

University of Groningen

Enhancing the biotechnological potential of *Bacillus subtilis*

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DOI:
[10.33612/diss.177748899](https://doi.org/10.33612/diss.177748899)

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Document Version
Publisher's PDF, also known as Version of record

Publication date:
2021

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):
Van Tilburg, A. (2021). *Enhancing the biotechnological potential of Bacillus subtilis: from genome minimization to lipid rafts*. University of Groningen. <https://doi.org/10.33612/diss.177748899>

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Stellingen behorend bij het proefschrift

Enhancing the biotechnological potential of *Bacillus subtilis*

From genome minimization to lipid rafts

door Amanda Y. van Tilburg

1. Genome reduction of microorganisms not only aids in understanding the minimal requirements for cellular life, but also leads to attractive microbial production hosts.
2. Compared to other commonly used *Bacillus subtilis* strains, the large-scale genome-reduced strain mini*Bacillus* PG10 offers several advantages as a cell factory for the production of lanthipeptides (Chapter 2).
3. Transcriptome analyses provide insight into deregulated pathways in genome-minimized bacterial strains and can reveal new targets for subsequent genome reduction steps (Chapter 3).
4. Although eukaryotic and bacterial lipid raft domains are composed of different lipid species, they share the same physical properties compared to the surrounding membrane (Chapter 4).
5. The confinement of multi-enzymatic reaction pathways in bacterial lipid rafts is a promising approach to improve product yields. However, it requires substantial information about the localization, interactions and protein domains of the enzymes involved in the reaction (Chapter 5).
6. In addition to cultivated meat and plant-based products, microbial fermentation and synthetic biology will accelerate the transition towards a more sustainable and animal-free food system.
7. Even though hard to measure, the presumed higher level of intelligence of humans does not give us the right to treat non-human animals as insentient living beings.
8. Be the change that you wish to see in the world (Mahatma Gandhi).