演題番号

**(Title) Times New Roman 14 point Bold**

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(First name Family name) Times New Roman 10.5 point: eg. XX XX1, XX XX1, XX XX1, XX XX1, XX XX1,

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(Affiliations) Times New Roman 10 point: eg. 1Graduate School of Health Sciences, Hokkaido University,

2Faculty of Health Sciences, Hokkaido University

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(Abstract) Times New Roman 11 point,

The abstract should not exceed 200 words.

（参考）記入例

**Title for the 6th FHS International Conference**

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As viewed from the point of environmental ecology widely spreading soil, river water or gut, microbial community comprising both protists (e.g. amoebae and ciliates) and prokaryotes (harmless bacteria) plays a major role in nutrient cycle. Meanwhile, since protists can be significant predators of bacteria, some bacteria have evolved variety of mechanisms to survive within protists, including escape from phagocytosis, acquisition of virulent factors and horizontal gene transfer. Such bacterial strategies against protists are also commonly seen into pathogenic bacteria to successfully adapt to mammalian cells (e.g. macrophages), and it seems reasonable to suggest that studies on interactions between bacteria and protists may give us a new insight to understand bacterial pathogenesis into developing appropriate infection control system. Hence, we have begun to study how symbiosis occurred by using amoebae (*Acanthamoeba*) with endosymbiotic bacteria that we originally isolated from Sapporo City. In this session, we would like to show several intriguing findings that some amoebal endosymbiotic bacteria manipulate growth speed and motility of host amoebae. We will also introduce our data indicating that ciliates (*Tetrahymena*) significantly enhance the frequency of bacterial gene transfer, possibly responsible for multidrug resistant bacteria.