Special Issue

Shiga Toxin-Producing *Escherichia coli*: Diagnostics, Characterization, and Pathogenesis

Message from the Guest Editor

Shiga toxin-producing *Escherichia coli* (STEC), representing a genetically and phenotypically diverse group of *E. coli* strains characterized by the production of one or more Shiga toxins (Stxs), has been linked to a broad spectrum of clinical outcomes ranging from asymptomatic infection, bloody diarrhea, and the potentially life-threatening complication known as hemolytic uremic syndrome (HUS). The Stx is the key virulence factor of STEC and comprises two types: Stx1 and Stx2. The most predominant STEC serotype, O157:H7, normally producing the Stx2a subtype (with or without Stx2c), has been strongly associated with severe clinical symptoms, such as HUS. In recent years, non-O157 STEC infections are increasingly recognized as the main cause of sporadic cases or outbreaks worldwide, primarily due to improvements in diagnostics. To date, there is no curative treatment for STEC-HUS. The aim of this Special Issue is to summarize the current knowledge and report up-to-date research on the diagnostics, characterization, and pathogenesis of STEC, which may shed light upon new perspectives for the management of STEC-associated diseases, in particular HUS and its complications.

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