

## BACTERIA ISOLATES ISOLATED FROM CLINICAL MATERIAL AND FOODSTUFFS

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### Abstract

*S. enterica* is currently the most common foodborne bacterial pathogen causing severe illness. Of the more than 2,500 identified *S. enterica*, only a few serovars are of public health importance. In the available literature, there is evidence that *S. enterica* Typhimurium and *S. enterica* Enteritidis are the most common causes of human salmonellosis, including Kazakhstan. The aim of the study is genotyping of *Salmonella* bacterial isolates isolated from clinical material and food in 2018-2019 in Almaty. Using RAPD PCR, a study of 25 *S. enterica* isolates isolated from foodstuffs and 65 *S. enterica* isolates isolated from clinical material, previously identified using biochemical tests, was carried out. Of 25 *S. enterica* isolates isolated from foods, 14 (56%) isolates were identified as *S. enterica* Typhimurium, 8 (32%) - *S. enterica* Enteritidis, 3 (12%) - *S. enterica* Virchow. In the study of 65 *S. enterica* isolates from clinical samples, 29 (44.6%) isolates have been identified as *S. enterica* Typhimurium, 13 (20%) - *S. enterica* Enteritidis, 23 (35.4%) - *Salmonella enterica* Virchow. For three types of bacteria, *S. enterica*, a specific set of DNA fragments was identified that distinguish them from each other in RAPD PCR. Using RAPD PCR, two genetically different groups with different sets of DNA fragments of *S. enterica* Typhimurium isolates and three genetically heterogeneous isolates of *S. enterica* Virchow were found. With the accumulation of a sufficient number of mutations in genes, genotyping methods begin to distinguish isolates. In some cases, the isolates do not differ in the distribution of DNA fragments, which indicates the genetic similarity of these isolates. A genetic relationship was found in *S. enterica* Enteritidis isolates

**Received:** January 27, 2022; **Accepted:** January 27, 2022; **Published:** January 31, 2022

### Biography

Barmak S is lecture in department of Food Science and Nutrition. He specialize his MSc. degree in Food Science and Technology at Haramaya University. Now time he is doing his PhD at Jimma University in Food Science and Technology. His future research interest is food fermentation/biotechnology, food safety, improving nutritional composition of food products for pregnant, lactating mothers, infants and children, especially through fermentation and formulations using locally available raw materials.