

ESPS PEER REVIEW REPORT

Name of journal: World Journal of Pharmacology

ESPS manuscript NO: 12239

Title: ?PATENTS ON ANTIVIRULENCE THERAPIES?

Reviewer code: 00506530

Science editor: Fang-Fang Ji

Date sent for review: 2014-06-29 15:21

Date reviewed: 2014-06-30 15:13

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> Existing	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input checked="" type="checkbox"/> Grade D: Fair		BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Existing	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

An interesting manuscript which attempts to explain current knowledge regarding patents associated with anti-virulence mechanisms. 1. Please provide a definition of 'virulence' at the beginning of the article. 2. Please state which patent databases were searched, which search terms were used and which years were included in the search will stop 3. Is antibiotic resistance actually a virulence factor? I think you are mixing up "multidrug resistance" and "antimicrobial resistance". If you want to discuss patents on antimicrobial resistance then you will have to include patents that involve the development of antibiotics ! 4. Line 83 should read "multidrug resistance" and not "antimicrobial resistance" (see also above). 5. In the quorum sensing chapter - from my understanding AI-1 are a acyl homoserine lactones, AI-2 are heterocyclic furanosyl-borates, AI-3 are catecholamines and AI-4 cyclic peptides. 6. Please add 1 to 2 sentences on the five main families of efflux pumps i.e. the MATE, MFS, SMR, RND and ABC (super) families. I presume that you have searched the patents related to all of these different types of efflux pumps? 7. Line 187 to 189 - "Furanones, which are naturally occurring compounds, appear to be the most widely studied quorum quenching compounds. However, they are toxic to artemias and rotifers, which will limit their use" - I do not understand the significance of this sentence. If anti-quorum sensing compounds are to be used in preventing infections in animals and plants, then the use of such compounds in a wide variety of settings should be stressed in the introduction to the quorum sensing chapter. 8. Line 191 - 193 - "Other compounds involved in QQ include honaucin A, 2-methylthiopyrrolidines, lovastatin and

hydroxytyrosol. Finally, one enzyme (OLB-26) is known to be involved in QQ.” - So what is the conclusion? Are there any patents associated with these compounds? 9. The chapter “Future prospects: resistance to antivirulence compounds” only deals with quorum sensing compounds. Therefore this chapter should be incorporated within the quorum sensing chapter (without a title). It would also be interesting to know if resistance to any of the other mechanisms mentioned in the paragraphs of this manuscript had been described. This information can then be added to the end of the relative chapter. 10. Line 141 – Change “Search of the patent database (up to April 2014)....” to “ A search of the patent database (up to April 2014)....” 11. Line 169 - Change “Numerous quorum sensing inhibitors are now begin to be reported in the literature” to “Numerous quorum sensing inhibitors have been reported in the literature”. 12. In the concluding remarks, you mention nothing of the virulence mechanisms that are explained in this manuscript! For example the authors state “It is therefore imperative to develop new molecules, therapies and / or new combinations of these for the eradication of these pathogens.” This sentence should be followed by 2 to 4 sentences giving examples based on the work presented manuscript. 13. Figure 1 - I do not understand why are you are showing antibiotics resistance mechanisms here. Further, there are no chapters specifically relating to antibiotic resistance. As previously mentioned, if you include a chapter on antibiotics resistance and you have to include patents on antibiotics, which would involve a lot of extra work! In any case, I am not convinced that antimicrobial resistance is a virulence mechanism. Figure 1 should show the effect of quorum sensing molecules on global cellular virulence factor production and microbial growth. 14. You do not say anything about proteases, one of the most important virulence factors that bacteria possess. For example, https://www.google.com/patents/US20070231334?dq=protease+inhibitors+virulence&hl=nl&sa=X&ei=eQGxU66WHcPSPO_6gMAP&ved=0CFQQ6AEwBg 15. You should add a chapter describing patents relating to therapy u

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Title: ?PATENTS ON ANTIVIRULENCE THERAPIES?

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CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> Existing	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Existing	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

COMMENTS TO AUTHORS

Please find the minor comments in the reviewed manuscript (see the attachment, Manuscript_20140628165629_reviewed.pdf). After the correction of the minor comments, the manuscript should be considered for publication.

ESPS PEER REVIEW REPORT

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Title: ?PATENTS ON ANTIVIRULENCE THERAPIES?

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CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> Existing	<input checked="" type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
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<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> Existing	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

1. This review considered patents related to inhibition of several bacterial virulence factors: adhesion/colonization, secretion systems, cellular signalling systems and antimicrobial resistance mechanisms , and emphasized the importance of analyzing new targets and/or molecules in this field and of considering possible resistance. So, this paper has the novelty and innovation.
2. The title is accurately reflects the major topic and contents of the review.
3. The abstract is well organized.
4. The methods used are innovative.
5. The results provide sufficient evidence or data to draw firm scientific conclusions.
6. The discussion is well organized, and the systematic theoretical analyses and valuable conclusions are provided.
7. The references are appropriate, relevant, and updated.
8. The figure and tables reflect the major findings of the study.