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Mater/Bachelor Thesis Offer*

Characterization of phospholipid regulated proteins controlling the parasite *Toxoplasma gondii* lytic cycle.

We are interested in a highly motivated student who is interested on gaining knowledge in fields of cloning, molecular parasitology and biochemistry. Our field in our group we are studying the obligate intracellular parasite *Toxoplasma gondii*, one of the most abundant eukaryotic pathogens of warm-blooded animals, including humans. Unique characteristics and futures of its lytic cycle were identified by our group to be related with the production of the exclusive phospholipid Phosphatidylthreonine (PtdThr) a natural analogue of Phosphatidylserine (PtdSer), both synthesized by their corelated enzymes Phosphatidylserine synthase (PSS) and Phosphatidylthreonine synthase (PTS).

We are currently working on characterizing the pathway under which PtdThr and PtdSer are regulating the lytic cycle and virulence of the parasites. The main focus of this project will be the production of specific ko models to characterize the importance and functional role of proteins identified to bind to Toxo PtdThr and PTdSer liposomes using mass spectroscopy. The student/s will characterize the importance of these pathways and determine the inhibition of these pathways on the growth and virulence of the parasite. She/He/They will examine the molecular function in detail by labelling assay and by phenotyping knockout mutants of key enzymes.

The student will gain experience in cell culture, genetic manipulation, parasite phenotyping, online database usage and bioinformatics tools, as well as an insight into metabolic profiling.

* The project could potentially involve more than just one person.

Send a brief introduction about yourself and your CV to:

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