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Nanomalaria group

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Exploration of protein aggregation as an antimalarial design strategy

Malaria is one of the main medical concerns worldwide. However, current approaches do not offer prospects of complete protection and the front-line drugs are rapidly losing efficacy, with resistance already developed to the first-line drug artemisinin. Thus, alternative strategies working through radically new mechanisms are urgently needed.

-Video on research activity (Website of the Institute for Bioengineering of Catalonia): <http://www.youtube.com/watch?v=8oji54VFis8>

-Video on research dissemination (Local TV Network): <http://www.xiptv.cat/el-problema-de-gettier/capitol/be-smart-dr-xavier-fernandez-busquets>

-Video on research activity (ERA-Net EuroNanoMed2 Network, European Commission-funded project): <https://www.youtube.com/watch?v=-25WHokUO18&feature=youtu.be> (Drug Delivery: The Use of Nanoparticles in Medicine).

-Video on research activity (Audiovisual Gateway of the University of Barcelona, UBtv): <http://www.ub.edu/ubtv/video/nanomedicine-against-malaria> (Nanomedicine against Malaria).

-Video on research activity (Nanomalaria group, IBEC): https://www.youtube.com/watch?v=_IX5hT6GN1o

-Video on research activity (ISGlobal seminar, February 17, 2016: A Short (Hi)story of Malaria): <https://youtu.be/cuVfqzQo3to>

-Video on research activity (BIOIBERICA: centennial of the discovery of heparin): <https://www.bioiberica.com/salud-humana/heparina/heparin-tv/?v=documental-heparina-100-anos-salvando-vidas>

-Video on research activity (BIOIBERICA research contract): <https://www.bioiberica.com/bioiberica/historias/la-heparina-como-nueva-estrategia-para-combatir-la-malaria/>

Job position description

We offer a position to explore protein aggregation as a new antimalarial drug concept. The abundance of aggregation-prone prion-like domains in *Plasmodium falciparum* suggests that induction of this mechanism might promote the collapse of the proteostatic machinery in this organism. Studies of prion toxicity for the host cell will be carried out in *Plasmodium*-infected red blood cells and also in ookinetes, a *Plasmodium* stage generated in the insect vector.