

# Covid-19: The long road from lab to jab

Why there are still miles to go before India has a vaccine

RUCHIKA CHITRAVANSHI & SOHINI DAS  
New Delhi/Mumbai, 18 August

The quest for a Covid-19 vaccine may have started in the laboratories but that's only the start of a long process that involves the government and private sector working on the other issues that bridge the gap from lab to jab — from manufacturing and manpower to logistics and distribution priorities.

That is why most of those involved in the race for a vaccine are studiously non-committal about a timeline. The 2020-end deadline that is being bandied about in the public domain is purely speculative.

Balram Bhargava, chief of Indian Council of Medical Research, in a recent interview with *Business Standard* had said that even if another country succeeds in developing a vaccine first, India or China will have to scale it up.

Scaling up manufacture is actually the least of the problems. India's vaccine-making abilities are among the highest in the world. Several companies, including Bharat Biotech and Indian Immunologicals (IIL), have indicated that they are open to collaborations to scale up capacities for the Covid-19 vaccine. None has materialised yet, but sources suggest that three Hyderabad-based vaccine makers — Bharat Biotech, IIL and Biological E — could opt for a manufacturing collaboration. All three are working on Covid vaccine candidates.

Biological E (BE) recently tied up with Johnson & Johnson for its candidate and has augmented its vaccine-making capacity by acquiring Akorn India, which has a plant in Himachal Pradesh, to make sterile injectables. BE's managing director, Mahima Datla, said: "We will leverage BE's and Akorn India's capabilities both in vaccines and in generic injectables. The timing of this acquisition is fortuitous as it will immediately allow us to expand our capacity to manufacture our investigational Covid-19 vaccine. With these capacities, we would be in a position to offer over one billion doses a year."

Collaborations in vaccine manufacture have to be based on many technical considerations, however. A vaccine using an inactivated virus, which is a time-tested technology, requires a much higher level of biosafety standards than a vaccine using the DNA formula (meaning it will not use the SARS-Cov-2 strain), such as the one being made by Zydus.

As of now, three vaccine candidates are the front-runners in India: Zydus Cadila, Bharat Biotech and Serum Institute for the Oxford-AstraZeneca vaccine.

Bharat Biotech is using an inactivated virus vaccine and can make 300 million doses of it a year. Serum Institute, which will start phase II and III trials by end of August, plans to make around a similar number to start with. And Zydus will be able to make a few hundred million doses at its Ahmedabad plant.

Beyond manufacturing, transportation and logistics are other challenges. India has used the Electronic Vaccine Intelligence



REUTERS

## A shot at immunity

India produces 60% of the world's vaccines and accounts for over 70% of the UN's annual vaccine procurement

Smaller companies — Premas Biotech, Hester Biosciences, Myrnax etc — are also working on a Covid vaccine

Govt will procure and distribute Covid vaccine initially; is preparing priority list on who will get the vaccine first

Serum Institute said it will price the vaccine below ₹1,000/dose and will supply 100 mn doses to the Gavi network for ₹250/dose

Bharat Biotech is the world's first company to file a global patent for Zika vaccine

Zydus Cadila was the first to make swine flu vaccine indigenously in 2010



Network (eVIN) to track information on the vaccine supply chain and stocks across the country during the Covid-19 pandemic. This system provides real-time information on stocks, storage temperatures across registered vaccine storage sites in India. The network has 23,900 digital temperature loggers and 41,420 cold chain handlers for digital record-keeping.

Industry experts believe India has a fairly developed cold chain network, especially due to an extensive national immunisation programme through schemes such as the National Rural Health Mission and the Mission Indradhanush to improve the immunisation coverage of India.

But the main challenges will be around the availability of trained personnel to administer vaccines. Chhaya Pachauli, member of the Jan Swasthya Abhiyan

(JSA), a national health care platform, said if the vaccine is to be administered in the conventional way through intramuscular injection, then training would not be a major problem. "It is done periodically for new workers who join and as refreshers for old ones," she said.

The issue would be whether such workers are available in sufficient numbers. Auxiliary nurses, midwives and village-level health workers, who are used to dealing with 20 to 30 children in a day, will have to deal with a much larger number of people, most of them adults.

"We are very keyed into vaccines for children. Are we going to be able to mobilise individual adults to come forward? We have very little experience with adult vaccination," said Rakhil Gaitonde, professor, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram. She gave the example of the influenza vaccine, which has been administered extensively in the US and Europe but not in India, probably because the vaccine is not free.

Will the Covid-19 vaccine see a similar fate? "If you are going to use vaccination as a way of preventing the epidemic from spreading or, at some point, controlling it totally, then the government cannot make it optional," Gaitonde pointed out, adding that in that case the vaccine will either have to be distributed free or under a price cap.

Meanwhile, the government is still discussing the details of a vaccine procurement plan and has already directed states not to chart separate pathways of procurement. A meeting with indigenous vaccine makers on Monday involved more clarity on procurement and investments to scale up capacities. A government official said that the process has just started, and once the vaccine expert group holds more meetings, the granular details will emerge.

Private hospitals are gearing up to participate in the vaccination drive once any candidate gets the regulator's nod. "We have around 6,000 staff, and we will be more than willing to procure and vaccinate our staff once a candidate is available in the market," said Dilip Jose, CEO of Manipal Hospitals.

# Meeting Modi's 1,000-day optical fibre cable target

DoT will have to rope in private companies to speed up village connectivity

SUBHOMOY BHATTACHARJEE  
New Delhi, 18 August

The target set by Prime Minister Narendra Modi in his Independence Day speech to connect every village in the country with optical fibre cable (OFC) in 1,000 days is quite possible. But to achieve it, the cables would have to be laid at nearly 3.6 times the current speed: up from the existing average of 350 km a day to over 1,251 km a day.

It is a challenging jump and that is where the weakness of BharatNet as a pure play government programme could show up. BharatNet is the name of the umbrella project under which the government aims to connect every village digitally by 2024. The government has so far financed the project mostly through Bharat Broadband Network Ltd (BBNL), a state-owned company set up in 2012 for the purpose. The new target is stiff.

Until now, the Department of Telecommunications (DoT) planned to reach the 250,000 gram panchayats by March 2024 and then secure last-mile connectivity, with a total of 700,000 Wi-Fi hotspots to cover India's 600,000-odd villages by adding two to five Wi-Fi hotspots per gram panchayat and a minimum of one Wi-Fi hotspot per village.

DoT had secured a Union cabinet approval for spending ₹42,068 crore on the project.



The cables have so far reached 154,999 gram panchayats, according to BBNL data. But now, BharatNet will not only have to reach the remaining nearly 100,000 gram panchayats, it will also have to reach deeper to link all of the country's villages.

To meet the original target of connecting the remaining gram panchayats, the government would have had to spend another ₹30,000 crore or so in the next three years. At ₹10,000 crore of additional spending per year, it was not much of a pressure on the DoT's finances.

The scope of the challenge becomes obvious from a perusal of DoT's successive annual reports. Now it will not only need a larger budget but it will also need to lay the cables at a much faster pace. For this, it will need to rope in private companies on a public-private partnership model, as was done for the road sector.

In 2016-17, the pace of laying

the OFC cables was 168 km per day. Data from reports by the Ministry of Communications indicates that 2.8 km of OFC needs to be laid to reach every successive village. The department had reached 65,000 village panchayats by the end of December 2016. This speed of laying the cables increased to about 350 km per day by June 2020. In all, 445,304 km of the OFC network has been laid till now (BBNL website).

To reach the remaining 450,000 villages within the next 1,000 days, the government will need to lay another 1,251,000 km, assuming the average distance of 2.8 km between the villages. Since it can be safely assumed that villages near the cities would have already been covered, the distance between the remaining villages would actually be more. Even if that weren't the case, the average speed of laying the cables will need to increase to about 1,251 km per day.

Indian Council for Research on International Economic Relations (Icrier) Director Rajat Khaturia, who has studied the Indian telecom sector for decades, reiterates that it is important to bring in the private sector to meet the new targets — something the Telecom Regulatory Authority of India has also batted for. According to a *LiveMint* report, TRAI has urged the government to allow private players to run the project, principally because of concerns over poor utilisation of the digital infrastructure built under BharatNet. Taken to its logical conclusion, this could mean disbanding BBNL, too.

While Telecom Minister Ravi Shankar Prasad has welcomed the Prime Minister's announcement, the revised game plan means he and DoT Secretary Anshu Prakash will have to go back to the drawing board.

The BharatNet programme seeks to make the National Broadband Mission operational. The mission was launched on December 17 last year with a vision to fast-track the growth of digital communications infrastructure, bridge the digital divide, facilitate digital empowerment and inclusion, and provide affordable and universal broadband access to all villages by 2022. While some of that can be made possible by wireless network, steady connections at remote villages, as Modi pointed out, need wires to reach there.

## DECODED

# AGR case: Spotlight on treatment of public resources under IBC

SUDIPTO DEY  
New Delhi, 18 August

The on-going case relating to payment of Adjusted Gross Revenue (AGR) dues in the Supreme Court of India has put the spotlight on the treatment of public resources under the Insolvency and Bankruptcy Code (IBC) framework. When the apex court posed the question to Solicitor General Tushar Mehta, appearing for the Department of Telecommunications, whether spectrum can be sold by telecom companies undergoing proceedings under the IBC, his response clearly brought out the differences in thinking between the Department of Telecom (DoT) and Ministry of Corporate Affairs (MCA) in this matter.

The SG noted in his arguments that spectrum is not defined as an asset under the IBC. A point of view endorsed by DoT, the Solicitor General argued that the ownership of spectrum continues to remain with the government, even though telecom companies have been allowed to use it for commercial exploitation through a contract. In other words, as asset, owned by a third-party — in this case, the government as trustee — but held by a company under insolvency, cannot be sold.

The lawyers representing the insolvent telecom companies have held that they never claimed spectrum as an asset. But they do consider the right to use the spectrum as an asset. An asset that can be shared with other telecom companies or traded in, according to



The lawyers representing the insolvent telecom companies have held that they never claimed spectrum as an asset. But they do consider the right to use the spectrum as an asset

government established sharing and trading norms put out in 2015.

Lawyers following the arguments in the apex court in the AGR dues case say the issue of sale of spectrum under the IBC stems from an absence of a well-articulated policy in this regard. They say the Code does not deal with payment of spectrum or, for that matter, payment in relation to private

exploitation of a public asset. "There are lacunae in the IBC law when it comes to defining the treatment of public resources by companies under insolvency. The law needs to clearly define what should be considered as assets owned by such companies," says Saurav Kumar, partner at law firm, IndusLaw.

Lawyers note that the legal position vis-à-vis the effect of the IBC framework on public resources, such as spectrum licences, remains open. There are court orders that hold that spectrum licences are an asset of the State over which the private entity or corporate debtor has no right of ownership. Most agree that the right to use the spectrum ought to be considered as a "property" within the meaning of the Code.

"The bankrupt telcos ought to be allowed to trade in such right to use the spectrum under the resolution plan," says Ashish Bhan, partner at law firm, Trilegal. Jay Parikh, partner, L&L Partners, adds that the right has to be dealt with according to the resolution plan — approved by the Committee of Creditors — subject to the laws applicable.

Most lawyers feel the Code should come out with clear-cut guidelines as to what should be considered an asset in a company undergoing the insolvency proceeding, especially in regard to treatment of public resources.

Legal experts say the current case would also be relevant to see how the apex court balances the larger economic interest of the country with the rights of people.

**AVTIL ENTERPRISE LIMITED**  
CIN: L70100MH1982PLC027263  
Regd. Office: 1/204, Navjivan Soc., 2<sup>nd</sup> Fl., Lamington Rd.,  
Mum-8. Tel: 2392925. Email: info@avtilinvest.com  
Website: www.avtilinvest.com

**NOTICE**  
Notice is hereby given that Pursuant to Regulation 47(1) of the SEBI (Listing Obligation & Disclosure Requirement), 2015, the meeting of Board of Directors of the Company will be held on Tuesday, August 25, 2020 at 2.00 p.m. at the Registered Office of the Company inter alia, to consider and approve the Unaudited Financial Results for the quarter ended June 30, 2020. Pursuant to Regulation 47(2), this Notice is also available on the website of the Company (www.avtilinvest.com) & the BSE Limited (www.bseindia.com).

For AVTIL Enterprise Limited  
Date: August 18, 2020 Sd/-  
Place: Mumbai Dharmistha Darji  
Company Secretary & Compliance Officer

**Lotus Eye Hospital and Institute Limited**  
CIN No.: L85110T1997PLC007783  
770/12, Avinashi Road,  
Civil Aerodrome Post, Coimbatore - 641 014.  
Tel: 0422 4229900, 4229999. Fax: 0422 4229933.  
E-Mail: companysecretary@lotuseye.org  
Website: www.lotuseye.org

**NOTICE**  
Pursuant to Regulation 29 read with Regulation 47 of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations 2015, Notice is hereby given that the meeting of the Board of Directors of the Company is scheduled to be held on Monday the 31st August, 2020 at the registered office at 770/12, Avinashi Road, Civil Aerodrome Post, Coimbatore - 641 014 to inter-alia consider and approve the Un-Audited Financial Results of the Company for the quarter ended 30th June, 2020. This information shall also be available on www.lotuseye.org, www.bseindia.com and www.nseindia.com.

For Lotus Eye Hospital and Institute Limited  
Coimbatore (Sd/-) Akanksha Parmar  
18.08.2020 (Company Secretary)

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Fax : +91-11-23720201

For Subscription and Circulation enquiries please contact:  
Ms. Mansi Singh  
Head-Customer Relations  
Business Standard Private Limited.  
H/4 & I/3, Building H, Paragon Centre, Opp. Birla Centurion, PB.Marg, Worli, Mumbai - 400013  
E-mail: subs\_bs@bsmail.in  
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**VINYL CHEMICALS (INDIA) LIMITED**  
CIN: L24100MH1986PLC039837  
Regd. Office: Regent Chambers, 7<sup>th</sup> Floor, Jammalal Bajaj Marg, 208, Nariman Point, Mumbai - 400 021.  
Tel: 2282 2708; Fax: 2204 3969; E-mail: cs.vinylchemicals@pidilite.com Website: www.vinylchemicals.com

**NOTICE OF 34<sup>th</sup> ANNUAL GENERAL MEETING**

Notice is hereby given that pursuant to the provisions of the Companies Act, 2013 (the 'Act') and Rules framed thereunder and the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 ('Listing Regulations') read with relevant Circulars issued by the Ministry of Corporate Affairs ('MCA Circulars') and also Circulars issued by the Securities and Exchange Board of India ('SEBI Circulars'), the 34<sup>th</sup> Annual General Meeting ("AGM") of the Members of **Vinyl Chemicals (India) Limited** ("Company") **will be held on Wednesday, 16<sup>th</sup> September, 2020 at 11.00 a.m. through Video Conferencing ("VC")/ Other Audio Visual Means ("OAVM") facility** without the physical presence of the Members at a common venue in view of the continuing COVID-19 pandemic, to transact the business as stated in the Notice convening the said AGM.

Notice convening the AGM and the Annual Report of the Company for the financial year 2019-2020 along with the login details for joining the 34<sup>th</sup> AGM through VC/OAVM facility is being sent only by electronic mode (e-mail) to those Members who have registered their e-mail ids with the Company/Depository Participants ("DP") in accordance with the aforesaid MCA Circulars and SEBI circulars. The Company has also made available the AGM Notice along with the Annual Report on its website [www.vinylchemicals.com](http://www.vinylchemicals.com), on the website of NSDL [www.evoting.nsdl.com](http://www.evoting.nsdl.com) and on the website of the Stock Exchanges i.e. BSE Limited and National Stock Exchange of India Limited at [www.bseindia.com](http://www.bseindia.com) and [www.nseindia.com](http://www.nseindia.com) respectively.

The instructions for joining the AGM are provided in the Notice of the AGM. The Members attending the AGM through VC/OAVM shall be counted for the purpose of reckoning the quorum under Section 103 of the Act.

Notice is also hereby given pursuant to Section 91 of the Act, read with Rule 10 of the Companies (Management and Administration) Rules, 2014 and Regulation 42 of the Listing Regulations, that the Register of Members and Share Transfer Books of the Company will remain closed from **Wednesday, 2<sup>nd</sup> September, 2020 to Wednesday, 16<sup>th</sup> September, 2020** (both days inclusive) for the purpose of dividend and AGM.

The Company is providing to all its Members the facility to exercise their right to vote on the resolutions proposed to be passed at the AGM through electronic voting system prior to the AGM (remote e-voting) and during the AGM (e-voting). The Company has entered into an arrangement with National Securities Depository Limited (NSDL) for facilitating remote e-voting/e-voting services. If your email ID is already registered with the Company/DP, the login details for e-voting are being sent on your registered email address. The remote e-voting period shall commence on **Saturday, 12<sup>th</sup> September, 2020 at 9.00 a.m. (IST)** and end on **Tuesday, 15<sup>th</sup> September, 2020 at 5.00 p.m. (IST)**. The remote e-voting module shall be disabled for voting after 5:00 pm on Tuesday, 15th September, 2020.

The voting rights, by remote e-voting/e-voting, shall be as per the number of equity shares held by the Member(s) as on **Wednesday, 9<sup>th</sup> September, 2020 (cut-off date)**. The Members are eligible to cast vote electronically only if they are holding shares as on cut-off date. The Members who have acquired shares after the date of electronic dispatch of the Annual Report and holding shares as of the cut-off i.e 9th September, 2020, may obtain the Login ID and Password by sending a request at [evoting@nsdl.co.in](mailto:evoting@nsdl.co.in). The Members who may have cast their vote through remote e-voting may participate in the AGM through VC/OAVM facility but shall not be allowed to cast their vote again through e-voting facility in the AGM. Detailed procedure of e-voting is available in the AGM Notice as well as in the email sent to the Members by NSDL. In case of any queries/grievances pertaining to e-voting, you may refer to the Frequently Asked Questions (FAQs) and e-voting user manual available at the Downloads section of [www.evoting.nsdl.com](http://www.evoting.nsdl.com) or contact Mr. Amit Vishal, NSDL, 4<sup>th</sup> Floor, A-Wing, Trade World, Kamala Mills Compound, Senapati Bapat Marg, Lower Parel, Mumbai - 400013, email [evoting@nsdl.co.in](mailto:evoting@nsdl.co.in) or [amitv@nsdl.co.in](mailto:amitv@nsdl.co.in), Tel: 2499 4200 or a toll free number 1800 222 990.

In case you have not registered your e-mail address and/or updated your Bank details with the Company/DP, you may follow the instructions given below for obtaining login details for e-voting for joining AGM through VC/OAVM.

**Physical Holding:**  
Send a signed letter to the Company's R & T Agents providing Folio No., name of shareholder along with copy of PAN (self-attested) and email-id details for registering email address.

For updating bank account mandate, for receiving dividends directly in their bank accounts, hard copies of the following documents are to be sent to R & T Agents:

- Signed letter mentioning your Name, Folio Number, complete address and following details relating to Bank Account in which the dividend is to be received viz. i) Name and Branch of Bank and Bank Account type; ii) Bank Account Number allotted by your Bank after implementation of Core Banking Solutions and iii) 11 digit IFSC Code;
- Cancelled cheque in original bearing the name of the Member or first holder, in case shares are held jointly;
- Self-attested copy of the PAN Card and;
- Self-attested copy of any document (viz. Aadhar Card, Driving License, Election Identity Card, Passport) for address verification of the Member as registered with the Company/ R & T Agents

**Demat Holding:**  
Please contact your Depository Participant and register e-mail address and bank account details in your demat account, as per the process advised by your DP.

August 19, 2020  
Mumbai

For **Vinyl Chemicals (India) Limited**  
**P.C. Patel**  
President & Secretary