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LIVE IN THE COMMUNITY – BIOFILM FORMATION

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Summary

All living organisms interact with each other and may exhibit cooperative behavior. Bacteria are not an exception. Free-living cells (planctonic cells) are able to communicate to each other by using specific types of chemical compounds. Such communication processes between bacterial cells are particularly important in multicellular structures, referred to as biofilms. Those structures are able to grow both in biotic and abiotic environments, in many cases even in very extreme conditions. The cell-communication processes are so important in bacterial biofilms for they provide sharing of physiological and metabolic functions between different species and thus stimulation of horizontal gene transfer that leads to bacterial evolution. Therefore, of importance is not only discovery and understanding of the communication system between microorganisms, but also of the conditions in which they may occur and influence cellular metabolic processes.