

S5. Microbial Evolution

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Abstract

The study of microorganisms has revolutionized our view of the Tree of Life. They have offered not only new, not yet fully characterized groups but revealed evolutionary processes that are uncommon in eukaryotes. They also provide continuous examples of how fast evolution can proceed, reducing evolutionarily significant times to even days. Their presence has been detected in every environment and the width and variety of their adaptations to the harshest conditions is inspiring new solutions to our society problems. The development of high throughput sequencing technologies has allowed studying microorganisms and their populations and consortia, which is changing our perspective on how we and other species interact and depend on them. We have also determined the complete genome sequence of thousands of bacterial isolates, thus allowing to perform detailed population genomic analyses. This workshop is aimed at providing an overview of the recent developments in the evolutionary analysis of bacteria and other microorganism. Contributions from groups that use evolutionary approaches in basic and applied research with all kinds of microorganisms are encouraged.