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ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Infectious Diseases
ESPS manuscript NO: 17056
Title: Tuf mRNA rather than 16S rRNA is associated with culturable Staphylococcus aureus
Reviewer's code: 00506623
Reviewer's country: United States
Science editor: Xue-Mei Gong
Date sent for review: 2015-02-10 16:40
Date reviewed: 2015-02-25 05:19

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	Google Search:	[ ] Accept
[ ] Grade B: Very good	[Y] Grade B: Minor language polishing	[ ] The same title	[ ] High priority for publication
[ ] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Duplicate publication	[Y] Rejection
[Y] Grade D: Fair	[ ] Grade D: Rejected	[ ] Plagiarism	[ ] Minor revision
[ ] Grade E: Poor		[Y] No	[ ] Major revision
		BPG Search:	
		[ ] The same title	
		[ ] Duplicate publication	
		[ ] Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

The paper by Loonen et al describes a potential new PCR technology targeting viability of Staphylococcus aureus in blood. This is an area that needs improvement for clinical detection. However, this paper has too many holes in it at this time to warrant publication. Major Criticisms: 1. Define more specifically your target. You assume everyone knows that tuf encodes the TU elongation factor. What was your rationale for choosing the tuf gene? 2. You have problems with the scientific nomenclature. The 16S rRNA gene is not italicized, but tuf should be italicized when you discuss nucleic acids. 3. You do not mention what controls if any you ran. 4. If you are going to have a new detection technique described, you have to do the diagnostic sensitivity and diagnostic specificity parameters for your test. 5. All of the data revolves around a single laboratory strain of S. aureus. To have greater meaning, you need to at minimum test this against several strains.

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ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Infectious Diseases
ESPS manuscript NO: 17056
Title: Tuf mRNA rather than 16S rRNA is associated with culturable Staphylococcus aureus
Reviewer's code: 02520437
Reviewer's country: Greece
Science editor: Xue-Mei Gong
Date sent for review: 2015-02-10 16:40
Date reviewed: 2015-02-23 20:05

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
[ ] Grade A: Excellent	[Y] Grade A: Priority publishing	Google Search:	[ ] Accept
[ ] Grade B: Very good	[ ] Grade B: Minor language polishing	[ ] The same title	[Y] High priority for publication
[Y] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Duplicate publication	[ ] Rejection
[ ] Grade D: Fair	[ ] Grade D: Rejected	[ ] Plagiarism	[ ] Minor revision
[ ] Grade E: Poor		[Y] No	[ ] Major revision
		BPG Search:	
		[ ] The same title	
		[ ] Duplicate publication	
		[ ] Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

This manuscript describes a novel approach in molecular diagnostics based on the need to assess bacterial viability and not only presence of bacterial DNA. I have some concerns about this submission: ? Obviously one MSSA isolate was used for the study since it was susceptible to fluoxacillin. However, testing with one MRSA isolate is mandatory for any probable commercial exploitation. ? One methodology problem is how the growth medium was replenished every day. It is not acceptable to keep it unaltered for 6 days. ? Why results are expressed as Ct and not as relative copies? Why was not a housekeeping gene used? ? The discussion is too long.

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ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Infectious Diseases
ESPS manuscript NO: 17056
Title: Tuf mRNA rather than 16S rRNA is associated with culturable Staphylococcus aureus
Reviewer's code: 01021289
Reviewer's country: Japan
Science editor: Xue-Mei Gong
Date sent for review: 2015-02-10 16:40
Date reviewed: 2015-02-24 09:15

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
[ ] Grade A: Excellent	[Y] Grade A: Priority publishing	Google Search:	[ ] Accept
[ ] Grade B: Very good	[ ] Grade B: Minor language polishing	[ ] The same title	[ ] High priority for publication
[Y] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Duplicate publication	[ ] Rejection
[ ] Grade D: Fair	[ ] Grade D: Rejected	[ ] Plagiarism	[ ] Minor revision
[ ] Grade E: Poor		[Y] No	[Y] Major revision
		BPG Search:	
		[ ] The same title	
		[ ] Duplicate publication	
		[ ] Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

General comments: Loonen and colleagues demonstrated that Tuf mRNA expression, but not the tuf DNA, 16S DNA or 16S rRNA, is correlated with the presence of culturable S. aureus in TH broth and whole human blood. Based on these findings, they suggested that Tuf mRNA may represent a suitable marker for the detection of viable S. aureus in the sepsis, which is the refractory bloodstream infection. The results are intriguing and clinically relevant. However, one of the major limitations of this study is that bacteria can be infective and viable even it is not culturable, which affects the interpretation of the data. Specific comments 1. In the non culturable S aureus, Tuf mRNA was absent, but 16S DNA was detected in both TH broth and human blood. On the other hand, Tuf mRNA was detected only in the culturable S. aureus. These data suggest that Tuf mRNA expression is associated with the presence of culturable S. aureus. However, presence of 16S DNA in the non-culturable S. aureus also suggests that S. aureus may exist as VBNC. Therefore, the interpretation can be different, depending on whether S. aureus was truly dead or just remained as VBNC. The data do not have any issues; however, the interpretation and the title are overstated. I would suggest the

authors change the title, for instance, "Tuf mRNA expression is associated with presence of culturable S. aureus". Moreover, it would be more appropriate to discuss Tuf mRNA as a viability marker for S. aureus-induced bloodstream infection just in the discussion section without making any conclusive statement in the title. 2. Please state the rationale why the Tuf mRNA was chosen in this study. 3. Please explain how the Tuf mRNA expression is regulated. Is it down-regulated by antibiotics? Is it known that it is functionally associated with bacterial survival or proliferation?