

Healthcare: Devices

# Mobilab - Affordable IOT Enabled Smart Multi Diagnostic device for chronic diseases detection

## APPLICATION

The device can be used as a point of use device for Kidney Function Tests, Liver Function Tests, Heart Function tests, and Pancreatic Function Tests.

COMPANY NAME	TECHNOLOGY READINESS LEVEL (TRL)	INTELLECTUAL PROPERTY
Primary Healthtech Pvt Ltd	TRL: 8 (Clinical trials are completed; Early Revenue Generation Phase)	Portable Cuvette based Reagent Mixer (Indian Patent App No – 202131038898)
FOUNDER'S NAME		Portable low powered optical system for colorimetric analysis (Indian Parent App no: 202231004664)
Sahil Jagnani		

## PROBLEM ADDRESSED

70% of people are dying because of Non-communicable diseases which are disease related to kidney, liver, heart, pancreas etc. There are rare symptoms of these disease and if detected early can be treated at primary care with proper medicine. But more than 50% of diagnosis happens only at later stage. Establishing laboratory set up in Rural and Semi-urban area is not economically viable for diagnostic companies. The solution in this case is the point of care diagnostic solution which can provide affordable, portable, accessible instant diagnosis.

## ABOUT THE TECHNOLOGY

Nanotechnology principles have been used for antibody conjugation to improve Sensitivity of detection for better accuracy, Reduced steps of detection and improved Kinetics to reduce testing time. Detection of biomarkers have been done using colorimetry principles using Beer Lambert's Law where concentration is correlated to absorbance. We are also working on a microfluidics system to simultaneously detect various biomarkers with a drop of blood. Reader device internal arrangement and optical detection part has been patented which not only gives the compact size but also significantly reduces the cost of the device. Electronics part is optimized such that reader device requires ultra-low power and is driven using proprietary firmware. As internet and mobile phone usage is on rise, we have moved our entire system on cloud and all the tests and calculations are using processing power of mobile phones.

## FUNDS RAISED/ACHIEVEMENTS

- BIRAC BIG grant of INR 50 lakhs
- BIRAC SEED fund at INR 25 lakhs from
- Raised INR 25 lakhs from Pontaq Venture & STPI
- MeITY SASACT INR 33 lakhs
- INR 25 lakhs from Villgro
- Raised INR 1 Cr from Sage Venture

## PRODUCT IMAGE



## USP

- Affordability - Device will be priced in sub-15k (INR) range and it will bring down the cost of tests by 1/10th using economic raw material.
- Portability - Smartphone-sized device, needs no heavy set-up & can be used in home conditions while to set up a diagnostic lab a lot of space & infrastructure is required.
- Easy to Operate
- Vernacular Language - Our smartphone application is multilingual, with a goal to help technicians comprehend and use our device with ease.
- Battery operated - Device is robust for low resource setups, it has a power backup of 4-6 hours.
- Modularity - Modular architecture with specified modules, this makes the device future proof.
- Instant results with Few drops of Blood/Urine
- Smart Clinical/ Technician App - A dedicated Mobile application has been developed for clinician/ technician with data processing using our algorithms and data analysis to predict health parameters.

## END USERS/CUSTOMERS

- In house patients, Govt agencies, Hospitals, Insurance providers, Local Medical Centers