


Rapid Airparticle Monitoring against BiOlogical threats	
Funded under	EDA Joint Investment Programme on CBRN Protection (JIP CBRN)
Start date	2013
End date	2016
Objective	
<p>The RAMBO project aims at developing advanced methods, instrumentation and sensing strategies/protocols for continuous monitoring of air particles against biological threats and in particular the Anthrax (through an experiment on its stimulants). More specifically, RAMBO aims at developing an advanced sensor with the following performance objectives:</p> <ul style="list-style-type: none"> • Good selectivity (low probability of False Alarms) • Detect to Warn response time (<45 min) • Minimal use of chemicals and reagents (for long-term unattended operation) • State of the art sensitivity (towards the one-spore limit) • Man-Portability and ruggedizability for use in defence and security scenarios • Broad biological spread (investigations could be later extended to virus and toxins in that same list) <p>The objective of RAMBO is to investigate and apply the 2 sensing techniques to the detection and classification of bio agents (actually stimulants of real agents). The SERS (Surface Enhanced Raman Spectroscopy) cell functionalised with Phages long life specific receptors, will be connected through a microfluidic path to commercially available air samplers upstream and downstream to PCR (Polymerase Chain Reaction) for classification/identification of the bio agents. The B -point detection sensor will operate as a first alarm detector, and will also allow the identification of the threat. It will be implemented in an portable device that can be left unattended for long time.</p>	
Cordis website	