

# **The Laboratories Experiences on Strengthening Biosafety in COVID-19 Pandemic AND WHO VPD Laboratory Network**

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# Introduction

- COVID-19 diagnostic facilities are affordable and accessible in all districts of India
- Strengthened the quality control programmes
- In the first week of February 2020, only 14 laboratories were testing for COVID-19
- By the end of March 2020, India had 106 Virus Research & Diagnostic Laboratories (VRDLs), which anchored COVID-19 diagnosis in the country
- As cases surged, new laboratories were needed to meet the demand and make testing widely available. VRDLs served as a platform for capacity building and hand hold new laboratories to come on board for COVID19 testing
- The central and state governments also came together to deploy equipment and manpower to establish molecular virology laboratories.

# Introduction

- ICMR along with MoHFW onboarded certified private laboratories in India. To ensure quality, only laboratories approved by National Accreditation Board Testing and Calibration (NABL) (ISO15189) were engaged.
- Currently more than 3365 laboratories are serving as COVID-19 testing facility in country.



# BSL3 laboratories in country

- COVID-19 pandemic made realization of enhancing biosafety capacity of country
- Currently approximately 39 laboratories are serving as BSL3 laboratories
- India's first Biosafety level-3 containment mobile laboratory was launched in Nashik, Maharashtra in Feb 2022.

# Strengthening biosafety

- Country has capacity (NABL accredited) for assuring quality of these biosafety levels
- Private partners are available which can assure quality of these facility by mode of annual maintenance contract, calibration etc.
- Private partners/Laboratories beyond network selected which had NABL accredited facility.
- Providing guidance material available on-line for strengthening the quality of laboratory biosafety
- Upcoming BSL4 facility in country to enhance testing capacity of emerging pathogens

# Challenges

- As the laboratory network grows maintaining quality with respect to biosafety is major challenge
- Dictating the culture of quality assurance to private partners involved in profit business
- Generating quality assurance auditors for high no. of laboratories

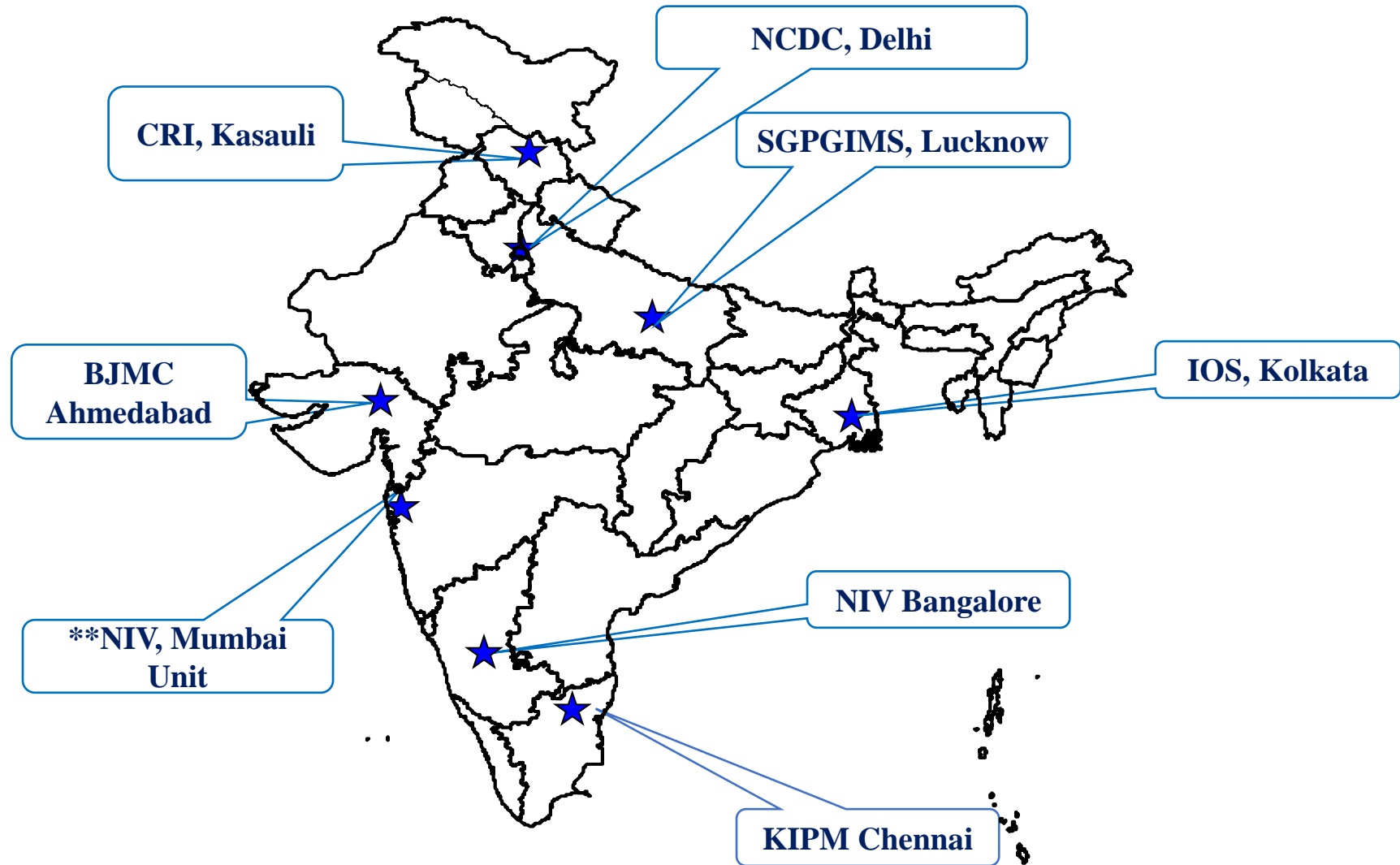
# VPD Laboratory Network

# Background

- AFP polio surveillance
- Measles and rubella surveillance
- Diphtheria and pertussis surveillance



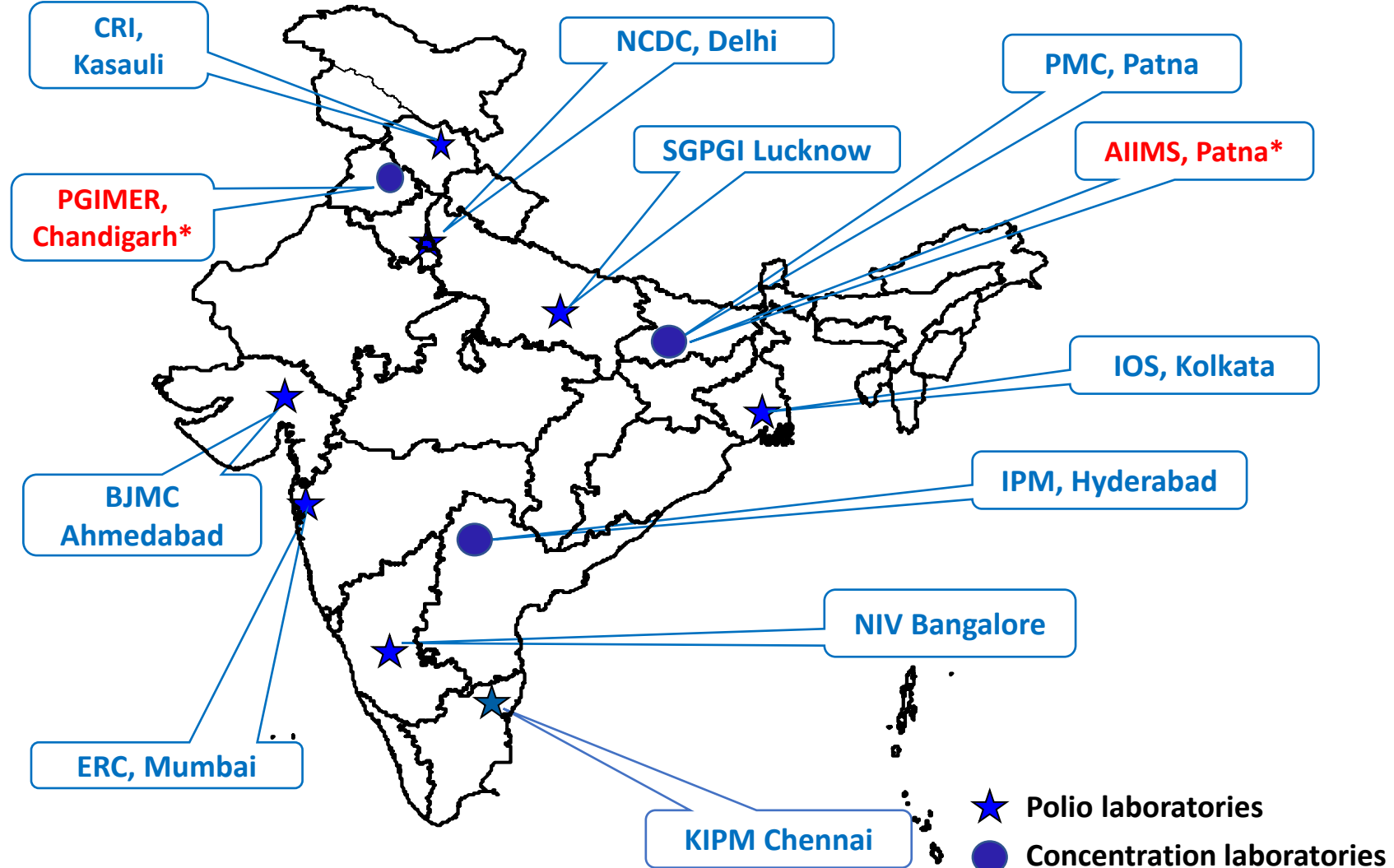
# Polio Laboratory Network (PLN), India



★ Polio laboratories

\*\* Global Specialized polio laboratory since 2000

# Laboratories Supporting Environmental Surveillance



**\*Temporary polio concentration laboratories**

# Measles and rubella laboratory network (MRLN), India

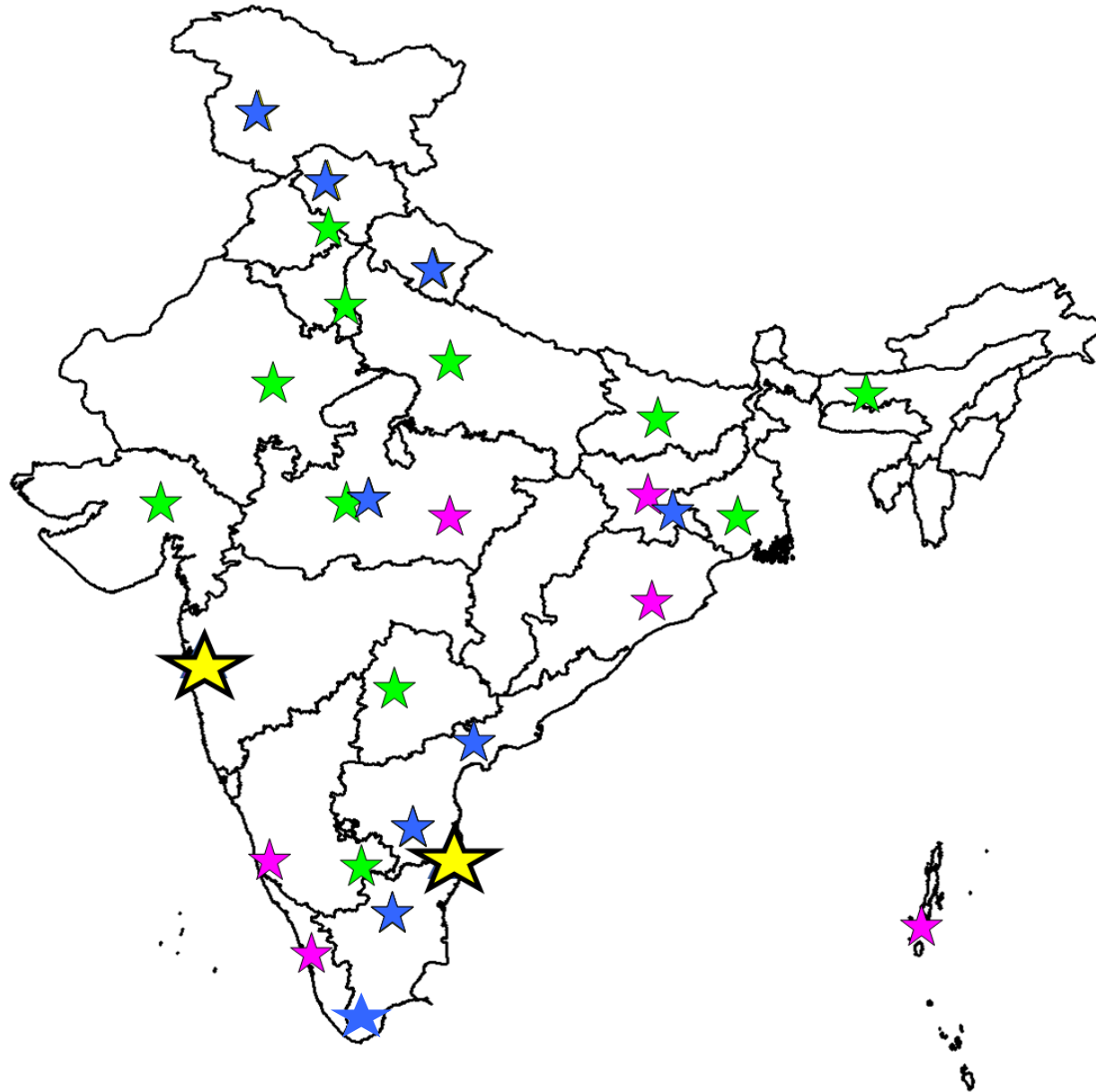
**MRLN, India: 27**

**★ Up to 2017 - 13 labs (2 reference labs)**

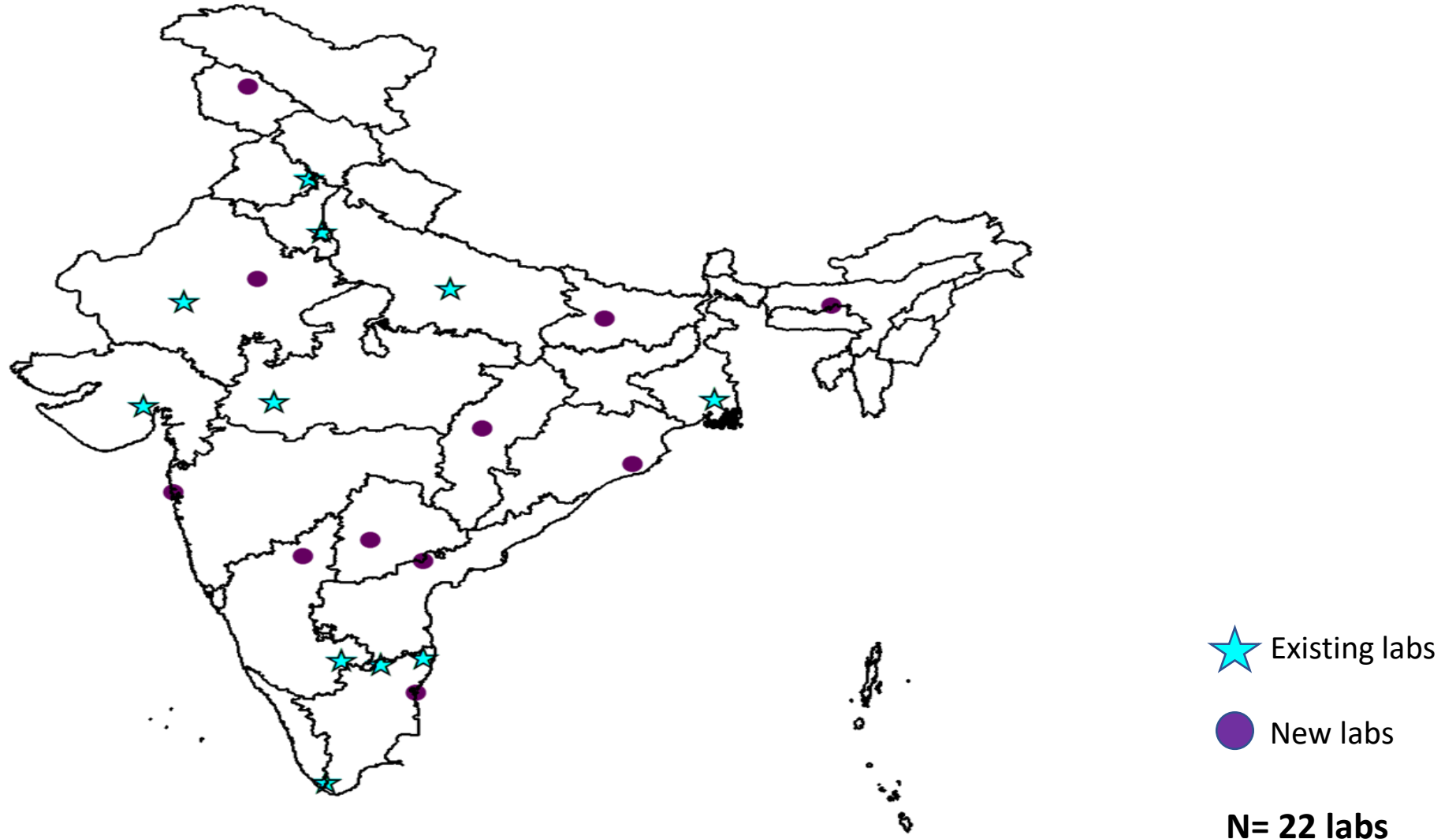
**★ 2018 - 6 new labs**

**★ 2021 – 8 new labs\***

**★ Reference laboratory (2)**



# Laboratories Supporting Diphtheria and Pertussis Surveillance



# References

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4216491/>
- <https://www.who.int/india/news/feature-stories/detail/how-india-scaled-up-its-laboratory-testing-capacity-for-covid19>

Thank You