Author's response to reviews

Title: Molecular and Epidemiologic Analysis of a County-Wide Outbreak Caused by Salmonella enterica subsp. enterica serovar Enteritidis Traced to a Bakery

Authors:

Po-Liang Lu (idpaul@hotmail.com)
In-Jane Hwang (lupl@pchome.com.tw)
Ya-Lina Tung (lubird@so-net.net.tw)
Shang-Jyh Hwang (luplkimo@yahoo.com.tw)
Chun-Lu Lin (lubird@seed.net.tw)
L. k. Siu (lksiuh@nhri.org.tw)

Version: 3 Date: 30 June 2004

Author's response to reviews: see over
Re: 1838477155273488 - Molecular and Epidemiologic Analysis of a County-Wide Outbreak Caused by Salmonella enterica subsp. enterica serovar Enteritidis Traced to a Bakery

Dear Editors,

A point-by-point response to the peer reviews of our original manuscript, #1838477155273488, is presented in this reply letter according to the editors’ suggestion. All authors have read and agreed to the re-submitted version of the manuscript. The reviewers’ queries and suggestions are addressed item by item as follows and was highlighted in Bold format:

Reviewer Meirion Evans
Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. Abstract
1.1 Revise abstract to clarify methods and results (see comments below and minor revisions).

*** We have corrected accordingly.

2. Methods
2.1 Page 5, line 6. I am still unclear exactly which patients were interviewed. Was it the 162 patients presenting with gastroenteritis during the outbreak period? If so, were interviews successfully completed for all 162 patients or only some of them?

*** Interviews were conducted for all the admitted patients. For the patients visiting ER but not being admitted, we underwent telephone contact. The implicated bread was inquired for all 162 patients. We also inquire the patients’
attending banquet and eating sea food behavior that were most commonly associated with foodborne outbreaks and the two subjects did not correlated with salmonella cases in the outbreak. The point is described in page 9, line 12.

2.2 The study design is not described. It appears that a cohort study of all 162 patients attending the ER with acute gastroenteritis between Jul 28 and August 3 2001 was performed in order to test the hypothesis that salmonella infection was associated with eating bread from a particular bakery. This should be clearly stated.

2.3 Page 5, line 13. The case definition is unsatisfactory. Cases should not be defined in terms of their exposure (consuming the suspected food) but in terms of their illness (salmonella infection). Otherwise it is not possible to test the hypothesis that illness is associated with eating the bread. The only way in which the analysis makes sense is if cases are defined as patients with gastroenteritis confirmed due to salmonella and non-cases are patients with gastroenteritis who were negative for salmonella or from whom no stool sample was obtained.

2.4 The term 'case' should be restricted to people who meet the case definition. Other individuals should be referred to as non-cases or patients.

2.5 Page 7, lines 11-13. This sentence needs to be rephrased.

*** For 2.2, 2.3, 2.4 and 2.5, we have corrected accordingly.

2.6 Page 7, lines 13-14. Presumably food samples were collected from the homes of patients (not brought in to the ER). What kind of food samples were collected (only bread or other foods as well)?

Within what timescale was the sampling done?

*** Only a bread sample was collected.

2.7 Page 8, line 2. Since both aspects of the study relate to cohorts (everyone attending the ER from 6 weeks before until 2 weeks after July 28; everyone presenting to the ER with gastroenteritis between July 28 and August 3) the appropriate measure of association is relative risk not the odds ratio.

*** We have corrected accordingly.

3. Results
3.1 Page 8, line 8. Substitute 'patients' for 'cases', and elsewhere.
3.2 Page 9 line 1 and line 5. Give relative risks not odds ratios
3.3 Page 9, line 7. Substitute 'patients' for 'cases'.
3.4 Page 9, line 11-13. Rephrase this sentence and give the relative risk: 'Twenty eight of 34 (82%) cases had consumed the buns compared with 6 of 128 (5%) non-cases (RR 17.6, 95%CI 7.9 - 39.0)[NB. this assumes that cases are defined as people who were Salmonella positive]

The relevant 2x2 table should be constructed as follows:

<table>
<thead>
<tr>
<th></th>
<th>Cases</th>
<th>Non-cases</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ate bread</td>
<td>28</td>
<td>6</td>
<td>34</td>
</tr>
<tr>
<td>Did not eat</td>
<td>6</td>
<td>122</td>
<td>128</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>128</td>
<td>162</td>
</tr>
</tbody>
</table>

*** For 3.1 to 3.4, we have corrected accordingly.
3.5 The authors should include a table summarising the epidemiological analysis of food exposures including bread and some of the other foods that were statistically analysed (particularly those often associated with salmonella outbreaks)

***Besides the implicated bread, we inquire the patients’ attending banquet and eating sea food behavior that were most commonly associated with foodborne outbreaks and the two subjects did not correlated with salmonella cases in the outbreak that is described in page 10. We did not include every item the 162 patients ate within 3 days for the association of *Salmonella* gastroenteritis and the bread was recognized soon and because these community patients did not took as few food items as the outbreak cases ate in a facility or in a restaurant.

3.6 Page 9, line 16 to end of paragraph. This description should relate to people with salmonella (cases) not people who ate the bread (exposed) and the whole paragraph should ahead of the previous section describing analysis of exposures.

*** We have corrected accordingly.

3.7 Page 11, line 1. How many of the 162 people with gastroenteritis who presented during the outbreak period submitted stool samples? If samples were only sought from people who ate the bread then this introduces an unacceptable bias in the investigation. Elsewhere, the authors mention at least 6 salmonella positives among patients who had not eaten bread.

***We have corrected accordingly. The result is shown in page 12.

3.8 Page 11, line 2. It is odd that the number of patients presenting to the ER doubled during the outbreak week (from 80 per week to 160) but only 34 salmonella positives were identified – this merits further discussion.

*** It is discussed in paragraph 4 of page 14, line 19 to page 15, line 1-5 in the discussion part.

3.9 Page 11, line 5. How many food samples were tested in total, and what kind of foods?

*** Only a bread sample was collected. It is described in page 10, line 3-13.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Abstract
1. Background. Delete 'inconspicuous' and 'with no common source'.
2. Background. Add details of time and place e.g. 'An increase.............was noted at one hospital emergency room in Taiwan over a six day period in July to August 2001.'
3. Method. substitute 'tested' for 'isolated'. Move third sentence to Results. Delete fourth sentence.
4. Results. Line 1, line 3 and line 7 - substitute 'patients' for 'cases'.
5. Results. Rephrase sentence 2: 'During the week of the outbreak, 34 of 162 patients with gastroenteritis were positive for Salmonella.'
6. Results. Insert new sentence 3: '28 of 34 salmonella cases reported eating the same kind of bread compared with only 6 of 128 non-cases (relative risk, etc...).'
7. Results. Delete sentence 4.
8. Results. Give relative risks and 95% CI not just p values.

*** We have corrected the above minor essential revisions accordingly.
Reviewer Carl Schroeder

I encourage the authors to include a list of dilution ranges tested for each of the antimicrobials, together with the resistance breakpoints used. Also, the authors should check whether E. coli ATCC 25922 is an appropriate control for ofloxacin; if it is not they may wish to simply acknowledge that fact.

*** Since disc diffusion method but not agar dilution method was used, there would not be dilution ranges. The E. coli ATCC 25922 can be the quality control strain for testing susceptibility for ofloxacin (NCCLS M2A5, 1993).

Second, if quality control organisms were used for PFGE they should be kisted explicitly. If not, the authors should state that they performed all experiments in duplicate (as they do in their reply to the reviewers' comments).

*** We have corrected accordingly.
Reviewer Anja Siitonen

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. Table 1. The discussion about data on table 1 in the 2nd paragraph in page 15 is not appropriate. The table 1 should be deleted as suggested previously.

*** Table 1 and the related discussion in the 2nd paragraph in page 15 are deleted.

2. Figure 2. This is a new figure, and it should be deleted. However, the curve describing the total number of cases visited ER can be added to the current Figure 1. The number of these cases can be shown on the secondary Y-axis. In addition, the bars describing the cases of acute gastroenteritis can be shown from June 16 to August 7.

*** We have merged Data presented in Figure 1 and Figure 2 according to reviewer’s kind suggestion.

3. Figure 3. The molecular weights of the markers are still at the wrong positions. Their adjustment is difficult because the bands of the marker are hardly visible. Therefore, they should be removed from the gel picture.

*** The gel picture is modified according to the reviewer’s comments.

4. The manuscript is lengthy, longer that the first version, and does not contain much new. I fully agree with another reviewer who stated that the authors should shorten the manuscript.

*** We have shortened the length of the manuscript.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. Abstract
1.1. The complete name of Salmonella should be introduced when the name of a serovar is mentioned for the first time.
1.2. “Stool and blood sample were isolated...” should be corrected to be “Stool and blood samples were collected...”
1.3. Small initial letter for serovar should be used in the middle of the sentence.
1.4. The mentioning “All S. Enteritidis isolates were of serogroup D…” should be removed because, by definition, the Enteritidis strains always belong to the group D, as already previously stated to the authors.
2. Epidemiological investigation
By “These isolates were further...” the authors probably mean “These specimens were further...”
3. Bacterial strains
It is unclear what the authors mean when they say that “…, two were of serogroup O9 group B and four were …” Namely, the major antigenic determinant in group B is O4, not O9.
4. Most of the references still contain names of bacteria and should be written in italics.

*** We have corrected accordingly.

Looking forward to your kind reply

Yours sincerely,

Dr. L. K. Siu Ph.D., FIBMS(U.K)