Seraph Biosciences, Inc.

Seraph's Field Portable Ultra-high Sensitive Raman System

Seraph Biosciences, Inc. has developed a field portable ultra-high sensitive Raman system to revolutionize the speed and efficacy of pathogen detection in a variety of clinical care settings. This portable and inexpensive point of care system has been tested for pathogen detection and can provide an enhanced spectral output at an accelerated data gathering, in near real time, or approximately 20 times the speed of large and expensive laboratory-based advanced Raman spectrometers. The Seraspec® technology can readily differentiate viral from bacterial pathogens, gram positive from gram negative bacteria, and with further spectral analysis allow identification of specific bacteria and viruses and corresponding antibiotic resistance. The Seraspec® detects pathogens at a lower threshold of detection utilizing advanced hardware and software algorithms that minimize background interference and confounding factors in biological samples. These advanced technical capabilities, which simultaneously allow the analysis of intracellular and cell membrane biomarkers and their surrounding microenvironment in successive real time measurements which also provide early indication of antibiotic resistance as well as a clearer understanding of their mechanism of action. This approach allows novel virus and bacteria detection by documenting slight sample variations, a task which could take days, weeks or may otherwise be impossible with currently available technology. The Seraspec® system is configured with a cuvette sampling system which maximizes internal reflections for increased Raman spectral detection on the order of surface enhanced Raman without the need for specialized substrates. Further development of the existing spectral biomarker library will bolster the Seraspec® platform technology and permit rapid diagnostics of a robust array of pathogens, including drug-resistant bacteria. Seraspec® has recently received FDA approval as a Raman Spectroscopic predicate device as well as approval to begin initial clinical studies.