	Instituția Publică Universitatea de Stat de Medicină și Farmacie "NICOLAE TESTEMIȚANU" Facultatea de Farmacie <b>CATEDRA DE FARMACOGNOZIE ȘI BOTANICĂ FARMACEUTICĂ</b> <b>09.3.1-18</b> <b>Materiale referitor la evaluarea cunoștințelor</b>	<b>Red.:</b>	<b>01</b>
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„APROB”  
 Decanul Facultății de Farmacie,  
 Doctor în farmacie,  
 conferențiar universitar

\_\_\_\_\_ Nicolae CIOBANU


Examine și aprobate la  
 ședința catedrei “ 10 “ mai 2017  
 Proces verbal Nr. 17  
 Șef de catedră, profesor universitar

\_\_\_\_\_ Anatolie Nistreanu


**Subjects**  
**for exam on**  
**“PHARMACEUTICAL BOTANY”**  
**Students of I<sup>st</sup> year, Pharmacy faculty,**  
**2016-2017 universitay year**

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1. Pharmaceutical Botany. Botany compartments. Short history. The aims of pharmaceutical botany.
2. Eukaryotic cell: shape, types, sizes. Cell parts. Cytoplasmic organelles.
3. Cell. Ergastic inclusions. Types. Location. The diagnostic role and pharmaceutical value.
4. Structural particularities of vegetal cell: cell wall, vacuole, plastids.
5. Definition of tissue. Classification, location and characteristics.
6. Protective tissues. Types. Structural characteristics and role.
7. Epidermis. Specific structures. Diagnostic role. Examples of medicinal plants.
8. Ground (fundamental) tissues: assimilation and storage parenchyma. Location. Characteristics. Pharmaceutical value.
9. Mechanical tissues (supporting): colenchyma and sclerenchyma. Characteristics. Role.
10. Conductive tissues: Liberian and wood elements. Types of vascular bundles.
11. Secretory tissues: internal and external structures. The characteristics. Examples on medicinal plants.
12. Organography. Vegetative and reproductive organs. The morphological characteristics. Modified organs. Pharmaceutical value.
13. Root. Functions. Morphological types. Modified roots. Examples on medicinal plants.
14. Anatomical root zones. Primary and secondary anatomical structures of root.
15. Root – source of medicine. Examples.
16. Stem. Functions. Morphology. Types of stems. Examples on medicinal plants.
17. Modified stems. Types. The characteristics. Examples on medicinal plants.
18. Stem. Primary and secondary anatomical structure (examples on gymnosperms, monocot and dicot plants).
19. Leaf. Functions. The leaf components. Leaf annexes. Types of leaves. Metamorphoses leaf. Examples.
20. Leaf. Lamina morphology. Morphological and anatomical diagnostic criteria. Examples on medicinal plants.
21. Leaf – source of medicine. Examples.
22. Flower. The biological role. Components. Examples on medicinal plants.
23. Flower. Morphological types of flowers. Examples on medicinal plants.
24. Inflorescences. Classification. Types. Examples on medicinal plants.
25. Fruit. Fruit components. The morphology and anatomy. The biological role of fruit.
26. Fruit. Classification. Simple fruits. Types. Examples on medicinal plants.
27. Multiple and compound fruits. Types. Examples on medicinal plants.
28. Fruit – a source of medicine. Examples on medicinal plants.
29. Seed. The morphology and anatomy. Distribution of plants. Examples.
30. Seed – source of medicine. Examples on medicinal plants.
31. Thallophytes and cormophytes. Higher spore and seed plants. Flowering plants. General characters.
32. Plant systematics. Short history. Taxonomic units. Examples. Binomial nomenclature
33. Algae. General characteristics. Divisions *Cyanophyta*, *Chlorophyta*. Characteristics. Species with pharmaceutical value.
34. Divisions *Phaeophyta*, *Rhodophyta*. Characteristics. Morphology of species with pharmaceutical value.
35. Fungi. Characteristics. Cl. *Basidiomycetes*. Fam. *Hymenomycetaceae*, *Agaricaceae*. Role. Species with pharmaceutical value.
36. Cl. *Ascomycetes*. Fam. *Saccharomycetaceae*, *Aspergillaceae*, *Clavicipitaceae*. General characteristics. Morphology of species with pharmaceutical value.
37. Div. *Bryophyta*. Characteristics. Cl. *Musci*. Pharmaceutical role. Div. *Lycopodiophyta*, fam. *Lycopodiaceae*. Species with pharmaceutical value.
38. Div. *Equisetophyta*, fam. *Equisetaceae*. Characteristics. Species with pharmaceutical value.
39. Div. *Pterydophyta*. Characteristics. Fam. *Aspleniaceae*. Species with pharmaceutical value.
40. Div. *Pinophyta* (*Gymnospermatophyta*). Characteristics. Fam. *Ginkgoaceae*. Morphology of species with pharmaceutical value.
41. Fam. *Cupressaceae* and *Taxaceae*. Characteristics. Morphology of species with pharmaceutical value.
42. Fam. *Pinaceae*. Characteristics. Morphology of species with pharmaceutical value.
43. Fam. *Ephedraceae*. Characteristics. Morphology of species with pharmaceutical value.
44. Fam. *Nymphaeaceae*, *Schizandraceae*. Characteristics. Morphology of species with pharmaceutical value.

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45. Fam. *Ranunculaceae*. Characteristics. G. *Ranunculus*, *Adonis*. Morphology of species with pharmaceutical value.
46. G. *Aconitum*, *Nigella*, *Delphinium*, *Helleborus*. Morphology of species with pharmaceutical value.
47. Fam. *Berberidaceae*. Characteristics. Morphology of species with pharmaceutical value.
48. Fam. *Papaveraceae*. Characteristics.
49. G. *Papaver*, *Chelidonium*, *Glaucium*. Morphology of species with pharmaceutical value.
50. Fam. *Urticaceae* and *Cannabaceae*. Characteristics. Morphology of species with pharmaceutical value.
51. Fam. *Fagaceae*, *Betulaceae*. Characteristics. Morphology of species with pharmaceutical value.
52. Fam. *Polygonaceae*. Characteristics. G. *Rheum* and *Rumex*. Morphology of species with pharmaceutical value.
53. G. *Polygonum*. Characteristics. Morphology of species with pharmaceutical value.
54. Fam. *Theaceae*, *Violaceae*. Characteristics. Morphology of species with pharmaceutical value.
55. Fam. *Passifloraceae*, *Cucurbitaceae*. Characteristics. Morphology of species with pharmaceutical value.
56. Fam. *Brassicaceae*. Characteristics. G. *Brassica*. Morphology of species with pharmaceutical value.
57. G. *Capsella*, *A Armoracia*, *Erysimum*. Characteristics. Morphology of species with pharmaceutical value.
58. Fam. *Salicaceae*, *Primulaceae*. Characteristics. Morphology of species with pharmaceutical value.
59. Fam. *Ericaceae*. Characteristics. Morphology of species with pharmaceutical value.
60. Fam. *Tiliaceae*, *Malvaceae*. Characteristics. Morphology of species with pharmaceutical value.
61. Fam. *Hypericaceae*, *Saxifragaceae*. Characteristics. Morphology of species with pharmaceutical value.
62. Fam. *Rosaceae*. Characteristics. Systematics. Economical value. Spontaneous and cultivated species in Moldova' flora.
63. G. *Rosa*, *Rubus*, *Fragaria*. Characteristics. Morphology of species with pharmaceutical value.
64. Genurile *Sanguisorba*, *Potentilla*, *Prunus*. Characteristics. Morphology of species with pharmaceutical value.
65. Fam. *Fabaceae*. Characteristics. Economical value. Spontaneous and cultivated species in Moldova' flora.
66. G. *Sophora*, *Thermopsis*, *Arachis*. Characteristics. Morphology of species with pharmaceutical value.
67. G. *Cassia*, *Glycyrrhiza*, *Phaseolus*. Characteristics. Morphology of species with pharmaceutical value.
68. G. *Melilotus*, *Ononis*, *Glycine*. Characteristics. Morphology of species with pharmaceutical value.
69. Fam. *Myrtaceae*, *Rutaceae*. Characteristics. Morphology of species with pharmaceutical value.
70. Fam. *Hippocastanaceae*, *Anacardiaceae*. Characteristics. Morphology of species with pharmaceutical value.
71. Fam. *Araliaceae*. Characteristics. Morphology of species with pharmaceutical value.
72. G. *Coriandrum*, *Anisum*, *Daucus*, *Carum*. Characteristics. Morphology of species with pharmaceutical value.
73. G. *Anethum*, *Foeniculum*, *Pastinaca*, *Ammi*. Characteristics. Morphology of species with pharmaceutical value.
74. Fam. *Rhamnaceae*, *Elaeagnaceae*. Characteristics. Morphology of species with pharmaceutical value.
75. Fam. *Apocynaceae*, *Caprifoliaceae*. Characteristics. Morphology of species with pharmaceutical value.
76. Fam. *Linaceae*, *Valerianaceae*. Characteristics. Morphology of species with pharmaceutical value.
77. Fam. *Lamiaceae*. Characteristics. Morphology of species with pharmaceutical value.
78. G. *Mentha*, *Lamium*, *Ortosiphon*. Characteristics. Morphology of species with pharmaceutical value.
79. G. *Salvia*, *Melissa*, *Hyssopus*. Characteristics. Morphology of species with pharmaceutical value.
80. G. *Thymus*, *Ocimum*, *Scutellaria*. Characteristics. Morphology of species with pharmaceutical value.
81. Genurile *Lavandula*, *Origanum*, *Leonurus*. Characteristics. Morphology of species with pharmaceutical value.
82. Fam. *Solanaceae*. Characteristics. Economical value. Spontaneous and cultivated species in Moldova' flora.
83. G. *Atropa*, *Hyoscyamus*, *Datura*. Characteristics. Morphology of species with pharmaceutical value.
84. Genurile *Solanum*, *Scopolia*, *Capsicum*. Characteristics. Morphology of species with pharmaceutical value.
85. Fam. *Scrophulariaceae*, *Plantaginaceae*. Characteristics. Morphology of species with pharmaceutical value.

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86. Fam. *Asteraceae*. Characteristics. Economical value. Spontaneous and cultivated species in Moldova' flora.
87. G. *Achillea*, *Matricaria*, *Inula*, *Rhaponticum*. Characteristics. Morphology of species with pharmaceutical value.
88. G. *Artemisia*, *Tussilago*, *Gnaphalium*, *Sylibum*. Characteristics. Morphology of species with pharmaceutical value.
89. G. *Centaurea*, *Calendula*, *Bidens*. Characteristics. Morphology of species with pharmaceutical value.
90. G. *Taraxacum*, *Arnica*, *Tanacetum*, *Helychrysum*. Characteristics. Morphology of species with pharmaceutical value.
91. G. *Senecio*, *Helianthus*, *Arctium*, *Cichorium*. Characteristics. Morphology of species with pharmaceutical value.
92. G. *Veratrum*, *Convallaria*, *Allium*. Characteristics. Morphology of species with pharmaceutical value.
93. Fam. *Iridaceae*, *Dioscoreaceae*, *Araceae*. Characteristics. Morphology of species with pharmaceutical value.
94. Fam. *Poaceae*. Characteristics. Economical value. Spontaneous and cultivated species in Moldova' flora.
95. Spontaneous flora in Moldova – reserve source of medicinal plants.
96. Cultivated medicinal plants in Moldova.
97. Medicinal plants and ecological aspects.

Aprobate la ședința catedrei din 10.05.2017, proces verbal nr 17.

**Chef of Departement, doctor in pharmacy,  
University professor**

**Anatolie Nistreanu**