Microfluidics for Biophysical Studies on Artificial Lipid Membranes

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Propositions

accompanying the dissertation

Microfluidics for Biophysical Studies on Artificial Lipid Membranes

by

Arash Yahyazadeh Shourabi

1. Precisely designed microfluidic chips enable the handling of complex processes on flaccid lipid bilayers.
This proposition pertains to the dissertation (chapters 2-4).

2. Lipid bilayer studies are sensitive to the experimental setup.
This proposition pertains to the dissertation (chapters 5-7).

3. Even a slight lipid tail asymmetry significantly alters the properties of a bilayer.
This proposition pertains to the dissertation (chapter 6).

4. Less common lipid compositions (e.g. PMPC) should be used more often in biophysical studies on biomembranes, as they may exhibit fewer stability issues compared to the frequently used compositions (e.g. DOPC).
This proposition pertains to the dissertation (chapter 6).

5. Diversity and inclusion are essential for any group tracking complex, multifaceted challenges.

6. Continuous active learning sustains motivation throughout the journey.

7. Academia is not evolving at the pace of the changing world.

8. Graduate schools should offer practical industry-focused courses like business/project management to prepare scientists for careers beyond academia.

9. Time is not your enemy; it helps to drive the process forward.

10. Scientific papers should strive to be more transparent and interactive.

These propositions are regarded as opposable and defendable, and have been approved as such by the promotors Dr. M.-E. Aubin-Tam and Prof. Dr. G. H. Koenderink