

# CORPORAL COMPOSITION MONITORING, AND NUTRITIONAL AND HYDRATION PATIENT'S STATE ASSESSMENT

## ABSTRACT

This platform for the monitoring of the corporal composition, and the assessment of the nutritional and hydration state of patients applies a set of methods to satimate the parameters and to detect states of alertness. It is a multi-user monitoring device, useful for the management and follow-up of several subjects.

The invention is located in the area of the information and communication technologies (ICT). In particular, belongs to medical technology and biomedical engineering for the development of wearable electronic devices for the monitoring of physiological parameters and health condition of people.

It was developed by researchers belonging to the University of Sevilla, and the Biomedical Research Networking Center (CIBER).

## DESCRIPTION

The present invention refers to an intelligent, portable, and wireless platform for monitoring de corporal composition and the assessment of the nutritional and hydration state of subjects, comprising three devices: a sensor, a monitoring device, and a multi-user device. This platform develops all methods for the assessment of the corporal composition. It manages the information from all the monitored users and detects states of alertness. Additionally, it can also process and manage the information coming from other connected wearable sensors related to other parameters (respiratory rithm, heart rate, ECG, temperature, activity, fall, glucose, etc.).

Besides, the platform comprises the methods for managing of the information and the assessment. The platform also can store and display the information and results of the assessment, and can send them wireless to and integrated e-Health system. It can be customized according to the characteristics of the user.

The measurements can be referred to the whole body or to a specific corporal section

The methods consider the age, height, weight, sex, race, previous illnesses, etc. of the subject.

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## INNOVATIVE ASPECTS AND ADVANTAGES

- Accurate
- Efficient
- Portable
- Wireless
- Robust against disturbance, noise, parasitic effects
- Optimal resources in multi-user environment
- State of alertness detection
- e-Health system integration
- It can be remotely configured and activated
- Customization
- Energy efficient

## DEVELOPMENT STATUS

Developed  
Laboratory tested

## AVAILABLE FOR

- Exclusive license agreement
- Non-exclusive license agreement
- Further research or development

## TECHNOLOGICAL OFFER

## APPLICATIONS

- Information and Communication Technologies (ICT)
- Medical technology and biomedical engineering
- Monitoring of physiological parameters and health
- Assessment of nutritional and hydration states
- Illness indicator
- Risk assessment in several pathologies
- Diagnostic, follow-up, decision-making during diseases
- Nephrology, nutrition, pregnancy, lactation, aging, rehabilitation, etc.
- Cardiovascular, immunology and nervous systems, paediatrics, oncology, etc.
- Sport training and physical condition

## INDUSTRIAL PROPERTY

Spanish Patent **ES2682059B1** (priority date: March 16, 2017)

## IP STATUS

Patent granted

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