

MICE LUNG ADENOMA BIOASSAY FOR STUDIES OF POSSIBLE MODIFYING AGENTS IN CARCINOGENESIS

Saulė Uleckienė¹, Janina Didžiapetrienė¹, Irena Jonauskienė², Danguolė Zabulytė², Rimantas Pečiūra³

¹*Institute of Oncology, Vilnius University, Santariškių 1, LT-08660 Vilnius, Lithuania*

²*State Research Institute Center for Innovative Medicine, Department of Immunology
Molėtų plentas 29, LT-08409 Vilnius, Lithuania*

³*Lithuanian University of Health Science, Tilžės 18, LT-47181 Kaunas, Lithuania*

Corresponding author: Dr. S. Uleckienė

Institute of Oncology, Vilnius University, Santariskiu str. 1, LT-08660 Vilnius, Lithuania

e-mail: Saule.Uleckiene@vuo.lt; fax: 370 5 2720164, tel.: 370 5 2190915

Abstract. Pulmonary tumours of mice are often been used as a tool in cancer research. The aim of this paper is to investigate and consider the utility of mouse pulmonary adenomas induced by urethane model in cancer chemoprevention studies.

Three sets of experiments have been conducted on inbred mice (both sexes), total – 372 animals. Potential anticarcinogenic compounds – vitamin E, novel organoselenium compounds – D-glucosamine hydroselenate and original anticarcinogenic mixture which consisted of these ingredients: retinol acetate, α -tocopherol, riboflavin, sodium selenite and glucuronic acid were given chronically *per os*, carcinogen – urethane was given by intraperitoneal injections. The experiments lasted for 4 months.

The results of our studies showed that all tested compounds exert inhibitory effect on lung carcinogenesis induced by urethane. Lung adenoma can serve as a model for analysis of complementary agents – cofactors whether intensifying or inhibiting pulmonary carcinogenesis.

Keywords: urethane, D-glucosamine hydroselenate, vitamin E, original anticarcinogenic mixture, lung carcinogenesis, mice.