

ICMR's VCRC plans repurposing RT-PCR Covid testing facilities to monitor vector-borne diseases

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Puducherry, Jul 5 (PTI) The ICMR's Vector Control Research Centre (VCRC) is planning to repurpose the existing RT-PCR Covid testing facilities for monitoring vector-borne diseases to understand their distribution and assess the impact of their control and elimination programmes. Scientists at VCRC have developed a simple and less expensive RT-PCR-based xenomonitoring test for filariasis which is being used as a pilot in Odisha's Khurda district, Tamil Nadu's Cuddalore and Puducherry. VCRC Director Dr Ashwani Kumar said the Centre is now developing multiplex RT-PCR for different vector-borne diseases. Vector-borne diseases such as lymphatic filariasis, malaria, kala-azar, dengue, and chikungunya are major public health problems in India. Filariasis is endemic in 328 districts. There are about 0.48 million cases of lymphoedema and 0.18 million cases of hydrocele are line-listed in the endemic districts with 670 million people at risk, said Dr S L Hoti, an ICMR emeritus scientist at VCRC. Currently, programmes for eliminating some vector-borne diseases like filariasis, malaria and kala-azar have been launched on a wide scale through various interventions and with Mass Drug Elimination for lymphatic filariasis. Such programmes require monitoring at regular intervals to know the impact of the interventions. Conventionally, the monitoring is done by examining blood samples of people in endemic communities. Collecting blood samples has problems with availability of skilled manpower, logistics and ethical issues. Since these diseases are transmitted by mosquitoes and sandflies which suck blood from people along with parasites, these vectors can be used to monitor infection in communities as an indirect measure of transmission, Dr Hoti said. By examining the vectors through dissection and examination for pathogens under a microscope, one can know whether the disease is being transmitted in the community. This is called xenomonitoring. However, dissection and microscopic examination are tedious and need expertise, Dr Kumar said. "At VCRC, RT-PCR based molecular xenomonitoring tests have been developed which can detect pathogens in thousands of mosquitoes, unlike conventional dissection and microscopic examination by which 50 to 60 mosquitoes can be examined in a day," the VCRC director said. This molecular xenomonitoring technique can be used to monitor vector-borne diseases in elimination programmes with much ease in a high throughput manner. "We will submit a proposal for this network to ICMR soon. This network will go a long way in helping the national Programme eliminate vector-borne diseases," Dr Kumar said. Currently, there are 3,382 Covid 19 RT-PCR testing laboratories across the country, with the required infrastructure and manpower. PTI PLB NSD.

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