



14.08.2018

## FORM 4.7 Errata

Correcting formal errors in the PhD thesis (cf. section 15.3-2 in the PhD regulations)

Thesis title:	Development of antimicrobial drug resistance - impact of the bacterial infection treatment
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### Errata for PhD Thesis Leon Cantas August 14, 2018

The 'Article V'; 'A clinical treatment modeling of diarrhea in piglets for minimum drug resistance development in intestinal microbiota' has been withdrawn and removed from this PhD thesis due to errors in data analyses and algorithms used, as recognized after the dissertation took place.

The majority of conclusions in the PhD thesis remain unchanged, and the withdrawal of "Article V" does not affect the approved status of the thesis.

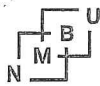
This document lists changes and corrections made to the previously approved version (dissertation, June 6, 2013) of Leon Cantas's PhD thesis:

Page no	Paragraph, line(s)	Change from	Change to
4	1, 162	2.2.3 Newborn piglet model ...	Delete
6	5, 226-230	Paper V...	Delete
7	1, 249-250	... zebrafish, Atlantic salmon and piglet studies ...	... zebrafish and Atlantic salmon studies ...
7	1, 256-257	The use of probiotics ...	The use of sub-lethal concentration of antimicrobials ...
7	1, 258	... treatment with meloxicam or prednisolone ...	... treatment with prednisolone ...
8	1, 275	... sebrafisk-, lakse- og spedgris-studiene ...	... sebrafisk- og lakse-studiene



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8	1, 282	Bruken av probotika ...	Bruken av sub-lethale konsentrasjoner av antibiotika ...
8	1, 283	... behandling med meloxicam eller prednisolon ...	... behandling med prednisolon ...
22	1, 556-557	... bacterial population only after selection only after selection ...	... bacterial population only after selection ...
38	1, 777-800	Entire Figure 8 printed in front of the text.	Entire Figure 8. positioned back of the text (See attachment).
42	2, 997-998	ZooLac Propaste® probiotic was commonly preferred among Scandinavian ...	Among many others, ZooLac Propaste® probiotic is one of the most commonly preferred product by Scandinavian ...
42	2, 1003-1005	In this study, the Zoolac Propaste® ... <i>E. coli</i> in feces.	Delete
43	1,1008	Metacam (Meloxicam) which is a NSAID of the oxicam class.	For example, Metacam (meloxicam) which is ... class.
45	2, 1075	..., whereas ...	Delete
46	1, 1076-1077	... Enterotoxigenic <i>E. coli</i> (ETEC) ... in Paper V.	Delete
60	1, 1373-1392	Entire page 60	Delete
61	1, 1393-1418	Entire page 61	Delete
62	2,1423	Table 4. Entire colon 'V'.	Delete



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67	4, 1536	... host specific pathogens (Paper II-IV-V-VI).	... host specific pathogens (Paper II-IV-VI).
67	5, 1537	... zebrafish, Atlantic salmon and neonatal piglets with ...	... zebrafish and Atlantic salmon with ...
67	5, 1538	... expressions (Paper II-IV-V) and ...	... expressions (Paper II-IV) and ...
67	7, 1544-1545	... concentrations (Paper II-IV-V-VI) including ...	... concentrations (Paper II-IV-VI) including ...
67	7, 1545	... immunostimulatory probiotics (Paper V) ...	... immunostimulatory sub-lethal concentration of antibiotics (Paper II-IV-VI) ...
67	7, 1545	... and immunosuppressive steroid (Paper VI) - NSAID (Paper V).	... and immunosuppressive steroid (Paper VI).
77	1,1764	Figure 28. The 'cross talk' ... (Paper II-IV-V-VI).	Figure 28. The 'cross talk' ... (Paper II-IV-VI).
77	2, 1761-1778	Figure 28. Left and Right tables. Colons '† MIC +', NSAID and Probiotic.	Delete
78	1, 1812-1813	An interesting result in Paper V... given probiotic bacteria.	Delete
79	1, 1816-1817	But, in Paper V, ... resistant to clinically used antibiotics.	Delete



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79	1, 1821-1823	Here, our results ... to other gut bacteria.	Delete
79	2, 1831-1834	Surprisingly, treatment with an NSAID-meloxicam (Paper V) and a Steroid-prednisolone (Paper VI) seems to have the opposite effect compared to the probiotic bacteria ... plasmid, respectively.	Surprisingly, treatment with a Steroid-prednisolone (Paper VI) seems to have the opposite effect compared to the immunostimulatory sub-lethal antibiotic treatments (II-IV-VI) on the... plasmid, respectively.
79	2, 1838	... on the impact of the Steroids or NSAIDs on horizontal ...	... on the impact of the Steroids on horizontal ...
80	1, 1861	... Steroids- NSAID) ...	... Steroids) ...
81	1, 1867	... in Paper II-IV-V and VI, despite ...	... in Paper II-IV and VI, despite ...
83	1 1924	... (from zebrafish to neonatal piglets).	... (from zebrafish to Atlantic salmon).
84	1, 1941-1942	... same effect on the animals (piglets and zebrafish respectively) ...	... same effect on the animals (zebrafish and Atlantic salmon, respectively) ...
Att.	Paper V	Entire Paper V.	Removed.



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This form will be signed by the PhD candidate and the main supervisor and must be sent to the faculty for approval. The approved errata must be archived in the PhD candidate's doctoral archive and must be attached to the final thesis print version as the last page of the thesis.

**Date and signature:**

PhD candidate (Author):	Leon Cantas
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Main supervisor:	Henning Sørum
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Errata approved by the university: Yes  No

For the university:	Øystein Johnsen
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