



**GOVERNMENT MEDICAL COLLEGE**  
**OMANDURAR GOVERNMENT ESTATE**

# **HOSPITAL INNOVATION SHOWCASE- COVID TRACKER**

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# INTRODUCTION



- The COVID tracker is an experimental device patented by Dr. K. Jagadesan, Director of a private hospital, awaiting ICMR approval.
- The COVID tracker was studied at Govt. Omandurar Medical College Hospital after getting approval from IEC.
- It is based on nanotechnology.

# BASIS OF NANOTECHNOLOGY

- Zeta potential/ nano potential is the electrical potential of the surface of the human tissue. It is measured in Volts and millivolts
- Biosensors are used to measure zeta potential.
- Conventional sensors are used to measure Pulse, Temperature, Spo2, Respiration, BP, Blood cell counts, Total Platelet count, Hb.
- Results are interpreted using Arduino Software.
- It can be used for everyone except for those with skin lesions.

ZP of healthy individuals is **+22mV to +24mV**

ZP of COVID virus is **-25mV**

**+5mV to +15mV**

ZP of COVID infected patients depending on severity

# COVID TRACKER REPORT



- Zeta Potential



- COVID status



- Blood Pressure



- Temperature



- Pulse rate



- SpO<sub>2</sub>



- Hb



- RBC Count



- WBC- Total and  
Differential count

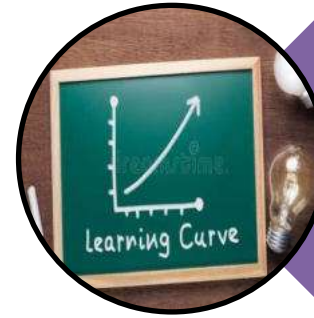


- Platelet count

# HIGHLIGHTS KJ COVID TRACKER



High  
efficacy



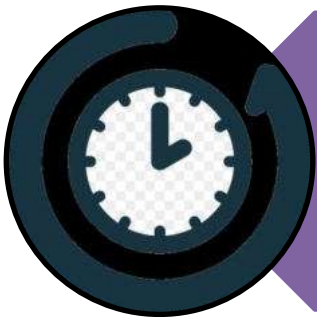
Small  
learning  
curve



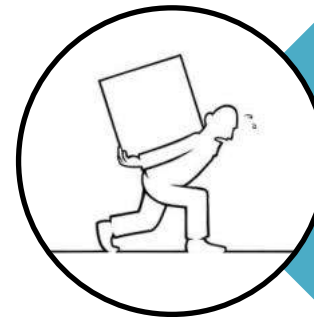
Inexpensive



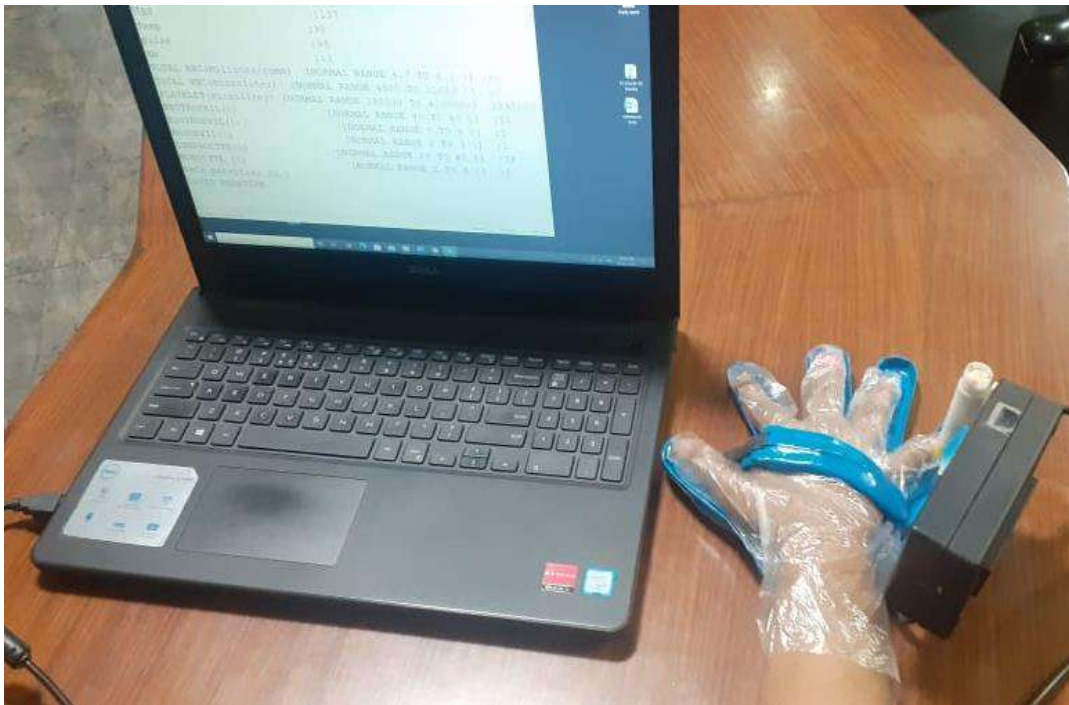
Prevents cross  
infection



Less time to  
process



Non-  
cumbersome



- It can be used as an adjuvant for diagnosis of COVID 19 infection especially in mass screening at **malls, educational institutions, transport facilities, religious gatherings** etc.
- The Zeta potential can be used for diagnosis of other viral infections.