UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH
Servei de Gestió de la Innovació

Foldable paper-based devide for detection of infection in body fluids

A new and simple foldable paper-based fluidic device (InfectCheck), designed with only two foldable sections for an efficient separation and detection of the desired biomarker.

Industrial Partners from biomedical sector to further develop the device and/or to establish commercial agreements are sought

The Challenge

Chronic wounds represent a challenge to wound care professionals and consume a great deal of healthcare resources around the globe. The severity and cost of wound infections increase dramatically the longer they remain untreated. The resulting pain, impairment and social isolation lead to reduced quality of life and, in the worst case, hospitalization, and eventually sepsis and death. Standard procedures for wound infection detection are time consuming (microbiological tests) or show limited reliability due to the subjective judgement. Based on the medical practitioners interests, **InfectCheck** has been developed. of simple point of care testing (PoCT) devices based on the objective

The Technology

InfectChek is a **foldable paper-based fluidic device** for detection of infection-related enzyme biomarkers in body fluids.

InfectChek is designed to implement a **highly specific immuno-capturing** of an enzyme biomarker, followed by fast color development due to the enzyme activity. The colour intensity reveals the state of infection.

InfectChek is **validated for detection of infection in chronic wound exudates and sputum** measuring the levels of myeloperoxidase (MPO) enzyme biomarker.

Innovative advantages

- Rapid, reliable and inexpensive visual detection of infection in body fluids such as saliva, sputum, wound exudate, blood and /or sweat.
- Fast self-assessment as Rapid Diagnostic Kit for infection testing performed by patients suffering from Chronic wounds.
- It is equipment-free and can be self-operated by the patient, with sample to result time within 5 minutes.
- Easy implementation in screening programs for infection control in the population at risk.
- Early disease detection. It means shorter hospitalization, improvement of patients' quality of life and reduction of healthcare costs.

Current stage of development

Laboratory validation. It's required a pre-clinical validation in chronic wound fluids and sputum.

Applications and Target Market

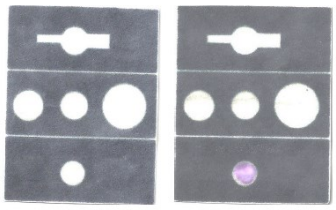
Fast self-assessment (Rapid Diagnostic Kit) / Point-of-care (PoC) tests for infection in out-hospital conditions, performed by patients suffering from:

- Chronic wounds
- Chronic obstructive pulmonary disease (COPD)
- Adverse cardiac events

Reference number

MKT2022/0181_H

Body fluids: saliva, sputum, sweat, wound exudate, blood



Non-Infected Infected

Business Opportunity

Technology available for Patent licensing with technical cooperation

Patent Status

Pending Patent

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