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THE APPLIED SCIENTIFIC RESEARCHES DIRECTION  
“APPLICATIONS OF CLINICAL MEDICINE” (“APCLINM”)  
OF “SEC "SFA CMT" OF "RA(M)S" N. A. ACAD. BURDENKO N.N.” (PART 6)

The developed “The applied scientific researches direction “Applications of clinical medicine”” (“APCLINM”) treats to the applied 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 applied scientific researches directions 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 applied 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:  
XXII. “The applied scientific researches department “Applications of endocrinology (of the diseases of the internal organs and the disorders of hormonal cycles)”” (“APEND (DIO and DHC)”) (\*)  
*[ the applied scientific researches in area “ Applications of endocrinology ” – studies the hormones and their impact on the biological construct of the organism (of the person), usage of the theoretical bases of endocrinology, usage of theory of the structure and functions of the glands of internal secretion (of the endocrine glands), usage of theory of the products of the glands of internal secretion (of the hormones), usage of theory of the formation and action of the hormones on the organism of animals and person, usage of theory of diseases caused by the violation of function of the glands of internal secretion or hormones, usage of theory of disorders in the endocrine system, usage of theory of endocrine cardiology, usage of theory of endocrine oncology, usage of theory of endocrine ophthalmology, usage of theory of endocrine gastro-enterology, usage of theory of endocrine nephrology, usage of theory of endocrine neurology, usage of theory of endocrine gynecology and usage of the cognitive modeling technology in the applications of endocrinology].*

XXIII. “The applied scientific researches department “Applications of epidemiology (of the infectious diseases)”” (“APEPID (ID)” (\*) [ *the applied scientific researches in area “ Applications of epidemiology ”* – the general-medical scientific direction, studying the regularities of occurrence and spread of the diseases of various etiology with the purpose of development of the preventive actions (the premorbid prevention, primary prevention, secondary prevention and tertiary prevention), usage of the theoretical bases of epidemiology, usage of theory of the regularities of occurrence and spread of the diseases of various etiology, usage of theory of the development of preventive actions (the premorbid prevention, the primary, secondary and tertiary prevention), usage of theory of morbidity, usage of theory of regularities of the epidemic process, usage of theory of the population approach at the studying of the (non)infectious diseases, usage of theory of determining of the medical and social-economic significance of the disease and its place in the structure of the pathology of the population, usage of theory of studying of the regularities of spread of the disease over time (by the years and months), by the territory and among of the various groups of population (the age, sex and professional), usage of theory of revealing of the causes and conditions, determining the observed character of spread of the disease, usage of theory of developing of the recommendations for the optimizing of prevention, usage of theory of developing of the prediction of spread of the studied disease, usage of theory of the epidemiological methods (the observation, examination, the historical and geographical description, comparison, experiment, the statistical and logical analysis) and usage of the cognitive modeling technology in the applications of epidemiology].

XXIV. “The applied scientific researches department “Applications of surgery, cardio-vascular surgery, neuro-surgery, pediatric surgery, transplantology and artificial organs”” (“APSURGC-VSURGN-SURGPSESGT and AO”) (\*) [ *the applied scientific researches in area “ Applications of surgery ”* – the area of the clinical medicine, studying the acute and chronic diseases, which are treated by means of the operative (surgical) method, consisting of the several consecutive stages: the preparing of the patient to the surgery, anesthesia (narcosis), the surgery intervention and restoration of the integrity of the tissues, disturbed during the operation, usage of the theoretical bases of surgery, usage of theory of diagnostic operations, usage of theory of radical operations, usage of theory of palliative operations, usage of theory of emergency operations, usage of theory of urgent operations, usage of theory of scheduled operations, usage of theory of reconstructive surgery, usage of theory of minimally-invasive surgery, usage of theory of abdominal surgery, usage of theory of thoracic surgery, usage of theory of surgical urology, usage of theory of surgical andrology, usage of theory of surgical gynecology, usage of theory of neuro-surgery, usage of theory of surgical angiology, usage of theory of cardiac-surgery, usage of theory of surgical endocrinology, usage of theory of surgical traumatology, usage of theory of surgical orthopedics, usage of theory of plastic surgery, usage of theory of surgical combustiology, usage of theory of surgical transplantology, usage of theory of surgical ophthalmology, usage of theory of maxilla-facial surgery, usage of theory of purulent surgery, usage of theory of surgical oncology and usage of the cognitive modeling technology in the applications of surgery;

*the applied scientific researches in area "Applications of cardio-vascular surgery (cardiac-surgery and cardio-thoracic surgery)"* – the area of surgery and cardiology, eliminating the pathologies of the cardio-vascular system, usage of the theoretical bases of cardio-vascular surgery, usage of theory of the ways of treatment of the coronary disease of the heart, the infarction of myocardium and atherosclerosis, usage of theory of coronary bypass-surgery, usage of theory of transplantation of the heart, usage of theory of surgeries on the valves of the heart, usage of theory of the surgery of Bentall at the aneurysm of ascending aorta with the aortic insufficiency, usage of theory of the surgery "maze" at the fibrillation of auricles and usage of the cognitive modeling technology in the applications of cardio-vascular surgery;

*the applied scientific researches in area "Applications of neuro-surgery"* – the section of surgery, engaging in the questions of operative treatment of the diseases of the nervous system, including the head brain, spinal cord and the peripheral nervous system, usage of the theoretical bases of neuro-surgery, usage of theory of biological construct of the head brain and spinal cord, usage of theory of stereo-taxy, usage of theory of trepanation and usage of the cognitive modeling technology in the applications of neuro-surgery;

*the applied scientific researches in area "Applications of pediatric surgery"* – the area of the clinical medicine, studying the acute and chronic diseases of children, which are threatened at the help of the operative (surgical) method, usage of the theoretical bases of pediatric surgery, usage of theory of pediatric diagnostic operations, usage of theory of pediatric radical operations, usage of theory of pediatric palliative operations, usage of theory of pediatric emergency operations, usage of theory of pediatric urgent operations, usage of theory of pediatric scheduled operations, usage of theory of pediatric reconstructive surgery, usage of theory of pediatric minimally-invasive surgery, usage of theory of pediatric abdominal surgery, usage of theory of pediatric thoracic surgery, usage of theory of pediatric surgical urology, usage of theory of pediatric surgical andrology, usage of theory of pediatric surgical gynecology, usage of theory of pediatric neuro-surgery, usage of theory of pediatric surgical angiology, usage of theory of pediatric cardiac-surgery, usage of theory of pediatric surgical endocrinology, usage of theory of pediatric surgical traumatology, usage of theory of pediatric surgical orthopedics, usage of theory of pediatric plastic surgery, usage of theory of pediatric surgical combustiology, usage of theory of pediatric surgical transplantology, usage of theory of pediatric surgical ophthalmology, usage of theory of pediatric maxilla-facial surgery, usage of theory of pediatric purulent surgery, usage of theory of pediatric surgical oncology usage of the cognitive modeling technology in the applications of pediatric surgery;

*the applied scientific researches in area "Applications of transplantology"* – the section of the clinical medicine, studying the problems of transplantation of the organs (in particular, kidneys, liver and heart), and also the prospects of the creation of artificial organs, usage of the theoretical bases of transplantology, usage of theory of xeno-transplantation (of the transplantation of the organs and / or tissues from the animal of the another biological kind), usage of theory of allo-transplantation (transplantation, at which the donor of transplant is the genetically and immunologically another human organism), usage of theory of artificial organs, usage of theory of growth of organs from the stem cells, usage of theory of auto-transplantation (the recipient of transplant is his donor for himself) and usage of the cognitive modeling technology in the applications of transplantology;

*the applied scientific researches in area "Applications of artificial organs"* – the direction in the modern clinical medicine, which is engaged in the growing of organs of the biological construct of the organism, usage of the theoretical bases of artificial organs, usage of theory of promising bio-engineering technology, usage of theory of three-dimensional cell cultures (3D cell culture), usage of theory of organoids (organoids), usage of theory of studying and modeling of organo-genesis, usage of theory of modeling of tumors and various diseases, usage of theory of the technology of testing and screening on the organoids of the various medicinal drugs and toxic substances, usage of theory of experiments on the replacement of organs or the therapy of damaged organs by the transplants and usage of the cognitive modeling technology in the applications of artificial organs].

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