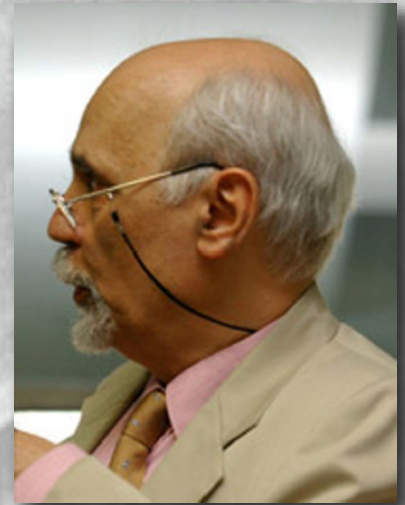


Karl Friedrich Bonhoeffer Lecture

Montag, den 12.09.2005 - 17:15 Uhr
Manfred-Eigen-Hörsaal
Max-Planck-Institut
für biophysikalische Chemie
Am Fassberg 11, 37077 Göttingen



Prof. Fotis C. Kafatos, Imperial College London

"Malaria and the Mosquito: Immunogenomics of Plasmodium Transmission in Anopheles"

The development and exploitation of molecular tools to understand the complex biological interactions that occur between mosquitoes and infective organisms is our main research focus. The emphasis of the work is directed towards unraveling the physiological interplay between the Anopheles mosquito and the malaria parasite, Plasmodium, during its transit through the insect host. The natural transmission of malaria requires completion of a complex developmental cycle in the midgut and the salivary glands of the mosquito vector. After gaining entry with the blood meal and beginning its development in the vector, the parasite, however, encounters the mosquito innate immune defence. In the major African vector, Anopheles gambiae, these defences can vary according to genetic polymorphisms that differentiate malaria susceptible from refractory strains. We focus on different aspects of mosquito biology, including innate immunity against parasite and bacterial infection, population and evolutionary genetic analysis, large scale genomic and high-throughput expression analysis of infection, as well as the development of transgenic tools for functional gene analysis, both in the mosquito and the parasite.