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# Diagnostic Challenge and Therapeutic Approaches in Human Sepsis Based on the Appearance of Endotoxemia and Beta-D-Glucanemia

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# **Message from the Guest Editors**

Endotoxins, also called lipopolysaccharides (LPS), are the major constituent of the outer membrane of Gram-negative bacteria. Fungal ( $1\rightarrow 3$ )-beta-D-glucan, a major component of the cell wall as well as endotoxin, have attracted a considerable amount of interest in applications as potential prognostic, diagnostic, and therapeutic markers in blood or body fluids.

In this Special Issue, we will focus on cellular and molecular mechanisms of endotoxin/beta-D-glucan activities; recent advances, limitations, and further challenges to the early detection of endotoxemia/beta-D-glucanemia, primarily with the Limulus amebocyte lysate assay (conventional/recombinant); and promising therapeutic approaches based on cytokine/chemokine blockades, anti-endotoxin agents, host defense (antimicrobial) peptides, antifungal agents, highly effective anticoagulants, or direct hemoperfusion, with the aim to pave the way to successful innovative treatments and management of sepsis or septic shock.

Dr. Hiroshi Tamura Dr. Yoshiyuki Adachi *Guest Editors* 









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