Rui Costa Martins

rui.martins@ecsaude.uminho.pt

+351 93 1667236

R. Rochedale no 6
Maia 4470-212
Portugal

Describe Your Application
MedPAT - The fist Point-of-Care Tricoder for personalized healthcare

Martins RC, Osorio R, Sousa NJ

Abstract

Tricoding is the future of personalized medicine, that is, the capacity of non-invasive, in-vivo and real-time measuring the individual health status. We developed using uv-vis-swnir and Raman ocean optics spectrometers detectors in combination with our proprietary advanced signal processing, artificial intelligence and opto-electronics a device that we call MedPAT.

We consider this a major breakthrough in Tricoding, as it is capable of instantaneous quantification of major clinically relevant human metabolites from blood, serum and urine, using less than 1 ml sample (minimally invasive); or by directly measuring transmittance of blood wrist veins, that is, to get your blood clinical analysis without having to use a needle or remove a single drop of blood. We submitted an international patent of the current technology.Currently our databases count with more than 16000 samples for system calibration, that will exponencially grow once prototypes are released for clinical trials.

MedPAT will improve the quality of life by monitoring your health on a daily basis, helping to adapt a personalized healthy lifestyle, evaluating the effectiveness of medical treatments, or even saving lives in medical emergency cases, such as predicting the probability of heart attacks in the next 24 hours, hepatic problems, infection, renal deficiency, etc. MedPAT is currently calibrated for the 26 most important parameters medical doctors need to evaluate an individual's health.

We are also proud that MedPAT is the culmination of 8 years research using Ocean Optics spectrometers, which have proven extremely precise and reliable for achieving this level of performance. My sincere thanks to Ocean Optics for putting a huge effort in developing high-grade miniaturized spectrometers and making this invention possible.

Comments or Questions

Please contact me for disclosure agreements if the project is selected.

Current webpage: http://www.medpat.pt/