Serotype-associated polymorphisms in a partial rpoB gene sequence of Salmonella enterica

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Salmonella enterica is a zoonotic bacterium with more than 2500 serotypes, which affect a wide range of hosts and produce diverse clinical outcomes. Strain identification usually involves costly and time-demanding procedures. This paper describes the sequencing of a rpoB hypervariable gene segment (847 bp) that allows identification of serotypes in S. enterica strains isolated from several hosts. The nucleotide similarity values among S. enterica serotypes ranged from 98.23% to 99.88%, with potential usefulness for devising a simple one-step sequencing as a first approach for identification of S. enterica strains. In conclusion, the analysis of polymorphisms in the partial rpoB sequence can discriminate S. enterica strains at the subspecies level.