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THE FUNDAMENTAL SCIENTIFIC RESEARCHES BRANCH
“THEORY OF PHARMACOLOGY AND PHARMACEUTICS” (“TPHARMAC AND PHARMAC”)
OF “SEC “SFA CMT” OF “RA(M)S” N. A. ACAD. BURDENKO N.N.”

The developed “The fundamental scientific researches branch “Theory of pharmacology and pharmaceutics”” (“TPHARMAC and PHARMAC”) treats to the fundamental scientific researches divisions of “The scientific-educational centre “System and financial analysis based on cognitive modeling technology” of “RA(M)S” named after acad. Burdenko N.N.” (“SEC “SFA CMT” of “RA(M)S” n. a. acad. Burdenko N.N.” – SEC) as the first SEC in the structure of “SIO “Academy of cognitive natural sciences”” (“SIO “ACNS””) as the add. component of the system of science and education of the modern country for the creation, distribution and use of the main and derivative scientific results of the cognitive modeling technology (CMT) (www.vetrovan.(spb.)ru) [see the fundamental scientific researches branches and departments of SEC]:

- 1) it is executed by the principle of “administrative-economy submission”;
- 2) works in the several main directions, which allow to provide the development of the fundamental main and derivative scientific results (my second report on SRW from 2006-2008(9) y. was submitted to “SPbSETU “LETI”” and “The Government of RF” for the translation, carrying out of int. action and receiving of “The Nobel prize”);
- 3) includes the several various main divisions:
I. “The fundamental scientific researches department “Theory of pharmacology, pharmaco-epidemiology, pharmacy, bio-chemical pharmacology, clinical pharmacology, molecular pharmacology, pharmaco-genomics and experimental pharmacology”” (“TPHPH-EPPHB-CHPHCLPHMPHPH-G and EXPPH”) (*)
[the fundamental scientific researches in the area “Theoretical pharmacology” – the medical-biological science about the medicinal substances and their action on the organism (the science about the physiologically active substances), the theoretical bases of pharmacology, theory of pharmacology, methods and equipment for the pharmacological researches, theory of pharmaco-kinetics and pharmaco-dynamics of the drugs and substances, theory of molecular pharmacology, theory of bio-pharmacology, theory of cytological pharmacology, theory of embryological pharmacology, theory of genetic pharmacology, theory of virological pharmacology, theory of micro-biological pharmacology, theory of botanical pharmacology, theory of physiological pharmacology of the plants, theory of zoological pharmacology, theory of ecological pharmacology, theory of anthropology of pharmacology, theory of physiological pharmacology of the person and animals, theory of immunological pharmacology, theory of toxicological pharmacology, theory of radiation pharmacology, theory of space pharmacology, theory of bio-engineering pharmacology and the cognitive modeling technology in the theoretical pharmacology;

the fundamental scientific researches in the area “Theoretical pharmaco-epidemiology” – the synthetic area of knowledge for the studying of the application and action of the medicinal drugs on the large groups of people, the theoretical bases of pharmaco-epidemiology, theory of studying of the application and action of the medicinal drugs on the large groups of people, theory of the methodological apparatus of pharmaco-epidemiology (pharmacology and epidemiology), theory of pharmaco-supervision and the cognitive modeling technology in the theoretical pharmaco-epidemiology;

the fundamental scientific researches in the area “Theoretical pharmacy” – the complex of scientific-practical disciplines, studying the problems of creation, safety, research, storage, manufacture, dispensing and marketing of medicinal drugs, and also the search of the natural sources of the medicinal substances, the theoretical bases of pharmacy, theory of pharmaceutical chemistry, theory of the technology of synthesis of the pharmaceutical drugs and medicinal forms, theory of judicial chemistry, theory of pharmaco-gnosy, theory of the organization and economics of pharmacy, theory of military pharmacy and the cognitive modeling of technology in the theoretical pharmacy;

the fundamental scientific researches in the area “Theoretical bio-chemical pharmacology” – the direction in the modern clinical medicine, which is engaged in the creation of the genetic and metabolic certification of the impact of chemical compounds, including the drugs, on the biological organisms with the purpose of development of the principles of individual prevention and therapy, the theoretical bases of bio-chemical pharmacology, theory of system biology, theory of mathematical bio-physics, theory of regulation of hemostasis and thrombosis, theory of intra-cellular signaling, theory of self-organization, theory of regulation of mitosis, theory of development of protein micro-arrays, theory of devices for the diagnostic and the cognitive modeling technology in the theoretical bio-chemical pharmacology;

the fundamental scientific researches in the area “Theoretical clinical pharmacology” – the direction in the modern clinical medicine, which studying the impact of medicinal drugs on the organism of the sick person, the theoretical bases of clinical pharmacology, theory of the requirements to the testing of new pharmacological drugs, theory of development of the principles and methods of comprehensive study of the action of pharmacological drugs, theory of pharmaco-dynamics (the studying of a set of effects of the medicinal substance and its mechanisms of action), theory of pharmaco-kinetics (the studying of the ways of admission, distribution, bio-transformation and removal of medicinal drugs from the organism of the patient), theory of adverse reactions, theory of the features of action of the medicinal substances in the various conditions, theory of the interaction of drugs at their together application, theory of impact of the food on the pharmaco-kinetics of medicinal drugs, theory of pharmaco-genetics (the determining of the genetic bases of reactions of the organism on the medicinal drugs) and the cognitive modeling technology in the theoretical clinical pharmacology;

the fundamental scientific researches in the area “Theoretical molecular pharmacology” – the modern medical-biological scientific direction about the medicinal substances and their action on the organism on the molecular level (the scientific direction about the physiologically active substances, acting on the molecular level), the theoretical bases of molecular pharmacology, theory of molecular pharmacology, methods and equipment for the pharmacological researches on the molecular level, theory of pharmaco-kinetics and pharmaco-dynamics of the drugs and substances on the molecular level, theory of molecular pharmacology, theory of molecular bio-pharmacology, theory of cytological molecular pharmacology, theory of embryological molecular pharmacology, theory of genetic molecular pharmacology, theory of virological molecular pharmacology, theory of micro-biological molecular pharmacology, theory of botanical molecular pharmacology, theory of physiological molecular pharmacology of the plants, theory of zoological molecular pharmacology, theory of ecological molecular pharmacology, theory of anthropology of molecular pharmacology, theory of physiological molecular pharmacology of the person and animals, theory of immunological molecular pharmacology, theory of toxicological molecular pharmacology, theory of radiation molecular pharmacology, theory of space molecular pharmacology, theory of bio-engineering molecular pharmacology and the cognitive modeling technology in the theoretical molecular pharmacology;

the fundamental scientific researches in the area “Theoretical pharmaco-genomics” – the branch of pharmaceutics and pharmacology, which researching the impact of genetic variation of each person in his response on the certain medicinal drug (pharmaco-genomics links the expression of the particular gene or single-nucleotide polymorphism in the genome of person with the efficiency or toxicity of the medicinal drug in order, that to develop the rational means of optimizing of pharmaco-therapy), the theoretical bases of pharmaco-genomics, theory of pharmaco-genomics, theory of the genotypes of people, theory of providing of the maximal efficiency at the minimal side effects, theory of creation of “the personified medicine”, theory of optimizing of the genetic characteristics of person, theory of applied application of the genome of person, theory of research of the interaction of the single gene with the medicinal drugs, theory of treatment of the cancer of mammary gland, theory of treatment of the virus of deficiency of the immune system, theory of treatment of leukemia, theory of revealing of the potential adverse reactions in the response to the action of medicinal drugs and the cognitive modeling technology in the theoretical pharmaco-genomics;

the fundamental scientific researches in the area “Theoretical experimental pharmacology” – the modern medical-biological scientific direction about the experimental medicinal substances and their action on the organism (the scientific direction about the experimental physiologically active substances), the theoretical bases of experimental pharmacology, theory of experimental pharmacology, methods and equipment for the pharmacological experimental researches, theory of pharmaco-kinetics and pharmaco-dynamics of the experimental drugs and substances, theory of experimental molecular pharmacology, theory of experimental bio-pharmacology, theory of cytological experimental pharmacology, theory of embryological experimental pharmacology, theory of genetic experimental pharmacology, theory of virological experimental pharmacology, theory of micro-biological experimental pharmacology, theory of botanical experimental pharmacology, theory of physiological experimental pharmacology of the plants, theory of zoological experimental pharmacology, theory of ecological experimental pharmacology, theory of anthropology of experimental pharmacology, theory of physiological experimental pharmacology of the person and animals, theory of immunological experimental pharmacology, theory of toxicological experimental pharmacology, theory of radiation experimental pharmacology, theory of space experimental pharmacology, theory of bio-engineering experimental pharmacology and the cognitive modeling technology in the theoretical experimental pharmacology].

The fundamental scientific researches branches and departments of SEC allow to develop the main and derivative scientific results of CMT.

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“The Nobel committee” (The Kingdom of Norway and The Kingdom of Sweden)
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