Reviewer's report

Title: Acinetobacter baumannii in Intensive Care Unit: a Novel System to Study Clonal Relationship Among the Isolates.

Version: 1 Date: 12 October 2007

Reviewer: Antonella Agodi

Reviewer's report:

General comment
The paper entitled “Acinetobacter baumannii in Intensive Care Unit: a novel system to study clonal relationship among the isolates” describes the evaluation of the combination of a software package for control of hospital infection with a new system useful to study clonal relationships among the isolates in study. The paper is potentially interesting but, for better understanding a few major amendments are needed.

Major Compulsory Revisions
1. Language: must be improved by English professional.

Background:
2. The Authors should clarify and acknowledge the background and rationale of different epidemiological typing systems.
3. The objective (-s) of the study is not stringent and clear. It would be imperative to mention the exact objective (-s), reported in the Methods section of the Abstract (lines 13-16).

Methods:
4. No specific definition of colonization and infection is mentioned. Please specify.
5. Please specify “epidemic cluster consisting of 13 patients admitted to the ICU”. Which definition of epidemic cluster has been used? (lines 11 and 12) Was it established by the old method? Or does it refer to the peak of microorganism isolation?
6. Results related to antimicrobial resistance of the isolates in study should be reported in the Results section and deleted from the Methods section (lines 20 – 23).
7. Results related to Environmental screening should be reported in the Results section and deleted from the Methods section.
8. The phrase “The genetic relationships among the isolates were determined using REP-PCR” (lines 2 and 3) should be moved in the “Fingerprinting of the isolates” paragraph.
9. Methods related to Environmental screening should be moved in the correct
paragraph of the Methods section
10. How is the dendrogram computed? The Authors should clarify the methods employed by the software to compute the similarity matrix.

Results:
11. Please report results of Environmental screening after results of patient monitoring.
12. In the Results section we understand that 56 isolates were identified from 13 patients. Suddenly, we are told about profiles of 13 isolates (Figure 1 reports the REP PCR profiles of the 13 isolates). Do the Authors mean clones? Please clarify how the Authors discriminate 13 profiles out of 56 isolates.
13. The environmental isolates analysis is not clear. It is not clear as well how the relationships between clinical and environmental isolates are established. What does it mean “demonstrating transmission from patient-to-patient” Lines 18 and 19? Why only “some of the isolates of patients were compared with environmental ones? And furthermore since the epidemic is proven on the basis of clonality, how was clonality assessed?
14. The Author base their artiche on the comparison between the old and the new method. Please add a section were the two methods are appropriately compared and discussed.

Figure 3 is not very clear, please substitute it.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
'I declare that I have no competing interests'