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Novel Immunoassay for Early Detection of Bacterial Infections

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Beginning in August 2007, investigators from Greece, Germany and Romania have cooperated to develop a new immunoassay for the very early detection of life-threatening bacterial infections. Bacterial pathogens such as the endospores of *Bacillus (B.) anthracis* can cause severe, often fatal, infectious diseases if used against military and civilian populations. Agents such as *Shigella spp*, *Salmonella spp*, *Yersinia spp* and *Streptococcus spp* specifically target immune system cells, such as macrophages, and drive them to self-destruction or apoptosis. The development of a method to detect very early apoptotic events in macrophages can be used as a diagnostic tool for any bacterial infection at its onset. This highly sensitive assay, incorporated as an immunoassay called ELISA, would facilitate the diagnosis of bacterial infections during the very early, asymptomatic incubation period following contamination. Several companies have shown great interest to commercialize this approach by producing an inexpensive ELISA kit.

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