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Malaria Biotechnology – new technologies to tackle the scourge of humanity

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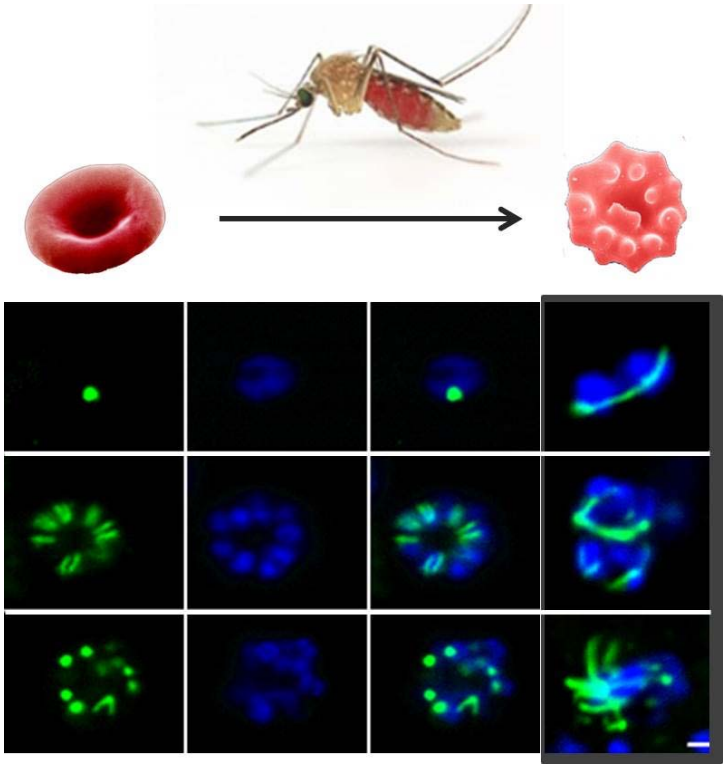

Motor proteins during the nuclear division cycles of the malaria parasite – malfunctioning induced by an inhibitor (right column) results in a derailment of the process chain

Despite of the enormous worldwide efforts to combat the disease, malaria continues to be a potentially fatal threat to almost half of the world's population. Although disease burdens have been lowered in the last five years, malaria remains endemic in over 100 countries and with an estimated deaths of half a million in 2015 is still one of the world`s leading cause of mortality and morbidity. The armory to fight the disease is rather limited. Owing to the absence of effective antiparasitic vaccines and the constant threat of antiparasitic drug resistance, novel antiparasitic chemotherapeutics remain the mainstay for disease control. In this presentation we will introduce to malaria and address pressing problems in controlling the disease and the limitations of classical biology and medicine. We will then unravel novel strategies pursued at the Institute of Medical Biotechnology using cutting edge biotechnological approaches. These address unique aspects in the metabolism of the parasite as a bio-particle, its cell division, parasite-host interactions and compound screening for novel or improved antimalarial agents.

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