

## Research project IZS VE 09/10

**Source attribution of human infections by Salmonella Typhimurium and its emerging monophasic variant (S. 4,[5],12:i:– ) along the food chain**

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The successful control of food-borne pathogens requires knowledge about the most important sources or reservoir as well as the principal routes of transmission. Numerous approaches have been used for tracing the source of human food-borne infections. Among them the microbiological ones are focussed on the causative agent and involve isolation, identification and characterization of the pathogen.

By analysing and comparing data on the occurrence of the pathogen in potential sources and comparing pathogens subtypes isolated from humans with subtypes isolated from animal and food, it may be possible to make inferences about the sources of human infections. In the framework of this project the microbiological subtyping approach will be used to investigate the epidemiology of two serotypes that account for the great majority of human salmonellosis infections (Salmonella Typhimurium (STM) and its monophasic variant (S. 4,[5],12:i:– ) in Italy. These serotypes are characterized by a wide distribution and can not be strictly connected with a specific source, hence it is relevant to investigate their epidemiology in order to identify the possible origins of human infections.