STATE UNIVERSITY OF PONTA GROSSA
Program in Biomedical Science

Administrative Structure of the Program

Main Director: Prof. Dr José Rosa Gomes

Director: Dr Rafael Bertoni da Silveira

Members of the research areas

Profa. Dra. Katia Sabrina Paludo
Profa. Dra. Carla Cristine Kanunfre
Prof. Dr José Carlos Rebuglio Vellosa

Electronic mail for contact: ppgbiomedicas@uepg.br and cienciasbiomedicasuepg@gmail.com

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The Aim of the program is:

Train human resources master's degree level, with qualifications and competence to work in basic research and/or applied to healthcare as well as in teaching.

Specific Objectives:

- To train graduates in the program for the study of physiological and pathological processes in models generated animal, in vitro, and human, deepening scientific knowledge on cellular and molecular processes;

- Develop skills of planning, analysis, execution and innovation in the production and exploration of biopharmaceuticals and/or natural products with biological activities;

Target Public:

Graduates in biological sciences, medicine, dentistry, nursing, biomedicine, pharmacy, physiotherapy, physical education and related areas of the biological and health. Other professionals may provide evidence of selection however is necessary to talk in advance with possible mentors.

AREAS OF RESEARCH

AREA OF CELLULAR AND MOLECULAR BIOLOGY

Description: This area encompasses the study of molecular mechanisms of cell biology and developmental biology in normal and pathological processes.
Areas of investigation:

1. Cellular and Molecular Biology of Development and Pathologic Processes:

Description: This research aims to study aspects such as cell proliferation, differentiation, migration, adhesion and cell death during animal development and in experimental pathology. It also includes the understanding of molecules involved in both processes.

This research theme is conducted by professors Jose Rosa Gomes, Maria Albertina Miranda Soares and Michele Dietrich Moura Costa.

2. Biochemistry of Cellular Processes:

Description: This line aims to study the molecular events of cell interactions is cell-cell and cell-extracellular matrix or exogenous components such as toxins from venomous animals and microorganisms.

This research theme is conducted by professors: Katia Sabrina Paludo, Michele Dietrich Moura Costa and Rafael Bertoni da Silveira.

3. Search compounds with biological activities:

Description: This line aims to toxicology and pharmacology of natural extracts (animal or plant) and synthetic compounds in models in vitro and in vivo.

This research theme is conducted by professors: Airton Pereira Vicente, Carla Cristine Kanunfre, Edmar Miyoshi, José Carlos Rebublio Velloso, Katia Sabrina Paludo, Marcelo Machado Ferro, Sabrina Grassioli, Rafael Bertoni da Silveira and José Rosa Gomes.

PHYSIOLOGY AND PATHOPHYSIOLOGY

Description: This area encompasses the study of physiological and pathophysiological investigating the dynamics of the interrelationships of the body system.

Areas of investigation:

1. Pathophysiology of the central nervous system:

Description: This line is aimed at the study of chronic diseases of the central nervous system, with emphasis on its treatment and prevention.

This research theme is conducted by professors: Marcelo Machado Ferro, Edmar Miyoshi, Michele Dietrich Moura Costa.

2. Pathophysiology of metabolism and the immune system:
Description: This line aims to investigate metabolic and inflammatory diseases epidemiology, diagnosis, treatment and prevention.

This research theme is conducted by professors: Carla Cristine Kanunfre, José Carlos Rebuglio Velloso, Marcelo Derbl Schafranski, José Gomes and Sabrina Rose Grassioli.

3. Search compounds with biological activities:

Description: This line aims to toxicology and pharmacology of natural extracts (animal or plant) and synthetic compounds in models in vitro and in vivo.

This research theme is conducted by professors: Airton Pereira Vicente, Carla Cristine Kanunfre, Edmar Miyoshi, José Carlos Rebuglio Velloso, Katia Sabrina Paludo, Marcelo Machado Ferro, Sabrina Grassioli, José Rosa Gomes and Rafael Bertoni da Silveira.

**General information how to apply for the Program**

The time of the course is always two years. Foreigner students are stimulated to apply for the program. The candidates need to do a first contact with some of professors sending a message for the ppgbiomedicas@uepg.br which will be addressed to the professor indicated in the message. To access the detailed curriculum of each professor please go to [http://www.pitangui.uepg.br/propesp/ppgbiomedicas/docentes.php](http://www.pitangui.uepg.br/propesp/ppgbiomedicas/docentes.php)

After this first contact and in the opportunity time the candidate must to submit a test to show its potential knowledge about themes involved in cell biology and physiology. After approval in the test the candidates are able to ingress in the program to development a project under supervision of one professor researcher.

**Research Collaboration**

Research collaboration with others investigative centers around the world are welcome.

Partnerships and agreements with companies interested in sponsoring research in the field of innovation of products with biological activity are also welcome.

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We are waiting for your contact because just missing you to complete our team.

Sincerely,

Prof. Dr José Rosa Gomes