

## General pharmacology:

1. Pharmacology, sub-branches, origin of drugs, drug names. •
2. Types of pharmacotherapy, rules of rational and safe pharmacotherapy. The question of drug misuse. •
3. Preclinical and clinical trials, stages. •
4. Basic legislation related to drug use, Sources of information on drugs and medicinal products. •
5. Solid and gaseous pharmaceutical drug dosage forms - overview and their influence on pharmacokinetics and pharmacodynamics. •
6. Semi-solid and liquid pharmaceutical drug dosage forms - overview and their influence on pharmacokinetics and pharmacodynamics. •
7. Routes of drug administration – overview, characteristics. •
8. Drug absorption, presystemic elimination, drug bioavailability. •
9. Drug distribution, volume of distribution, redistribution. General principles of drug movement through the body. •
10. Drug elimination, processes of the first and zero order, drug accumulation. •
11. Drug biotransformation – stages, examples. •
12. Drug excretion (ways of excretion, possibilities of their influence). •
13. Therapeutic monitoring of drugs (TDM). •
14. Pharmacokinetics of single, repeated and continual drug administration. •
15. Modes of drug action •
16. Synergism and antagonism in drug effect (pharmacokinetics, pharmacodynamics). •
17. Dose – response curves, types of doses, drug anamnesis, patient's adherence. •
18. Adverse drug reactions (types, categories, examples). •
19. Pharmacovigilance, drug safety. •
20. Influence of repeated administration (tolerance and tachyphylaxis) - examples. Primary resistance of the patient to the treatment. •
21. Factors influencing the drug effect – examples. •
22. Pharmacotherapy in elderly, the influence of co-morbidities on drug effect, polypharmacy. •
23. Pharmacotherapy in paediatric population, in breastfeeding women. Drugs influencing breast feeding. •
24. Pharmacotherapy in pregnancy, drug teratogenicity. •
25. Pharmacogenetics, influence of genetic polymorphisms on pharmacokinetics and pharmacodynamics of drugs. •
26. Pharmacokinetic drug interactions (desirable and undesirable) - overview, examples. •

27. Pharmacodynamic drug interactions (desirable and undesirable) - overview, examples. •

28. Principles of biological treatment – classification, technology, examples of clinical use. • • •

Special pharmacology: •

1. Sympathomimetics - overview of single classes and their indications, examples of drugs •
2. Sympatholytics - overview of single classes and their indications, examples of drugs •
3. Cholinomimetics •
4. Cholinolytics •
5. Antispasmodics - GIT + UGT •
6. Opioid analgesics •
7. NSAIDs, non-opioid analgesics, antimigraine agents •
8. Antiuratics, antirheumatics incl. DMARDs •
9. General anaesthetics •
10. Local anaesthetics •
11. Muscle relaxants •
12. Antidiabetics (except insulins) •
13. Insulins •
14. Analogues and antagonists of oestrogens, gestagens and androgens – their basic pharmacology; HRT, hormonal contraception •
15. Analogues and antagonists of H-P axis hormones used in pharmacology; uterotonics and tocolytics •
16. Glucocorticoids •
17. Immunostimulants + immunosuppressants (except glucocorticoids) •
18. Drugs used in osteoporosis, pharmacology of thyroid gland •
19. Antiasthmatics, drugs used in COPD •
20. Antitussives, mucoactive drugs •
21. H1 antihistamines •
22. Antipsychotics •
23. Drugs of neurodegenerative diseases (Parkinson's disease; dementia) •
24. Antidepressants - iMAO+SSRI+NDRI •
25. Antidepressants - tricyclic, NASSA, MASSA, SARI, SNRI, NARI, SMS •
26. Nootropics, cognitive enhancers •
27. Psychostimulants. Drugs used in ADHD. Psychotomimetics. •
28. Anticonvulsants •
29. Hypnotosedatives, anxiolytics •

30. Principles of antibacterial therapy – overview, modes of action, resistance, MIC, MBC •
31. Penicillins, carbapenems •
32. Cephalosporines, monobactams •
33. Tetracyclines + related ATBs, amphenicoles •
34. Macrolides and related ATBs, lincosamides •
35. Aminoglycosides, glycopeptides, polymyxins •
36. Sulphonamides, nitrofurans and nitroimidazoles •
37. Quinolones, antituberculotics •
38. Antimycotics •
39. Dermatologics – overview of classes, drugs and effects •
40. Antivirotics •
41. Antiemetic drugs, prokinetics, antivertigo drugs •
42. Laxatives, antidiarrhoics, drugs of infectious diarrhoeas •
43. Antiulcer agents, hepatoprotectives and drugs influencing the production and excretion of bile •
44. Drugs for non-specific inflammatory bowel disease •
45. Alkylating cytostatics and other drugs aiming on DNA in oncology •
46. Antimetabolites + hormonal therapy in oncology •
47. Targeted treatment in oncology •
48. Biological treatment of autoimmune diseases •
49. Hypolipidaemics, anti-obesity drugs •
50. Nitrates and other vasodilators •
51. Drugs targeting RAAS •
52. Diuretics and aldosterone antagonists •
53. Beta blockers + central antihypertensives •
54. Calcium channel blockers,  $\alpha$ 1-lytics •
55. Antiarrhythmics •
56. Positive inotropic drugs •
57. Antiplatelet agents, antianaemics •
58. Fibrinolytics, antifibrinolytics, haemostatics •
59. Anticoagulants •
60. Drugs causing addiction and substances used for treatment of addiction •

- 61. General principles of drug poisoning, specific antidotes and their mechanisms of action •
- 62. Drugs used in erectile dysfunction and BPH •
- 63. Antiglaucomatics and cycloplegics •

## Essential drugs

1. 5-fluorouracil •
2. acetylcysteine •
3. aciclovir •
4. allopurinol •
5. amphotericin B •
6. amiodarone •
7. amlodipine •
8. aprepitant •
9. atorvastatin •
10. atropine •
11. betahistine •
12. buprenorphine •
13. cefuroxime •
14. cetirizine •
15. ciprofloxacin •
16. cisplatin •
17. cyclophosphamide •
18. ciclosporin •
19. cyproterone •
20. dabigatran •
21. desflurane •
22. diazepam •
23. digoxin •
24. dobutamine •
25. doxazosin •
26. doxorubicin •
27. doxycycline •
28. empagliflozin •
29. enoxaparin •
30. escitalopram •

31. ethinylestradiol •
32. ezetimibe •
33. famotidine •
34. phenoxymethylpenicillin •
35. fenpiverinium/pitofenone •
36. fentanyl •
37. finasteride •
38. fluconazole •
39. furosemide •
40. gabapentin •
41. gentamicin •
42. haloperidol •
43. hexoprenaline •
44. ibuprofen •
45. imatinib •
46. indapamide •
47. indometacin •
48. interferons •
49. insulin analogues •
50. ipratropium-bromide •
51. isosorbide dinitrate •
52. carbamazepine •
53. caspofungin •
54. ketamine •
55. clarithromycin •
56. clopidogrel •
57. co-amoxicillin •
58. codeine •
59. cotrimoxazole •
60. acetalsalicylic acid •
61. valproic acid •

- 62. lactulose •
- 63. levodopa/carbidopa •
- 64. levonorgestrel •
- 65. lidocaine •
- 66. linagliptin •
- 67. lithium •
- 68. loperamide •
- 69. meropenem •
- 70. methadone •
- 71. metamizole •
- 72. metformin •
- 73. methyldopa •
- 74. metoclopramide •
- 75. metoprolol •
- 76. methotrexate •
- 77. methylphenidate •
- 78. mirtazapine •
- 79. morphine •
- 80. naloxone •
- 81. nimesulide •
- 82. nivolumab •
- 83. noradrenaline •
- 84. olanzapine •
- 85. ondansetron •
- 86. oxymetazoline •
- 87. oxytocin •
- 88. paclitaxel •
- 89. pantoprazole •
- 90. paracetamol •
- 91. perindopril •
- 92. pilocarpine •

- 93. piperacillin/tazobactam •
- 94. prednisone •
- 95. propofol •
- 96. rivaroxaban •
- 97. rivastigmine •
- 98. salbutamol •
- 99. sildenafil •
- 100. solifenacin •
- 101. spironolactone •
- 102. sumatriptan •
- 103. suxamethonium •
- 104. tamoxifen •
- 105. telmisartan •
- 106. tenofovir •
- 107. terbinafine •
- 108. tramadol •
- 109. trastuzumab •
- 110. vancomycin •
- 111. verapamil •
- 112. warfarin •
- 113. zolpidem