

## Non- invasive device to diagnose endothelial dysfunctions

### Problem

The existing invasive techniques are expensive and risky.

Existing non-invasive techniques require a medical professional for screening, need several devices to get an accurate reading, high sensitivity of devices to external environment, not directly assess endothelial functions, instead assess functions of brachial arteries etc.

### Solution

Less expensive, highly sensitive, simple hand held non invasive device to screen patients within few minutes.

### How does it work?

Measuring volumetric blood flow changes at the finger tip by the device and subsequent analysis of data using a PC based software tool and interpretation of data. Cloud based platform for PPG wave analysis generate score for endothelial dysfunctions.

### Innovative features

Signal processing algorithm to process PPG signal stream to PPG pulse waveform

Cloud based platform for PPG wave analysis

PC and smart phone apps which uses the cloud APIs to collect data from the patients and perform screening tests

### Application

Medical diagnostics

### Stage of development

10 prototypes were developed and being used in patient data collection

### Existing technologies

Infusion of vasoactive agents

High resolution ultrasound flow mediated dilation

Digital thermal monitoring (DTM) at the finger tip

### IP status

IP protected for algorithm (WO 201717163 A1)

Local patent - 18722

