

Correction

Correction: Morroni et al. Antimicrobial Activity of Aztreonam in Combination with Old and New β -Lactamase Inhibitors against MBL and ESBL Co-Producing Gram-Negative Clinical Isolates: Possible Options for the Treatment of Complicated Infections. *Antibiotics* 2021, 10, 1341

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Citation: Morroni, G.; Bressan, R.; Fioriti, S.; D'Achille, G.; Mingoia, M.; Cirioni, O.; Di Bella, S.; Piazza, A.; Comandatore, F.; Mauri, C.; et al. Correction: Morroni et al. Antimicrobial Activity of Aztreonam in Combination with Old and New β -Lactamase Inhibitors against MBL and ESBL Co-Producing Gram-Negative Clinical Isolates: Possible Options for the Treatment of Complicated Infections. *Antibiotics* 2021, 10, 1341. *Antibiotics* 2022, 11, 464. <https://doi.org/10.3390/antibiotics11040464>

Received: 20 January 2022

Accepted: 15 March 2022

Published: 30 March 2022

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1. Text Correction

Results have been implemented with additional data, which have been commented in the following paragraphs.

In Section 2.2.1, The sentence: “In contrast, MIC values for the six *Enterobacterales* ranged from 1 to 8 $\mu\text{g}/\text{mL}$, so zidebactam 0.5 $\mu\text{g}/\text{mL}$, which was a sub-inhibitory dose for all strains tested, was used for testing in combination with aztreonam.” [1] was changed to *Results—Checkerboard assays—Section 2.2.1:*

“In contrast, MIC values for the six *Enterobacterales* ranged from 1 to 8 $\mu\text{g}/\text{mL}$, so for testing in combination with aztreonam, zidebactam was used both at 0.5 $\mu\text{g}/\text{mL}$, which was a sub-inhibitory dose for all strains tested, and at a 1:1 ratio.”

In Section 2.2.1, At the end of the last paragraph, the following sentence was added: “Checkerboard assays testing the combination aztreonam/zidebactam at a 1:1 ratio confirmed previous results, showing synergistic effect against *C. amalonaticus* N18, *K. pneumoniae* KL 12 SG and *S. maltophilia* but not against the three *E. coli*, *K. pneumoniae* LC954/14, *C. indologenes* and *E. meningoseptica* (Table 1).”

In Section 2.2.4, A correction has been made to *Results—Time-kill assays with aztreonam/zidebactam 1:1 ratio—Section 2.2.4:*

“Time-kill assays were also performed with aztreonam/zidebactam at 1:1 ratio against *C. amalonaticus* and *S. maltophilia*, while at 1:1 ratio was already synergistic in *K. pneumoniae* KL 12 SG with 0.5 mg/L concentration (Figure 3). Results were summarized in Figure S1. In *C. amalonaticus* synergies were also confirmed with aztreonam/zidebactam at 1:1 ratio of 1 mg/L. In *S. maltophilia*, although we did not detect synergies with 0.5 mg/L of zidebactam

(regardless of aztreonam concentration), the two antibiotics showed synergistic effect with a 4 mg/L concentration, although the regrowth observed at 24 h suggests that this combination needs to be further analyzed in a higher number of *S. maltophilia* isolates.”

In Section 4.5, The sentence: “ZID, for which a recommended fixed concentration was not available, was tested in the range 0.125–32 µg/mL, alone and in association with ATM, by checkerboard assay in 96-well microtiter plates on an initial inoculum of 5×10^5 CFU/mL. The combination was considered synergistic when the fractional inhibitory concentration index (FICI) was ≤ 0.5 ” was changed to *Materials and Methods—MIC evaluation and checkerboard assays—Section 4.5*:

“Zidebactam (ZID), for which a recommended fixed concentration was not available, was tested in the range 0.125–32 µg/mL, alone and in association with ATM, by checkerboard assay in 96-well microtiter plates on an initial inoculum of 5×10^5 CFU/mL. Besides, as the Clinical Laboratory and Standards Institute (CLSI) in the United States of America recommends that testing of zidebactam in combination with cefepime is carried out at a 1:1 ratio, additional testing of the combination aztreonam/zidebactam at a 1:1 ratio was carried out. The combination was considered synergistic when the fractional inhibitory concentration index (FICI) was ≤ 0.5 .”

In the section Supplementary Materials, Figure S1 was added. Figure S1 shows time-kill assays performed with aztreonam/zidebactam at 1:1 ratio against *C. amalonaticus* and *S. maltophilia*.

2. Error in Table 1

The MICs obtained using the combination aztreonam/zidebactam at a 1:1 ratio have been added in Table 1 (column #13).

Table 1. MIC (µg/mL) of aztreonam, alone and in association with BLIs, of tested strains.

Strain	Metallo-β-Lactamase	Serine-β-Lactamase	MIC ATM	CLA ^a	TAZ ^b	MIC ATM after Addition of SUL ^b	VAB ^c	AVI ^b	REL ^b	ZID ^d	MIC ZID	MIC ATM/ZID 1:1 Ratio	REF
<i>E. coli</i> CP-Ec3	<i>bla</i> _{VIM-1}	<i>bla</i> _{KPC-2}	>32	>32	>32	>32	>32	8	>32	32	1	1	[16]
<i>E. coli</i> CP-Ec4	<i>bla</i> _{VIM-1}	<i>bla</i> _{TEM-1} * <i>bla</i> _{CTX-M-15} * <i>bla</i> _{SHV-12}	>32	16	>32	>32	>32	32	>32	>32	1	1	[16]
<i>E. coli</i> 482483	<i>bla</i> _{NDM-5}	<i>bla</i> _{TEM-1} * <i>bla</i> _{CTX-M-15}	>32	16	>32	>32	>32	8	>32	32	1	1	[17]
<i>C. amalonaticus</i> N18	<i>bla</i> _{VIM-1}	* <i>bla</i> _{SHV-12}	>32	8	>32	>32	>32	0.25	4	0.5	4	0.5	[18]
<i>K. pneumoniae</i> KL 12 SG	<i>bla</i> _{NDM-1}	<i>bla</i> _{TEM-1} * <i>bla</i> _{CTX-M-15}	>32	>32	>32	>32	4	0.25	4	0.25	8	0.5	This study
<i>K. pneumoniae</i> LC954/14	<i>bla</i> _{NDM-1}	* <i>bla</i> _{CTX-M-15} * <i>bla</i> _{SHV-182}	>32	>32	>32	>32	8	0.25	4	>32	1	1	[19]
<i>C. indologenes</i> LC650/17	<i>bla</i> _{IND-3}	* <i>bla</i> _{CIA}	>32	>32	>32	>32	>32	>32	>32	>32	>32	>32	[20]
<i>E. meningoseptica</i> LC596/11	<i>bla</i> _{B-9} <i>bla</i> _{GOB-13}	* <i>bla</i> _{CME-1}	>32	>32	>32	>32	>32	>32	>32	>32	>32	>32	[20]
<i>S. maltophilia</i>	<i>bla</i> _{L-1}	* <i>bla</i> _{L-2}	>32	>32	4	8	2	1	0.5	0.5	>32	0.5	[20]

MIC, minimum inhibitory concentration; BLIs, β-lactamase inhibitors; ATM, aztreonam; CLA, clavulanate; TAZ, tazobactam; SUL, sulbactam; VAB, vaborbactam; AVI, avibactam; REL, relebactam; ZID, zidebactam. a: 2 µg/mL; b: 4 µg/mL; c: 8 µg/mL; d: 0.5 µg/mL. * ESBL.

The authors apologize for any inconvenience caused and state that the scientific conclusions are unaffected. The original publication has also been updated.

Reference

- Morroni, G.; Bressan, R.; Fioriti, S.; D’achille, G.; Mingoia, M.; Cirioni, O.; Di Bella, S.; Piazza, A.; Comandatore, F.; Mauri, C.; et al. Antimicrobial activity of aztreonam in combination with old and new β-lactamase inhibitors against MBL and ESBL co-producing gram-negative clinical isolates: Possible options for the treatment of complicated infections. *Antibiotics* **2021**, *10*, 1341. [[CrossRef](#)] [[PubMed](#)]