

Visiting Professor Selection

FACULDADE DE FARMÁCIA Universidade Federal de Minas Gerais Edital Nº 110, february 7th 2019

Area: Bioassays for antiparasitic and anticancer activities

WORK PLAN

Area: Bioassays for antiparasitic and antitumoral activity

1 - TEACHING AND RESEARCH ACTIVITIES TO BE CARRIED OUT

- To develop a research project on “Bioassays applied to the discovery of new antimalarial drugs”;
- To teach a course on “Bioassays applied to the discovery of new antimalarial drugs” in the PPGCF UFMG;
- To assist in the performance of biological protocols of the routine laboratory work;
- To participate of seminars and group meetings related to the research project;
- To write reports and papers for publications.
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2- RESEARCH ACTIVITIES

To submit a project on “Bioassays applied to the discovery of new antimalarial drugs” covering the following topics:

2.1. To present a proposal for establishing a platform for *in vitro* assays against *Plasmodium falciparum* aiming to evaluate the therapeutical efficacy of plant extracts, natural and synththetic compounds;

2.2. To investigate interactions (synergism, addition or antagonismo) among active compounds and convetional antimalarial drugs;

2.3. To assess the cytotoxicity of active compounds against cell cultures of normal and tumoral cells for determination of the selectivity index in relation to *P. falciparum*;

- 2.4. To assess the *in vivo* antimalarial activity of bioactive compounds;
- 2.5. To assess the *in vivo* acute toxicity of bioactive compounds;
- 2.6. To investigate the immune response profile: IL12, TNF- α , INF- γ , IL4, IL10, NO, by RT-qPCR;
- 2.7. To investigate potential mechanisms of action of bioactive compounds.