

## Conspectus

1. Heteropolysaccharides and plant substances containing them.
2. Lipids. Fixed oils and fats.
3. Coumarins and plant substances containing them.
4. Flavonoids and plant substances containing them.
5. Anthraquinones and plant substances containing them.
6. Tannins. Hydrolysable and condensed tannins and plant substances containing them.
7. Cardiac glycosides and plant substances containing them.
8. Steroidal and triterpene saponins and plant substances containing them.
9. Essential oils - general characteristic. Plant substances containing acyclic, monocyclic and bicyclic monoterpenes.
10. Plant substances and essential oils containing sesquiterpens and aromatic terpenes.
11. Alkaloids - general characteristic. Carbocyclic and tropane alkaloids and plant substances containing them.
12. Quinoline and purine alkaloids and plant substances containing them.
13. Isoquinoline alkaloids from benzyloisoquinoline, benzyltetrahydroisoquinoline, morphinane, phenanthridine groups and plant substances containing them.
14. Indole alkaloids. Rauwolfia, Vinka, Catharanthus, Ergot alkaloids and plant substances containing them.
15. Regulatory control on herbal medicinal products. Parameters for quality control of herbal medicines (organoleptic and microscopic evaluation, determination of foreign bodies, ash, heavy metals, aflatoxins and microbial contaminants, pesticide residues, radioactive contamination).

16. Wild harvested and cultivated plants. Harvesting, drying, storage of medicinal plants. Quality control of herbal products in the production chain. Examples.
17. Formation of biological active substances in plant tissue cultures *in vitro* - advantages and disadvantages. Methods for induction of secondary metabolism *in vitro*. Organ cultures – morphological differentiation and „hairy roots“ cultures *in vitro*.
18. Types of phytoproducts. Composition and problems about their standardization. Steps in creating of phytoproducts. Registration and marketing of phytoproducts.
19. Medicinal plants and herbal medicines acting on the respiratory system.
20. Medicinal plants and herbal medicines acting on the cardiovascular system.
21. Medicinal plants and herbal medicines acting on the gastrointestinal system.

**Chief of the department:**



**/Professor Stefan Nikolov, D. Sci., PhD/**

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