Propositions

accompanying the dissertation

EXPLORING MICROBIAL DIVERSITY
EXTENDING THE BOUNDARIES OF BIOPOLYMER
PRODUCTION USING PARALLEL CULTIVATION

by

Gerben Roelandt STOUTEN

1. Unraveling the intricacies of the microbial world requires the consolidation of dynamic cultivation techniques, ecological principles, and data sciences. *(This thesis)*

2. Only a rigorous experimental approach involving parallel cultivation allows for unambiguous identification of competitive strategies in microbial communities. *(Chapter 3 of this thesis)*

3. Seemingly insignificant cultivation differences can result in major changes in microbial community structure and function. *(Chapter 4 of this thesis)*

4. The uncoupling and alternating supply of growth nutrients is a firm selector for storage polymer producing microbial communities. *(Chapter 5 of this thesis)*

"The following propositions do not pertain to this dissertation, specifically."

5. The only way to complete your life's work is to leave things unpolished.

6. One of Marcus Aurelius meditations (~175 A.C.): "The cucumber is bitter? Then throw it out. There are brambles in the path? Then go around them. That's all you need to know. Nothing more. Don't demand to know why such things exist," also applies to scientific experimentation – where the lure of the unexpected distracts us from our original objective, and its immediate chase leads us astray and into mal-designed, and exhaustive, examinations.

7. The publish or perish culture results in the blurring between data and insight in ever diluting scientific literature. Therefore, a stronger push should be made to the academic valuation of publishing experimental designs and datasets.

8. Erwin Chargaff's reflection (1975) that "The true and only function of a university, namely, to help young people find themselves by bringing to them the accumulated memory of mankind, has been swept aside," is even more true now than it was fifty years ago.

9. Safeguarding humanity requires emancipated education of the individual, deep appreciation of the laws of thermodynamics, and unification of the mineral and living world.

10. The primary motivational force of an individual is to find meaning in life, and is captured by Viktor E. Frankl's words (1946): "Happiness cannot be pursued; it must ensue." This profound statement also applies to scientific discoveries.

11. Emergent properties are the fabric of the natural world, and the kindle of inventions.

12. What truly matters is the size of your heart and the strength of your character.

These propositions are regarded as opposable and defendable,
and have been approved as such by the promotors
Dr.ir. R. Kleerebezem and Prof.dr.dr.h.c.ir. M. C. M. van Loosdrecht.