



Retraction for Verbree et al., “Identification of Peptidoglycan Hydrolase Constructs with Synergistic Staphylolytic Activity in Cow’s Milk”

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Volume 83, no. 7, e03445-16, 2017, <https://doi.org/10.1128/AEM.03445-16>. In our paper, we described a novel screening approach that allows rapid identification of peptidoglycan hydrolases (PGHs) featuring high killing activity against *Staphylococcus aureus* in cow’s milk from large enzyme libraries. Our method identified nine promising PGH candidates. Out of these nine candidates, the three enzymes that showed the highest activity against *S. aureus* in milk (lysostaphin, Ami2638A, and CHAPK_CWT-LST) were further characterized. This included determination of synergistic effects when the enzymes were used in combination, as well as experiments in raw bovine milk.

We recently discovered an error in our PGH library: resequencing of all PGH constructs described in the article revealed that the enzyme named “Ami2638A” actually is not the amidase domain of the 2638A endolysin but rather a derivative of lysostaphin. This means that our final selection of three enzymes actually contained two different lysostaphin constructs: a C-terminally 6×His-tagged version of lysostaphin termed “lysostaphin” and a lysostaphin construct with an N-terminal 6×His tag followed by a tobacco etch virus protease cleavage site that was erroneously named “Ami2638A.”

It is important to mention that, despite this error, the general conclusions of our study remain valid. Namely, (i) our screening approach is suitable for identifying PGHs with staphylolytic activity in milk from large enzyme collections; (ii) selected PGH constructs featuring different peptidoglycan cleavage sites act synergistically in milk against multiple staphylococcal bovine mastitis isolates; and (iii) the selected PGH constructs exhibit high activity in ultra-heat-treated milk under various conditions and retain their activity in (diluted) raw milk.

However, the specific conclusions pertaining to the “Ami2638A” construct are no longer valid, which results in a number of inaccuracies throughout the paper.

For this reason, we retract this article and apologize for the inconvenience it may have caused to the readers. We intend to submit a revised version of the manuscript that will correct the aforementioned error.

Citation Verbree CT, Dätwyler SM, Meile S, Eichenseher F, Donovan DM, Loessner MJ, Schmelcher M. 2017. Retraction for Verbree et al., “Identification of peptidoglycan hydrolase constructs with synergistic staphylolytic activity in cow’s milk.” *Appl Environ Microbiol* 83:e02100-17. <https://doi.org/10.1128/AEM.02100-17>.

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