UNIVERSITY OF NOVI SAD
FACULTY OF MEDICINE

Study program: Doctoral Academic Studies in Biomedical Sciences

Name of the subject: RISK AND BENEFIT ANALYSIS IN PUBLIC HEALTH

Teacher(s): Ljilja D. Torović, Nebojša V. Kladar, Branislava U. Srdjenović Čonić, Sanja V. Bijelović

Status of the subject: elective

Number of ECПБ points: 15

Condition: -

Goal of the subject

The overarching goal of the subject is to enable students to perceive the principles and potentials of the risk and benefit analysis related to food / cosmetics / environment in service of human health, to interpret the risk / benefit assessment outputs, get to know risk management options and communication skills and tools.

Outcome of the subject

Knowledge: Risk and benefit assessment principles and methodology, management options and communication skills and tools. Scientific, professional and regulatory framework.

Skills: Implementation of the integral knowledge of the risk and benefit analysis related to food / cosmetics / environment with the aim to protect and improve public health (exploitation of potential benefits, recommendations for risk reduction, legislation).

Content of the subject

Theoretical lectures

- Risk / benefit analysis - importance and structure of the processes.
- Scientific, professional and regulatory framework.
- Formal steps in the assessment process: hazard / benefit identification and characterization (dose - response relationship, critical effect, reference points, scientific substantiation of the evidence, biomarkers of exposure, effect and susceptibility); exposure assessment (considerations on bioavailability, methods of data collection, food composition and consumption databases, exposure factors); risk / benefit characterization.
- Risk *vs.* benefit analysis: the structure of the process. Cost / benefit analysis.
- Natural foods. Dietary interventions - food fortification and supplementation. Impact of technological processing on food.
- Systems for ensuring of safety.
- International exchange of information on risks related to food, cosmetics and environment.
- Safety of cosmetic products, borderline products, legislation, product information file.
- Management options. Communication skills and tools in the analysis process and communication with the public.

Practical lectures

Selected case studies of risk / benefit analysis related to food / cosmetics / environment: chemical contaminants; natural toxic substances; processing contaminants; substances with beneficial health effects, food fortification and supplementation; cosmetic product information file.

Recommended literature

Compulsory

1. WHO/FAO. Environmental health criteria 240: Principles and methods for the risk assessment of chemicals in food. Geneva: World Health Organization; 2009. Available from: www.who.int.

Additional

Selected publications (available on internet): WHO (www.who.int), FAO JECFA (www.fao.org), IARC (www.iarc.fr), EFSA (www.efsa.europa.eu), EC (ec.europa.eu/food/safety/index_en.htm), EPA (www.epa.gov)

Number of active classes	**Theory:** 60	**Practice:** 45

Methods of delivering lectures

Theoretical and practical teaching.

Evaluation of knowledge (maximum number of points 100)

project presentation/seminar: 50

oral exam: 50