

Salmonella Cerro

Background: *Salmonella enterica* subsp. *enterica* serovar Cerro (antigenic formula 6,14,18:z₄,z₂₃:1,5) is a serovar of the O:18 (K) serogroup. This serovar emerged in cattle in the United States. According to the CDC report of 2011, this serovar ranked third among clinical-nonhuman sources. Hardly reported in human salmonellosis cases, but highly reported among dairy cattle; *S. Cerro* appears to be adapted to cattle. Subtyping by pulsed field gel electrophoresis (PFGE) had identified a single predominant PFGE type on dairy farms in [New York](#) and [Pennsylvania](#). Genomic characteristics associated with the adaptation of *S. Cerro* to cattle are currently under study at the Cornell Food Safety Laboratory and Dr. Cummings' lab at Texas A&M University.

Animal reservoir: *Salmonella* Cerro has as reservoir dairy cattle. Some endemic regions include New York and Pennsylvania.

Geographical distribution: *S. Cerro* has been reported mainly in the U.S. (from bovine samples). In addition, in southern Italy, this serovar was described as endemic in the year 2000.

Outbreaks: Two outbreaks of human salmonellosis due to serovar Cerro has been reported. The most recent one occurred in 2 prisons in 2012 and was attributed to multiple serovars, including *S. Cerro*. In addition, one subclinical outbreak in dairy cattle was reported, in this outbreak contamination at the farm persisted for almost 2 years.

Year	Location	Associated source	Number of cases
1985	New Mexico	Beef jerky	29
2012	Arkansas	Eggs, chicken salad, person-to-person	6*

*The total case count was n=597, and a total of 60 and 106 *Salmonella* isolates were cultured from 56 (Prison A) and 99 patients (Prison B), respectively. *S. almonella* Cerro was isolated from 6 patients that were co-infected with other serovars, and 8 isolates were obtained from the egg samples.

Relevant links and references:

1. <http://www.ncbi.nlm.nih.gov/pubmed/20187753>
2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3095722/>
3. <http://www.ncbi.nlm.nih.gov/pubmed/18041954>
4. <http://www.cdc.gov/mmwr/preview/mmwrhtml/00000628.htm>
5. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6308a2.htm>