THEME OF THE EXAM

FOR THE POSITION OF UNIVERSITY PROFESSOR

DISCIPLINES:

Pharmaceutical Botany II (Pharmacy, 1st year of study - courses)

Nutrigenetics and nutrigenomics (Nutrition and dietetics, 2nd year of study – courses and practical activities)

Cell and molecular biology (Nutrition and dietetics, 1st year of study – courses)

position 6 from the Pharmacy Department's State of Functions

FACULTY OF MEDICINE AND PHARMACY, University of Oradea

1. **Pharmaceutical Botany II**

1.1. Filum Pteridophyta, general characteristics, classification, examples, importance

1.2. Filum Pinophyta, general characteristics, classification, exemples, importance

1.3. Subclass Magnoliidae (Class Magnoliatae), general characteristics, classification: Order Magnoliales, Order Piperales, Order Ranunculales, Order Papaverales, general characteristics, classification, exemples, importance

1.4. Subclass Hamamelidae (Class Magnoliatae), general characteristics, classification: Order Hamamelidales, Order Urticales, Order Fagales, Order Juglandales, general characteristics, classification, exemples, importance

1.5. Subclass Rosidae (Class Magnoliatae), general characteristics, classification: Order Saxifragales, Order Rosales, Order Fabales, Order Myrtales, Order Rutales, general characteristics, classification, exemples, importance

1.6. Subclass Rosidae (Class Magnoliatae), general characteristics, classification: Order Sapindales, Order Geraniales, Order Araliales, Order Rhamnales, Order Santalales, general characteristics, classification, exemples, importance

1.7. Subclass Dillleniidae (Class Magnoliatae), general characteristics, classification: Order Dilleniales, Order Theales, Order Violales, Order Capparales, Order Salicales, Order Malvales, Order Ericales, Order Primulales, general characteristics, classification, exemples, importance

1.8. Subclass Asteridae (Class Magnoliatae), general characteristics, classification: Order Gentianales, Order Dipsacales, Order Polemoniales, Order Scrophulariales, Order

Plantaginales, Order Lamiales, Order Asterales, general characteristics, classification, exemples, importance

1.9. Subclass Liliidae (Class Liliatae), general characteristics, classification: Order Liliales, Order Zingiberales, Order Poales, general characteristics, classification, exemples, importance

2. Nutrigenetică și nutrigenomică

2.1. The human genome: structure of DNA, structure of RNA, structure of human cromosomes, the gene concept

2.2. Replication, transcription and translation

2.3. Genetic variability in the human genome – single nucleotide mutations (SNPs)

2.4. Epigenetics. The relationships between epigenetics and nutrition

2.5. Nutrigenetic polymorphisms - the nutrigenetics of obesity, monogenic obesity

2.6. Nutrigenetic polymorphisms - food intolerance polymorphisms - lactose, gluten, histamine intolerance

2.7. Nutraceuticals and gene expression

3. Cell and molecular biology

3.1. Ultrastructure of the prokaryotic and eukaryotic cells

3.2. Molecular biology of cell membranes

3.3. The cytoskeleton, structure, biological significance

3.4. Cellular organelles, molecular architecture and functional role. Ribosomes. The endoplasmic reticulum. Golgi complex. Mitochondria. Lysosomes. Peroxisomes

3.5. Nucleus. The interphasis nucleus and the division. The cell cycle

REFERENCES

1. TĂMAȘ M., Botanica farmaceutică, Sistematica – Cormobionta, vol II, Ed. Medicală Universitară Iuliu Hațieganu, Cluj-Napoca, 2005.

2. PALLAG A., Botanică farmaceutică, Sistematica, Cormobionta, Ed.Universitatii Oradea, 2015.

3. MOHAN GH., Mica enciclopedie de plante medicinale și fitoterapie, Editura BIC ALL, 1989.

4. SZABO I., Botanică farmaceutică, Sistematica vegetală, Editura Universității din Oradea, 2007

5. TEMELIE M., Enciclopedia plantelor medicinale cultivate în România, Rovimed Publishers, Bacău, 2008
6. *** Farmacopeea Română, ediţia X., Ed. Medicală, Bucureşti, 1993.
7. VRÂNCEANU M. Cursuri School of Nutrigenetics and Antiaging Medicine. Curs organizat de UMF "Iuliu Hatieganu", Cluj-Napoca, aprilie 2017.
8. VRÂNCEANU M. Genetica, Nutriția personalizată și medicina de precizie. București: Ed. Tracus Arte, 2017.
9. COTRUTZ C.E, COTRUTZ C., PETREUȘ T., BĂDESCU L., Bioloige celulară și moleculară, Editura Sedcom Libris, Iași, 2011
10. PUŞCAŞIU M., PUŞCAŞIU D.M., Biologia Celulară şi moleculară-Note de curs, Editura Universităţii din Oradea, 2010

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