Sechenov himself worked. It is under the direction of P. K. Anokhin, who, with 29 scientific associates, is studying "anticipatory reflexes" and "systemogenesis." Here there is also work on the role of the reticular formation of the brain stem in the transmission of unconditioned excitation to the cerebral cortex. The laboratories have excellent equipment and there is the usual evidence of good morale among the group.

The Academy of Sciences also supports a number of other independent physiology research laboratories in Moscow. Thus E. A. Asratyan has a special laboratory for studying the effects of extirpation of the cerebral cortex on vegetative and somatic functions. At the Institute of Biophysics, G. M. Frank, L. P. Kayushin, and R. G. Ludkovska are investigating the change in structure and mechanical properties of nerves during the spread of excitation. At the Institute of Higher Nervous Activity, V. S. Rusinov is conducting electrophysiological research on dominant areas of the higher nervous system. There is much work with elaborate electroencephalographic equipment. The conventional microscopic equipment that we saw was of high quality, and all of it was manufactured in the Soviet Union.

The Ukrainian Academy of Sciences maintains an extensive Biochemical Institute under A. V. Palladine. Here studies are in progress on the chemical and metabolic aspects of various functional portions of the brain, on brain metabolism during ontogenesis, and on brain metabolism during excitation, inhibition, and hypoxia. At the Institute of Animal Physiology of Kiev State University, P. G. Kostyuk is making intracellular recordings of end-plate potentials in repeated nerve stimulation. At the Physiology Laboratory of Rostov State University, A. B. Kogan is studying the interrelationships of conditioned reflexes, motor activity, brain potentials, and excitability of cortical neurons in chronic experiments on free behavior in normal animals. The Georgia Academy of Sciences maintains an Institute of Physiology at Tbilissi, under A. I. Roitbak, who is working on bioelectric phenomena in the cerebral cortex produced by various methods of stimulation.

Soviet physiologists are keen workers and thinkers, however closely they may be oriented toward the Pavlovian canon. They and their pupils have ready access to the world's major physiological publications. There is a comprehensive annual indexing program for biological literature, which is the basis for documentation in ordinary periodical publication. For a time during World War II many of the biological contributions from the U.S.S.R. appeared in English. The country's biological periodicals cover the conventional range. In general scientific literature, Soviet scientists seem partial to *Nature, Science,* and *Experientia.* Most of the physiology workers have small private libraries.

It is interesting that Soviet experimental work in the biological fields has little statistical control. In physical experimentation, on the other hand, it is as conventionally used as anywhere. However, animals are handled with extreme care and solicitude. Since most of the physiological work is repeated experimentation with the same animals, they tend to become pets of the workers. Thus with relative uniformity of experimental material there may not be the variation that necessitates statistical control. But philosophic factors may also be involved.

Soviet physiologists are capable and efficient in their technical work. They are generous in their personal relations, and they seem to be anxious to have their efforts known and appreciated. They would welcome the chance for correspondence and personal contact with American and other Western physiologists.

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Mathematics Teaching Essay Contest

Kappa Mu Epsilon, national honorary mathematics society, and the AAAS Science Teaching Improvement Program are cooperating in the sponsorship of an essay contest on "Opportunities in teaching mathematics in secondary schools." Satisfactory essays will be published in *The Pentagon,* official publication of Kappa Mu Epsilon. First prize in the contest will be $50. There will be second and third prizes of $25 and $15, respectively.

The Mathematics Teaching Essay Contest is planned to increase interest in the teaching of mathematics at the secondary-school level by encouraging undergraduate students in mathematics to consider the advantages of a career in secondary-school mathematics teaching. It is hoped that the preparation, as well as the reading, of the essays may attract good students with an interest in mathematics to enter the teaching profession. The importance of the ability to express oneself in writing, particularly on the part of teachers, should also be emphasized by such an essay contest.

Essays submitted in the contest should reach Prof. Carl V. Fronabarger, Southwest Missouri State College, Springfield, Mo., *no later than 1 Apr. 1957.* They must be not more than 1000 words in length and should be typed double-spaced on a good grade of paper. Four copies should be submitted by each contestant. Undergraduate and graduate students in mathematics are eligible to enter the contest.

The content of the essay should be as specific as possible and should point out the advantages of preparation for the teaching of mathematics at the secondary-school level. The essay may consider one or more of the special facets of the profession of mathematics teaching, or it may cover the general area as completely as the length of the essay will permit. The essays will be judged on accuracy and objectivity of the data presented, the degree to which the essay appears to be convincing in the case presented for mathematics teaching, and composition and neatness.

Bacteriophages in the American Type Culture Collection

Bacteriophages have become research materials of major importance in such fields as genetics, biophysics, and biochemistry as well as microbiology. It should be of considerable interest, therefore, that the American Type Culture Collection now maintains a collection of some 150 strains of bacteriophages and their host bacteria. Included among the hosts are the following genera of bacteria: *Azotobacter, Bacillus, Corynebacterium, Escherichia, Salmonella, Shigella, Serratia, Micrococcus, Staphylococcus, Streptococcus, Mycobacterium, Pasteurella, Pseudomonas, Rhizobium, Vibrio, Xanthomonas,* and *Streptomyces.* A complete catalog of the collection is available on request (2112 M St., NW, Washington 7, D.C.). Each phage strain and its host are sold separately for $4 plus shipping costs.

The collection has been built up by generous gifts from a relatively few donors, the greatest number of strains having come from I. N. Asheshov. The curator, W. A. Clark, is very anxious to obtain additional strains and will welcome gifts from any source. Donors should send both phage and host strain to the ATCC, together with literature references to the strain, history of isolation, host range, strain designations if it has been described under various names, and any useful information about preparation and preservation of phage stocks. In the case of temperate phages, the lysogenic bacterium and the indicator host should be sent as well as the phage stock.

Much of the earlier phage literature has little meaning today, because the phage strains concerned have been lost and, in most cases, cannot be related taxonomically with any strains now available. Until a usable phage taxonomy can be developed, it is essential that all phage strains that have been the subject of pub-