schemes The opportunity to make a career in IPR

On the first day of the training the participants got enrolled for the program and introduced themselves on a virtual platform.

The training started on the second day with an inaugural program in the morning with a welcome address by Dr. Mita Tarafder, Head of KRIT Division of CSIR-NML. In her inspiring address she welcomed all young minds who have innovative ideas and want to protect their ideas and convert them to prototype to attend this training program. She gave the example of how a cycle leaf crusher was built from an innovative idea and suggested to develop the passion and practice innovation to solve day-to-day problems and make it a habit.

This was followed by an address by Dr. S.K. Pal, Head of RPBD Division of CSIR-NML. Dr. Pal introduced the Intellectual Property Facilitation Centre (IPFC) of CSIR-NML and talked about the objectives of creating this centre, the main activities and services it provides and welcomed all participants to approach them and utilise the facilities of the centre to help themselves in their entrepreneurial journey.

The technical sessions were scheduled on the second and third day of the training program. The inaugural program was concluded with vote of thanks delivered by Mr. K. Sudhakar Rao, Technical Officer at CSIR-NML. More than 130 participants from all over the country attended the inaugural session of the training program which was conducted virtually.

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Dailypioneer

CSIR-IMMT

19th March, 2021

# ଆନନ୍ଦପୁର କଲେଜରେ ତାଲିମ ଶିବିର


ଆନନ୍ଦପୁର,୧୮।୩(ଆପ୍ର): ଆନନ୍ଦପୁର କଲେଜ ପରିସରରେ ସିଏସ୍‌ଆଇଆର-ଆଇଏମ୍‌ଏମ୍‌ଟି, ଭୁବନେଶ୍ୱର ଏବଂ ବିଜୟ କଳିଙ୍ଗ ବିକାଶ କେନ୍ଦ୍ରର ଆନୁକୂଲ୍ୟରେ ଦୁଇଦିନିଆ ତାଲିମ ଶିବିର ଅନୁଷ୍ଠିତ ହୋଇଛି। ବିଜୟ କଳିଙ୍ଗ ବିକାଶର ସମ୍ପାଦକ ବିକ୍ରମ କେଶରୀ ବେହେରା ଶିବିର ସଂଯୋଜନା କରିଥିଲେ। ଆୟୋଜିତ କାର୍ଯ୍ୟକ୍ରମରେ ଆନନ୍ଦପୁର କଲେଜ ପଦାର୍ଥ ବିଜ୍ଞାନ ପ୍ରାଧାପକ ଡ ଦିଲ୍ଲୀପ କୁମାର ଦାଶ ସଭାପତିତ୍ୱ କରିଥିଲେ। ସିଏସ୍‌ଆଇଆର୍-ଆଇଏମ୍‌ଏମ୍‌ଟି ପକ୍ଷରୁ ଡ ଲକ୍ଷ୍ମୀଧର ବେଶ୍ରା, ଡ ଶିଶିର ମନ୍ତ୍ରୀ, ଏନ୍ ଉଷାକିରଣ, ଦିବ୍ୟସିଂହ ପ୍ରଧାନ ପ୍ରମୁଖ ଅତିଥି ଭାବେ ଉପସ୍ଥିତ ଥିଲେ। ଶିବିରରେ ସାବୁନ ପ୍ରସ୍ତୁତି, ତରଳ ସାବୁନ ପ୍ରସ୍ତୁତିର ସହଜ ବୈଜ୍ଞାନିକ ପ୍ରଣାଳୀର ଲାଇଭ୍ ଡେମୋନଷ୍ଟ୍ରେସନ୍ କରାଯାଇଥିଲା। କୋଭିଡ୍-୧୯କୁ ଦୃଷ୍ଟିରେ ରଖି ସାବୁନର ଆବଶ୍ୟକତାକୁ ଗୁରୁତ୍ୱ ଦେଇ ଏହାର ପ୍ରସ୍ତୁତି ପ୍ରଣାଳୀ ସମ୍ପର୍କରେ ତାଲିମ୍ ଦିଆଯାଇଥିଲା। ଏହାଦ୍ୱାରା ରୋଜଗାରକ୍ଷମ କରାଯିବାର ପ୍ରୟାସ କରାଯାଇଥିଲା। କାର୍ଯ୍ୟକ୍ରମରେ ବହୁ ସଂଖ୍ୟାରେ ଛାତ୍ରଛାତ୍ରୀ ତାଲିମ୍ ନେଇ ସ୍ୱାବଲମ୍ବୀ ହେବାର ଜ୍ଞାନକୌଶଳ ଆହରଣ କରିଥିଲେ।

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Pramaya

CSIR-IMMT

19th March, 2021

# ବୈଜ୍ଞାନିକ ଜ୍ଞାନ କୌଶଳ ପ୍ରୟୋଗ ତାଲିମ ଓ କର୍ମଶାଳା।

◤ ଆନନ୍ଦପୁର,ପିଏନଏସ

ଆନନ୍ଦପୁର ମହାବିଦ୍ୟାଳୟର ଅଧ୍ୟକ୍ଷ ଦାୟିତ୍ୱରେ ଥିବା ପ୍ରଫେସର ଡ. ଦିଲ୍ଲିପ ଦାଶଙ୍କ ସଭାପତିତ୍ୱରେ ଆନନ୍ଦପୁର ମହାବିଦ୍ୟାଳୟ ସଭାଗୃହ ଠାରେ ଆଏମଏମଟି ଭୁବନେଶ୍ୱର ଓ ବିଜୟ କଳିଙ୍ଗ ବିକାଶ କେନ୍ଦ୍ରର ମିଳିତ ଆନୁକୂଲ୍ୟରେ ଏକ ୨ଦିନିଆ ତାଲିମ ଓ କର୍ମଶାଳା ଅନୁଷ୍ଠିତ ହୋଇଯାଇଛି । ସିଏସଆଇଆର ଆଇଏମଏମଟି ଭୁବନେଶ୍ୱରରୁ ଡ. ଲକ୍ଷ୍ମୀଧର ମିଶ୍ର , ବୈଜ୍ଞାନିକ ଏବଂ ବିଭାଗୀୟ ମୁଖ୍ୟ ଡ. ଶିଶିର ମନ୍ତ୍ରୀ , ବୈଜ୍ଞାନିକ ଏନ .ଉସା କିରନ ଏବଂ ଦିବ୍ୟଙ୍ଗି ପ୍ରଧାନ ପ୍ରମୁଖ କାର୍ଯ୍ୟକ୍ରମରେ ଯୋଗଦେଇ ସାବୁନ ପ୍ରସ୍ତୁତି ଏବଂ ଲିକ୍ୱିଡ ସୋପ ପ୍ରସ୍ତୁତ କରିବାର ସହଜ ବୈଜ୍ଞାନିକ ପ୍ରଣାଳିର ତାଲିମ ପ୍ରଦାନ କରିଥିଲେ । କୋଭିଡ୧୯କୁ ଦୃଷ୍ଟିରେ ରଖି ସାବୁନ ଏକ ପ୍ରମୁଖ ଭୂମିକା ଗ୍ରହଣ କରୁଥିବାରୁ ବିନା ମୂଳଧନରେ ଏହି ପ୍ରକଳ୍ପ କରି ଯେକେହି ବ୍ୟକ୍ତି ଆର୍ଥିକ ଭାବେ ରୋଜଗାର କ୍ଷମ ହୋଇପାରିବବୋଲି ଅତିଥିମାନେ ବିଶଦ ବର୍ଣ୍ଣନା କରିଥିଲେ। ସେହିପରି ଆନନ୍ଦପୁର ମହାବିଦ୍ୟାଳୟର ଅଧ୍ୟାପକ ଡ. ସେଖର ପ୍ରସାଦ ଦେବତା , ଡ. ଶକ୍ତି ପ୍ରସାଦ ମହାପାତ୍ରଙ୍କ ସମେତ ମହାବିଦ୍ୟାଳୟର କର୍ମଚାରୀ ଏବଂ ଛାତ୍ର ଛାତ୍ରୀଯୋଗଦେଇ କାର୍ଯ୍ୟକ୍ରମରେ ତାଲିମ ଗ୍ରହଣ କରିଥିଲେ। ସେହିପରି ବିଜୟ କଳିଙ୍ଗ ବିକାଶର ଉପଦେଷ୍ଟା ନାରାୟଣ ବେହେରା, ଉପସଭାପତି ଦୀବାକର ମାଝି, ଟ୍ରି ପ୍ରକଳ୍ପ ରାଜ୍ୟ ସଂଯୋଜକ ମନୋଜ ପଣ୍ଡା, ନୀରୁପମା ଜେନା, ସୁପ୍ରଭା ଦାଶ, ବାସନ୍ତୀ ଦାସ, ସବୀତା ଜେନା, ମିନତୀ ବେହେରା, ମାମାଲୀ ସାହୁ,ଶଦାଶିବ ସାହୁ, ପୂର୍ବତନ ଆନନ୍ଦପୁର ପୌରାଧକ୍ଷ ସାନ୍ତନୁ ସେଠୀ, କାର୍ଯ୍ୟକ୍ରମ ପୂର୍ଣ୍ଣାଙ୍ଗ ହେବାରେ ପ୍ରମୁଖ ଭୂମିକା ଗ୍ରହଣ କରିଥିଲେ।

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Pragativadi

CSIR-CMERI

19th March, 2021

# सीएसआइआर-सीएमइआरआइ ने किया कौशल विकास कार्यक्रम का आयोजन

➲ **25 प्रतिभागियों ने लिया कार्यक्रम में हिस्सा**

**दुर्गापुर.** सीएसआईआर-सीएमईआरआई, दुर्गापुर द्वारा कौशल विकास गतिविधि के तहत संस्थान में इंटीग्रेटेड म्यूनिसिपल सॉलिड वेस्ट मैनेजमेंटः जीरो वेस्ट सॉल्यूशंस पर तीन दिवसीय आवासीय प्रशिक्षण कार्यक्रम का आयोजन किया गया. प्रशिक्षण कार्यक्रम में शहरी जल आपूर्ति और स्वच्छता सेवा सलाहकार नेटवर्क (मेजबान संगठनः प्रगति बायो और नवीकरणीय

ऊर्जा), बिहार के छात्रों और अधिकारियों सहित 25 प्रतिभागियों ने भाग लिया. समापन सत्र में, प्रो. हरीश हिरानी, निदेशक, सीएसआईआर-सीएमईआरआई ने बताया कि हमारे समाज में लोग स्वदेशी रूप से विकसित लोगों की बजाय आयातित तकनीकों पर अधिक भरोसा करते हैं. सीएसआईआर-सीएमईआरआई स्वदेशी प्रौद्योगिकियों को विकसित करने के लिए कड़ी

मेहनत कर रहा है. संस्थान कौशल विकास कार्यक्रमों के माध्यम से आम जनता के बीच इन तकनीकों के बारे में जागरूकता लाने और ज्ञान में सुधार के लिए भी अपना प्रयास दे रहा है क्योंकि यह सामाजिक और राष्ट्रीय विकास प्राप्त करने और एक वास्तविक आत्मनिर्भर भारत की ओर जाने का एकमात्र तरीका है.उन्होंने कहा कि हमारा देश प्रतिवर्ष भारी मात्रा में कचरे का उत्पादन करता है जो सीमित भूमि के एक बड़े क्षेत्र पर कब्जा करता है और गंभीर प्रदूषण और पर्यावरण प्रदूषण में योगदान देता है. धीरे-धीरे जनसंख्या के बढ़ने से समस्या बदतर होती जा रही है. स्थिति से वैज्ञानिक रूप से निपटने के लिए, संस्थान ने एकीकृत नगरपालिका ठोस अपशिष्ट प्रबंधन के लिए एक अनूठी तकनीक डिजाइन और विकसित की है. विकसित प्रणाली में नगरपालिका ठोस अपशिष्ट का यंत्रीकृत पृथक्करण शामिल है. आवासीय परिसर से उत्पन्न दैनिक कचरे को जीरो लैंडफिल आवासीय परिसर को प्राप्त करने के लिए पर्यावरण के अनुकूल तरीके से संसाधित किया जा रहा है. ठोस अपशिष्ट प्रबंधन मार्ग के माध्यम से कोविड -19 के प्रसार सहित रोगजनकों को रोकने के लिए श्रृंखला को तोड़ने में इस तरह का विकेन्द्रीकृत आईएमएसडब्ल्यूडीएस बहुत उपयोगी है.

**Published in:**
Prabhat khabar

# NIO launches project to map genetic diversity of organisms in Indian Ocean

CSIR-NIO

18th March, 2021

The CSIR- National Institute of Oceanography (CSIR-NIO) in Goa has launched a project to map the genetic diversity of the organisms as well as the effect of trace metal and micronutrients on them in the Indian Ocean. The project will be supported by the Council of Scientific and Industrial Research- CSIR, under one of its flagship projects TraceBioMe.


The data generated by the CSIR-NIO project will help in a long way to achieve the goals of Sustainable Development Goals 14: Life Below Water, which aim at conserving and sustainable use of the seas, oceans, and marine sources.

Ever since Industrialization began in the 19th century, the biological diversity in the oceans has decreased dramatically.
However, only a small portion of the species in the polar oceans and deep seas have so far have been identified which makes the loss of species in the oceans much more difficult to evaluate and record.

**What will happen under the project?**

The project by CSIR-NIO intends to do an elaborative sampling of sediments, planktons, water, and different organisms in the various parts of the Indian Ocean. The samplings will help in further studying the presence of different forms of organisms and the micronutrients and trace metals found therein.

The modern state-of-the-art molecular technologies, as well as the classical techniques, will be used during the sampling, and in the first phase, microscopic organisms will be investigated.

**How long will be the expedition?**

A 90-day long expedition onboard RV Sindhu Sadhana, a research vessel, with 30 scientists took off from Vishakhapatnam on March 15, 2021. The expedition will be completed in two legs till the end of May and will cover 9,000 nautical miles. It will end in Goa.

**Why NIO is conducting the mission?**

The scientists of CSIR-NIO have set out on a mission for identifying and characterizing the proteins and genes in the ocean in order to understand the cellular-level operations of the organisms in the Indian Ocean.

The scientists during the mission will be utilizing emerging biomedical techniques, such as genomics and proteomics.

Proteins will work as a catalyst for the biogeochemical reaction that the organisms undergo in the seawater. By studying Proteomics, they will be able to identify the biogeochemistry of the organisms under the changing ocean conditions.

These studies will further help in understanding the cellular biochemistry as well as the response of the ocean to the increasing pollution, climate change, and nutrient stress.

**Significance of the study:**

The study by NIO will help the scientists in identifying the factors controlling the changes in DNA and RNA in the oceans as well as various other stressors impacting them.

They will also be used as the tracers for tracking the causative factors and for suggesting the possible solution for their mitigation. In addition, the large pools of DNA and RNA library of the oceans will be utilized for future bioprospecting in the Indian Ocean for societal benefit.

**Exploration of Ocean genome:**

Rapid changes and advancements in bioinformatics and sequencing technologies have made possible the exploration of the Ocean Genome.

Further exploration of the Ocean Genome will enable to increase the growing number of commercial biotechnology applications. It will be extending from multiple anticancer treatments to cosmetics and industrial enzymes to the antiviral

**Published in:**
Jagranjosh

# CECRI designs wearable sensor capable of monitoring biomarkers from sweat

CSIR-CECRI

18th March, 2021

Dr. Vinu Mohan A.M., scientist at CSIR-Central Electrochemical Research Institute (CECRI), Karaikudi, Tamil Nadu, a recipient of the INSPIRE Faculty Fellowship instituted by the Department of Science & Technology, Government of India, has introduced a flexible low cost, wearable sensor that can track sweat for monitoring the health and physiological status of the human body. It can obviate the necessity of blood and other invasive tests.

The wearable microfluidic sensor, which does not need a clean room, can be used for in situ monitoring of biomarkers such as lactate, Sodium (Na+), Potassium (K+), and Alkaline/acidic nature (pH) simultaneously from sweat samples. Using the INSPIRE Faculty fellowship, Dr. Vinu is improving upon the sensor to make it stretchable as well so that it can monitor the sweat during exercising and biking.

The sensor can analyse biomarkers from human sweat during exercise activities without transfer of signals. The high-throughput sweat sampling ability of the sensor facilitates continuous capture and transport of sweat over the surface of the device resulting in real-time analysis.

The flexible sensor can be attached on the irregular skin surface and monitors the dynamic biomarker levels, and are important for clinical diagnosis and personalized point-of-care analysis.

Dr. Vinu Mohan and his team are also exploring other reliable biofluids such as saliva and fluid in tissues as they contain abundant chemical markers that could reflect the underlying physiology of the human body. They are also in-parallel focusing on developing wearable energy storage devices as they are essential for powering wearable electrochemical sensors.

**Published in:**
Biospectrumindia

CSIR-CIMFR

18th March, 2021

# कोयले की गुणवत्ता को लेकर निरसा में कार्यशाला

## कोल इंडिया की 75 वां सालगिरह पर कार्यक्रम

**निरसा.** निरसा के इसीएल सेंटरपुल रेलवे साइडिंग में सिंफर के वैज्ञानिकों की पावर प्लांट के अधिकारियों के साथ कोयले की गुणवत्ता को लेकर दो दिवसीय कार्यशाला संपन्न हुई. कार्यशाला में मुख्य अतिथि सिंफर के पूर्व निदेशक डा. एमके सिन्हा थे. मंगलवार से चल रही कोल सैंपलिंग कार्यशाला के व्यावहारिक सत्र का बुधवार को समापन हो गया. इस दौरान एनटीपीसी, डीवीसी, एमपीएल के 33 प्रतिभागियों के बीच कोयला संग्रह कर उसकी गुणवत्ता की जांच को लेकर जानकारी दी गयी.

कोयले की गुणवत्ता की जांच करते सिंफर के सदस्य.

**बताया गया सैंपलिंग का तरीका :** प्रतिभागियों को प्रशस्ति पत्र भी दिये गये. प्रशिक्षण के दौरान सिंफर के वैज्ञानिक डॉ एमके सिन्हा, डॉ यूएस चट्टोपाध्याय, डॉ अनोल्ड, डॉ गोपी, डॉ प्रबल बोराल, डॉ सरोज कुमार ने प्रतिभागियों को वैगन टॉप से कोल सैंपलिंग का तरीका बताया. सिंफर के प्रधान वैज्ञानिक डॉ आशीष घोष ने बताया कि रानीगंज में भी दो दिवसीय कार्यशाला का समापन हो गया. वहां पर मुख्य अतिथि डॉ. अमलेंदु सिन्हा हैं. यह संस्था कोयले की गुणवत्ता को लेकर कोयला के क्रेता-विक्रेताओं के बीच सामंजस्य स्थापित करती है. आयोजन कोल इंडिया की 75 वीं सालगिरह के परिप्रेक्ष्य में हुआ.

**इनकी थी सहभागिता :** मौके पर सिंफर के वैज्ञानिक प्रभारी डॉ आशीष मुखर्जी, डॉ अशोक कुमार सिंह, इसीएल के सुशांत सागर ठाकुर, आरपी पांडे, श्री भास्कर, पीके राय सहित अन्य उपस्थित थे. सिंफर-सीएसआइआर द्वारा कार्यक्रम आयोजित की गई है.

**Published in:**
Prabhat Khabar

# Agonist Molecule Synthesis For COVAXIN by CSIR-IICT

CSIR-IICT

17th March, 2021


The constituent labs of CSIR (Council of Scientific and Industrial Research) have been tireless in their industrial collaboration for the launching of repurposed drugs via conduction of clinical trials and process development. The CSIR labs have made remarkable contributions to the SARS-CoV-2 diagnostic kits, including the Dry Swab Direct RT-PCR method and Feluda.

Bharat Biotech developed Covaxin, which is the country's indigenous vaccine against COVID-19. The Hyderabad-based company used an inactivated whole SARS-CoV-2 virion which is highly purified. To produce the requisite immune reaction type, aluminum hydroxide gel was chemisorbed with TLR7/8 agonist to create the Algel-IMDG used for vaccine formulation. Owing to the TLR7/8 agonist's substantial vaccine efficiency function, Bharat Biotech International Limited (BBIL) approached Hyderabad-based CSIR-IICT (Indian Institute of Chemical Technology) to develop the agonist via a synthetic approach utilizing cost-effective and highly pure native chemicals.

The agonist molecule synthesis project for Covaxin was led by CSIR-IICT Director Dr. Chandrashekhar and Senior Scientist Dr. Raji Reddy, who came up with a viable solution in a matter of 4 months. Likewise, AcCSIR Professor and Senior Principal Scientist Dr. Mohana Krishna Mudiam led a team of researchers who played an important role in developing an analytical technique to evaluate the TLR7/8 molecule. With the help of a NABL (National

Accreditation Board for Testing and Calibration Laboratories) certified lab, the team also carried out the molecule's method validation procedures.

Bharat Biotech MD and Chairman Dr. Krishna Ella acknowledged the IICT scientists' work. They said that the CSIR-IICT-developed process technology primarily aids the adjuvant production for COVAXIN for the TLR7/8 agonist molecule.

CSIR's Director-General Dr. Shekhar Mande, who is also the DSIR Secretary, lauded the research team for coming forward for the agonist molecule synthesis for Covaxin economically and in record time. He mentioned the achievement as another example of CSIR's dedication towards an Aatmanirbhar Bharat.

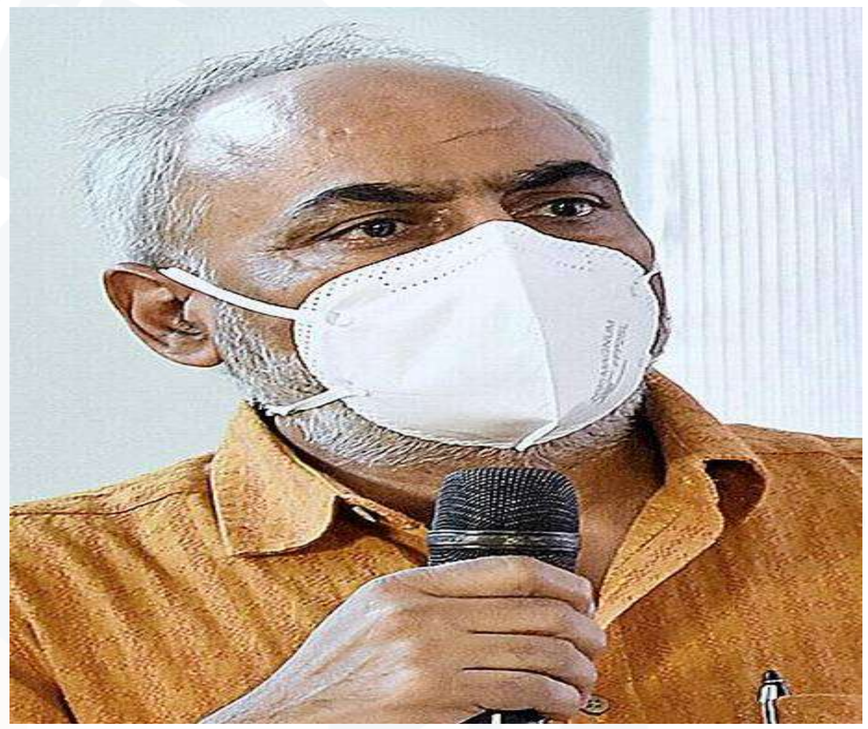
**Published in:**
Biotecnika

# Social behaviour behind spike, not any mutation: CCMB chief

CSIR-CCMB

17th March, 2021

**Says new variants likely to emerge if the virus is allowed to spread**



It is not any new mutated variant of SARS-Cov-2 causing COVID-19, leading to the latest spike in positive cases in many parts of the country but it is most likely due to the "social and behaviour laxity" of the general population, say top scientists involved in the battle against the pandemic for the past one year.

However, "if we continue to allow the virus to spread, new variants are likely to emerge and may lead to worse outcomes", cautions CSIR-Centre for Cellular & Molecular Biology (CCMB) director Rakesh Mishra on Wednesday.

"There is no evidence, so far, of any peculiar mutation or virus variant causing more infections and surge in the number of cases. While there could be multiple reasons, it is likely that new cases are caused by a dominant variant in a large number of people. So, the surge is not because of any particular variant," he observes.

The contributing factors could be people "not wearing mask properly, gathering in closed environments for functions and meetings". "Hopefully, these are only small waves that will be controlled soon and not curves going upwards for longer time in multiple locations," he says.

**Natural process**

In a geographically heterogeneous country like India, there are bound to be multiple reasons

for increase in infection and they are bound to surface.

"What we are witnessing is a natural process of infection when 'COVID-appropriate' behaviour is not followed and is definitely a matter of concern. The biggest tool is our face mask, avoiding crowded places especially indoors, washing hands frequently and maintaining personal hygiene," insists Mr. Mishra.

This 'social vaccine' has become imperative since the real vaccine is "yet to show its might against the pandemic" as the percentage of population vaccinated has been initially restricted to the frontline, healthcare workers and selective age groups. It could take up to two to three months for the impact to show, while the process of vaccination is picking up, he says.

**'Spread contained'**

The CCMB director opines the country seems to have been able to contain the spread of dangerous mutations from the United Kingdom, South Africa and Brazil so far. The forced quarantine for travellers could be working to some extent, he asserts. "We have noticed these strains to be largely in those with a travel history from among the samples collected in the airports and it has not yet spread across the population, though there have been cases of a few travellers breaking quarantine rules," he points out.

**Published in:**
Thehindu

# NIO launches project for mapping genetic diversity in Indian ocean

CSIR-NIO

17th March, 2021

**TraceBioMe envisages extensive sampling of water, sediments, planktons and various organisms in different areas**

The Council of Scientific and Industrial Research-National Institute of Oceanography (CSIR-NIO), Goa, has initiated a project for mapping the genetic diversity of organisms and the effect of micronutrients and trace metals on them in the Indian Ocean supported by the CSIR, under one of its flagship projects TraceBioMe.

The project envisages extensive sampling of water, sediments, planktons and various organisms in different parts of the Indian Ocean to study the presence of different kinds of organisms and the trace metals and micronutrients found therein using modern state-of-the-art molecular techniques as well classical techniques. In the first phase, microscopic organisms will be investigated.

**90-day long expedition**

A 90-day long expedition onboard research vessel RV Sindhu Sadhana with 30 scientists took off from Visakhapatnam on Monday and will be completed in two-legs till the end of May, covering over 9,000 nautical miles, and ending in Goa. The data generated under this programme will help in a long way to achieve the SDG14 goals, which aim at conserving and sustainably use the oceans, seas and marine resources.

Biological diversity in the oceans has decreased dramatically since industrialisation began in

the 19th century. However, only a small fraction of the species in the deep sea and polar oceans have so far been identified, making the loss of species in the oceans much more difficult to record and evaluate, than on land.

Scientists from the CSIR-NIO have set out on a mission to identify and characterise the genes and proteins in the ocean to understand the cellular-level operations of organisms in the ocean by utilising the emerging biomedical techniques, such as proteomics and genomics.

Proteins act as a catalyst for the biogeochemical reaction the organisms undergo in the ocean. By studying proteomics, one can identify the biogeochemistry of the organisms under varying ocean conditions. These studies will help one understand cellular biochemistry and the response of ocean to the climate change, nutrient stress and increasing pollution.

This study will enable scientists to identify the factors controlling the changes in RNA and DNA in the oceans and various stressors impacting them. Further they will be used as tracers to track the causative factors and suggest possible solutions for their mitigation impacting society. In addition, these large pool of RNA and DNA library of the oceans would be utilised for future bioprospecting in the Indian Ocean for human benefit.

Rapid advances in sequencing technologies and bioinformatics have enabled exploration of the ocean genome. Exploring the ocean genome will enable to increase the growing number of commercial biotechnology applications, extending from multiple anticancer treatments to cosmetics and industrial enzymes, to antiviral molecules.

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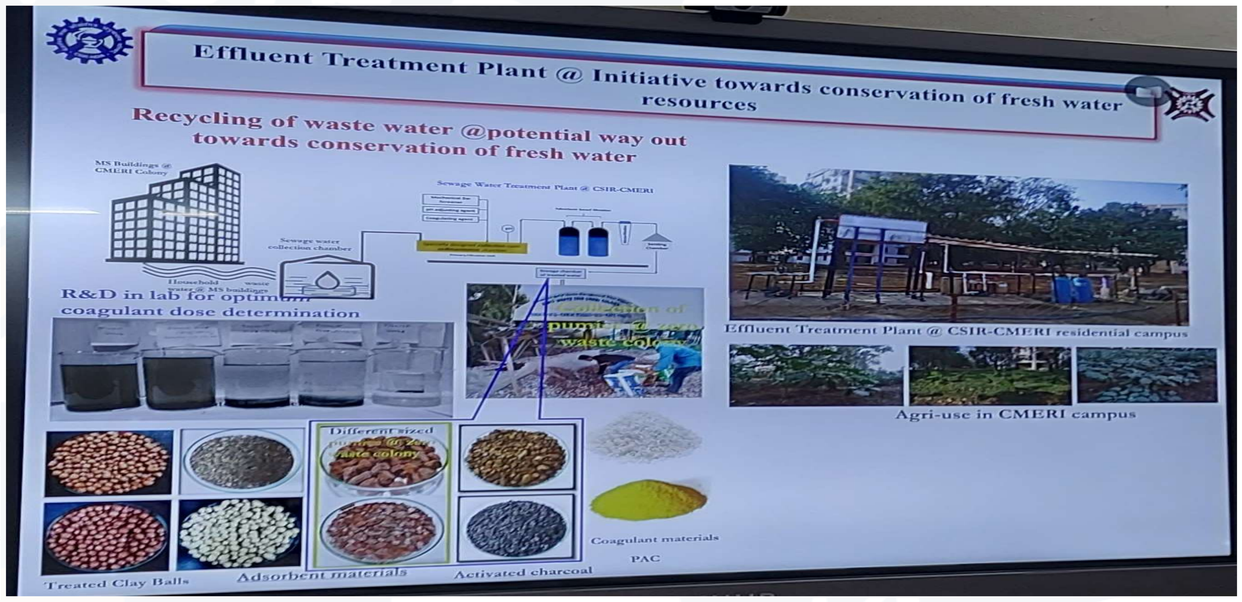
Thehindu

# Meeting with MSME's by CSIR-CMERI for Affordable & sustainable water purification technologies

CSIR-CMERI

16th March, 2021




CSIR-CMERI, Durgapur, West Bengal in association with MSME-DI, Ahmedabad jointly organised a meeting on CSIR-CMERI developed technologies on 16th March 2021 at the office of MSME-DI, Ahmedabad. The objective of the meeting is to deliberate on the CSIR-CMERI developed technologies & find the ways to provide benefits to the various industries. Especial emphasis was given on technologies related to purify large quantity of effluent water.

Prof. (Dr.) Harish Hirani, Director, CSIR-CMERI, was invited as the Chief Speaker in the meeting. Mr. Vikash Gupta, Jt. Director & HOD, MSME-DI, Ahmedabad, Mr. P.N.Solanki, IEDS, Dy.Director, MSME-DI, Ahmedabad, Dr, Jaimin Vasa, President, Gujarat Chemical Association, Ahmedabad, Mr.Ramesh M.Patel, President, Dyestuff Manufacturing Association, Ahmedabad, Mr.Shrenik Merchant, Chairman, Gujarat Chamber of Commerce & Industry, Prof. Chinmoy Ghoroi,IIT, Gandhinagar,Gujarat deliberated on the technologies. All the members, who attended the meeting appreciated all the technologies and shown willingness to forge the collaboration.

Prof.Hirani gave a detailed presentation on the CSIR-CMERI developed technologies including water purification technologies with the complete solutions to the industries

including the comprehensive treatment of waste water, based upon diverse purification parameters. The CSIR-CMERI water testing facilities can facilitate the assessment of local water parameters and thereafter in partnership with the local government authority. The Mechanized Drainage Cleaning System developed by CSIR-CMERI can help contain the spread of contaminated water as it clears drainage choking and treats waste water through a decentralised purification process.

Affordable & sustainable water purification technologies of CSIR-CMERI can be effectively implemented only when a partnership with the MSMEs can be forged.

Prof. Hirani also added that the CSIR-CMERI developed Municipal Solid Waste Processing technology helps to achieving decentralized decimation of solid wastes. The primary focus of CSIR-CMERI is to unburden the common households from the segregation responsibilities through advanced segregation techniques.

During the interaction with the industry officials, Hirani also told that establishing a connection between CSIR-CMERI, MSMEs, Entrepreneurs, Local governments and Industrialists can help in creating for a strong partnership & for solving Industrial water pollution related issues. Keeping in mind the local specific requisites, technologies can be customized to address the specific concerns. The CSIR-CMERI developed water purification technologies have already been transferred to 56 MSME registered companies across the country.

Mr. Vikash Gupta, Jt. Director & HOD, MSME-DI, told that CSIR-CMERI developed sustainable water purification technologies has a substantial societal impact with the complete solution to the industries . He assured the business community to provide all coordination and assistance required by the MSMEs of the region for getting access to the technology advancements of institutions of excellence such as CSIR-CMERI.

Dr, Jaimin Vasa, President, Gujarat Chemical Association, Ahmedabad thanked to MSME-DI,Ahamedabad for organizing such informative & technical meeting with the CSIR-CMERI, Durgapur . He told that we are vey much need for such technologies developed by CSIR-CMERI & interested to work with MSME & CSIR-CMERI.

Shri P.N. Solanki, Dy. Director, IEDS, MSME-DI, Ahmedabad urged all the industrialists to actively work together with CSIR-CMERI for solving the industrial water purification & treatment of the Gujarat. Shri Solanki also shared that owing to the existence of industrial water pollution in Gujarat, the CSIR-CMERI water technologies can be harnessed by the MSMEs for partnering in creating a healthy regional ecology.

**Published in:**

Pib

# Dr Raghav Inaugurates CSIR Integrated Initiative: Assure Full Support For Overall Development/ Rejuvenation Field Station

CSIR-IIIM

17th March, 2021

PULWAMA, MARCH 16: As part of CSIR Integrated Skill Initiative, a three day workshop on 'entrepreneurship opportunities in the cultivation, processing, post harvest management and marketing of aromatic crops' was started here at Field Station Bonera of CSIR- Indian Institute of Integrative Medicine.

The workshop has been started to impart the scientific and technical know-how and skill for the cultivation of different high value aromatic cash crops like Lavender, Rose, Clarysage, Rosemary and other industrial crops known for their economic value in flavour and fragrance industry to the 100 farmers/ women farmers.
The District Development Commissioner DDC) Pulwama, Dr. Raghav Langer was the Chief Guest on the occasion.

Addressing the participants, the DDC appreciated the initiative of CSIR-IIIM in promoting the cultivation and processing of these crops by organizing the on-farm skill development programme. He also emphasized on the importance of crop diversification through aromatic crop cultivation and integrating different farm enterprises for enhancement of the farmer income, livelihood generation and entrepreneurship development.

He also visited the farm and inspected the facilities available for extraction and processing and was informed about the different activities being carried out at the farm.

He assured his full support for the overall development and rejuvenation the Field Station, Bonera.

Earlier a detailed overview of the programme and its importance in the entrepreneurship and industrial development in the UT through production of different high value aromatic cash crops was given by Dr. Shahid Rasool, Senior Scientist and Incharge of the Field Station.

The technical lectures to the participating farmers on production, processing and value addition of different aromatic crops were given by Dr Qazi Parvaiz and Dr Phalisteen Sultan and on-farm demonstration to the participating farmers/ women farmers was given by Dr Padma Lay and Habibullah.

The three day programme is being organized under the patronage of Dr. D.S Reddy, Director CSIR-IIIM, Jammu and under the supervision of Er. Abdul Rahim, Head, Planning Monitoring, Evaluation and Business Development and Dr Zabeer Ahmed, Head CSIR-IIIM (Br) Srinagar.

Among others present on the occasion were Mr Khursheed Muzaffar, Lead District Manager, Pulwama, Dr Muzamil Ahmad, Dr Qazi Parvaiz, Dr Phalisteen Sultan, Dr Firdos Mir and Technologists from CSIR-IIIM.

**Published in:**
Crosstownnews

# Mysuru gets new target of 7,000 swab tests daily after fresh scare

CSIR-CFTRI

16th March, 2021

Amidst fears of a second wave of COVID-19 infections, Mysuru has been given the target of carrying out nearly 7,000 swab tests daily. As of now, 4,500 swab tests using the RT-PCR method were being done across the district.

Since the last two days, the testing has been scaled up by about 1,000 swab tests but reaching the target of 7,000 daily is a challenge considering the response from the public.

About 3,000 RT-PCR tests of swab samples are done at the Microbiology Lab of the Mysore Medical College and Research Institute (MMCRI) and about 1,500 tests at the facility run by the CSIR-Central Food Technological Research Institute (CFTRI), Mysuru.

Mysuru city alone has about 10 mobile teams for the collection of swabs besides 10 static swab collection centres. Half-a-dozen mobile teams also function in the district.

"The COVID-19 testing system has been streamlined and people are coming on their own to get tested in case of any symptoms. But, after the substantial drop in cases, the number of tests also came down with drop in people coming forward to give their swabs unless it's indispensable. Nevertheless, the testing was kept going, covering the primary and secondary contacts of the infected, besides mass collection of swabs, for curbing the spread. This included collection of swabs of students after reports of positive cases and so on," sources in the Health Department said.

After more private hospitals were given the permission of carrying vaccination against COVID-19, the tests, which were around 300 a day, came down by almost a half over the last few days, sources said.

The MMCRI Testing Centre (Viral Research and Diagnostic Laboratory) and the CSIR-CFTRI Testing Centre are the two public institutions that have been providing services for free since the outbreak.

The CSIR-CFTRI came forward to support the district administration in the fight against the pandemic by setting up the facility and carrying out RT-PCR tests since testing was key for containing the spread of the disease.

With its support, Mysuru could do more testing, helping in combating the pandemic which had peaked and the district was identified as a COVID-19 hotspot because of the spurt in infection rate and fatalities last year. The cases and the fatalities dropped substantially since October last, and increase in testing was cited as one of the reasons for flattening the curve. Now, a small surge has been reported when compared to the last two months.

Arguing that testing helped in bringing the cases down, the government has set district-wise targets after Karnataka was reported as one of the States that showed spurt in infections, especially in Bengaluru, raising fears of a second wave of pandemic. New guidelines had been issued to stop the spread before the situation goes out of hand like last time.

Sources in the MMCRI told The Hindu that the contract of data entry operators of its lab who update the test results was expiring this month. Unless their contract was renewed or new operators were taken for the task, it would become difficult to meet the testing target.

As on Monday, 9,11,451 people had been tested in Mysuru district. This includes 8,39,072 tested in government labs and 72,379 in private labs. A total of 54,491 had been tested positive since the outbreak and 53,228 had been discharged as on Monday. The active stands at 226 until Monday with total deaths reported include 1,037.

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# NIO study on sand replenishment, erosion by May'

CSIR-NIO 16th March, 2021

PANJIM: The ongoing study by the National Institute of Oceanography (NIO), Dona Paula for monitoring riverine and riparian biodiversity on a sampling mode, sand replenishment and erosion will be completed by May this year, informed CSIR-NIO Director Sunil Kumar Singh. Based on the complete study, the Goa government will decide on granting permits to contractors for sand extraction.

"We are exactly mapping the sand thickness in the riverbeds giving details such as in which place how much sand is available, how much sand is going back and how much is stolen and based on the report the government will decide what to do next. It will be a complete survey of all the rivers in Goa," Singh said adding "We will submit our final report on sand and erosion study to government by May 2021."

Singh said the NIO had already submitted preliminary report of the Chapora River and that the study of Terekhol, Mandovi and Zuari Rivers are on and would be completed by May this year. He said that the study was delayed due to COVID-19 pandemic.

In June 2019, the Goa government decided to engage the services of the NIO for monitoring riverine and riparian biodiversity on a sampling mode, carrying out assessment studies for sand replenishment/accretion and erosion studies and assessment of biodiversity for rivers.

In the first phase, the NIO will conduct survey of four rivers –Chapora, Terekhol, Mandovi and Zuari and in the second phase in will undertaker sampling and survey and data analysis processing of seven additional rivers.

The construction activity in the State has come to a standstill due to ban on sand mining by the High Court of Bombay of Goa in 2018 after the Federation of Rainbow Warriors challenged the environmental clearances (ECs) granted by the North Goa District Magistrate.

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# Search for 3rd water stream between Ganga & Yamuna

CSIR-NGRI 16th March, 2021

Prayagraj: A team of scientists from National Geophysical Research Institute (NGRI), Hyderabad, is partnering with a team from Denmark in the search for a third water stream between rivers Ganga and Yamuna from Kaushambi to Kanpur.
The survey is being conducted using high precision gadgets like the Transient Electromagnetic System.

A similar survey by the team in 2018 had detected a third paleochannel beneath the surface from Prayagraj to Manjhanpur between the Ganga and Yamuna.

The scientists from NGRI and Denmark are tracing the real identity of this water stream and new paths of water conservation. The survey is being carried out by the Central Ground Water Board (CGWB) under the Namami Gange project.

In the previous survey, a 14 kilometre long and five kilometre wide water stream was found between Prayagraj to Kaushambi. The water stream is extinct now, but the survey found evidence of its existence many years ago.

This time, the scientists are conducting an aerial survey from Kaushambi (Manjhanpur) to Kanpur. CGWB scientist Shashi Kumar said the aerial survey is being carried out to a depth of 300 metre (around 1,000 feet) beneath the surface with the primary objective of tracing any paleochannel so that water can be conserved, and its resources can be enhanced.

The experts would study various components, including soil, pebbles to collect information about the amount of water in that particular area and its proportion.

The scientists would collect the specimens and then conduct carbon dating of soil, pebbles, sand and water. Investigations are expected to conclude by the end of this month and the findings would be forwarded to the Central Ground Water Board.

The equipment used by the team can extract information from 200-400 metre beneath the earth crust and similar work has already been done in six districts, including Patna, Tumkur, Dausa, Nagpur etc.

The main equipment — transient electromagnetic sensors (TEM) — are attached to a helicopter which would fly on the pre-decided longitudes between the two rivers.

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# Filling work of Ram temple foundation starts

CSIR-NGRI 15th March, 2021

The Sri Ram Janmabhoomi Tirath Kshetra Trust on Monday started filling work of Ram temple's foundation after performing vedic rituals at Ram Janmabhoomi.
Champat Rai, general secretary of the trust and its other members performed the rituals, after which engineered material was spread over the foundation.

The remaining work related to spreading of engineered material, a mixture of several buildings' material, in the foundation will be done from April 9 when the trust is expected to receive supply of the requisite material.

Till then, rollers will be used to level the 13,000 sq metre dug-up area of the temple's foundation. Around 40 feet deep foundation of Ram temple will be filled by August this year," Rai told media persons at Karsevakpuram, Ayodhya, on Monday.

"The National Geophysical Research Institute (NGRI), Hyderabad, had informed us about the presence of 12 feet debris at the foundation site after carrying out technical survey of the ground," said Rai.

The NGRI experts had suggested removing this debris to make the temple's foundation strong, Rai added.
The temple's foundation, which will be 107 feet above sea level, will be made by layers of stones. For filling the foundation, gitti (pebble) of Banda, coarse sand, fly ash and asbestos will be used.

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# Horse antisera may be effective against COVID-19, says study

CSIR-CCMB

14th March, 2021

HYDERABAD: An in-vitro study by researchers of University of Hyderabad, Centre for Cellular and Molecular Biology and a startup incubated at UoH - VINS Bio Products Limited, has shown that antibody fragments derived from horses might prove an effective therapy against Covid-19.

The study also indicates the therapy might work against the emerging variants of coronavirus as well.

A pre-print research paper on the study's findings, 'Development of Equine Immunoglobulin Fragment F(ab')2 with High Neutralizing 2 Capability against SARS-CoV-2', was recently uploaded on medrxiv.com.

In layman's terms, the method involves immunisation of horse with inactivated novel coronavirus.

This would result in generation of antibodies in the animal.

The antisera — the blood serum containing antibodies — can be synthesised from the horse, and can be injected into humans infected with Covid-19 to neutralise the virus.

The lab-based study reports that "significant neutralisation" against the virus was observed, when the antisera was collected from the horse 29 days post-immunisation.

The same increased when the antisera was collected after 42 days. The antisera from horse was also found to be effective against the more infectious variant of coronavirus, containing D614G mutation.

The pre-print paper notes, “Remdesivir is one of the 25 antivirals currently being used with a limited window of action. As more drugs are being vetted, immunotherapy in the form of neutralising antibodies can provide immediate action to 27 combat the increasing numbers of Covid-positive cases”.

It further said, “In conclusion, this study demonstrates that virus-neutralising 38 antibodies raised in equines can potentially be used as a treatment regimen in the form of 39 effective passive immunotherapy to combat Covid-19”.

The UoH had announced last year the undertaking of this study, with Dr Nooruddin Khan from the Department of Animal Biology heading its team and Dr Krishnan Harinivas heading the CCMB team.

Use of antisera from animals for treatment of diseases in humans has been done earlier as well in cases of rabies and Hepatitis B.

Last year, the ICMR had announced the development of a ‘highly purified antisera’ for prophylaxis and treatment of Covid-19 in collaboration with a Hyderabad-based private firm.

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