General Information

Course name and code	Experimental oncology ÚBEV/EXON/04	**ECTS Credits**	**5**
		Semester	**2nd (Summer) Doctoral Degree**

Aims

The purpose of this course is to explain the principles of malignant transformation of cells, to acquaint students with possibilities to prevent cancer and with preclinical testing of chemopreventive substances, with focus on *in vivo* experiments.

Contents

Malignant transformation of cells, causes. Classification of carcinogens. Molecular basis of carcinogenesis, oncogenes and tumour suppressor genes. Cell cycle control, regulation of cell viability. Cell integrity maintenance, tumour metastasis. Experimental models of carcinogenesis with focus on mammary carcinogenesis. Possibilities of prevention and treatment of tumour diseases. Cancer chemoprevention with natural and synthetic compounds. Testing of chemopreventive agents.

Evaluation

Oral exam.

Bibliography

Weinberg R.A.: The Biology of Cancer. Garland Science, 2007
Ahmed N. et al.: Biology of Disease, Taylor & Francis 2006
Waugh A., Grant A.: Ross and Wilson Anatomy and Physiology in Health and Illness. Churchill Livingstone Elsevier, 2010