TOWARD THE TWENTY-FIFTH CONGRESS OF THE COMMUNIST PARTY OF THE SOVIET UNION

The previous (24th) Congress of the Communist Party of the Soviet Union set the country immense tasks on the domestic and foreign political fronts and confirmed the directives for the Five-Year Plan for development of the USSR national economy in 1971-1975. The scientists of the Soviet Union were presented with a task of tremendous importance, that of combining the achievements of the scientific and technological revolution with the advantages of the socialist system, of increasing the efficiency of scientific research, and of securing even closer interlinking of theory with practice. Among the most important tasks which the Congress presented to biology and medicine in the Five-Year Plan were the following: development of scientific research aimed primarily at the search for effective means of preventing and treating cardiovascular, oncological, and virus diseases, the creation of new physiologically active preparations, and the study of hereditary diseases.

The Soviet people is proudly aware that thanks to its selfless toil under wise leadership of the Communist Party, the tasks set by the Twenty-Fourth Congress have been fulfilled. Another important step has been taken along the road to the complete victory of communism in the USSR. Soviet scientists, including doctors and biologists, have made their own weighty contribution to this common victory.

The last five-year period has seen the further development of Soviet science. The creative union of labor and knowledge, about which the great Lenin dreamed, has been forged and given a new look. The view that science must assume the role of a direct productive force has become even more evident and confirmed by reality. Tremendous progress has been made in the development of heavy industry, new types of industry, and agriculture. The international prestige of the Soviet Union has increased and the brotherly union of the socialist countries has been strengthened. Successes in foreign policy and the lowering of tension in international relations are essential conditions for the further development of all the productive forces, including those of science, in the Soviet Union.

In the last year of the five-year period the scientific community of the USSR and of the world as a whole has celebrated an outstanding event, the 250th anniversary of foundation of the Academy of Sciences of the USSR. The jubilee session of the Academy of Sciences of the USSR reviewed achievements of Soviet science and testified to its increasing international prestige. The tremendous advances made by Soviet science since the Revolution are evidence of the exceptional role played by socialist society in creating conditions favorable for scientific progress, on the one hand, and the role played by science for the building of socialism and communism, on the other hand. In his speech to the jubilee session of the Academy of Sciences of the USSR, Comrade L. I. Brezhnev, General Secretary of the Central Committee of the CPSU said: "Socialism and science are indivisible, and this is one reason for the victory of communism. Only socialism has enabled the triumph of science to be used in the interests of the people and the potentials and talents which every people possess in abundance to flourish. And it is only on the basis of the latest advances in the natural and social sciences that socialism and communism can be successfully built [1].

Advances in science as a whole are made up of advances achieved in its various branches. In the last five-year period notable progress was made in the development of medical science, biology, and health care.

In the fields of cardiovascular physiology and pathology and clinical aspects of cardiovascular diseases, important facts have been obtained relative to the mechanisms of cardiac activity, mechanisms of heart failure, of essential hypertension, and of atherosclerosis; new schemes for the treatment of these diseases and also of heart defects, angina, cerebrovascular disturbances, and other conditions have been developed.

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In the field of oncology new data have been obtained on the mechanisms of carcinogenesis, the virogenic theory of malignant neoplasms has undergone further development, new ways of early diagnosis and treatment of tumors have been devised, and new approaches made to the study of resistance of the body to tumors. Much progress has been made in the fields of general and experimental virology and the study of the nature of viruses and their interaction with cellular structures; new species of pathogenic viruses have been discovered; the production of antiviral vaccines for the prevention of poliomyelitis, measles, smallpox, and other diseases has been improved and, as a result, the incidence of these diseases has been reduced many times over. A wide range of investigations devoted to the study of and search for physiologically active substances has led to the creation of many new therapeutic agents, the mechanisms of their action have been elucidated, and further developments of research in this direction have been outlined. Much of the previous backwardness in the study of problems in general genetics has now been overcome. New data have been obtained on mutagens, on the molecular mechanisms of genetic recombination, and on the mechanisms of DNA repair; some plasmatids have been identified, and their genetic behavior has been studied. Medical genetics has undergone rapid development: Progress has been made in the study of the organization of human chromosomes, much work has been done on the geography of many hereditary diseases, and a medical genetic counseling service has been organized.

Special attention has been paid to environmental health and hygiene and to practical efforts at controlling pollution of the human environment and the prevention of occupational diseases. Fresh advances have been made in the health services, many new hospitals have been opened, large hospital complexes have been built, highly qualified medical personnel have been trained, and new methods of examination and treatment introduced.

A raising of the general scientific and technical standards of the investigations, the use of new techniques, the performance of combined studies by specialists in different fields, a tendency toward the study of fundamental problems, the appearance of new growth points at the meeting points of different disciplines, a strong scientific-methodological basis for research, and a combination of synthetic generalizations with greater depth of analytical approach have been the characteristic features of the development of theoretical and experimental medicine and biology in the last decade. Fields such as molecular biology, space medicine and biology, and so on have developed rapidly.

Much of the material obtained by these investigations has been presented on the pages of this journal. During the last five years 2,350 papers on physiology, general pathology and pathological physiology, oncology, pharmacology, microbiology and immunology, biochemistry, morphology, and other experimental disciplines have been published in the "Bulletin of Experimental Biology and Medicine."

In the final year of the ninth five-year period the Academy of Medical Sciences of the USSR celebrated its thirtieth anniversary. Founded in June, 1944, when bitter fighting was in progress during the Second World War, the Academy of Medical Sciences of the USSR has grown into a powerful multidisciplinary scientific institution, tackling important scientific problems and training highly qualified scientific workers. Having trained about a thousand Doctors of Sciences and more than 3,600 Candidates of Sciences, the Academy of Medical Sciences has major scientific achievements to its credit on the occasion of the 25th Congress of the CPSU. A further considerable step has been taken by Soviet scientists in cooperation with their colleagues abroad in the combined study of current medical problems. This has been greatly facilitated by the lessening of international tension and the successful development of scientific and technical links with many countries. "I sincerely wish our own scientists and their colleagues abroad," said L. I. Brezhnev at the Jubilee meeting of the Academy of Sciences of the USSR, "fresh trimphs in all these great tasks so important to all peoples" [1]. The successful joint flight of the "Soyuz" and "Apollo" spacecraft, the tremendous work involved in preparation for this flight and during its course, have shown quite clearly what great progress can be made by combining the efforts of scientists from different countries in the solution of global scientific problems facing mankind in the 20th century.

In the draft of the Central Committee of the CPSU for the 25th Congress, the basic lines of development of the national economy of the USSR in 1976-1980 were laid down. Immense tasks associated with the rapid development of the Soviet Union in the next five-year period are set in this draft.

"The main task of the 10th five-year period, as stated in the draft of the Central Committee of the CPSU, is the methodical accomplishment of the course as laid down by the Communist Party for raising the material and cultural standard of living of the people on the basis of the dynamic and proportional development of the national production and the increasing of its efficiency, the acceleration of scientific and technical progress, the growth of productivity of labor, and a universal improvement in the quality of work in all sections of the national economy" [2].

Tasks of great importance and magnitude are also laid before Soviet scientists, including doctors and biologists.

In the 10th five-year period there must be an intensification of "research in the field of molecular biology, the physiological and biochemical basis of the activities of the human body in order to bring forward the solution to vital medical and biological problems to do with the control of cardiovascular, oncological, viral and occupational diseases, and diseases of the nervous system," and "research devoted to making working conditions better and healthier" must be continued [2]. The control of environmental pollution is an urgent task facing Soviet science.

Aware of the magnitude, immensity, and importance of these new tasks facing Soviet science, Soviet scientists, including doctors and biologists, will exert every effort to ensure that they fulfill these tasks with honor for the good of the Soviet peoples and of the peoples of the whole world, and will justify the great confidence placed in scientists in the Soviet Union by the Party and people.

LITERATURE CITED

1. Kommunist, No. 15, 4 (1975).
2. "Draft of the Central Committee of the CPSU for the 25th Congress. Main lines of development of the USSR national economy in 1976-1980," Pravda, December 14 (1975).