Reviewer’s report

Title: Antimicrobial policies in animals and human health

Version: 0 Date: 24 Jul 2017

Reviewer: Pierre Wattiau

Reviewer's report:

This invited commentary provides a condensed overview of the past and present of antimicrobial use in livestock, highlighting the threats for public health caused - or supposedly so - by some unadapted, yet generalized practices in veterinary medicine.

The comment ends up with (technical) recommendations for the rational use of antimicrobials in animals.

GENERAL COMMENT

The topic is interesting as it aims at informing a public health audience with useful and often unknown / misunderstood historical information related to antimicrobial use in livestock and as such, deserves publication in the chosen journal.

A small point of discrepancy / discussion lies with the comment's title. Whereas the title points to (current or future) antimicrobial POLICIES in animals required to preserve human health, the MS mostly develops - in a great way and judicious style - the past and present livestock treatment practices having led to alarming levels of antimicrobial resistance (sometimes predictable, sometimes unexpected). The title may hence be reformulated to better reflect the MS content.

Finally, the author may have considered aligning his ideas along the latest global initiatives aimed at fighting the raise in antimicrobial resistance into account, such as the "European One Health Action Plan" and its handling by the EU agencies in charge.

In this plan, EU is presented as a best practice region constantly revisiting its policies based on accurate research and monitoring data, promoting its successful experience globally. Since it is noteworthy that the same care is not devoted by all countries in the World to control AMR emergence and spread, statements should be added in the MS - where appropriate - to stress out the need for a global joint action.

P6 Epilogue. I personally don't think that mobile "spectrometric labs" is the best answer to improve diagnostics. Classical diagnostic labs are able to deliver very useful results in an affordable delay provided they are adequately solicited by the veterinarians (which supposes
either the agreement of the farmer community and/or the launching of constraining policies),
provide good quality samples, make the right links with the clinical presentation, take the farm
disease history into account ... in an effort to correctly identify the pathogens and orient the
antibiotic therapy in a rational way.

P2 L34 intense instead of much?
P2 L50 the term "clonal complex" (CC398) may be more appropriate than "sequence type"
P2 L54 ... these organisms ....
P2 L56 ... resistant to (instead of for, throughout entire MS)
P3 L8 ..worldwide proportionally decrease .... sentence unclear, please rephrase
P3 L12 other BACTERIAL agents ....
P3 L13 A verb is missing in the last part of this sentence
P3 L20 clostridial? Clostridium spp.?
P3 L26 ... the ban of AMGPs (?)
P3 L47 horizontally transferable elements (see also P4 L27)
P3 L49&50 structurally
P3 L52 Evidence has demonstrated ... please rephrase
P3 L57 ... Under the assumption that
P3 L58 ... let alone "any use" : rephrase?
P4 L4 ... next in line to have received
P4 L21 Colistin currentlky still is : please rephrase
P4 L59 largely resemble
P5 L19 concentration dose : rephrase?
P5 L40 registered antimicrobial (?)
P5 L43 please explain what HGT stands for (Horizontal gene transfer, I suppose)
P6 L24 influenced the consumption
P6 L53 in diagnostics ... screening for .....
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Please indicate how interesting you found the manuscript:

An article of importance in its field

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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