



**Universidade Federal do Paraná**  
**Graduate Program in Cell and Molecular Biology**  
<http://www.pgbiocel.ufpr.br/portal/>



**PPGBioCelMol is offering 2 graduation courses related to the Bioscience and Health project of CAPES/PRINT, within the Cancer: Basic and Applied Research topic.**

**Enrolment:** please send an email to Prof Carolina ([krokoli@ufpr.br](mailto:krokoli@ufpr.br)), with copy to Prof. Fernanda ([ferfs@ufpr.br](mailto:ferfs@ufpr.br)). Include the following information:

Full name		
CPF		
E-mail		
PPG		
Status	<input type="checkbox"/> Master student	<input type="checkbox"/> PhD student

**Coordination:** Carolina Camargo de Oliveira, Prof, PhD (Cell Biology Department – UFPR); Fernanda Fogagnoli Simar (Cell Biology Department – UFPR)

**Collaborator:** Mehdi Damaghi, Prof, PhD (Assistant Professor, Department of Oncologic sciences, Morsani College of medicine, University of South Florida, Tampa, FL, USA; Research Scientist, Department of Cancer Physiology, H. Lee Moffitt Cancer Center & Research Institute)

**Course 1: *BCEL-7035: Contemporary Topics in Cell and Molecular Biology: Tumor microenvironment.***

Language: English

Classes: 21, 22, and 25 November – from 9h-12h30 and 13h30-15h

Credits: 1 (15h)

Room: anfi 03

Description: Introduction and characterization of tumor microenvironment (TME), cells and ECM, as well as its implication in tumor progression. Functional and metabolic features of TME, acidic microenvironment implications. Therapeutic approaches targeting microenvironment properties.

**Course 2: *BCEL-7035: Contemporary Topics in Cell and Molecular Biology: Evolutionary approach of Cancer.***

Language: English

Classes: 27, 28, and 29 November – from 9h-12h30 and 14h-16h

Credits: 1 (15h)

Room: anfi 03

Description: An introduction to evolutionary based therapy. Exploiting cancer cells acid induced metabolic vulnerabilities to optimize therapy (an evolutionary approach); techniques and approaches to study cancer evolution.