

Functions and Possible Provenance of Primordial Proteins—Part II: Microorganism Aggregation in Clouds Triggered by Climate Change

Andrei P. Sommer*,† and N. Chandra Wickramasinghe‡

Central Institute of Biomedical Engineering, University of Ulm, 89081 Ulm, Germany and Cardiff Centre for Astrobiology, Cardiff University, Cardiff, CF10 3DY, United Kingdom

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Current models predict that the elevation of the Earth's surface temperature due to global warming is accompanied by a warming of the troposphere, and a thickening cloud cover associated with longer-lasting clouds, in particular over land. These effects can have an instant impact on the vitality level of microorganisms in clouds and the spreading of airborne diseases. Microorganisms could originate from locations on the Earth, or even arrive from space. Primordial proteins in nanobacteria, only recently identified in the atmosphere, could play a significant role in clouds—accelerating the formation of cloud droplets and interconnecting nanobacteria (and possibly nanobacteria and other microorganisms), thus enhancing their chances to eventually reach the Earth.

Keywords: global warming • primordial proteins • slime • light • living nanovesicles • nanobacteria • microorganisms • atmosphere

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III. Desiccation of Living Nanovesicles: Laboratory **Analogues**

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Figure 1. For airborne microorganisms, it is not the same if they are within the protective, wet and nutrient-rich envelope of a cloud, or outside of it. (Courtesy: Katlin Sommer)

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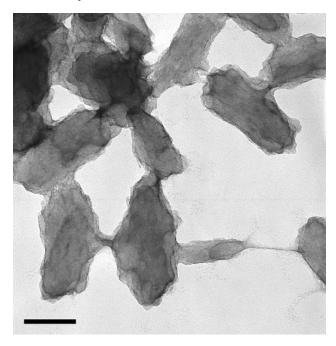


Figure 2. Transmission electron microscopy image showing NB isolated from human serum by culturing in mammalian cell culture conditions for three weeks. Reprinted from ref 35 with permission. Image clearly shows how several NB are kept together by slime. Bar 100 nm.

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