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Microbial Cultures of *Chlorella*

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Description

Chlorella is a nutritious algae because it is an excellent source of several vitamins, minerals and antioxidants. In fact, new research shows that, among other health benefits, it helps move toxins out of the body and improves cholesterol and blood sugar levels. Cultures of 14 other bacteria that can grow in algae cultures were obtained from mass cultures of algae that grow in open, non-sterile systems. In addition, soil and air bacterial collections were carried out far away from laboratory algae cultures.

Chlorella (green algae; Green algae) is a cosmopolitan genus with small spherical cells. Some stems can grow at 15-40 °C, so some stems are more resistant to temperature. *Chlorella* strains grow autotrophically in inorganic media under mixed and heterotrophic conditions (e.g.: with the addition of acetic acid and glucose). *Chlorella* autotrophic production is currently carried out in open ponds, semi-closed tubular photobioreactors, or sloping cascades, as high growth rates prevent contamination by other microalgaes (Japan, Czech Republic, Germany, etc.). Treatment of *chlorella* cells requires effective centrifugation and mechanical disintegration of the cellulose cell wall. These results raise the question of how "only" these morphological morphologies represent phenotypic adaptation to ecological conditions such as phytoplankton grazing pressure and buoyant living strategies.

Ecophysiological experiments with micratinium show a wide range of morphological flexibility. In dense cultures, this alga produces individual "green spheres" that exactly match the *chlorella* phenotype. However, under grazing pressure and transferred medium from Brachionus cultures, Micractinium produced strong bristles. This approach of combination of morphological, onthogenetical, ecophysiological with phylogenetic considerations provides a wide and interesting scope of limnological and phycological activity to elucidate the interaction of structure and function in freshwater ecosystems. Each symbiotic *Chlorella* species of is enclosed in a Perialgal Vacuole (PV) membrane derived from the host Digestive Vacuole (DV) membrane.

Algaefree paramecia and symbiotic algae are capable of growing independently and paramecia can be reinfected experimentally by mixing them. This phenomenon provides an excellent model for studying cell to cell interaction and the evolution of eukaryotic cells through secondary endosymbiosis between different protists. However, the detailed algae infection process is unknown. Using pulse markings on isolated symbiotic algae and hunting methods, we discovered four cytological events necessary to establish internal symbiosis. Approximately 3 minutes after mixing, some algae are resistant to the host lysosomal enzyme in domestic violence, even in the presence of digested material. Approximately 30 minutes after mixing, the DV membrane buds into the cytoplasm and the algae begin to escape from the DV.

Conclusion

In addition, there may not be enough information to know if it is actually a *chlorella* species or another green alga, so it may not be possible to know which organism was actually used in these studies. Ongoing research supports some of these claims, but behavioral patterns remain unresolved. The problem of bioactivity research on commercial products is the variety of "*chlorella*" species to be cultivated, the different culture methods used, the purity of the products produced, and the different treatment methods used to produce the final products. Makes it even more complicated. Each of these factors can affect the biochemical composition of algae and therefore its potential biological activity.

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