isolated, non-digestible carbohydrates which have beneficial effects in humans and total fibre as the sum of dietary and functional fibers.
Materials and methods. The profile literature and database were evaluated and analyzed.
Results. Nowadays there are several classification systems of dietary fibers based on: role in the plant, type of polysaccharide, their simulated gastrointestinal solubility, products of digestion and physiological indicators. The accepted classifications are based on their solubility in a buffer at a defined pH, and/or their fermentability in an in vitro system. There are 2 groups of dietary fibers: water-insoluble/less fermented (cellulose, hemicellulose, lignin) and the water-soluble/well fermented fibers (pectin, gums, mucilages). Functions of dietary fibers in human body: add bulk to the diet; making feel full faster; attract water and turns to gel during digestion, trapping carbohydrates and slowing absorption of glucose; lower total and LDL cholesterol; regulate blood pressure; speed the passage of foods; add bulk to stool; balance intestinal pH and stimulate intestinal fermentation production of short-chain fatty acids. The benefits of dietary fibers on human health: may reduce appetite; lower variance in blood sugar levels; reduce risk of heart disease; reduce symptoms of metabolic syndrome and diabetes; reduce risk of colorectal cancers; alleviate constipation. The importance of food fibers has led to the development of a large market for fiber-rich products, there is a trend to find new sources of dietary for foods. Fiber supplementation of foods can change their consistency, texture, and sensory of the end products, can offer new opportunities in food industry.
Conclusions. Dietary fiber can be used in various functional foods. Influence of different processing treatments (like extrusion-cooking, canning, grinding, boiling, frying) alters their properties and improves their functionality.
Key words: dietary fibers, classification, function, benefits

363. MEDICINAL PLANTS AND PHYTODRUGS USED IN GASTROINTESTINAL TRACT DISORDERS

Author: **Anastasia Sula**
Scientific adviser: Cojocaru-Toma Maria, PhD, Associate professor, Department of pharmacognosy and pharmaceutical botany
Nicolae Testemitanu State University of Medicine and Pharmacy of the Republic of Moldova

Introduction.The digestive system is a morphological and functional ensemble of organs which is responsible not only for the digestion and absorbtion of the ingested food, but also for the evacuation of unassimilable residues. Diseases of the digestive tract can occur to any person, regardless of gender, age or social class and represent a problem both in the medical and socio-economic fields. In the R. Moldova, 8,8% of deaths are caused by the diseases of the digestive tract. The districts in the central area of the R. Moldova are the most affected by pathologies of the gastrointestinal tract, correlated with the quality of water and soil (salts, pesticide content). Today, there are many natural remedies that we can use before resorting medicamentous treatment.
Aim of the study. Analysis of vegetable products and phytodrugs used in the treatment of the diseases of the digestive system, with: anti-inflammatory, antidiarrheal, anthelmintic, tonic-bitter, laxative, carminative, regenerative, hepatoprotective activity.
Materials and methods. Evaluation of profile literature, the medicinal plants, active principles and phytodrugs according with the State Nomenclature of Medicines of Moldova.
Results. Among many medicinal plants used in digestive system diseases, we can mention: *Chamomilla recutita* L., *Linum usitatissimum* L. (antiinflamatory action through the content of volatile oils and polyholosides*); Vaccinium myrtillus* L., *Quercus robur* L., *Fragaria vesca* L., (antidiarrhoeal action is ensured by tanning substances); *Tanacetum vulgare* L., *Dryopteris filix-mas* L. (anthelmintic action – by the content of volatile oils and filicine); *Gentiana lutea* L.,

Artemisia absinthium L., *Taraxacum officinalis* L. (bitter tonic action); *Frangula alnus* Mill., *Senna angustifolia* Vahl. (laxative action due to anthracene derivatives); *Anethum graveolens* L., *Coriandrum sativum* L., *Foeniculum vulgare* Mill. (carminative action – by coumarins and volatile oils); *Glycyrrhiza glabra* L. (the saponosides with antulcerous effect), etc. Out of the 5446 drugs included in State Nomenclature of Medicines of Moldova, the share of phytodrugs (vegetable products, homeopathic preparations, medicinal species) represent 15,4 % of the total number of medicines.

Conclusions. Pathologies of the gastrointestinal tract represent 8.8% of the causes of deaths in the Republic of Moldova, occupying the third place after circulatory diseases and tumors. In the treatment of gastrointestinal tract pathologies, are used: bitter-tonic, laxative, anti-inflammatory, antidiarrheal, anthelmintic, carminative, antulcerous, antihemorrhoidal and hepatoprotective phytodrugs, that represent 15,4 % corresponing to the State Nomenclature of Medicines of Moldova.

Key words: gastrointestinal tract, medicinal plants, phytodrugs

364. ANTIOXIDANT ACTIVITY OF *HYPERICUM PERFORATUM* L. AND *HYPERICUM ELEGANS* STEPH. SPECIES

Authors: **Irina Soroca, Natalia Cibotaru**
Scientific adviser: Benea Anna, University assistant, Department of pharmacognosy and pharmaceutical botany
Nicolae Testemitanu State University of Medicine and Pharmacy of the Republic of Moldova

Introduction. Oxidative stress is an important risk factor in developing pathological conditions in human body. Numerous phenolic antioxidants in species of g. *Hypericum* have scavenging radical activities and are considered promising bioactive compounds for free radical pathologies related with chronic diseases (atherosclerosis, neurodegenerative disorders, cerebral and cardiac ischemia, and rheumatic disorders*).*

The aim of the study. The comparative determination of total phenolic content (TPC) in different species *H. perforatum* L. and *H. elegans* Steph and in various plant raw materials (*Hyperici herba* and *H. flores)* of the sp. *H. perforatum* L.

Materials and methods. TPC for analyzed samples was assessed by Folin-Ciocalteu method. The absorbance was measured at 765 nm with Meterthech UV/VIS SP 8001 spectrophotometer. As solvent it was used 80% ethanol. The antioxidant activity was determined by DPPH and ABTS assay. The results are calculated in terms of gallic acid equivalent.

Results. The total content of polyphenols in dry extracts was determined: *Hyperici flores* – 42,76 mg/ml, *Hyperici herba* – 23,89 mg/ml**,** *H. elegans* aerial parts – 23,14 mg/ml. The antioxidant potential determined by DPPH method showed: 11,65 μg/ml – *H. flores*; 19,08 μg/ml – *H. herba*; 19.95 μg/ml – *H. elegans*). ABTS method showed: *Hyperici herba* – 22,75, *H. flores* – 28,73 and *H. elegans* – 22,39 mM TEAC.

Conclusions. The most quantity of phenols is contained in *Hyperici flores*, which contributes to higher antioxidant activity. However, the content of phenols in aerial parts of both species of *g.Hypericum* are almost the same. This should be taken in account, because of the possibility of using *Hypericum elegans* as a medicinal plant.

Key words: *Hypericum perforatum , H. elegans,* antioxidant, DPPH, ABTS

365. ANTIOXIDANT ACTIVITY AND TOTAL PHENOLIC CONTENT OF SEA BUCKTHORN (HIPPOPHAE RHAMNOIDES L.) FRUITS AND LEAVES

Authors: **Patrisia Litvicov, Sorina Vesiolii**