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BEML rolls out mechanical minefield marking equipment

Bengaluru: Leading public sector under Ministry of Defence BEML Limited has rolled out the first prototype of Mechanical Minefield Marking Equipment Mk-II, built on BEML TATRA 6×6 an 'Atmanirbhar' product, developed through TOT from R&D E Engineers, DRDO.

The virtual roll out was performed in the presence of BEML Chairman and Managing Director M V Rajasekar and V V Parlikar, Director, R&D (Engrs), DRDO. Also present were Shri Kiran Jadhav, CMD Accurate Group, other valued partners from Dynalog (India) Ltd, Electro-pneumatics & Hydraulics (I) Pvt Ltd and Adroit System Pvt Ltd and BEML team headed by Defence Director A K Srivastav, according to a press release issued here on Wednesday.

BEML signed LAToT during the 'Bandhan' event in presence of Raksha Mantri during DEFEXPO 2020 and is executing the project by partnering with a number of MSMEs.

Mechanical Minefield Marking Equipment MK-II developed by R&DE (Engineers) would greatly benefit Indian army to mark/fence minefields. The MK II is designed for marking the mine fields at a faster rate, semi-automatically with minimal human intervention.

The equipment is capable of marking/fencing at a minimum rate of 1.2 km/hr with inter-picket spacing of 15 m. The system has capability to place the pickets at 10 ? 35 meters spacing in the step of 5 m. The picket can be driven to a maximum depth of 450 mm by this system.

MMME Mk-II system is designed to operate in plains of Punjab, as well as semi-desert & desert of Rajasthan, in all weather conditions. The system can store 500 numbers of pickets and polypropylene rope of 15 km in length.

The main sub systems which are to be integrated onto the vehicle are Carrier vehicle, Mechanical sub system, Pneumatic sub system, Electrical sub system and Electronic sub system with selected sub-vendors. Sourcing of subsystems from industries established during the development phase is being followed by BEML. The superstructure is being built by sub-vendors and supplied to Accurate Group for integration onto BEML HMV.

Speaking on the occasion, Rajashekar said, "We are proud to be a partner with this project in our quest to achieve 'Atmanirbhara'. The equipment will greatly benefit the Indian Army during operations. I am sure that this project would be the harbinger for many more projects to come." BEML is expected to receive the orders of more than 55 systems from MoD after the successful trial evaluation.

<https://www.dailyexcelsior.com/beml-rolls-out-mechanical-minefield-marking-equipment/>



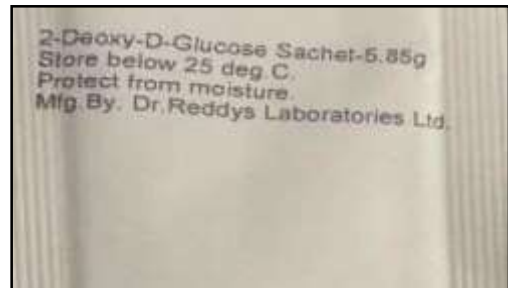
Thu, 20 May 2021

Dr Reddy's shares important information on DRDO's 2-DG Covid drug. Details here

- *The 2-DG drug has been developed jointly by the Institute of Nuclear Medicine and Allied Sciences, a lab of the DRDO, in collaboration with Dr Reddy's Laboratories, Hyderabad*

As the country is battling the second wave of the Covid-19 pandemic, an anti-Covid drug, named 2-deoxy-D-glucose (2-DG), found to help speed up recovery and reduce oxygen dependence has been launched by the Defence Research and Development Organisation (DRDO).

The 2-DG drug has been developed jointly by the Institute of Nuclear Medicine and Allied Sciences, a lab of the DRDO, in collaboration with Dr Reddy's Laboratories, Hyderabad.



Dr Reddy's on Wednesday shared a few important information regarding the drug. Take a look:

The DCGI has recently granted permission for emergency use of the drug as an adjunct therapy in moderate to severe Covid-19 patients. (ANI)

- Emergency use approval has been granted in India for anti-Covid-19 therapeutic application of the drug 2-deoxy-D-glucose (2DG) developed by INMAS, a lab of the DRDO, in collaboration with Dr Reddy's Laboratories.
- 2DG is an oral anti-viral drug that can be administered only upon prescription to hospitalised moderate to severe Covid-19 patients as adjunct (add on) therapy along with existing standard of care.
- 2DG has not yet been launched into the market. Price per sachet has not yet been announced.
- Commercial launch and supply of 2DG to major Government and private hospitals is expected to commence in mid-June. Price is being determined with a view to making it accessible and affordable to as many patients as possible, and will be announced soon.
- Please beware of agents selling spurious or illegal products in the name of 2DG.
- Please beware of unverified messages relating to 2DG circulating on social media and on WhatsApp.

The national drug regulator, Drugs Controller General of India (DCGI), had cleared the formulation on May 1 for emergency use as an adjunct therapy in moderate to severe Covid-19 patients.

1st batch of the anti-Covid-19 drug released

Defence Minister Rajnath Singh and Health Minister Dr Harsh Vardhan on Monday (May 17) released the first batch of the indigenously developed anti-Covid-19 drug, 2-deoxy-D-glucose or '2-DG'.

The drug accumulates in virus-infected cells and prevents the growth of the virus by stopping viral synthesis and energy production. Its selective accumulation in virally infected cells makes this drug unique, a release said.

"The drug will be of immense benefit to the people suffering from Covid-19," it said.

<https://www.livemint.com/news/india/2deoxydglucose-dr-reddy-s-shares-important-information-on-drdo-s-2-dg-covid-drug-details-here-11621438609404.html>

DRDO's 2-DG anti-Covid drug to be available by mid-June: Dr Reddy's

New Delhi: Dr Reddy's on Wednesday said that the supply of anti-Covid drug 2-deoxy-D-glucose (2-DG) developed by the Defence Research and Development Organisation (DRDO) is expected to commence in mid-June.

In a statement, Hyderabad based Dr Reddy's said that the drug has not been launched in the market yet and people should be cautious of agents selling spurious or illegal products in the name of 2DG.

The anti-Covid therapeutic application of the drug has been developed by the Institute of Nuclear Medicine and Allied Sciences (INMAS), a leading laboratory of the DRDO, in collaboration with Dr Reddy's Laboratories (DRL) in Hyderabad.

2-DG is an oral anti-viral drug that can be administered only upon prescription to hospitalised moderate to severe Covid-19 patients as adjunct (add on) therapy along with existing standard of care.

Commercial launch and supply of 2-DG to major government and private hospitals is expected to commence in mid-June. Price is being determined with a view to making it accessible and affordable to as many patients as possible, and will be announced soon.

Dr Reddy's also warned of unverified messages relating to 2-DG circulating on social media and on WhatsApp.

Earlier this month, the Drugs Controller General of India (DGCI) approved the oral drug for emergency use as an adjunct therapy in moderate to severe coronavirus patients.

The approval of the drug has come at a time when India is grappling with a record-breaking wave of the coronavirus pandemic that has stretched the country's healthcare infrastructure to its limit.

DRDO Chairman Dr G Satheesh Reddy said that DRDO and Dr Reddy's lab had gone through the complete trials and conducted trials across 30 hospitals and on a large number of patients.

The drug comes in powder form in a sachet, which is taken orally by dissolving it in water. It accumulates in the virus-infected cells and prevents virus growth by stopping viral synthesis and energy production. Its selective accumulation in virally infected cells makes this drug unique.

Clinical trial results have shown that this drug helps in faster recovery of hospitalised patients and reduces supplemental oxygen dependence. Higher proportion of patients treated with 2-DG showed RT-PCR negative conversion in Covid patients.

<https://timesofindia.indiatimes.com/india/drdo-2-dg-anti-covid-drug-to-be-available-by-mid-june-dr-reddys/articleshow/82775063.cms>



DRDO's anti-COVID-19 drug 2-DG likely to be available by mid-June: Dr Reddy's

In a statement, Hyderabad based Dr Reddy's clarified that 2-DG is not yet available in the market and the commercial launch of the drug is expected by mid-June

Highlights

- 1. Commercial launch and supply of 2-DG to major government and private hospitals is expected to commence in mid-June, Dr Reddy's said.**
- 2. On May 17, Defence Minister Rajnath Singh had released the first batch of 2-DG.**
- 3. The drug was approved for emergency use as an adjunct therapy in moderate to severe COVID-19 patients on DCGI on May 1.**

New Delhi: Dr Reddy's on Wednesday (May 19) said its anti-COVID-19 drug 2-deoxy-D-glucose (2-DG) is expected to launch in the market by mid-June.

In a statement, Hyderabad based Dr Reddy's clarified that the drug is not yet available in the market and its per sachet price remains to be announced, The Times of India (TOI) reported.

“Price is being determined with a view to making it accessible and affordable to as many patients as possible, and will be announced soon,” the statement read.

While commercial launch and supply of 2-DG to major government and private hospitals is expected to commence in mid-June, as per TOI report.

In addition, Dr Reddy's also warned of agents selling spurious or illegal products in the name of 2-DG.

The anti-COVID-19 drug has been developed by the Institute of Nuclear Medicine and Allied Sciences, a lab of the Defence Research and Development Organisation (DRDO), in collaboration with Dr Reddy's Laboratories.

On May 17, Defence Minister Rajnath Singh had released the first batch of 2-DG.

The drug comes in powder form in a sachet and has to be taken orally by dissolving in water. It accumulates in the virus-infected cells and prevents virus growth by stopping viral synthesis and energy production.

It was approved for emergency use as an adjunct therapy in moderate to severe COVID-19 patients by the Drugs Controller General of India (DCGI) on May 1.

<https://zeenews.india.com/india/drdo-s-anti-covid-19-drug-2-dg-likely-to-be-available-by-mid-june-dr-reddys-2363137.html>

कोरोना के इलाज की नई दवा 2डीजी: बाजार में नहीं मिलेगी डीआरडीओ की एंटी-कोविड ड्रग, ये है वजह

By आशीष तिवारी

सार

ऑल इंडिया केमिस्ट एसोसिएशन से जुड़े विकास रस्तोगी कहते हैं कि इस दवा के लांच होने के बाद से उनके पास लगातार लोगों के फोन और उनके आउटलेट पर लोगों की भीड़ पहुंच रही है। विकास कहते हैं दरअसल इस दवा को इमरजेंसी में ही मंजूरी मिली है। वह बताते हैं जो दवा इमरजेंसी के तौर पर लांच की जाती है वह खुले बाजार में नहीं मिलती है...

विस्तार

नई दिल्ली: रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) ने एंटी-कोविड ड्रग तो बना ली लेकिन यह दवा किसे मिल रही है इसकी जानकारी शायद ही किसी को मिल रही हो। दरअसल इस दवा को लेकर पूरे देश में अचानक से डिमांड बढ़ने लगी और लोग इस दवा के लिए चक्कर काटने लगे हैं। स्वास्थ्य मंत्रालय के अधिकारियों का कहना है कि इस दवा को इमरजेंसी में इस्तेमाल के लिए अनुमति मिली है। इसलिए फिलहाल दवा को खुले बाजार में नहीं बेचा जा सकता।

सोमवार को डीआरडीओ ने एंटी कोविड-19 ड्रग को लांच की थी। डीआरडीओ और लॉन्च करने वाली कंपनी का दावा है कि इस दवा से मरीजों में ऑक्सीजन का स्तर सुधरता है और मरीजों में रिकवरी भी जल्दी होती है। ऐसे वक्त में जब कोरोना पूरे देश में तबाही मचा रहा है तो इस तरह की दवा का उपलब्ध होना लोगों में एक नई उम्मीद की किरण जगाता है। यही वजह रही



DRDO की बनाई देसी कोरोना दवा 2DG लॉन्च - फोटो : ANI (File)

कि दवा की लॉन्चिंग के बाद से ही लोगों ने अस्पतालों से लेकर दवा की दुकानों तक पर इस ड्रग को खोजना शुरू कर दिया। लेकिन यह दवा फिलहाल अब तक उपलब्ध नहीं है।

ऑल इंडिया केमिस्ट एसोसिएशन से जुड़े विकास रस्तोगी कहते हैं कि इस दवा के लांच होने के बाद से उनके पास लगातार लोगों के फोन और उनके आउटलेट पर लोगों की भीड़ पहुंच रही है। विकास कहते हैं दरअसल इस दवा को इमरजेंसी में ही मंजूरी मिली है। वह बताते हैं जो दवा इमरजेंसी के तौर पर लांच की जाती है वह खुले बाजार में नहीं मिलती है। ऑल इंडिया केमिस्ट एसोसिएशन ने लगातार बढ़ रही मांग को लेकर केंद्रीय स्वास्थ्य मंत्रालय से भी संपर्क किया है। एसोसिएशन के मुताबिक उनको मंत्रालय से मिली जानकारी के अनुसार फिलहाल अगले एक से डेढ़ महीने तक यह दवा बाजार में उपलब्ध नहीं हो सकेगी।

केंद्रीय स्वास्थ्य मंत्रालय के अधिकारियों के मुताबिक डीआरडीओ द्वारा तैयार इस दवा को फिलहाल सेना के अस्पताल और एम्स में मरीजों को इमरजेंसी ड्रग के तौर पर दिया जा रहा है। स्वास्थ्य मंत्रालय के अधिकारियों का कहना है क्योंकि इस दवा की पहली खेप महज 10 हजार डोज ही तैयार हुई हैं ऐसे में यह निश्चित है कि दवा आम जनता के लिए उपलब्ध नहीं हो सकेगी। ड्रग कंट्रोलर महानिदेशालय के मुताबिक अगले कुछ महीनों में इस दवा को बल्क में बनाया जाना शुरू किया जाएगा। हालांकि महानिदेशालय का

कहना है कि यह काम कंपनी और रिसर्च करने वाली एजेंसी का ही होता है लेकिन अनुमति उनके निदेशालय से ही जारी होती है इसलिए अनुमान है कि अगले एक से डेढ़ महीने के बाद में इस दवा को पब्लिक के लिए बाजार में लांच किया जाएगा।

ऑल इंडिया केमिस्ट एसोसिएशन ने मांग की है कि जब इस दवा को रामबाण के तौर पर माना जा रहा है तो पब्लिक के लिए दवा को खुले बाजार में उपलब्ध कराया जाना चाहिए। एसोसिएशन के मुताबिक जितनी जल्दी यह दवा बाजार में उपलब्ध हो जाएगी, लोगों को बीमारी से निजात पाने में मदद मिलेगी। एसोसिएशन को इस बात का हमेशा डर बना रहता है कि बहुत सी ऐसी दवा हैं, जिनकी डिमांड ज्यादा होती है बाद में या तो वह कालाबाजारी के माध्यम से बाजार में मिलना शुरू हो जाती हैं या फिर उनका नकली प्रोडक्ट बाजार में आ जाता है। इसलिए एसोसिएशन ने मांग की है कि बेहतर है जल्द से जल्द इस दवा को बाजार में आम मरीजों के लिए उतार दिया जाए।

<https://www.amarujala.com/india-news/drdo-anti-covid-drug-2-dg-will-not-available-in-open-market?pageId=2>



Thu, 20 May 2021

DRDO की एंटी-कोविड दवा 2-DG कब आएगी बाजार में, कितनी रहेगी कीमत? डॉ रेड्डीज ने दी जानकारी

डॉ. रेड्डीज लैबोरेटरीज ने DRDO की एंटी-कोरोना दवा

'2-डीऑक्सी-डी-ग्लूकोज' (2-DG) को लेकर कुछ जानकारियां साझा की हैं।

हैदराबाद बेस्ड फार्मा कंपनी डॉ. रेड्डीज लैबोरेटरीज ने DRDO की एंटी-कोरोना दवा '2-डीऑक्सी-डी-ग्लूकोज' (2-DG) को लेकर कुछ जानकारियां साझा की हैं। डॉ. रेड्डीज ने बताया कि भारत में एंटी-कोरोना दवा 2-DG के इमरजेंसी इस्तेमाल की इजाजत मिल गई है। इसे DRDO की अग्रणी प्रयोगशाला नाभिकीय औषधि तथा संबद्ध विज्ञान संस्थान (INMAS) ने डॉक्टर रेड्डीज प्रयोगशाला के साथ मिलकर विकसित किया है। डॉक्टर रेड्डीज प्रयोगशाला ने बताया कि 2-DG एक ओरल एंटी वायरल दवा है, जिसे केवल अस्पताल में भर्ती मध्यम और गंभीर मरीजों को डॉक्टर की सलाह पर पहले से जारी इलाज में जोड़कर दिया जा सकता है।

2DG दवा अभी बाजार में नहीं

Dr. Reddys की तरफ से कहा गया है कि 2DG Drug अभी बाजार में नहीं आई है। इस दवा के जून तक बाजार में आने की संभावना है। डॉ. रेड्डीज की तरफ से कहा गया है कि उससे पहले किसी भी मैसेज से सावधान रहें। सोशल मीडिया पर 2DG को बेचने के किए जा रहे दावे फर्जी हैं।



DRDO 2G Anti Covid Drug: डॉ. रेड्डीज लैबोरेटरीज ने DRDO की एंटी-कोरोना दवा '2-डीऑक्सी-डी-ग्लूकोज' (2-DG) को लेकर कुछ जानकारियां साझा की हैं।

कितनी होगी कीमत

Dr. Reddys की ओर से यह भी कहा गया है कि इस दवा की कितनी कीमत होगी यह अभी तय नहीं किया है। आने समय में इसकी कीमत तय की जाएगी। डॉ. रेड्डी की तरफ से जारी बयान में कहा गया है कि इसकी कीमत ऐसी रखी जाएगी जो सबकी पहुंच में हो, जल्द ही कीमतों का एलान हो सकता है।

सप्लाई मिड जून से होने की संभावना

डॉक्टर रेड्डीज प्रयोगशाला की ओर से जानकारी दी गई कि 2-DG के कमर्शियल लॉन्च और बड़े सरकारी तथा निजी अस्पतालों को इसकी सप्लाई मध्य जून से शुरू होने की उम्मीद है। ज्यादा से ज्यादा रोगियों तक इसे पहुंचाने और वहनीय बनाने की दृष्टि से दाम को निर्धारित किया जा रहा है और जल्द ही इसकी घोषणा की जाएगी।

एजेंटों से सावधान रहें

2-DG के बारे में जानकारी साझा करते हुए डॉ. रेड्डीज ने कहा कि ऐसे एजेंटों से सावधान रहें, जो 2DG के नाम से नकली और गैरकानूनी प्रोडक्ट बेच रहे हैं। इसके साथ ही उसने सोशल मीडिया और WhatsApp पर फैल रहे 2DG से जुड़े असत्यापित संदेशों से भी खबरदार रहने के लिए कहा है।

इमरजेंसी इस्तेमाल की मंजूरी

डॉ रेड्डीज लैबोरेटरीज के सहयोग से डीआरडीओ की एक प्रयोगशाला INMAS द्वारा विकसित दवा 2-डीऑक्सी-डी-ग्लूकोज (2DG) को एंटी-कोविड-19 के रूप में भारत में इमरजेंसी इस्तेमाल की मंजूरी दी गई है।

ओरल एंटी-वायरल दवा

2DG एक ओरल एंटी-वायरल दवा है जिसे केवल अस्पताल में भर्ती मॅडरेट से गंभीर कोविड-19 मरीजों को देखभाल के मौजूदा मानकों के साथ सहायक (एड ऑन) थेरेपी के रूप में दिया जा सकता है।

<https://www.financialexpress.com/hindi/business-news/dr-reddys-share-important-information-about-drdo-anti-covid19-drug-2g-when-supply-in-market-what-will-be-price/2255336/>

दावा: ग्वालियर के DRDE लैब में 25 साल पहले तैयार की गयी थी DRDO की 2 डीजी ऑक्सी डी ग्लूकोस दवा

Gwalior, इस दवा को तैयार करने वाली टीम में शामिल रहे डॉ करुणा शंकर पांडेय का कहना है जहां तक वो जानते हैं भारत में इस मॉलिक्यूल को अब तक केवल डीआरडीओ ने ही तैयार किया है जो कैंसर थेरेपी में काम आ रही थी

By सुशील कौशिक

ग्वालियर: देश के रक्षा मंत्री राजनाथ सिंह और स्वास्थ्य मंत्री डॉ हर्षवर्धन ने कोरोना महामारी से बचाव के लिए जो "2 डीजी ऑक्सी डी ग्लूकोस" दवा लॉन्च की है, इस दवा को ग्वालियर के डीआरडीई लैब में लगभग 25 साल पहले ही तैयार कर लिया गया था। ग्वालियर DRDO के इंस्टिट्यूट ऑफ न्यूक्लियर मेडिसिन एंड एलाइड साइंसेज ने इस दवा को कैंसर थेरेपी के लिए तैयार किया था। इस दवाई को तैयार करने वाली टीम में शामिल रहे रिटायर्ड वैज्ञानिक डॉ करुणा शंकर पांडे ने ये दावा किया है।

अमेरिका ने मना किया तो भारतीय वैज्ञानिकों ने तैयार कर ली दवा

रिटायर्ड वैज्ञानिक डॉ करुणा शंकर पांडे ने बताया कि दिल्ली स्थित DRDO की इनमास इस दवा को 1995 से पहले अमेरिका से मंगवाती थी। अमेरिका से आने के कारण ये बेहद महंगी पड़ती थी। बाद में अमेरिका ने ये दवा देने से मना कर दिया। DRDO के प्रोफेसर डॉ विनय जैन ने डीआरडीओ की बैठक में इस मुद्दे को रखा।



उस समय पूर्व राष्ट्रपति डॉ एपीजे अब्दुल कलाम DRDO के महानिदेशक हुआ करते थे। उन्होंने इस मॉलिक्यूल को भारत में बनाने का सुझाव दिया। कलाम ने प्रो विनय जैन को DRDO के डॉक्टर आर बी स्वामी से बात करने के लिए कहा और उसके बाद डॉक्टर स्वामी इस प्रोजेक्ट को लेकर ग्वालियर आए। ग्वालियर DRDO लैब के डॉक्टर करुणा शंकर पांडे को ये प्रोजेक्ट सौंपा गया।

डॉ करुणा शंकर पांडेय ने 25 साल पुरानी कहानी बतायी

सालभर में तैयार हुई दवा, कैंसर थेरेपी में कारगर रही

साल 1995 में इस मॉलिक्यूल पर काम शुरू हुआ। सालभर में ही दवा तैयार कर ली गई, जिसके बाद इसे ड्रग डिपार्टमेंट को पेटेंट के लिए भेजा गया। फरवरी 1998 में इस दवा को पेटेंट भी मिल गया। तब से यह लगातार कैंसर थेरेपी के लिए कारगर साबित हो रही थी।

अभी हाल ही में इनमास और डॉक्टर रेडी लैब द्वारा इस दवा का कोविड मरीजों के इलाज के लिए भी परीक्षण किया गया जिसके सार्थक परिणाम सामने आए। उसके बाद इसे अब कोविड-19 के लिए उपयोग करने की अनुमति दी जा चुकी है।

टीम में शामिल होने का गर्व

इस दवा को तैयार करने वाली टीम में शामिल रहे डॉ करुणा शंकर पांडेय का कहना है जहां तक वो जानते हैं भारत में इस मॉलिक्यूल को अब तक केवल डीआरडीओ ने ही तैयार किया है जो कैंसर थेरेपी में

काम आ रही थी। अब ये कोरोना मरीजों के लिए भी उपयोगी साबित होगी। उनका कहना है डीआरडीओ के बेहतरीन कामों में से यह एक है, मैं उस टीम का हिस्सा था इसका मुझे गर्व है।

<https://hindi.news18.com/news/madhya-pradesh/gwalior-claim-drds-2dg-oxy-d-glucose-drug-was-formulated-25-years-ago-in-drde-lab-of-gwalior-mpsg-3593847.html>



Thu, 20 May 2021

Don't panic; great vaccines, miracle DRDO drug available

By Biswaraj Patnaik

It is not untrue that there have been severe lapses on the Union Government's planning and execution fronts. Coronavirus had appeared as a strange, near-invincible pathogen in early 2020 though it was discovered in China in December 2019. The novel coronavirus gripped the world in such a scary manner that even the wisest of human beings seemed to have forgotten the deadliest Bombay flu which had raged India between 1918 and 1921.

The Spanish flu that had wiped out nearly 500 million people worldwide has been the most-talked-about pandemic until this novel thing happened. Indians seem to be oblivious of the fact that the Bombay flu of 1918-1921 did have much more devastating effect in India than Covid is having now.

The Bombay flu had killed 20 million of the total 310 million Indians under the British rule. The Spanish flu had taken away 150 million human lives after infecting at least 500 million which was one-third of the world population.

The 1918 flu pandemic in India between 1918 and 1921 was only a consequence of the worldwide Spanish flu pandemic. The ship carrying troops returning from the First World War in Europe are believed to have brought the virus to India then. The deadly flu broke out first in Bombay in June 1918. Then it spread fast across the country. It hit different parts of the country in three waves, the second wave being the most devastating with record deaths.

The flu peaked in Bombay in September 1918; in Madras in the middle of November and in Calcutta a couple of months later.

The younger 20-40 age group was most affected by the disease. The spread was further exacerbated by a failed monsoon that brought in famine-like conditions. The underfed and weak rural folks were forced to move into densely populated cities for survival.

Not surprisingly, the year 1919 witnessed a reduction of births by around 30 per cent and the population growth of India during the 1911-1921 decade had dipped to 1.2%, the lowest in decades under the British Raj. Mahatma Gandhi, the leader of India's independence struggle, was also infected by the virus, for which the freedom movement around that time had gone weak as people were struggling to keep off the flu. The prevailing healthcare system, primitive and horrendously inadequate, virtually collapsed as it failed miserably to cope with the huge demand for medical attention.

The consequent toll of death and misery coupled with the resultant economic fallout subsequently led to more furious agitations against the colonial rule only when the pandemic subsided a little.

The Spanish flu, as per available records, had nearly 500 million people or one-third of the world's population infected. A whopping 50 million people died worldwide with 6,75,000 deaths having occurred only in the United States. Fortunately, the coronavirus of today, though enigmatic at the beginning, is by now known too well. Due to incredible developments in modern medical

science and technology, strangest most unruly of pathogens are being deciphered within a short period. All their codified secrets of mischief that make them temporarily difficult to contain are unravelled by master researchers.

Now, the experts know just too well how the spiked viruses cheat the human cells wherein they dupe the host's genetic system by masquerading as close friends to be welcomed to do whatever they want to with the sole objective of multiplying rapidly.

There is no need to explain further how treatment protocols have become effective and what simple behaviour practices can keep unruly viruses warded off. Most heartening of all good things is the invention of efficacious vaccines developed within just one year. By now, there are at least five wonderful vaccines, two of them essentially made in India, that are being administered to create herd immunity fast. The happiest news of all is that India has come up with a wonder oral drug that cures Covid within three to four days, particularly the 'moderate-to-severely' ill patients.

The Defence Research and Development Organisation (DRDO) has invented this simple sureshot drug called '2DG', which has obviously left the developed Western nations stunned because of its superb efficacy and the short time within which they invented it.

Defence Minister Rajnath Singh and Union Health Minister Dr Harsh Vardhan have already released the first batch of anti-Covid-19 drug '2-DG' three days ago on May 17. Approximately 10,000 doses of the 2-deoxy-D-glucose (2DG), as it is known scientifically, will be made available by the DRDO this week to be administered across India. The drug has been developed in collaboration with Dr Reddy's Laboratories (DRL) in Hyderabad. Prominent doctors have successfully treated ICU patients with the 2-DG during the trials. All patients recovered miraculously.

Many patients in the ICU and not responding to conventional medications have shown remarkable improvement at various stages. Patients requiring a high level of oxygen began requiring much less the moment 2-DG was administered orally. Similarly, patients on ventilators also showed significant improvement.

What all it does is cheat the cheating pathogen by tempting it to devour the glucose-like substance that instead of feeding the enemy starves it to death. Most viruses are crazy to feed on glucose the only nutrition that keep them live. 2-DG feeds to kill. So they say 'cheating the cheater' is the trick used. The 2-DG drug is not a fanciful one but a simple powder drug packaged in small glucose like sachets. Half the quantity of a single packet is mixed with 100 ml of water and consumed by the patient in the morning and evening for five or six days only.

It is very easy for patients to just drink down. Most importantly, the price of the drug is said to be highly affordable by all though the exact price is yet to be revealed. However, this drug is not to be consumed by patients in home Isolation because they don't require that at all.

The drug is under emergency use only and not released commercially in public markets as yet. As of now, it is to be administered to patients admitted in hospitals and under strict medical supervision. Mankind will be saved because of this Indian wonder drug.

<https://www.dailypioneer.com/2021/state-editions/don---t-panic--great-vaccines--miracle-drdo-drug-available.html>

2-DG holds promise but need more data before use: Experts

2DG hasn't been launched in the market and the price of the sachet hasn't been announced. Many experts have flagged concerns over the approval

By Prabha Raghavan , Anil Sasi

New Delhi: Top doctors in key Covid wards are guarded in their reception to the 2-DG (2-deoxy-D-Glucose) drug the Centre launched Monday granting emergency use approval and saying it will reduce recovery time and oxygen dependency for Covid-19 patients.

Their consensus is that the principle behind 2-DG, traditionally used as a cancer drug, is well-established. It inhibits glycolysis, the process by which cells break down glucose which helps viruses get energy to replicate and spread and so disrupting this could be a tool in the treatment of Covid-19. But, they said, they need more clinical trial evidence before it can be widely used.

The promise of 2-DG as a therapeutic tool finds mention in at least five papers, including by German, Brazilian and US scientists published last year, but none draws from testing in actual hospital settings.

The version launched in India, offered by Defence Research and Development Organization (DRDO) with Dr Reddy's Laboratories (DRL), is linked to a paper written in March 2020 by a team led predominantly by members of Haridwar-based Patanjali Research Institute.

The non-peer reviewed paper was posted on ResearchGate with the lead author Acharya Balakrishna, chairman, Patanjali Ayurved. This pre-print was cited in the January-February 2021 issue of the Indian Council of Medical Research's Indian Journal of Medical Research.

His fellow authors include three affiliated with Patanjali Ayurved (Pallavi Thakur; Narsingh Chandra Dev and Anurag Varshney); one from Vivekanand Education Society's Institute of Technology (Shivam Singh); another from the Jain Vishva Bharati Institute (Viney Jain); and the vice-chancellor of Chennai-based SIMATS, Saveetha Institute of Medical and Technical Sciences, (Rakesh Kumar Sharma). Thakur and Sharma have been associated with DRDO as well. Welcoming the clearance, Sharma tweeted that it was a "matter of great pride" that the research for 2-DG was conducted at SIMATS and Patanjali Research Institute "under the leadership of Balkrishna."

2DG hasn't been launched in the market and the price of the sachet hasn't been announced. Many experts have flagged concerns over the approval.

Records show multiple attempts by DRL in 2020 to seek a speedy approval with truncated trials which were overruled by the Subject Experts Committee, the expert panel of the Indian drug regulator.

The SEC cited lack of sufficient evidence to greenlight such a clearance without adequate human testing. Following a Phase 2 and Phase 3 clinical trial, the regulator granted restricted permission for emergency use on May 1.

Dr Shashank Joshi, expert member in the Maharashtra Covid task force, said that, conceptually, the drug appears attractive but there is not much data in the public domain. "I would only use it in research mode till we have data in the public domain. Studies have not been done in the population



of diabetics and those with coronary artery disease. It may be useful in mild to moderate disease after validation in research mode,” Joshi said.

Lok Nayak Jai Prakash Narayan (LNJP) Hospital Director of Medicine and Medical Director Suresh Kumar said that it holds promise. “We will have to see how well it performs once we prescribe this. So far, it is available only in select centres. Once we practically see this, it may work, because oxygen is something which most of the patients require,” he added.

“As things stand, I will not be introducing it as part of treatment. There is many a slip between theoretical value and clinical outcome, and they haven’t shown any significant clinical outcomes. I would be happy if they would do a good Phase 3 clinical trial,” said Sumit Ray, head of critical care at Holy Family Hospital in New Delhi.

It’s paucity of data that experts point to. Flagging the lack of evidence to back claims that 2DG could reduce the need for supplemental oxygen, together with the “lack of transparency” in the approval process, Madhav Thambisetty, neurologist and Adjunct Professor of Neurology at Johns Hopkins, said that there were “serious concerns about scientific rigour yielding to expediency in decision-making that further exploits the growing desperation of patients and their families.”

As per the four available minutes of SEC’s meetings on 2DG, the drug was tested in a Phase 2 proof of concept study, a Phase 2b dose-finding study and Phase 3 clinical trials.

According to a May 8 release by the Ministry of Defence, the drug had been tested on 110 patients in Phase 2 trials. However, this does not reflect in the details uploaded and updated on the trial registry — DRL’s June 2020 listing of this Phase 2 trial mentions a sample size of only 40 participants.

The Phase 3 trial was conducted on 220 patients between December 2020 and March 2021 at 27 Covid hospitals across the country. “The detailed data of (the) Phase-III clinical trial was presented to DCGI,” it stated, adding that the results of the trials indicated “early relief from oxygen therapy/dependence.”

Despite 2-DG receiving authorization on May 1, the Central Drugs Standard Control Organization (CDSCO) is yet to make public the minutes of the SEC meeting where emergency authorization was recommended.

Queries and phone calls to Drug Controller General of India VG Somani remained unanswered.

On May 8, the Ministry of Defence said that a “significantly higher” proportion of Covid-19 patients – 42% — that received 2-DG had improved symptomatically and became free from supplemental oxygen dependence by the third day. In comparison, 31% of those receiving standard of care had seen such improvement. However, no data from the trials has been published.

2-DG has been studied around the world for decades due to its potential benefit in cancer treatment. Realising the effect of 2-DG on non-surgical treatment of cancers and expecting its impact “to be very significant,” the DRDO’s Institute of Nuclear Medicine and Allied Sciences (INMAS) had transferred the technology for this molecule to DRL in 2014.

In its submission for Phase 2 clinical trials with 2DG, the company had said, “While 2DG is not an approved drug, it has been studied in 218 clinical trials for the treatment of various cancers globally. 2-DG has not been evaluated in the acute treatment of moderate to severe COVID-19.” INMAS was responsible for the genesis of this hypothesis and the testing of 2-DG’s efficacy against SARS-CoV-2, it stated.

Messages and phone calls to Dr Sudhir Chandna, Additional Director at DRDO’s INMAS went unanswered. Queries to DRL and DRDO remained unanswered.

<https://indianexpress.com/article/india/2-dg-corona-vaccine-holds-promise-but-need-more-data-before-use-experts-7322215/>

What is DRDO's Oxycare System and how it can prove to be a boon in the COVID-19 pandemic?

DRDO's Defence Bio-Engineering Electro Medical Laboratory (DEBEL), Bengaluru has developed a SpO₂ (Blood Oxygen Saturation) Supplemental Oxygen Delivery System for moderate COVID-19 patients and soldiers posted at extreme high-altitude areas

By Arfa Javaid

In a landmark achievement, DRDO's Defence Bio-Engineering & Electro Medical Laboratory (DEBEL), Bengaluru has developed a SpO₂ (Blood Oxygen Saturation) Supplemental Oxygen Delivery System. The automatic Oxycare System can prove to be a boon during the ongoing COVID-19 pandemic and to soldiers posted at extreme high-altitude areas.

On 12 May 2021, the PM-CARES Fund has approved sanction for the procurement of 1,50,000 units of Oxycare System at a cost of Rs 322.5 Crore.

The Oxycare System developed by DEBEL will help in delivering supplemental oxygen based on the SpO₂ levels, preventing the person from sinking into a state of Hypoxia (fatal in most cases, if sets in).

Hypoxia

It is a state where the amount of oxygen reaching the tissues is not adequate to meet all the energy requirements of the body. The exact situation is replicated in COVID-19 positive patients and has been a leading factor in the ongoing crisis.

As per the press release by the Ministry of Defence, the electronic hardware of the Oxycare System is designed to function at extreme altitudes with low barometric pressures, low temperatures and humidity. The software safety checks which are incorporated in the Oxycare System plays a crucial role in ensuring the functional reliability of the system in field conditions.

How does the Oxycare System work?

The automated system developed by DRDO reads the SpO₂ levels of an individual with the help of a wrist-worn pulse oximeter module through a wireless interface and controls a proportional solenoid valve to regulate the oxygen supply to the patient. The patient will receive oxygen from a lightweight portable oxygen cylinder through nasal nares.

As per the Ministry, the Oxycare System is available in various sizes ranging from one litre and one kg weight with 150 litres of oxygen supply to 10 litres and 10 kg weight with 1,500 litres of oxygen supply which is expected to sustain for around 750 minutes with a continuous flow of two litres per min (lpm). The automated system with the dual qualities of being robust and cheap is already in bulk production with the industry.

Boon to the ongoing COVID-19 pandemic

The Oxycare System is a boon to the ongoing crisis arising due to the COVID-19 pandemic. It can be used in the houses for moderate COVID-19 infected patients for Oxygen flow therapy with flow controlled at 2/5/7/10 lpm flow. The wrist-worn oximeter will give an alarm in cases of lower SpO₂ value. It will also increase or decrease the oxygen flow based on SpO₂ settings which can be automatically adjusted at 2,5,7,10 lpm flow rate.

Due to its availability and uncomplicated usage by a common man, the Oxycare System will reduce the workload and exposure time of doctors and paramedics at large.



Medical Grade Cylinder Model No : ACE- 10L-152
DRDO's supplemental Oxygen Delivery System

What is SpO2?

Saturation of Peripheral Oxygen (SpO2) is the measure of the amount of oxygen-carrying haemoglobin in the blood to the amount of haemoglobin not carrying oxygen. It is also referred to as Oxygen Saturation.

Condition	SpO2 range
Normal	95-100%
Brain gets affected	80-85%
Cyanosis	65%

"The automated Calibrated Variable Flow Control for Low O2 levels (User pre-set, <90%, <80%) through a calibrated Flow Control Valve (PFCV) will facilitate in economising the oxygen supply (1-10 lpm with ± 0.5 lpm). A moderate Covid patient requires longtime moderate O2 supply 10Litre/150bar–10kg–1500 litres which can sustain up to 750 minutes," the Ministry said in a press note.

The automated and uncomplicated Oxygen Delivery System will prove to be a boon in the current crisis when medical resources are stretched to their limits. Its proliferation would mitigate the crisis in the management of a huge number of COVID-19 positive patients in many ways pan India.

<https://www.jagranjosh.com/general-knowledge/drdo-spo2-supplemental-oxygen-delivery-system-1619517150-1>



Thu, 20 May 2021

DRDO वाराणसी अस्पताल बना COVID रोगी प्रबंधन का रोल मॉडल, लखनऊ समेत देश के अन्य अस्पताल में लागू होगा Model

वाराणसी के पंडित राजन मिश्र कोविड अस्पताल में रोगी प्रबंधन सिस्टम की चर्चा रक्षा मंत्रालय में होने लगी है। उनके मॉडल को लखनऊ में डीआरडीओ के अवध शिल्प ग्राम स्थित अटल विहारी वाजपेई कोविड अस्पताल में लागू करने की तैयारी है।

By Rafiya Naz

लखनऊ: डीआरडीओ ने लखनऊ, दिल्ली, अहमदाबाद, वाराणसी और पटना सहित कई शहरों में मिशन मोड पर कोविड अस्पताल तो बना दिया। लेकिन इन सभी अस्पतालों में अब वाराणसी के पंडित राजन मिश्र कोविड अस्पताल में रोगी प्रबंधन सिस्टम की चर्चा रक्षा मंत्रालय में होने लगी है। उनके मॉडल को लखनऊ में डीआरडीओ के अवध शिल्प ग्राम स्थित अटल विहारी वाजपेई कोविड अस्पताल में लागू करने की तैयारी है। जहां भर्ती मरीजों की जानकारी तक तीमारदार हासिल नहीं कर पा रहे हैं।

डीआरडीओ ने लखनऊ के बाद वाराणसी का अस्पताल बनाया था। मध्य कमान मुख्यालय ने लखनऊ के साथ वाराणसी में



सैन्य डॉक्टर, पैरामेडिकल स्टाफ, मिलिट्री नर्सिंग सर्विस अधिकारियों की तैनाती की थी। लखनऊ में जहां आईसीयू और ऑक्सीजन वार्ड में बेड खाली होने पर भी 30 प्रतिशत बेड पर सीधी भर्ती नहीं ली जा रही है। वही वाराणसी में सीधे और निजी अस्पतालों से रेफर मरीज को भर्ती हो रही है।

आईसीयू वार्ड में भर्ती हर मरीज के पैर या हाथ में स्टिकर लगाकर उनकी डिटेल और सम्पर्क नंबर लिखा रहता है। गंभीर मरीजों की रोजाना अपडेट उनके परिवार को फोन कर बताई जा रही है। जबकि अस्पताल आने वाले तीमारदारों को ग्रीन एरिया में रोजाना सभी मरीज की स्थिति मेडिकल बुलेटिन से बताई जा रही है।

अब अपने आसपास होने वाली मौत से अवसाद और नकारात्मक विचार आने पर भी रोगियों की देखभाल के लिए सेना ने अपना मनोचिकित्सक तैनात किया है। लखनऊ के डीआरडीओ अस्पताल के हेल्प डेस्क पर फोन करने पर भी रोगियों की सही जानकारी न दिए जाने और यहां उपचार के दौरान अवसाद में आये रोगियों को काउंसलिंग जैसी सुविधा न होने से मरीज और तीमारदार परेशान हैं। मध्य कमान मुख्यालय वाराणसी मॉडल लखनऊ में भी लागू करने की तैयारी कर रहा है।

<https://www.jagran.com/uttar-pradesh/lucknow-city-varanasi-drdo-covid-hospital-became-the-role-model-for-covid-patients-management-in-the-country-21657659.html>



Thu, 20 May 2021

Advisor Bhatnagar inspects ongoing works at upcoming DRDO Hospital Jammu

Jammu: Advisor to Lieutenant Governor, Rajeev Rai Bhatnagar today visited the DRDO Hospital site Bhagwati Nagar here and inspected the ongoing construction works there.

The Advisor was accompanied by Deputy Commissioner Jammu, Anshul Garg; SSP Jammu, Chief Engineer DRDO, SE PWD Jammu, SE MED Jammu, SE UEED Jammu, senior officers of health department and other allied departments.

During the visit, Advisor Bhatnagar said that the facility is being built on war footing basis and after its completion, the health infrastructure of Jammu division will be upgraded and will help in providing better treatment to the public in view of COVID-19.

The Advisor directed the concerned executing agency to complete the necessary works well within the given timelines so that the facility is dedicated to the public at the earliest

.He also reviewed the status of utilities and services required in the hospital and directed the concerned to establish the same before the functioning of hospital.

Advisor Bhatnagar further directed the health authorities to ensure timely deployment of doctors as well as paramedical staff and arrange for all consumables and medical supplies for smooth functioning of the hospital to ensure better Healthcare facilities to the Covid patients.

During the visit, the officers of DRDO apprised the Advisor about different aspects of the hospital.

<https://www.crosstownnews.in/post/64163/advisor-bhatnagar-inspects-ongoing-works-at-upcoming-drdo-hospital-jammu-.html>



Thu, 20 May 2021

Covid-19: J&K Govt sanctions 1366 posts for 500-bed DRDO hospitals

By Sajidah Yousuf

Srinagar: The government of Jammu and Kashmir on Wednesday sanctioned 1366 posts for 500 COVID-19 bed Defence Research and Development Organisation (DRDO) hospitals to be made functional here.

In this regard, an order has been issued by the Financial Commissioner Health and Medical Education Department (H&ME), Atal Dullo, a copy of which lies with the news agency—Kashmir News Observer (KNO).

The order reads that 683 posts have been kept for DRDO hospitals in Jammu and Srinagar respectively, expenditure on account of salary and maintenance of these hospitals which shall be borne out of the UT budget.

“The Administrative Control of these Hospitals shall lie respectively with the Principals of Government Medical Colleges, Jammu and Srinagar”, reads the order.

The government also said that the selection of the contractual posts for the COVID-19 hospitals shall be conducted by the five member committee set up each in Jammu and Srinagar.

In Jammu the committee includes Principal, Government Medical College Jammu as chairperson. Administrator Associated Hospital, Jammu will be the secretary and member of the committee. Director Health Services Department Jammu, Mission Director, National Health Mission and Representative of Health and Medical Education Department will be the members of the Committee.

Similarly in Srinagar, Principal, Government Medical College Srinagar has been Hospital, Srinagar will be the secretary and member of the committee set up for the COVID-19 hospital. Director Health Services Department Srinagar, Representative of MD, NHM and Representative of Health and Medical Education Department will be the members of the Committee.

“The contractual appointees shall have to furnish an affidavit to the extent that they will not claim regular appointment at any future date on the strength of this contractual appointment”, it reads.

It also reads that the posts were created for a period of three years and initially, posts shall be filled for a period of one year and will be extended to another year, one year at the time if the requirement persists—(KNO)

<https://www.thedispatch.in/covid-19-jk-govt-sanctions-1366-posts-for-500-bed-drdo-hospitals/>

DRDO Covid Hospital in J&K: डीआरडीओ के दो कोविड

अस्पतालों के लिए 1386 पद सृजित, इन पदों के लिए होगी नियुक्तियां

जम्मू और श्रीनगर में डिफेंस रिसर्च और डेवलपमेंट आर्गनाइजेशन की ओर से तैयार किए जा रहे 500-500 बिस्तरों की क्षमता वाले दोनों अस्पतालों को स्वास्थ्य एवं चिकित्सा शिक्षा विभाग ने मंजूरी दे दी है। दोनों ही अस्पतालों के लिए 1386 पद सृजित करने को भी मंगलवार को मंजूरी दी गई।

By Vikas Abrol

जम्मू: जम्मू और श्रीनगर में डिफेंस रिसर्च और डेवलपमेंट आर्गनाइजेशन की ओर से तैयार किए जा रहे 500-500 बिस्तरों की क्षमता वाले दोनों अस्पतालों को स्वास्थ्य एवं चिकित्सा शिक्षा विभाग ने मंजूरी दे दी है। दोनों ही अस्पतालों के लिए 1386 पद सृजित करने को भी मंगलवार को मंजूरी दी गई। एक अस्पताल जम्मू के भगवती नगर और दूसरा श्रीनगर में बन रहा है। दोनों ही अस्पतालों के कर्मचारियों के वेतन और इसे चलाने का भार भी जम्मू-कश्मीर सरकार उठाएगी।

स्वास्थ्य एवं चिकित्सा शिक्षा विभाग के वित्तीय आयुक्त अटल दुल्लू द्वारा जारी आदेश में कहा गया है कि दोनों ही अस्पतालों की कमान जीएमसी जम्मू और जीएमसी श्रीनगर के प्रिंसिपलों के हाथ होगी। जो पद सृजित किए गए हैं, वे भी सिर्फ तीन वर्ष के लिए ही होंगे। पहले एक साल के लिए कांट्रेक्ट पर नियुक्तियां होगी। मेडिकल सुपरिटेण्डेंट और डिप्टी मेडिकल सुपरिटेण्डेंट के पद स्वास्थ्य विभाग के डाक्टरों को तैनात करके भरे जाएंगे।



इसी तरह फिजिशियन, एनेस्थीसिया, बाल रोग विशेषज्ञ और चिकित्सा अधिकारियों के पद स्वास्थ्य विभाग के अलावा कांट्रेक्ट पर डाक्टरों को नियुक्त करके भरे जाएंगे। नर्सिंग और पैरामेडिकल स्टाफ भी स्वास्थ्य विभाग और कांट्रेक्ट पर नियुक्तियों से भरा जाएगा। वहीं कोविड अस्पतालों के लिए कमेटी का भी गठन किया गया है। जम्मू के अस्पताल के लिए बनी इस कमेटी में प्रिंसिपल मेडिकल कालेज जम्मू को कमेटी का चेयरमैन नियुक्त किया गया है जबकि नेशनल हेल्थ मिशन के प्रबंध निदेशक, स्वास्थ्य निदेशक जम्मू तथा स्वास्थ्य विभाग के किसी अन्य प्रतिनिधि को सदस्य बनाया गया है।

जीएमसी और सहायक अस्पतालों के प्रशासनिक अधिकारी को मेंबर सेक्रेटरी बनाया गया है। कश्मीर के अस्पताल के लिए बनी इस कमेटी में प्रिंसिपल मेडिकल कालेज श्रीनगर को कमेटी का चेयरमैन नियुक्त किया गया है जबकि नेशनल हेल्थ मिशन के प्रतिनिधि, स्वास्थ्य निदेशक कश्मीर तथा स्वास्थ्य विभाग के किसी अन्य प्रतिनिधि को सदस्य बनाया गया है। जीएमसी और सहायक अस्पतालों के प्रशासनिक अधिकारी को मेंबर सेक्रेटरी बनाया गया है। गैजेटेड पदों के लिए नियुक्तियां मौके पर ही साक्षात्कार लेकर कर दी जाएंगी जबकि नर्सिंग और पैरामेडिकल स्टाफ की नियुक्ति कि लिए कमेटियां ही नियम बनाएंगी। वहीं डाटा इंट्री आपरेटर, सेनेटरी स्टाफ और नर्सिंग अर्दली निजी हाथों में होगी।

<https://www.jagran.com/jammu-and-kashmir/jammu-1386-posts-created-for-two-covid-hospitals-of-drdo-appointments-will-be-made-for-these-posts-21655540.html>

जम्मू-कश्मीर: अनुबंध के आधार पर डीआरडीओ अस्पताल जम्मू में होगी स्टाफ की तैनाती

सार

जीएमसी जम्मू की प्रिंसिपल डा शशि सूदन की अध्यक्षता में सरकार ने बनाई कमेटी
विस्तार

जम्मू: जम्मू में 500 बेड वाले डीआरडीओ के अस्थायी अस्पताल के लिए स्टाफ की भर्ती अनुबंध के आधार पर होगी। इस संबंध में स्वास्थ्य एवं चिकित्सा शिक्षा विभाग के वित्त आयुक्त अटल डुल्लू ने मंगलवार को जीएमसी जम्मू की प्रिंसिपल डा शशि सूदन की अध्यक्षता में कमेटी का गठन करने का आदेश जारी किया।

कमेटी में नेशनल हेल्थ मिशन के मिशन निदेशक और स्वास्थ्य सेवा निदेशक जम्मू को सदस्य बनाया गया है। एसोसिएटेड अस्पताल जम्मू के प्रशासक सदस्य सचिव रहेंगे। इसके अलावा स्वास्थ्य एवं चिकित्सा शिक्षा विभाग के प्रतिनिधि को भी सदस्य के तौर पर शामिल किया जाएगा। वहीं श्रीनगर में बने रहे डीआरडीओ के कोविड अस्पताल के लिए भी जीएमसी श्रीनगर की प्रिंसिपल की अध्यक्षता में कमेटी का गठन किया गया है।



जम्मू-कश्मीर में कोरोना वायरस - फोटो : संजय कुमार

एक साल के लिए अनुबंध के आधार पर दोनों कोविड अस्पतालों के लिए 1366 नियुक्तियां अनुबंध के आधार पर होगी। प्रत्येक कोविड अस्पताल के लिए 683 पदों पर नियुक्तियां की जाएगी। इसमें मेडिकल सुपरिंटेंडेंट, डिप्टी मेडिकल सुपरिंटेंडेंट, फिजिशियन, एनेस्थेसियोलॉजिस्ट, पीडियाट्रिशियन, मेडिकल अफसर, नर्सिंग सुपरवाइजर, स्टाफ नर्स, फार्मासिस्ट, लैब तकनीशियन, एक्स रे तकनीशियन, इलेक्ट्रीशियन, पलंबर, डाटा एंटी आपरेटर, नर्सिंग आईली, सेनीटरी वर्कर के पद शामिल रहेंगे।

https://www.amarujala.com/jammu/jammu-and-kashmir-staff-will-be-posted-in-drdo-hospital-jammu-on-contract-basis?src=also_read



Thu, 20 May 2021

Army will have enhanced presence on Northern front till de-escalation with China: Gen Naravane

He also said the disengagement process has been “cordial so far”, hoping the trust that has been built will help both sides make “forward movement”

By Shreya Dhoundial

The Indian Army will have an “enhanced” presence on the entire northern front from Ladakh to Arunachal Pradesh till talks with China are underway and “de-escalation” is achieved, army chief General MM Naravane told CNN-News 18 in an exclusive interview on Wednesday.

He also said the disengagement process between the neighbours, who are locked in a year-long standoff at the Line of Actual Control (LAC), has been “cordial so far”, hoping the trust that has been built over the past three months will help both sides make a “forward movement” in resolving pending issues. At the same time, he pointed out that “disengagement has happened, (but) not de-escalation”.

Gen Naravane said 11 rounds of military talks have taken place between India and China, and stressed that no “transgressions and violations” have happened since the beginning of the disengagement process in February.

“What is important is that we are talking. And what is important to know is that between two phases, there are periods where the trust has to be built up...I think the trust has (been) built up...because of that trust, maybe we will be able to make forward movement in other areas where issues are still to be resolved. I think this is a continuous process which will take time, but (it) will happen,” he added.

When asked how many troops were deployed on LAC, Gen Naravane said the numbers keep changing as the personnel are “rotated”. He said the deployment on the northern frontier is “what they were at the height of the stand-off”. “Around say 50,000-60,000,” he said.

In the same breath, he added: “It is very difficult to say this is the figure...the whole front will see this enhanced presence till such time we keep talking and de-escalation happens. We have to be ready to be deployed for the long run as well.”

Gen Naravane clarified that “when I say northern front, it is not just the area of Eastern Ladakh, but the whole front — from Ladakh down to Arunachal”.

Last year, tensions between India and China soared in the wake of the border standoff that was first reported in May. Ties hit a new low after a deadly clash in Eastern Ladakh’s Galwan Valley that killed 20 Indian soldiers. After months, China officially announced that it suffered four



File photo of Army chief MM Naravane. (Image: ANI)

casualties, though observers think the number could be much higher. It was the first deadly conflict between Indian and Chinese soldiers along the LAC in 45 years.

In the midst of spiralling tensions, both sides deployed tanks and artilleries in an eyeball-to-eyeball standoff. While the two sides have managed to achieve disengagement in Pangong Tso, outstanding issues remain in other key friction points such as Hot Springs, Gogra and Depsang.

When asked about China's efforts to bolster border infrastructure, Gen Naravane assured that India was not lagging on that front.

"Infrastructure development is a continuous process. After all, when you are deployed, you don't want to be in harsh conditions or sub-standard infra for months to come. So, obviously he (Beijing) is also improving his facilities, his infra and storage. And so are we. We are monitoring each of these developments and let me assure you, we are in no way lacking or behind in our infra development."

The army chief also spoke on the ceasefire agreement between India and Pakistan that was announced on February 25, terming it a "very positive development" that "has been fairly successful".

"There has only been one — sort of violation, but that border has been in the IB sector, the International Border (IB) area between the (Pakistan's) Rangers and the BSF (Border Security Force)," he said.

Gen Naravane stressed that India has made its position clear that a ceasefire agreement will not be a deterrent to its "counter-terror ops on our own side".

"Obviously, when it is sometimes closer to the border, firing will take place. But ceasefire violation with one post firing on another post — in the classical sense — whether small arms or heavy calibre, hasn't happened at all. So, definitely it is a good thing...almost two months now the ceasefire has been in effect, and we are hopeful that it will continue," he said.

<https://www.news18.com/news/india/army-will-have-enhanced-presence-on-northern-front-till-de-escalation-with-china-gen-mm-naravane-3756098.html>



Thu, 20 May 2021

Defence ministry clears the BRO tunnel under Shinkun La in Ladakh

Defence minister Rajnath Singh took a decision in favour of shorter 4.5km tunnel proposal of Border Roads Organisation but the order could not be issued as all the top officials involved in the project were hit by coronavirus

By Shishir Gupta

New Delhi: Cutting through the red-tape, the Union defence ministry has decided to ask the Border Roads Organisation (BRO) to build a 4.25-kilometre tunnel under the 5,091-metre-high Shinkun La pass to make an all-weather axis from Manali to Leh via Darcha-Padun-Nimmu alignment to supply Indian Army formations in Ladakh sector. The snow-free axis is expected to be completed by 2024.

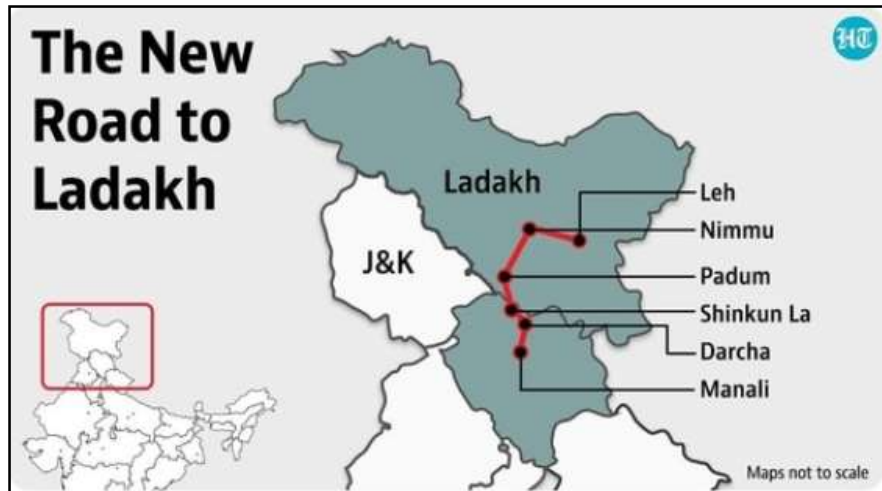
According to South Block officials, defence minister Rajnath Singh and top officials decided in favour of the BRO proposal instead of National Highways and Infrastructure Development Corporation Limited (NHIDCL), which was recommending an altogether new road alignment with a 13.5km tunnel under Shinkun La.

"Both BRO and NHIDCL made presentations before the minister in March 2021. After studying both the proposals, the defence ministry has decided in favour of shorter tunnel. The decision could not be put on the paper as a number of senior officials involved in this project were hit by Covid-19

infection,” said a top official. The NHIDCL has been preparing detailed project report of the project since 2017, much before the Chinese Army transgressed into Ladakh in May 2020.

It is understood that the total cost of the BRO tunnel construction will be around ₹1,000 crore due to simple design and requirement of basic electromechanical fittings. The 4.25km tunnel will have longitudinal ventilation using banana fans, which require minimum electricity and operational costs.

The Darcha-Padum-Nimmu road is 297-kilometre long with 100km already converted into double lane and black-topped by the BRO last year at the height of India-China border skirmish. While the distance between Manali and Leh will remain the same with the new road, the axis will remain totally snow-free round the year allowing movement of both troops and equipment to feed Ladakh, Kargil and Siachen sectors.



The present Manali-Sarchu-Upshi-Leh road goes over four high mountain passes of around 5,000-metre in height even after construction of Atal tunnel under Rohtang pass and remains snowed for at least two to three months during winter.

The four passes on present Manali-Leh route are: Baralacha La (16500 feet), Nakee La (15547 feet), Lachung La (16616 feet) and Tanglang La (17480 feet).

<https://www.hindustantimes.com/india-news/defence-ministry-clears-the-bro-tunnel-under-shinkun-la-in-ladakh-101621414374031.html>

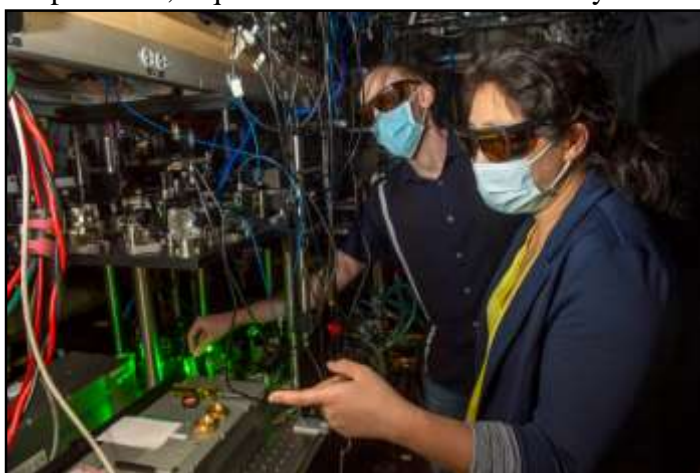
Thu, 20 May 2021

Researchers design new experiments to map and test the mysterious quantum realm

A heart surgeon doesn't need to grasp quantum mechanics to perform successful operations. Even chemists don't always need to know these fundamental principles to study chemical reactions. But for Kang-Kuen Ni, the Morris Kahn associate professor of chemistry and chemical biology and of physics, quantum spelunking is, like space exploration, a quest to discover a vast and mysterious new realm.

Today, much of quantum mechanics is explained by Schrödinger's equation, a kind of master theory that governs the properties of everything on Earth. "Even though we know that, in principle, quantum mechanics governs everything," Ni said, "to actually see it is difficult and to actually calculate it is near-impossible."

With a few well-reasoned assumptions and some innovative techniques, Ni and her team can achieve the near-impossible. In their lab, they test current quantum theories about chemical reactions against actual experimental data to edge closer to a verifiable map of the laws that govern the mysterious quantum realm. And now, with ultracold chemistry—in which atoms



Kang-Kuen Ni, right, and post-doc fellow Matthew A. Nichols do a hands-on consult in their lab. Ni and her team use ultra-cold chemistry to test quantum theory against actual experimental data and create a verifiable map of the quantum laws that govern everything on earth. Credit: Jon Chase/Harvard Staff Photographer

and molecules are cooled to temperatures just above absolute zero where they become highly-controllable—Ni and her lab members have collected real experimental data from a previously unexplored quantum frontier, providing strong evidence of what the theoretical model got right (and wrong), and a roadmap for further exploration into the next shadowy layers of quantum space.

"We know the underlying laws that govern everything," said Ni. "But because almost everything on Earth is made of at least three or more atoms, those laws quickly become far too complex to solve."

In their study reported in *Nature*, Ni and her team set out to identify all the possible energy state outcomes, from start to finish, of a reaction between two potassium and rubidium molecules—a more complex reaction than had been previously studied in the quantum realm. That's no easy feat: At its most fundamental level, a reaction between four molecules has a massive number of dimensions (the electrons spinning around each atom, for example, could be in an almost-infinite number of locations simultaneously). That very high dimensionality makes calculating all the possible reaction trajectories impossible with current technology.

"Calculating exactly how energy redistributes during a reaction between four atoms is beyond the power of today's best computers," Ni said. A quantum computer might be the only tool that could one day achieve such a complex calculation.

In the meantime, calculating the impossible requires a few well-reasoned assumptions and approximations (picking one location for one of those electrons, for example) and specialized techniques that grant Ni and her team ultimate control over their reaction.

One such technique was another recent Ni lab discovery: In a study published in *Nature Chemistry*, she and her team exploited a reliable feature of molecules—their highly stable nuclear spin—to control the quantum state of the reacting molecules all the way through to the products. They also discovered a way to detect products from a single collision reaction event, a difficult feat when 10,000 molecules could be reacting simultaneously. With these two novel methods, the team could identify the unique spectrum and quantum state of each product molecule, the kind of precise control necessary to measure all 57 pathways their potassium rubidium reaction could take.

Over several months during the COVID-19 pandemic, the team ran experiments to collect data on each of those 57 possible reaction channels, repeating each channel once every minute for several days before moving on to the next. Luckily, once the experiment is set up, it can be run remotely: Lab members could stay home, keeping the lab re-occupancy at COVID-19 standards, while the system churned on.

"The test," said Matthew Nichols, a postdoctoral scholar in the Ni lab and an author on both papers, "indicates good agreement between the measurement and the model for a subset containing 50 state-pairs but reveals significant deviations in several state-pairs."

In other words, their experimental data confirmed that previous predictions based on statistical theory (one far less complex than Schrödinger's equation) are accurate—mostly. Using their data, the team could measure the probability that their chemical reaction would take each of the 57 reaction channels. Then, they compared their percentages with the statistical model. Only seven of the 57 showed a significant enough divergence to challenge the theory.

"We have data that pushes this frontier," Ni said. "To explain the seven deviating channels, we need to calculate Schrödinger's equation, which is still impossible. So now, the theory has to catch up and propose new ways to efficiently perform such exact quantum calculations."

Next, Ni and her team plan to scale back their experiment and analyze a reaction between only three atoms (one molecule and an atom). In theory, this reaction, which has far fewer dimensions than a four-atom reaction, should be easier to calculate and study in the quantum realm. And yet, already, the team discovered something strange: the intermediate phase of the reaction lives on for many orders of magnitude longer than the theory predicts.

"There is already mystery," Ni said. "It's up to the theorists now."

More information: Precision test of statistical dynamics with state-to-state ultracold chemistry, *Nature* (2021). DOI: [10.1038/s41586-021-03459-6](https://doi.org/10.1038/s41586-021-03459-6)

Journal information: *Nature*
<https://phys.org/news/2021-05-mysterious-quantum-realm.html>

Thu, 20 May 2021

Research team develops new class of soft materials

By Karen Walker

"I think you're on mute." This was the most-used phrase of 2020, according to Human Resources Online. Emblazoned on T-shirts and embossed on coffee-mugs, we used the meme to make fun of ourselves while learning video-conferencing tools like Zoom and Microsoft's Teams.

But for the more than 7 million Americans who suffer from vocal disorders, not being heard is a serious matter. Many people who have normal speaking skills have great difficulty communicating when their voice box, the larynx, fails. This can occur if the vocal cords, the two bands of smooth muscle tissue in the larynx, suffer damage from an accident, surgical procedure, viral infection or cancer.

There is no replacement for the vocal cords when the damage is severe or permanent. Now, a team of materials scientists at the University of Virginia School of Engineering has developed a soft material with promise of new treatments in the future. Their novel soft material, called an elastomer, is very stretchable and 10,000 times softer than a conventional rubber, matching the mechanical properties of vocal cords. The elastomer can be 3D printed for use in health care.

Liheng Cai, assistant professor of materials science and engineering and chemical engineering, oversees this research. Cai also holds a courtesy appointment in biomedical engineering and leads the Soft Biomatter Lab at UVA. Cai's lab works to understand and control the interactions between active soft materials, such as responsive polymers or biological gels, and living systems, such as bacteria or cells and tissues in the human body.

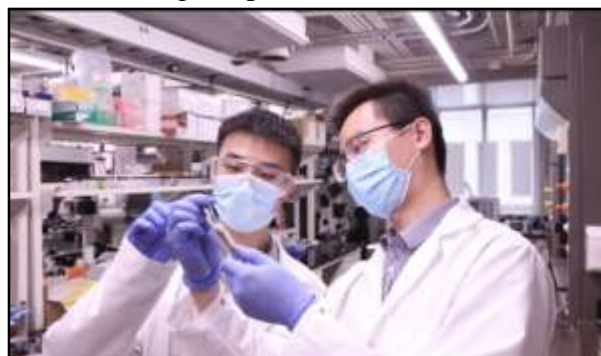
Cai's post-doctoral researcher Shifeng Nian and Ph.D. student Jinchang Zhu co-first authored the team's paper, "Three-Dimensional Printable, Extremely Soft, Stretchable, and Reversible Elastomers from Molecular Architecture-Directed Assembly," published and featured as a cover article in *Chemistry of Materials*. Collaborators include Baoxing Xu, associate professor of mechanical and aerospace engineering at UVA, who conducted simulations to understand the deformation of 3D-printed, extremely soft structures.

The team developed a novel strategy to make such 3D-printable soft elastomers. They used a new type of polymer with a special architecture reminiscent of the bottlebrush for cleaning small glassware, but on the molecular scale. The bottlebrush-like polymer, when linked to form a network, enables extremely soft materials mimicking biological tissues.

Cai began to prove the potential of bottlebrush polymers as a postdoctoral fellow at Harvard University's John H. Paulson School of Engineering and Applied Sciences. Cai's collaborative engineering of soft yet 'dry' rubber was published in *Advanced Materials*.

Now, Cai and his team have developed a new way to use strong—yet reversible depending upon the temperature—associations to crosslink bottlebrush-like polymers to form a rubber. The idea is to use chemical synthesis to append one glassy polymer to each end of a bottlebrush-like polymer. Such glassy polymers spontaneously self-organize to form nanoscale spheres that are the same as that of plastic water bottles. They are rigid at room temperature but melt at high temperature; this can be exploited to 3D print soft structures.

Their material's elasticity can be fine-tuned from approximately 100 to 10,000 pascals on the scale of pressure the material can withstand. The lower limit, approximately 100 pascals, is a



Shifeng Nian and Ph.D. student Jinchang Zhu load the ink into a syringe for 3D printing. Credit: University of Virginia

million times softer than plastics and 10,000 times softer than conventional 3D-printable elastomers. Moreover, they can be stretched up to 600%.

"Their extreme softness, stretchiness and thermostability bode well for future applications," Cai said.

Cai credits Nian for developing the chemistry for synthesizing bottlebrush polymers with precisely controlled architecture to prescribe the softness and stretchability of elastomers. The elastomer can be used as an ink in a 3D printer to create a geometric shape with the qualities of rubber.

The 3D printer itself is about the size of a dorm room refrigerator. Zhu custom-designed the nozzle for the extruder system that shoots the materials in a prescribed amount in a 3D space, guided by a computer program specific to the object desired.

Nian earned his Ph.D. in chemistry from UVA in 2018, and joined Cai's Soft Biomatter lab as a post-doc. "Dr. Cai's group gives me an opportunity to expand my research from classical chemistry to materials development; we're inventing a lot of cool materials with special mechanical, electrical and optical properties," Nian said.

What's cool about the team's soft material is its ability to self-organize and assemble as each drop is deposited. When the silicone-based material is first loaded into the ink cartridge, it has the consistency of honey, half solid and half liquid. As printing progresses, the solvent binds the layers and then evaporates to seamlessly build the object. Moreover, you can re-do it if you make any mistakes, as the material is 100% reprocessible and recyclable.

"Conventional 3D-printable elastomers are intrinsically stiff; the process of printing often requires external mechanical support or post-treatment," Cai said. "Here, we demonstrate our elastomer's applicability as inks for direct-write printing 3D structures."

To study the way the material's molecules interconnect, Cai's team collaborated with Guillaume Freychet and Mikhail Zhernenkov, beamline scientists at the U.S. Department of Energy's Brookhaven National Laboratory. They conducted experiments using the National Synchrotron Light Source II's sophisticated X-ray tool, specifically the soft matter interfaces beamline, to reveal the inner makeup of the printed materials without damaging the samples.

"The SMI beamline is ideally suited for this type of research due to its high X-ray beam intensity, excellent energy and momentum transfer tunability, and very low background. Working with Cai's team, we were able to see how the bottlebrush-like polymer assemble into a cross-linked network," Zhernenkov said.

Cai estimates that the team is two or three years away from seeing their elastomers in practical use, an accelerated pace enabled by the team's 3D-printing method. Sometimes called additive manufacturing, 3D printing is a research strength of UVA's Department of Materials Science and Engineering; researchers in this arena seek to understand the physics underlying additive manufacturing processes as they create new material systems.

Improving health is just one motivator for their research.

"We believe our findings will stimulate the development of new soft materials as inks for 3D printing, which can be the basis for a broad range of adaptive devices and structures such as sensors, stretchable electronics and soft robotics," Cai said.

More information: Shifeng Nian et al. Three-Dimensional Printable, Extremely Soft, Stretchable, and Reversible Elastomers from Molecular Architecture-Directed Assembly. *Chem. Mater.* 2021, 33, 7, 2436–2445 Publication Date: March 31, 2021. doi.org/10.1021/acs.chemmater.0c04659

Journal information: [Advanced Materials](#), [Chemistry of Materials](#)
<https://phys.org/news/2021-05-team-class-soft-materials.html>

Liquid-like motion in crystals could explain their promising behavior in solar cells

By Savannah Mitchem

The sun delivers more energy to Earth in one hour than humanity consumes over an entire year. Scientists worldwide are searching for materials that can cost-effectively and efficiently capture this carbon-free energy and convert it into electricity.

Perovskites, a class of materials with a unique crystal structure, could overtake current technology for solar energy harvesting. They are cheaper than materials used in current solar cells, and they have demonstrated remarkable photovoltaic properties—behavior that allows them to very efficiently convert sunlight into electricity.

Revealing the nature of perovskites at the atomic scale is critical to understanding their promising capabilities. This insight can help inform models to determine the optimal makeup of perovskite materials for solar cells, which can be used to power vehicles, electronic devices and even home heating and other appliances.

Scientists at the U.S. Department of Energy's (DOE) Argonne National Laboratory participated in a collaboration led by Duke University, along with DOE's Oak Ridge National Laboratory and other collaborators, to study the inner workings of a perovskite material using the world-class X-ray scattering capabilities at Argonne and neutron scattering capabilities at Oak Ridge. The scattering capabilities enabled the scientists to observe the material's behavior at the atomic scale, and the study revealed that liquid-like motion in perovskites may explain how they efficiently produce electric currents.

"There is a lot of excitement surrounding these materials, but we don't fully understand why they are such good photovoltaics," said Duke University's Olivier Delaire, lead scientist on the study.

When light hits a photovoltaic material, it excites electrons, prompting them to pop out of their atoms and travel through the material, conducting electricity. A common problem is that the excited electrons can recombine with the atoms instead of traveling through the material, which can significantly decrease the electricity produced relative to the amount of sunlight hitting the material.

"Perovskites do well at preventing recombination," said Argonne's Ray Osborn. "We want to know what mechanism causes this and if we can learn from this to create better solar cells."

The team studied one of the simplest perovskites—a compound of cesium, lead and bromine (CsPbBr_3)—to figure out what is going on at the atomic scale.

Using X-ray scattering capabilities at Argonne's Magnetic Materials group's beamline (6-ID-D) at the lab's Advanced Photon Source, a DOE Office of Science User Facility, the team captured the average positions of the atoms in a perovskite crystal at different temperatures. They found that each lead atom and its surrounding cage of bromine atoms form rigid units that behave like molecules. These units oscillate—or jiggle back and forth—in a liquid-like manner.

"The molecules in this material rotate about the other molecules like they're hinged together, and around the hinges, the molecules act kind of floppy," said Delaire.

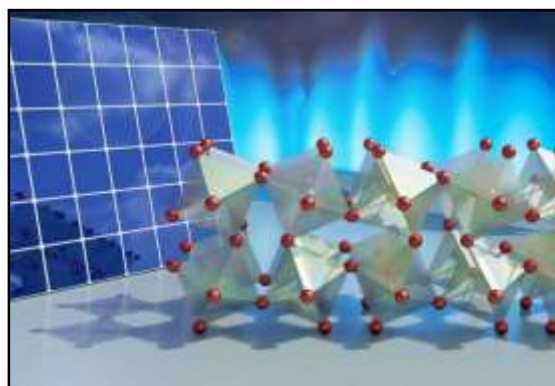


Illustration of the crystal structure of the perovskite. The molecules rotate about their hinges in two dimensions, which could explain the material's photovoltaic abilities. Credit: Jill Hemman, Oak Ridge National Laboratory.

One theory to explain how perovskites resist recombination is that these distortions in the lattice, or crystal structure, follow the free electrons as they traverse the material. The electrons might deform the lattice, causing the liquid-like disturbances, which then prevent them from falling back into their host atoms. This theory, which is bolstered by the new experimental results, can provide new insights into how to design optimal perovskite materials for solar cells.

The data also indicates that molecules in the material oscillate within two-dimensional planes, with no motion across planes—similar to a carnival ride that only swings left to right, but never front to back. The two-dimensional nature of the crystal distortions could be one more puzzle piece to explain how the perovskite can prevent electron recombination, contributing to the efficiency of the material.

According to Osborn, the two-dimensional patterns in the X-ray scattering data had never been seen. "Based on these unexpected measurements, we wanted to dig even deeper by not only looking at average atomic positions, but how the atoms move around in real time," he said.

To investigate the motion of the atoms directly, the team used neutron scattering capabilities at the Spallation Neutron Source, a DOE Office of Science user facility at Oak Ridge National Laboratory. Researchers at Argonne's Materials Science division and Northwestern University grew the large, centimeter-scale crystals required for the neutron measurements.

The neutron scattering confirmed the unforeseen pattern seen in the X-ray scattering experiment, but showed, in addition, that it takes almost no energy for the molecules to oscillate in two dimensions. This helps to explain why the excited electrons can deform the lattice so easily.

"This work is a beautiful example of the complementarity of neutrons and X-rays in revealing both the structure and dynamics of complex materials," said Osborn, who was involved in both sets of measurements.

The study represents a step towards taking full advantage of the largely untapped renewable energy from the sun, which could have significant impact on both the environment and economy.

More information: T. Lanigan-Atkins et al, Two-dimensional overdamped fluctuations of the soft perovskite lattice in CsPbBr₃, *Nature Materials* (2021). DOI: [10.1038/s41563-021-00947-y](https://doi.org/10.1038/s41563-021-00947-y)

Journal information: [Nature Materials](https://www.nature.com/articles/s41563-021-00947-y)
<https://phys.org/news/2021-05-liquid-like-motion-crystals-behavior-solar.html>



Thu, 20 May 2021

Both Pfizer, Moderna Vaccines Effective On B.1.617 COVID-19 Strain: US Study

The study which is yet to be published in a peer-reviewed journal shows that the newly identified SARS-CoV-2 variants identified in India are neutralised well by antibodies in individuals vaccinated with Pfizer and Moderna vaccines

Highlights

- *Researchers worked on blood samples from people who were vaccinated*
- *The blood drawn was exposed in a lab to engineered pseudovirus particles*
- *Pseudovirus particles contained mutations in spike region of coronavirus*

Washington: COVID-19 vaccines developed by Pfizer and Moderna work against B.1.617 variant of the virus that was first identified in India, according to a new study. The study shows that the newly identified SARS-CoV-2 variants identified in India are neutralised well by antibodies in individuals vaccinated with both vaccines. “This finding predicts that even though the new variants are highly transmissible, vaccinated individuals will be protected from infection with the new variants,” senior author Professor Nathaniel R Landau told ANI on Tuesday (May 18).

The lab-based study, which was carried out by the NYU Grossman School of Medicine and NYU Langone Center, is considered preliminary. Professor Landau and the team of researchers worked on blood samples from people who were vaccinated with Pfizer or Moderna vaccines. The blood drawn was exposed in a lab to engineered pseudovirus particles that contained mutations in the “spike” region of the coronavirus, which were particular to either the B.1.617 or B.1.618 variants, first found in India. And this mixture was exposed to lab-grown cells, to see how many would become infected. Researchers found an almost four-fold reduction in the amount of neutralising antibodies Y-shaped proteins the immune system creates to stop pathogens from invading cells.

People should get vaccinated. It will protect them, their family members and will slow the emergence of new variants, Professor Landau asserted.

President Biden announced on Monday (May 17) that he will export 20 million doses of vaccines from Pfizer Inc., Moderna Inc and Johnson & Johnson, on top of 60 million AstraZeneca doses he had already planned to give to other countries. During a Tuesday White House briefing, Dr Anthony Fauci said initial studies indicated the Pfizer-BioNTech and Moderna vaccines are “at least partially and probably quite protective” against serious illness, hospitalisation and death, “indicating another very strong reason why we should be getting vaccinated”.

Backed by the studies, Joe Biden’s top medical advisor also added that both the variants— B.1.617 and B.1.618 that have been identified in India— have been neutralised with both the vaccines. The US reported its first case of B.1.617, the variant that emerged in India, in early April. Stanford researchers found this variant in northern California. Since then, cases have been detected in Iowa, Nevada, and other states. Several of these cases are linked to international travel – causing the Biden administration to restrict travel from India.

(This story has not been edited by NDTV staff and is published from a syndicated feed.)

<https://swachhindia.ndtv.com/both-pfizer-moderna-vaccines-effective-on-b-1-617-covid-19-strain-us-study-59352/>

