Novel tool for the early diagnosis of sepsis

Reference No: B79000

CHALLENGE
Sepsis is a life-threatening multiorgan failure caused by an excessive, dysregulated immune reaction following an infection (bacterial, viral or fungal). Comprising over 20 million annual cases and estimated 8 million cases of death worldwide, sepsis is a major contributor to the global disease burden. Early recognition is crucial for an immediate therapy onset and hence patients’ survival. However, a precise diagnosis is still hampered by the lack of specific symptoms. The challenge is thus to develop a tool for the early diagnosis of sepsis or a developing sepsis; ideally a simple, quick point-of-care test for emergency rooms and doctor’s practices.

INNOVATION
The innovation describes a novel diagnostic tool for sepsis based on altered platelet function. Patients’ blood samples are stimulated with specific agonists. The test can be used for all cases of suspected sepsis, and can provide additional clinical information about disease severity and prognosis. The method allows medical personnel to make coherent decisions, e.g. about the need for an immediate start of antibiotic therapy and the transfer to an ICU for critical care management or to a specialized clinic.

COMMERCIAL OPPORTUNITIES
The innovation can be applied to test for a suspected sepsis. Potential applications are:
- Blood test kits for hospitals, medical practices, emergency departments
- Point-of-care test devices

DEVELOPMENT STATUS
Proof of concept. One sepsis patient cohort and one healthy cohort were analyzed.