Salmonella Cerro

**Background:** *Salmonella enterica* subsp. *enterica* serovar Cerro (antigenic formula 6,14,18:z₄, z₂₄:1,5) 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.

<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
<th>Associated source</th>
<th>Number of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>New Mexico</td>
<td>Beef jerky</td>
<td>29</td>
</tr>
<tr>
<td>2012</td>
<td>Arkansas</td>
<td>Eggs, chicken salad, person-to-person</td>
<td>6*</td>
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</tbody>
</table>

*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. *Salmonella* 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:**

5. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6308a2.htm