The Institute of Contemporary Russian Studies

Fordham University
Bronx, N. Y. 10458

Series II

47p

Selected Abstracts

from

Soviet Biomedical Journals

No. 6

Prepared by

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Contract No.

DA 18-108-405-CML-867 (A)

July 1964

ABBREVIATIONS USED IN "SELECTED ABSTRACTS" - Series II, No. 6

Gig. i san.	Gigiena i sanitariia
Med. parazit.	Meditsinskaia parazitologiia i parizarnye bolezni
Sov. med.	Sovetskaia meditsina
Vop. virus.	Voprosy virusologii
Zh. mikrobiol.	Zhurnal mikrobiologii, epidemiologii i immunobiologii

Institutions

ATP	Advanced Training of Physicians
ASSR	Autonomous Soviet Socialist Republic
IEM	Institute of Epidemiology and Microbiology
IEMH	Institute of Epidemiology and Microbiology Hygiene
MH	Ministry of (Public) Health
MI	Medical Institute
RSFSR	Russian Soviet Federated Socialist Republic
SC	Scientific Conference
SSR	Soviet Socialist Republic
SR	Scientific Research
SRI	Scientific Research Institute
USSR	Union of Soviet Socialist Republics

863. Alekseev, A. N., Action of insecticides on fleas in relation to their sex and age. Med. parazit. 33 (1964) 1: 57-61. (From the Central Disinfecting Institute, MH, USSR.)

Working with Nosopsyllus consimilis, the author found that the sensitivity of this flea to DDT, hexachlorane and chlorofos varied in relation to the sex and age of the insects tested. Most resistant to the action of the insecticides were female fleas which had repeatedly deposited eggs and had ingested blood into their stomach.

864. Fedder, M. I. et al., Experience of the use of diethyl-toluamide in aerosol cylinders. Med. parazit. 33 (1964) 1: 61-63. (From the Central SR Disinfection Institute, MH, USSR.)

The authors obtained encouraging results against mosquitoes and gnats when dispersing the repellent diethyl-toluamide in the form of aerosols as recommended by Gilbert (J. Econ. Entomol. 50 [1957]: 66) and other foreign workers.

865. Nabokov, V. A. et al., Use of helicopters for the dusting of forest foci of tick-borne encephalitis. Med. parazit. 33 (1964) 1: 64-68. (From the Department of Toxicology and the Control of Arthropods of the E. I. Martsinovskii Institute of Medical Parasitology and Tropical Medicine and the State SR Institute of the Civilian Airfleet.)

Tests with a helicopter at a velocity of 30-35 km per hour in foci of tick-borne encephalitis gave most encouraging results. Whereas in the case of dusting from an airplane 50 kg of 10% DDT had to be used per hectare, this amount could be reduced to 20 kg/ha, if advantage was taken of a helicopter for the distribution of the insecticide.

866. IArotskii, L. S., Experience on the prevention of African trypanosomiasis with lomidine. Med. parazit. 33 (1964) 1:103-104. (From the Department of Epidemiology of the E. I. Martsinovskii Institute of Medical Parasitology and Tropical Medicine, MH, USSR.)

This note, dealing with experiences gathered by Soviet workers in Guinea, is quoted by title only.

867. List of noteworthy articles quoted in a reference list published in Med. parazit. 33 (1964) 1:112-115.

1) Boiko, V. A., Structure of the natural tick-borne encephalitis foci of the forest-steppe type in the Tatar ASSR. Materialy itog. n. konf. Kazansk. inst. epidemiol., mikrobiol. i gigieny (Work Papers for the SC of the Kazan IEMH, 1963): 59-62.

2) Boiko, V. A. and Trebinskii, V. I., Observations on the influence of the economical activity of man on the natural foci of tick-borne encephalitis in the forest-steppe zone of Tartary. Ibidem, 62-63.

3) Gil'manova, G. Kh. et al., Contributions to the study of tick-borne encephalitis in the Mari ASSR. Ibidem, 63-64.

4) Idem: Isolation of the tick-borne encephalitis virus from the mosquitoes Aedes communis and Aedes maculatus. Ibidem, 58-59.

5) Gil'manova, G. Kh. and Livanova, I. A., Improvement of the diagnostic value of the complement fixation test through the use of different strains of the tick-borne encephalitis virus. Ibidem, 53-54.

6) Lapshina, G. N. et al., Observations on the possibility of an infection with the tick-borne encephalitis virus through cow's milk. Ibidem, 57-58.

7) Lapshina, G. N. and Stepanov, K. D., Contribution to the study of the clinical and epidemiological peculiarities of tick-borne encephalitis in Tartary. Ibidem, 55-57.

8) Kadatskaia, K. P. and Shirova, L. F., Ixodes ticks and fleas in the tularemia focus of the Nakhichevan ASSR. Dokl. AN Azerbaidzh. SSR 19 (1963) 4: 79-83.

9) Kaliagin, Iu. S., Zoological and parasitological characterization of the Kuzedeev focus of tick-borne encephalitis in the Kemerovo Oblast. In: Piataia n. konf. Kemerovsk med. inst. (Fifth SC of the Kemerovo MI, 1963): 191-193.

10) Idem: Some data on the biology of the tick Ixodes persulcatus, the vector of tick-borne encephalitis in the Kuzbass. Ibidem, 193-195.

11) Sapel'nikova, L. I., Clinique of tick-borne encephalitis in the Kuzbass according to 1962 observations. Ibidem, 143-144.

12) Shapoval, A. N., Observations on the prospects of liquidating tick-borne encephalitis in our country. Ibidem, 19-20.

13) Karpov, S. P. and Fedorov, IU. V., Epidemiologiia i profilaktika kleshchevogo entsefalita (Epidemiology and Prophylaxis of Tick-Borne Encephalitis`. Tomsk, 1963, 228 pp.

14) Kozlov, E. M., Study of the action of chlorofos on ixodes ticks under laboratory conditions. Uchennye zapiski Kazanskogo veterin. inst. 89 (1962): 157-160.

15) Krashkevich, K. V. and Krivtsova, E. N., Action of repellents on the tick Ixodes ricinus L. Vestnik Moskovskogo universiteta, Ser.6: Biologiia pochvovedeniia (1963) 5: 16-19.

16) Lariukhin, M. A. et al., Results of a four years' fight against the vectors of tick-borne encephalitis in the Andzhero-Sudzhensk Raion of the Kemerovo Oblast by means of distribution of chemicals from airplanes. In: Voprosy meditsinskoi parazitologii (Medical Parasitology). Moscow, 1963, pp. 251-263.

17) Popov, V. F., Epidemiology of tick-borne encephalitis in the southern raions of the Kirov Oblast. Thesis, Moscow (1963).

18) Pchelkina, A. A., Observations on the sensitivity of the golden hamster to the virus of tick-borne encephalitis. Laboratornoe delo (1963) 10: 44-46.

19) Savitskii, B. P., Use of the hexachlorane smoking pot NBK (G-17) for the fight against the vectors of tick-borne encephalitis. Zdrav. Belorus. (1963) 8: 56-57.

20) Tatarinova, L. G., Characterization of the tick-borne encephalitis foci in the Primorsk Krai. Thesis, Vladivostok (1962).

21) Petrishcheva, P. A. et al., IAponskii entsefalit (Japanese Encephalitis.) Medgiz, Moscow, 1963, 180 pp.

22) Gvozdeva, I. V. et al., The new phosphoro-organic insecticide trichlormetaphos-3 in the practice of medical

disinsectization in the towns of Uzbekistan. Tezisy doklad. piatogo soveshch. vsesoiusn. entomol. obshest-va (Abstracts of Proceedings of 5th Meeting of the All-Soviet Society of Entomologists). Moscow-Leningrad, 1963, p. 166.

868. Loginova-Parina, N. V., Observations on the methodology of plaque-formation by the viruses of the tick-borne encephalitis group and some possibilities of its use. Vop. virus. 9 (1964) 1: 25-30. (From the Institute of Poliomyelitis and Virus Encephalitides, AMS, USSR, Moscow.)

This well documented and illustrated article does not lend itself to the purposes of a brief review.

869. Semenov, B. F. and Rezepova, A. I., A study of the nature of the hemagglutinating activity of the tick-borne encephalitis virus.
Vop. virus. 9 (1964) 1: 30-34.
(From the Moscow SRI of Virus Preparations.)

Evaluating their work, the authors stated that

> "The results presented in this paper show that the hemagglutinating properties of suspensions of the tick-borne encephalitis virus are more stable than their infectious properties. In connection with this, one may note some similarity between the hemagglutinins of the tick-borne encephalitis virus and those of other viruses, like the influenza and vaccinia viruses. But this similarity is not complete....
>
> In the course of the present studies it was not possible to effect a complete separation of the hemagglutinins and the infectious virus particles.... Still, one may postulate that the tick-borne encephalitis virus has a complicated structure. Evidently side by side with the infectious particles there exist corpuscles bringing about an agglutination of erythrocytes."

The authors considered as probable the thesis that various types of tick-borne encephalitis hemagglutinins exist.

870. Duan-Suan-myou: Production of not infectious hemagglutinins of the Japanese encephalitis virus.
Vop. virus. 9 (1964) 1: 35-39.
(From the D. I. Ivanovskii Institute of Virology, AMS, USSR.)

The author concluded that

(1) Ultra-violet irradiation, formol, methylene blue and beta-propiolactone destroy the tissue culture hemagglutinins of the Japanese encephalitis virus even in small doses, insufficient for a suppression of the infectivity of the virus.

(2) The hemagglutinins of the Japanese encephalitis virus obtained from tissue cultures are more resistant to a temperature of 37°C than those derived from the brain of infected mice.

(3) An exposure to a temperature of 37°C for 7 days may be recommended as a simple and adequate method of inactivating the infectiousity of the culture hemagglutinins of the Japanese encephalitis virus.

871. Obukhova, V. R., Methodology of a neutralization test for the detection of the antibodies against Japanese encephalitis in sheep embryo kidney tissue cultures.
Vop. virus. 9 (1964) 1: 39-42.
(From the D. I. Ivanovskii Institute of Virology, AMS, USSR, Moscow.)

As a result of the observations recorded in this article the author recommended sheep embryo kidney tissue cultures for the rapid detection and identification of the Japanese encephalitis virus.

872. Unanov, S. S. et al., Preliminary results of tests of the efficacy of the tissue culture vaccine against tick-borne encephalitis. Vop. virus. 9 (1964) 1: 42-47.
(From the Moscow SRI of Virus Preparations, MH, USSR and the Sanitary-Epidemiological Station of the Sverdlov Oblast.)

Using the tissue culture vaccine against tick-borne encephalitis in 1962 in the Sverdlov Oblast, the authors obtained the following results:

Groups	Number of Persons	Subsequent Incidence of the Disease Cases	Per 100,000 Population
Vaccinated (3 times)	14,341	4	2.8
Controls	13,443	16	11.8

The reactions produced by the vaccine were slight.

873. Gil'manova, G. Kh. et al., Observations on infections with the tick-borne encephalitis virus through cow's milk. Vop. virus. 9 (1964) 1: 47-49.
(From the Kazan SRI IEM and Hygiene.)

The authors made complement fixation tests among the inhabitants of four villages situated in the immediate vicinity of a tick-borne encephalitis focus, examining each person twice at an interval of 25-30 days. Tests were made in a total of 156 persons who were and remained apparently healthy and denied to have been bitten by ticks. The first group of 109 persons, consisting of inhabitants of three of the villages, used the milk of cows constantly exposed to tick attacks, while the second group of 47 persons consumed the milk of cows but rarely attacked by ticks. An increase of the complement fixation titers was detected in 31 persons of the first group (28.4 ± 4.3%), but only in 7 (14.8 ± 3.4%) of the second group. Among the 40 cows belonging to the first group virus-neutralizing antibodies were found in 33 (82.5 ± 6%), while among the 19 cows of the second group such tests gave a positive result in 9 instances (47.3 ± 11.4%).

On account of this evidence the authors postulated that latent tick-borne encephalitis infections could take place in people consuming the milk of cows affected by the disease.

874. Mastiukova, IU. N. et al., Observations on the mechanism of anti-smallpox immunity. Report II. Observations on the role of the leucocytes in anti-smallpox immunity. Observations on homogenates of the organs of infected animals. Vop. virus. 9 (1964) 1: 90-95.
(From the Moscow SRI of Virus Preparations.)

The conclusions reached by the authors of this study were that

"1. The neurovaccine virus, administered intraperitoneally to not vaccinated and immunized rabbits can be observed in the organs of the animals one hour after the infection. In the organs of not vaccinated animals the virus multiplies intensively, accumulates in considerable quantities and causes the death of the rabbits. In the organs of the immunized animals the virus is observed irregularly, in small quantities and only during the first few days.

2. In the spleen, the lymph nodes and the lungs of the immunized rabbits, which before administration of the virus contained a considerable amount of specific antibodies, one could observe a marked drop of the antibody level, changing later to an intensive antibody accumulation. The latter phenomenon coincided with the 'disappearance' of the virus from the organs.

3. These experimental findings permit to assume that the cells of the organs of immunized animals are capable of disintegrating the vaccinia virus; apparently a substantial role in this process is played by the specific antibodies."

(The first article of this series appeared in Voprosy virusologii, 1963, No. 4 - see Abstract No. 400, p. II/249.)

875. Gurvich, E. B., Influence of different temperatures on the viruses of the smallpox group in tissue cultures. Vop. virus 9 (1964) 1:116-118. (From the Moscow SRI of Virus Preparations.)

The author of this study postulated that the differences in the critical temperatures (above which a cytopathogenetic action is absent) existing between the smallpox and alastrim viruses on the one hand and the vaccinia and cowpox viruses on the other hand can be used for a differentiation of these pairs of viruses.

876. Karaseva, P. S. et al., The color test in tick-borne encephalitis. Vop. virus. 9 (1964) 1:119-120. (From the Moscow SRI of Virus Preparations.)

The author of this note, the details of which must be studied in the text, recommended the color test devised by Libikova and Vilecek (Acta virologica 3 [1959] 3: 181) for serological tests in tick-borne encephalitis.

Items quoted by title

377. Sokolov, M. I. and Podcherniaeva, R. IA., Hybridization of the influenza virus. Report III. Transfer of the infectious activity and the pathogenic, antigenic, immunogenic and cytopathogenic properties. Vop. virus. 9 (1964) 1: 50-57. (From the D. I. Ivanovskii Institute of Virology, AMS, USSR, Moscow.)

378. Lipovirus (Editorial). Vop. virus. 9 (1964) 1: 121.

379. Petrishcheva, P. A. et al., Review of [Japanese Encephalitis]. Book Vop. virus. 9 (1964) 1:122-123.

380. Pshenichnov, R. A. et al., Cultivation of some pathogenic rickettsiae on a cell-free polysynthetic nutrient medium. Zh. mikrobiol. (1964) 3: 3-7. (From the Perm Vaccine and Serum Institute and the Perm MI.)

As described in this article, the authors succeeded in cultivating R. quintana and the causative agents of paroxysmal rickettsiosis on a semi-synthetic medium, the base of which was formed by human blood, chicken egg-yolk and milk. Attempts to cultivate R. prowazeki on this medium were not crowned by full success but these organisms were found capable of surviving on the medium for at least one year and, as the authors claimed, showed some tendency to multiply on it.

381. Tarasevich, I. V., A contribution to the study of the causative organism of Tsutsugamushi fever. Zh. mikrobiol. (1963) 3: 11-14. (From the Gamaleia IEM, AMS, USSR.)

The author records the results of experimental infection of white mice with the causative organisms of tsutsugamushi fever, a disease which is not present in the Soviet Union.

882. Pers, I. F. and Zhdanova, L. G., Action of suprasonic sound on the biological properties of the bacteria of the intestinal group. Report II. Changes of the biochemical properties and the antigenic structure of shigellae and salmonellae under the influence of ultrasound. Zh. mikrobiol. (1964) 3: 27-33. (From the Moscow Mechnikov Vaccine and Serum Institute.)

883. Mikhailov, I. F. and Kovaleva, V. V., Peculiarities of the specific fluorescence of the S and R forms of bacteria stained with fluorescent antibodies. Zh. mikrobiol. (1964) 3: 33-39. (From the Tarasevich State Control Institute of Medical Biological Preparations.)

884. Akatova, N. S., Observations on the nature of the color fluorescence of bacterial cultures under oblique illumination. Zh. mikrobiol. (1964) 3: 51-56. (From the Tarasevich State Control Institute of Medical Biological Preparations.)

These three papers, dealing with observations on bacteria of the intestinal group, are quoted by title.

885. Emel'ianova, O. S., A contribution to the geographical variability of the tularemia bacillus. Zh. mikrobiol. (1964) 3: 7-11. (From the Gamaleia IEM, AMS, USSR.)

The author reported on investigations made with 20 tularemia strains isolated respectively in the Soviet Union (8), China (1), Poland (2), France (1) and the United States (8). All the Old World strains did not ferment glycerol and were mildly pathogenic for domestic rabbits but (except old laboratory strains) highly pathogenic for guinea-pigs and white mice. Identical properties were shown by two of the US strains, while the other six strains obtained from there were glycerol-positive and highly pathogenic for domestic rabbits.

Emel'ianova stressed that though the strains from France and Poland as well as three of the Soviet strains had been isolated from hares, they did not differ from the other Old World strains in their low pathogenicity for domestic rabbits. This contradicted the postulation of American authors that the tularemia strains circulating among the lagomorpha were characterized by a high pathogenicity for domestic rabbits (and also for man) while opposite features were shown by the strains of rodent origin.

The reactions to glycerol shown by the strains under test underwent no change when, owing to prolonged storage under laboratory conditions, the organisms in question had lost their virulence. The author maintained therefore that tests with glycerol were useful for a preliminary distinction between the "palearctic" and the New World strains of the tularemia bacillus.

886. Ananova, E. V. and Savel'eva, R. A., A contribution to the problem of the possibility of a penetration of the tularemia bacillus through the unbroken skin. Zh. mikrobiol. (1964) 3: 92-95. (From the Gamaleia IEM, AMS, USSR.)

Observations on guinea-pigs showed that the administration of one drop of a suspension of tularemia bacilli containing 1 billion organisms per ml to the shorn but unbroken skin led almost invariably to infection.

887. Pershin, G. N. et al., Antibacterial and anti-virus action of some lactons and lactams. Zh. mikrobiol. (1964) 3: 109-114. (From the Ordzonikidze All-Soviet SR Chemico-Pharmaceutical Institute and the Central SR Disinfection Institute.)

In vitro tests on a wide range of microorganisms showed that among the various lactons and lactams betapropiolactone was most effective.

888. Kirilenko, O. A., Observation on mixed experimental infection with tetanus and staphylococci. Zh. mikrobiol. (1964) 3:118-122. (From the Pirogov State MI, Odessa.)

Large-scale tests on white mice showed that the combined administration of tetanus bacilli and staphylococci produced infections of a more severe degree than those following the separate use of the two organisms.

889. Somov, G. P., Preparation of the corpuscular antigen of Dermacentroxenus sibiricus in human embryo tissue cultures. Zh. mikrobiol. (1964) 3:123-126. (From the Vladivostok IEM and Hygiene.)

Quoted by title.

890. Mukhopad, V. A. et al., Serological and epidemiological materials for the detection of Q-fever patients in the Khmelnitsk, Chernigov and Kiev Oblasts of the USSR. Authors' Summary. Zh. mikrobiol. (1964) 3: 140. (From the Kiev IEM, the Chernigov Municipal Infectious Diseases Hospital and the Sanitary-Epidemiological Station of the Chernigov Oblast.)

In the experience of the authors complement fixation tests with the sera of patients who had suffered from undefined febrile affections were useful for establishing the presence of Q-fever infections.

891. Dushina, O. P. et al., An instance of isolation of atypical brucellae from mice and allied species in the Checheno-Ingush Autonomous Republic. Authors' Summary. Zh. mikrobiol. (1964) 3:143-144. (From the Sanitary-Epidemiological Station of the Checheno-Ingush Republic.)

Though atypical, the 7 strains of brucellae isolated by the authors from voles and a domestic mouse appeared to be similar in their properties to Br. melitensis.

892. TSvetkova, E. M. and TSareva, S. A., Action of chlortetracycline on the resting cells of the tularemia bacillus. Antibiotiki 9 (1964) 3:225-227. (From the Tularemia Laboratory of the Department of Naturally Focal Diseases of the Gamaleia IEM, Moscow.)

The authors found that chlortetracycline, added in a concentration of 2,000 microgram per ml to a 2-days old tularemia culture and left in contact with the organisms for 24 hours at 4°-5°C exerted no bactericidal action.

White mice, subcutaneously infected with some organisms from such cultures died from tularemia after the same intervals as control animals infected with the parent culture.

893. Stefanov, Zh., Endemic nephritis in Bulgaria and a sanitary-epidemiological study of its etiology. Gig. i san. 29 (1964) 3: 43-49. (From the SR Institute of Sanitation and Hygiene, Sofia.)

As pointed out by the author of this article, the details of which must be studied in the original or in a translation, the problem of the etiology of the endemic nephritis met with in Bulgaria, Yugoslavia and Rumenia could thus far not be solved. Micro-elements of the water might play a role in the causation of the disease.

894. Andreeva-Galanina, E. TS. and Bruskin, Z. Z., The effect of the inhalation of oil aerosols on the body. A brief survey of the literature.
Gig. i san. 29 (1964) 3: 70-73.
(From the Department of the Hygiene of Labor and the Clinic of Occupational Diseases of the Leningrad Sanitary-Hygienic MI.)

This survey of the literature, in which 5 Soviet publications and 17 foreign articles are dealt with, can be quoted by title only.

895. Pertsovskaia, M. I., Bacterial self-purification of the soil under the conditions of the extreme north.
Gig. i san. 29 (1964) 3: 97-99.
(From the Sysin Institute of General and Communal Hygiene, AMS, USSR.)

The self-purifying action of the soil under the conditions of the polar summer was found effective enough to permit the use of liquid manure for agricultural purposes.

896. Vasil'eva, V. L., Presence of tick-borne encephalitis foci in the territory of the Kiev, Chernigorsk and Zhitomir Oblasts. Vrachebnoe delo (1964) 3: 98-102.
(From the Kiev IEM.)

The presence of tick-borne encephalitis foci in the Zhitomir and Chernigov oblasts was suggested by (a) the isolation of five strains of neurotropic viruses from ticks (Ixodes ricinus and Dermacentor pictus) which partly showed features corresponding to those of the tick-borne encephalitis virus; (b) the presence of complement-fixing antibodies against tick-borne encephalitis in 12 out of 49 persons who had suffered from neurotropic affections; and (c) the demonstration of such antibodies in the sera of cattle collected in a number of raions of the Zhitomir Oblast.

897. Makarovskaia, E. I. (Kiev), Changes of the central nervous system due to poisoning with DDT.
Vrachebnoe delo (1964) 3:117-121.
(From the Institute of Labor Hygiene and Occupational Diseases.)

The results obtained by the author in white rats and cats experimentally poisoned with DDT must be studied in the text of her article.

898. Samovich, N. V. (Perm), Circinate erythema in tick-borne encephalitis. Sov. med. 27 (1964) 3:130-134.

Quoted by title.

899. Serebrennikova, G. P., Changeability of the clinical picture of tick-borne encephalitis contracted through alimentary infection. Sov. med. 27 (1964) 3:134-136.
(From the Nervous Diseases Clinic of the Perm MI.)

The author concluded her study by stating that

> "We wrote in our previous publication that the alimentary infection with the tick-borne encephalitis virus manifests itself in the form of a meningeal syndrome with an inconsiderable involvement of the brain tissue; according to our previous data this form ended in recovery.
>
> Our last observations showed that infections contracted by this route may take a more serious course with an involvement not only of the meningeal membranes but also of the substance of the brain.... This form of the disease may also assume a progressive character, gradually rendering the patient an invalid."

900. Erkhov, I. S. et al., Observations on the cerebrospinal fluid in the acute stage of tick-borne encephalitis. Annotation. Sov. med. 27 (1964): 139-140.
(From the Nervous Diseases Clinic of the Perm MI.)

Out of the 281 patients observed by the authors 220 suffered from the meningeal form of tick-borne encephalitis. During the acute stage the cerebrospinal fluid was mostly under

an increased pressure. The cell content was normal in 56.3%, moderately increased in most of the other patients, exceedingly high in 3.1%. The protein content of the liquor was increased in only 6.4% of the specimens. In 59.4% one could note during the acute stage of the disease an increase of the sugar content. The chloride concentration was sometimes increased but more often normal and most frequently decreased. If the disease ran its course in a two-wave form, the liquor showed changes from the normal only during the second phase.

901. Svet-Moldavskaia, IA. and Akatova, E. M., Vaccinal immunity to smallpox. Vop. virus. 9 (1964) 2:131-136. (From the Moscow SRI of Vaccinal Preparations.)

In the conclusion to their survey, in which they quoted 42 publications dealing with the problem of vaccinal immunity to smallpox, the authors stated that

> "All that has been discussed above shows that the true nature of the immunity to smallpox as well as that of the immunity to other virus infections has not yet been established.
>
> In the opinion of Collier and Schoenfeld (Med. J. Australia 2 [1950]: 363), neither the skin reaction to re-vaccination nor any of the known serological reactions demonstrate the true immunity to smallpox, being merely external manifestations of the reaction of the body to a second encounter with the virus.
>
> Whether this opinion will remain acceptable, will be shown by the future. At present the indispensability of a careful epidemiological and experimental investigation of this problem is obvious. In our opinion it is of great promise to study the role of the different cell systems of the body in the formation of the smallpox immunity.
>
> Of great interest is the role of reactions of a retarded type, i. e. immunity reactions in which a part is taken not by the serum antibodies but immediately by the cells of the lymphoid system."

902. Mastiukova, IU. N. and Sumarkov, A. A., Observations on the mechanism of anti-smallpox immunity. Report III. The role of the leucocytes in anti-smallpox immunity. In vitro experiments.* Vop. virus. 9 (1964) 2:137-142. (From the Moscow SR IEM.)

Summarizing the results of their observations the authors stated that the various kinds of phagocytes markedly differ in their potential function against the vaccinia virus. Under the conditions of their experiments the polymorphonuclear neutrophils of non-vaccinated rabbits were incapable of disintegrating the virus and did not acquire this property as a result of the immunization of the animals. On the contrary the functional possibilities of the mononuclear leucocytes markedly increased during the process of immunological transformation of the body, as manifested by the capability of these cells not only to fix but to disintegrate the virus.

The investigations of the authors furnished no answer to the question what kind of the mononuclears effects the disintegration of the virus. However, the results obtained clearly demonstrated the great importance of phagocytosis in the specific insusceptibility to virus infections. It is indicated, therefore, to make ample use of the cytological method for the study of the immunity against virus infections.

903. Solov'ev, V. D. et al., Observations on the mechanism of immunity to smallpox. Report IV. Antibody production in the development of the specific insusceptibility. Vop. virus. 9 (1964) 2:143-148. (From the Department of Virology of the Central Institute for ATP and the Moscow SR IEM, MH, RSFSR.)

In the conclusions to this article it is stated that

(1) The synthesis of the anti-smallpox antibodies takes place in the organs rich in lymphoid tissue - the spleen and the lymph nodes.

(2) The formation of the anti-smallpox antibodies is closely dependent upon the method of introduction of the virus and its dose.... The maximal amount of antibodies is produced after intravenous immunization which leads to antibody production in all lymph nodes and in the spleen; production

* For reviews of the first two parts of these studies see Abstract Nos. 400 and 874.

of the antibodies is minimal after intracutaneous administration of the virus, specially of small doses, when regularly antibodies are produced only in the regional lymph nodes.

(3) The formation of a humoral anti-smallpox immunity is subject to the same laws and is effected by the same mechanisms as the immunological transformation in bacterial infections. In both cases the lymphoid tissue is the immunologically active agent.

904. Chernos, V. I. and Gendon, IU. Z., Contributions to the study of the mechanism of the phenomenon of reactivation in the viruses of the smallpox group. Vop. virus. 9 (1964) 2:148-154. (From the Moscow SRI of Virus Preparations.)

The authors of this article, the complete contents of which must be studied in the original or in a translation, found that at a temperature of 56°C a complete inactivation of the vaccinia virus took place after 40-50 minutes but that the virus kept at that temperature for 15 hours was still capable of a reactivation with ectromelia virus. At a temperature of 60°C the vaccinia virus became inactivated already after 8-10 minutes and, if kept at this temperature, could be reactivated only after 5 hours. Temperatures of 70° or 80°C destroyed the activity of the virus within one minute and reactivation was impossible.

905. Peterson, O. P. et al., Interaction of the vaccinia virus with the tissue culture cells. Vop. virus. 9 (1964) 2: 154-158. (From the D. I. Ivanovskii Institute of Virology, AMS, USSR and the Department of Medical Radiology of the Central Institute for ATP, Moscow.)

This article can be quoted by title only.

906. Mel'nikova, E. E. and TSirkin, IU. M., Use of the cultural complement-fixing diagnosticum for the examination of the sera of tick-borne encephalitis patients. Vop. virus. 9 (1964) 2:158-162. (From the D. I. Ivanovskii Institute of Virology, AMS, USSR and the E. I. Martsinovskii Institute of Medical Parasitology and Helminthology, Moscow.)

As described in this article, an antigen prepared by growing the virus of tick-borne encephalitis in tissue cultures of sheep embryo kidney epithelium proved fully suitable for complement fixation tests.

907. Vigovskii, A. V. (L'vov), Isolation of the tick-borne encephalitis virus from a patient in the Western part of the Ukraine. Vop. virus. 9 (1964) 2:163-166.

As stated with much detail, it had been possible for the first time to isolate a strain of the tick-borne encephalitis virus from a patient in the western part of the Ukraine.

908. Noteworthy articles published in Trudy nauchno-issledovatel'skogo protivochumnogo instituta Kavkaza i Zakavkaz'ia (Transactions of the Caucasian and Transcaucasian Anti-Plague Institute), Vypusk 5 (1961). Parasitological problems.

1) Labunets, N. F. and Sardar, E. A., Investigation of the fleas of the small suslik in the Dagestan plague focus. Pp. 5-18.

During a plague epizootic taking place in 1951-1952 in the Terek-Sulak plains the authors isolated 257 plague strains from fleas - 119 from Neopsylla setosa, 109 from Nosopsyllus tesquorum, 1 from Frontopsylla semura and 28 from unidentified fleas.

2) Flegontova, A. A. and Malafeeva, L. S., Role of the human fleas Pulex irritans L. in the transmission of plague. Pp. 19-27.

The authors summarized that P. irritans

> "has to be classed among the efficient plague vectors and, parasitizing on man and massively infesting his habitations, can play a considerable role in the epidemiology of bubonic plague."

3) Kunitskaia, N. T., Fleas met with in the burrow entrances of the gerbils of the Eastern Cis-Caucasus. Pp. 90-97.

The species collected by the author comprised (a) the gerbil fleas Nosopsyllus laeviceps, Stenoponia vlasovi and

Coptospylla bairamaliensis; (b) the suslik fleas Neopsylla setosa and Nosopsylla tesquorum; and (c) Mesopsylla hebes, Rhadinopsylla acuminata and P. irritans.

4) Labunets, N. F., Some data on the ecology of the suslik fleas in the Armenian SSR. Pp. 119-126.

The species met with were mainly Neopsylla setosa hajastanica, Nosopsyllus transcaucasicus, Oropsylla ilovaiskii and Ctenophthalmus teres - all specific fleas of the small suslik (Citellus pygmaeus).

5) Labunets, N. F., Observations on the flea fauna of Dagestan. Pp. 127-137.

This article, enumerating 47 fleas species, can be mentioned by title only.

6) Labunets, N. F., New fleas from Mongolia. Pp. 191-198.

This article contains descriptions and drawings of Paradoxopsyllus kalabukhovi sp. nov. from gerbils, Rhadinopsylla dahurica sila ssp. nov., mainly from Ochotona daurica and Ophthalmopsylla praefecta ecphora ssp. nov. from Siberian jerboas.

7) Labunets, N. F., Amphipsylla transcaucasica - a flea of the mouse-like hamster. Pp. 199-202.

Description of a flea found on the Transcaucasian hamster Calomyscus bailwardi Thomas, 1905.

8) Kunitskii, V. N. and Kunitskaia, N. T., A new species of flea - Ceratophyllus mikulini sp. nov. - from Transcaucasia. Pp. 203-205.

Description of a new flea collected in the burrows of Meriones erythrourus which according to the author belonged to the subgenus Nosopsyllus of the genus Ceratophyllus.

9) Rybin, S. N., A new flea - Nycteridopsylla oligochaeta sp. nov. of Barbastella darjelingensis Dobs. Pp. 206-210.

Description of a new flea found near Osh in Kirghizia.

10) Guseva, A. A. and Zamakhaeva, E. I., Experimental infection of the tick Dermacentor marginatus Sulz. with brucellosis. Pp. 211-214.

The authors found that it was possible to infect D. marginatus ticks in all stages of their development by letting them feed on heavily brucellosis-infected small susliks. A carry-over of the infection during the processes of metamorphosis of the ticks was observed in a number of instances but no transovarian transmission of the disease was observed.

11) Ter-Vartanov et al., Remarks to the theses of the report by I. IA. Lavrovskii and IA. F. Shatas entitled "An analysis of the present grouping of animals in the Sulak-Terek plains and the factors conditioning the penetration of plague epizootics into Dagestan." Pp. 301-304.

Poleminzing against the statements made by Lavrovskii and Shatas in regard to the 1951-1952 plague epizootic in Dagestan the present authors asserted that in this outbreak Citellus pygmaeus was the fundamental reservoir of the infection while Meriones tamariscinus played a secondary role.

12) Tiflov, V. E., Bibliography of the fleas in the Soviet Union. Third supplement. Pp. 305-328.

This valuable collection contains 354 references to articles on fleas published since 1956 when the second supplement was published in the first report of the Stavropol Anti-Plague Institute of the Caucasus and Transcaucasus.

909. Gagarina, A. V. et al., Preparation of a non-encephalitogenic formolized vaccine against tick-borne encephalitis. Vop. virus. 9 (1964) 2:167-169.
(From the Institute of Poliomyelitis and Virus Encephalitides, AMS, USSR, Moscow.)

The authors found that (a) the tick-borne encephalitis virus multiplied intensively in the brain of suckling rats and (b) the infected brain tissue of these animals did not produce parases, paralysis or disturbances of the coordination in guinea-pigs.

Formolized vaccines prepared from the brain of suckling rats infected with tick-borne encephalitis virus proved immunogenic when tested in white mice.

910. Semenov, B. F. et al., Observations on the presence of spontaneous viruses resembling the tick-borne encephalitis virus in white mice. Vop. virus. 9 (1964) 2:169-173.
(From the Moscow SRI of Virus Preparations.)

The authors were able to isolate from laboratory mice 4 neurotropic virus strains which were neutralized by sera raised against the tick-borne encephalitis virus. Three of the strains were pathogenic for such animals when administered intracerebrally, intraperitoneally or subcutaneously while the fourth strain caused no infection when given by the last mentioned route. Guinea-pigs were susceptible to all four strains, monkeys only to one of them. White rats, rabbits and chicken did not fall ill when intracerebrally infected with the strains. The alterations caused by them in the nervous system of the test animals showed individual differences.

11. Shevtsova, Z. V., Observations on the cause of the lowering of the natural resistance to the live brucellosis vaccine in irradiated animals.
Zh. mikrobiol. (1964) 4:100-105.
(From the Gamaleia IEM, AMS, USSR.)

The author found that the administration of live or heat-killed cultures of the vaccinal strain Br. abortus 19-BA or of the endotoxin obtained from such cultures led to an increased mortality in irradiated animals. Since neither the multiplication rate of the brucellae nor their residual virulence showed an increase in the irradiated animals, their lowered resistance seemed to be the result of an increased sensitivity to the brucellar endotoxin.

12. Savel'eva, R. A., An experimental study of simultaneous vaccination against tularemia and tuberculosis.
Zh. mikrobiol. (1964) 4:118-124.
(From the Gamaleia IEM, AMS, USSR.)

Since BCG vaccinations are obligatory in the Soviet Union and about 10 million people are immunized against tularemia per year, it was of great practical importance to find out whether the first vaccination against tularemia, made at the age of 7 years, could be administered simultaneously with the second re-vaccination against tuberculosis.

In an earlier publication reviewed on page II/444 of these abstracts, Khatenever had furnished evidence that, as far as the creation of an immunity against tuberculosis was concerned, the simultaneous use of BCG and tularemia vaccine was permissible.

Reporting now on the state of immunity against tularemia in guinea-pigs subjected to simultaneous vaccination against this infection and tuberculosis, Savel'eva summarized that

(1) Simultaneous cutaneous inoculation against tularemia and tuberculosis, administered separately or in combination, creates in guinea-pigs a high degree of immunity against tularemia as demonstrated by the resistance of the animals to challenge with 1,000 lethal doses of a virulent tularemia strain.

(2) The local and general reactions in the simultaneously immunized animals were practically no different from those caused by the administration of the corresponding monovaccines.

(3) As far as observed the length of time for which the animals inoculated simultaneously remained immune against tularemia was the same as in those immunized with tularemia vaccine alone.

Like Khatenever the author recommended, therefore, to explore the possibility of a simultaneous immunization against tularemia and tuberculosis in the human population.

913. Kupenov, N. et al., A natural tularemia focus in Bulgaria. Zh. mikrobiol. (1964) 4:124-131.
(From the Department of Military Epidemiology and Hygiene of the Sofia Advanced Military-Medical Institute.)

Discussing the possibilities of the origin of a natural tularemia focus detected in 1961 in the district of the Srebyrna Lake near Silistria (Bulgaria), the authors made the following interesting statement:

"On the one hand one could admit that the infection was imported in 1956 from the Soviet Union through musk-rats which, as established by us, are the fundamental reservoir of the infection in the focus. However, this view could be accepted only if one admits a break of conditions of the international convention which foresees an isolation of animals destined for export into another country for a

stipulated quarantine period. It must be emphasized that during transit no epizootic was observed among the musk-rats.

It is possible on the other hand that the natural tularemia focus existed earlier but remained undetected owing to the insufficient attention it received on the part of the medical authorities. The mass multiplication of the highly tularemia-susceptible musk-rats in the area set aside for their breeding created with 5-6 years conditions facilitating the development of a massive epizootic and the special interest paid to these animals in our investigations accelerated the detection of the focus. The validity of this postulation is supported by the presence of some attacks in the human population which, as shown by their history and agglutination titers, might date back for a decade."

The authors favored, therefore, the second hypothesis. In their opinion the conditions for a continued activity of the focus were favorable and the possibility of a spread of the infection to other parts of Bulgaria could not be excluded.

914. Shtel'man, A. I., The effect of cortisone and other preparations on the course of the infectious process and on the diagnosis of plague in tamarisk gerbils from the Volga-Ural interfluvial area. Author's Summary. Zh. mikrobiol. (1964) 4:136-137. (From the Astrakhan Anti-Plague Station MH, USSR.)

In order to study the influence of cortisone on infection with P. pestis, the author worked with 26 tamarisk gerbils which had survived inoculation with a virulent plague strain. Half of the animals had withstood infection with doses ranging from 10 to 10,000 organisms, the second half infection with minimal doses.

The animals of the first group were given 20 micrograms of Dutch cortisone-adrezone 41 days after the infection. One animal succumbed after this administration; the other 12 gerbils were sacrificed at varying intervals

and bacteriologically examined. As a result from five animals killed 61 days after infection single plague colonies could be isolated from regional lymph nodes, the spleen and the liver.

The 13 gerbils of the second group were re-infected 45 days after the initial infection with sublethal doses (10 organisms) of the same plague strain. Seven days after the re-infection 9 of the animals received 25 microgram doses of the cortisone preparation while four were used as controls. Out of the cortisone-treated animals 3, sacrificed 15 days after re-infection, yielded plague cultures - one from all organs and the blood, the two others single colonies from the spleen only. From a 4th animal, sacrificed 21 days after the re-infection, five plague colonies were isolated from the spleen.

Of the control animals one succumbed on the 9th day after re-infection to generalized plague, while the other three, sacrificed 15-21 days after the re-infection were found to be unaffected.

Thus, the author summarized,

> "in a gerbil sacrificed 15 days after infection as a result of cortisone administration a general plague process was observed, while in 8 animals for the first time a long survival of P. pestis (15-16 days) was detected."

Trials were also made to lower the resistance to plague infection with the aid of egg-yolk suspensions and semi-solid agar. 138 tamarisk gerbils were used for this purpose, while 80 white mice served as controls. Both species were infected with sublethal doses of P. pestis. The animals treated with the egg-yolk suspension began to die en masse 2-3 days after infection and all had succumbed on the 4th or 5th day following the infection.

Semi-solid agar proved but slightly effective and sometimes even prolonged the life of the test animals.

The author recommended the use of cortisone in doses of 20-25 micrograms for the detection of a latent plague infection. Egg-yolk suspensions could be used with advantage in animals experimentally plague-infected for diagnostic purposes.

915. L'vov, D. K., Review of the book by S. P. Karpov and IU. F. Fedorov Epidemiologiia profilaktika kleshchevogo

entsefalita (Epidemiology and Prophylaxis of Tick-Borne Encephalitis). Tomsk, 1963.
Zh. mikrobiol. (1964) 4:149-150.

The reviewer expresses in general a most favorable opinion of this apparently brief compilation.

916. Anonymous: To the memory of Boris IAkovlevich El'bert. Zh. mikrobiol. (1964) 4:151-152.

This obituary for Professor El'bert who at 73 died in December 1963, states inter alia that

> "From 1932 to 1945 B. IA. El'bert together with N. A. Gaiskii undertook valuable researches in the realm of the pathology, immunology and vaccine prophylaxis of tularemia. As a result of this work a live tularemia vaccine was devised and the cutaneous method of immunization against this infection was worked out and introduced into practice. For this work El'bert and Gaiskii received a State premium."

917. Morgunov, I. N. et al., The mechanism of the potentiation of the antigenic action of toxoid by the toxin. Report I. Specificity of the potentiating action of the toxin. Zh. mikrobiol. (1964) 4: 40-45.
(From the Kiev IEM and the Kiev Bogomolets MI.)

This article which records observations with the diphtheria toxin and anatoxin can be quoted by title only.

918. Levashev, V. S. and TSilinskii, IA. IA., Contamination of tissue cultures by pleuropneumonia-like organisms. Zh. mikrobiol. (1964) 4:115-118.
(From the Gamaleia IEM and the Institute of Poliomyelitis and Virus Encephalitides, AMS, USSR.)

Subcultures of the strains Detroit-6, HLS, KB, Hep-2, ERK, He La, APO and the amniotic FL cells were found to be contaminated with pleuropneumonia-like organisms. It was possible to purify the growths with the aid of mycerin.

919. Grishina, O. S., A study of the air contamination in hospital wards by bacteria of the intestinal group.

Author's Summary. Zh. mikrobiol. (1964) 4: 137. (From the L'vov IEMH.)

The conclusion reached by the author of this note was that

> "The almost regular observation of enteropathogenic intestinal bacteria in the air of the hospital wards for children permits the postulate that in the prophylaxis of hospital infections with coli-enteritis it is indispensable to pay attention to the possibility of a dissemination of the causative organisms by the aerial route."

920. Mitel'man, P. M. et al., The reactogenicity and immunological efficacy of a new adsorbed soluble pertussis-diphtheria-tetanus vaccine. Zh. mikrobiol. (1964) 4: 70-73. (From the Mechnikov Institute for Vaccine and Serum, Khar'kov.)

This article is quoted by title.

921. Petrisheva, P. A. et al., Blood-sucking mosquitoes as a possible link in the circulation of the tick-borne encephalitis virus. Med. parazit. 33 (1964) 2:132-135. (From the N. F. Gamaleia IEM, AMS, USSR.)

As can be gathered from this article, attempts to transmit directly the tick-borne encephalitis virus from experimentally infected to healthy white mice through bites of the mosquito Aedes punctor met with no success. However, in some of the latter animals serological tests showed the presence of antibodies to the infection. Identical results were obtained when crushed mosquitoes were rubbed into the scarified skin of healthy white mice.

As shown by passage experiments in white mice injected subcutaneously and intracerebrally, mosquitoes which had ingested the tick-borne encephalitis virus were capable of harboring it for periods of up to 18 days (limit of observation).

On account of these observations the authors postulated that (a) under certain conditions mosquitoes may act

as vectors of tick-borne encephalitis and (b) these insects may take part in producing under natural conditions an insusceptibility to the infection. The authors noted in the latter connection that in the northern zones of the Soviet Union, where ticks are absent, antibodies to tick-borne encephalitis could be demonstrated in 30% of the human population.

922. Netskii, G. I. and Shaiman, M. S., Observations on the distribution and relationships between the foci of tick-borne encephalitis, North-Asian tick-borne typhus and Q-fever in Western Siberia.
Med. parazit. 33 (1964) 2:136-141.
(From the Omsk SRI of Naturally Focal Infections, MH, RSFSR.)

As stated in this well documented article, the contents of which do not lend themselves to a brief analysis, common foci of the three infections named in the title exist in large parts of Western Siberia infected with ixodes ticks.

923. Nikitina, N. A. and Aristova, V. A., Observations on the protective reactions of rodents against ticks.
Med. parazit. 33 (1964) 2:141-144.
(From the Department of Naturally Focal Infections of the N. F. Gamaleia IEM.)

Experiments with Ixodes persulcatus larvae led the authors to the conclusion that apparently in rodents exposed to tick attacks reflexes and mechanisms develop which protect the animals against further tick aggressions.

924. Morozov, IU. V., Observations on the time and mode of infection of animals with the tick-borne encephalitis virus in the natural foci of this infection.
Med. parazit. 33 (1964) 2:145-151.
(From the Central SR Disinfection Institute, Moscow.)

This well documented article does not lend itself to the purposes of a brief review.

925. Gil'manova, G. Kh. et al., Participation of the gamasides in the circulation of the tick-borne encephalitis virus in the natural foci of the Tatar ASSR.
Med. parazit. 33 (1964) 2:157-161.
(From the Kazan SR IEMH.)

The authors found mites of the species Haemogamasus nidi and probably also those of the species Eulaelaps stabularis capable of becoming infected with the tick-borne encephalitis virus. Starving mites of the two species could harbor the virus for one month (limit of observation).

A role of the gamasides in the circulation of the tick-borne encephalitis virus was also suggested by observations showing the continued presence of viremia in mice and allied species during the period of inactivity of the ticks.

926. Prisiagina, L. A., Observations on the epidemiology of tick-borne encephalitis under the conditions of the northern steppe regions of the Krasnoiarsk Krai. Med. parazit. 33 (1964) 2:165-168. (From the Department of Epidemiology of the E. I. Martsinovskii Institute of Medical Parasitology and Tropical Medicine, MH, USSR.)

This article can be quoted by title only.

927. Slonov, M. N. et al., Epidemiological characterization of the tick-borne encephalitis manifestations in the Primorsk Krai. Med. parazit. 33 (1964) 2:169-177. (From the Department of Entomology of the Institute of Medical Parasitology and Tropical Medicine, MH, USSR and the Sanitary-Epidemiological Station of the Primorsk Krai.)

As described in this article, the well set forth details of which must be studied in the original or in a translation, during the period from 1948 to 1959 the incidence of tick-borne encephalitis in the Primorsk Krai was highest in the forest zone with coniferous and broad-leaved trees, where the population density and infection rate of Ixodes persulcatus were extraordinarily high.

928. Grokhovskaia, I. M. et al., Does the feeding of the ticks on immune animals exert an influence on Rickettsia sibirica? Med. parazit. 33 (1964) 2:178-181. (From the Department of Naturally Focal Infections of the N. F. Gamaleia IEM.)

The authors found that

(1) Ticks of the species Hyalomma asiaticum can imbibe R. sibirica when sucking the blood of guinea-pigs infected with this organism and can retain the rickettsiae for two years.

(2) The infected ticks do not become free from the rickettsiae when having a complete blood meal on immune animals or when feeding first on an immune and then on a healthy animal.

(3) H. asiaticum ticks, which have ingested immune blood, remain capable of transmitting the infection from phase to phase and of passing it to their offspring through the transovarian route.

929. Timofeeva, G. IA., Experimental study of the transmission and harborage of the tularemia bacillus by the mite Hirstionyssus musculi Johnst. (Gamasoidea). Med. parazit. 33 (1964) 2:184-187.
(From the Central Anti-Plague Observation Station, MH, USSR, Moscow.)

The author obtained invariably negative results in "controlled" tests, when tularemia-infected mites, confined in test-tubes, were permitted to feed on healthy white mice. She was two times successful, however, when permitting the infected gamasidae to remain in free contact with the test animals. She concluded from these divergent results that the infection of the latter took place by the alimentary route, the mice devouring the ticks exposed on them.

930. List of noteworthy references quoted in a list published in Med. parazit. 33 (1964) 2:241-250.

1) Azarian, M. B. et al., Experience of campaigns against forest rodents in tick-borne encephalitis foci with the aid of the helicopter MI-1. In: Tick-borne encephalitis and virus-caused hemorrhagic fever. Conference materials, Omsk (1963) pp. 279-280.

2) Aleksandrov, IU. V. and IAgondinskii, V. N., Observations on a possible epidemiological role of male Ixodes persulcatus. Ibidem, 143-144.

3) Idem: Gamasides - ectoparasites of the rodents in the foci of tick-borne encephalitis and tick-rickettsiosis in the Sikhote-Alin Raion. Ibidem, 147-148.

4) Barkova, E. A., Influence of the specific gamma-globulin on the dynamics of the humoral immunity in tick-borne encephalitis patients. Ibidem, 29-31.

5) Bogdanov, I. I. et al., Factors influencing the frequency and the rate of infection of the tick-vectors with tick-borne encephalitis and Omsk hemorrhagic fever. Ibidem, 155-157.

6) Boiko, V. A., Structure of the natural focus of tick-borne encephalitis in the Tatar ASSR. Ibidem, 159-162.

7) Busygin, F. F., Contribution to the problem of differentiating between the natural foci of tick-borne encephalitis and Omsk hemorrhagic fever with the aid of serological methods. Ibidem, 381-383.

8) Bychkova, M. V. et al., Contribution to the problem of a study of virusemia and immunity in tick-borne encephalitis in the Kemerovo Oblast. Ibidem, 37-38.

9) Vasilenko, E. F., Contribution to the problem of naturally focal diseases in the Tuva ASSR. Ibidem, 163-164.

10) Vasil'eva, O. A., Influence of antibiotics on the vaccinal immunity against tick-borne encephalitis. Experimental observations. Ibidem, 251-252.

11) Vasil'eva, O. A. et al., Immunological characterization of the various vaccines against tick-borne encephalitis. Experimental observations. Ibidem, 253-255.

12) Veselov, IU. V., Clinical characterization of tick-borne encephalitis in the different raions of Western Siberia. Ibidem, 303-304.

13) Veselov, IU. V et al., Experimental tick-borne encephalitis in musk-rats. Ibidem, 165-166.

14) Vizen, E. M., Some actual problems of the study of tick-borne encephalitis. Ibidem, 5-7.

15) Gibet, L. A. and Nikiforov, L. P., Regional prognostication of the presence and intensity of the natural foci of tick-borne encephalitis (as exemplified by observations in the western part of the Krasnoiarsk Krai). Ibidem, 171-174.

16) Gil'manova, G. Kh., Observations on the antigenic variants of the strains of the tick-borne encephalitis virus circulating in the natural foci of the Tatar ASSR. Ibidem, 45-49.

17) Gil'manova, G. Kh. and Livanova, I. A., Increase of the diagnostic value of the complement fixation test through the use of different strains of the tick-borne encephalitis virus. Ibidem, 51-52.

18) Gol'dfarb, P. G. et al., Selection of contingents for vaccination on the basis of a study of the risk of infection with tick-borne encephalitis. Ibidem, 257-258.

19) Gorchakovskaia, N. N. et al., Anti-tick work in the foci as a method of preventing tick-borne encephalitis. Ibidem, 385-389.

20) Ivanova, D. M. et al., Observations on the distribution of tick-borne encephalitis in the territory of the RSFSR based on the notifications during 10 years (1952-1961). Ibidem, 391-393.

21) Izotov, B. K. and Lazarev, A. F., Contributions to the problem of the influence of the growth hormone on the efficacy of the immunization against tick-borne encephalitis. Ibidem, 67-68.

22) Kameneva, A. L. et al., Sanitation of the tick-borne encephalitis foci in the construction zone of the Kachkanarski mining center with the aid of direct eradication of the tick-vectors. Ibidem, 281-284.

23) Kanter, V. M., Tick-borne encephalitis in the Khabarovsk Krai. Ibidem, 305-308.

24) Karaseva, N. S. and Semenova, B. F., Study of the properties of the dry tissue vaccine for the prophylaxis of tick-borne encephalitis. Ibidem, 259.

25) Karmanova, T. P. and Gukhovskaia, V. M., Experience of the sanitation of the Tomsk focus of tick-borne encephalitis through eradication of the ticks in nature. Ibidem, 285-286.

26) Karpov, S. P., Observations on the mechanism of the formation of inhabited foci of tick-borne encephalitis. Ibidem, 175-177.

27) Kvetkov, V. P. et al., Observations on the methodology of the serological examination of small animals (on the possibility of obtaining substrates for immunological examination from the parenchymatous organs). Ibidem, 395-398.

28) Kokorev, V. S. et al., Contributions to a study of the conditions bringing about an accumulation of the hemagglutinins of the viruses of the tick-borne encephalitis group in tissue cultures. Ibidem, 77-79.

29) Korenberg, E. I., Main results of a study of the birds of the natural tick-borne encephalitis focus in the taiga forest of southern Europe. Ibidem, 179-182.

30) Kondrashova, Z. N., Observations on the use of extracts from the liver and spleen, infusions from the heart and blood serum dried on paper disks for serological reactions in tick-borne encephalitis. Ibidem, 399-401.

31) Kraminskii, V. A. et al., Observations on the transovarian transmission of the tick-borne encephalitis virus in birds. Ibidem, 185-186.

32) Kraminskii, V. A. et al., Pathogenesis of experimental tick-borne encephalitis in linnets. Ibidem, 183-184.

33) Krasovskii, F. V. and TSirkin, IU. M., Isolation from ixodes ticks in the Krasnoiarsk Krai of a cytopathogenic virus differing from the causative organism of tick-borne encephalitis. Ibidem, 81-82.

34) Levacheva, Z. A. et al., The natural focus of hemorrhagic fever with a renal syndrome in the territory of the town of Tula and the peculiarities of the manifestations of the disease. Ibidem, 403-404.

35) Levkovich, E. N. and Rzhakhova, O. E., Determination of the serological types of the viruses circulating in the natural foci of tick-borne encephalitis. Ibidem, 91-92.

36) L'vov, D. K. et al., Study of the influence of the level of humoral immunity on the development of a virusemia in tick-borne encephalitis. Ibidem, 93.

37) L'vov, D. K. et al., Formation of antibodies against the virus of tick-borne encephalitis in people immunized with inactivated cultural vaccine. Ibidem, 261-262.

38) L'vov, D. K. et al., Planned anti-encephalitis measures in accord with a typification of the pseudofoci of tick-borne encephalitis. Ibidem, 193-194.

39) Magazanik, S. S. and Kameneva, A. L., Clinical characterization of tick-borne encephalitis in the Sverdlovsk Oblast, 1960-1962. Ibidem, 309-311.

40) Mal'kov, G. B., Materials regarding the changes in the incidence of mice and allied species in the tick-borne encephalitis foci of the Perm Oblast. Ibidem, 195-198.

41) Melent'eva, L. A. et al., Comparative study of the strains of the tick-borne encephalitis virus isolated in the Toguchansk Raion of the Novosibirsk Oblast. Ibidem, 95-97.

42) Minaeva, V. M. et al., New observations on the epidemiology of tick-borne encephalitis in the western Ural. Ibidem, 199-200.

43) Mironov, G. S. et al., Tick-borne (spring-summer) encephalitis in the Mari ASSR. Ibidem, 201-202.

44) Morozov, IU. V., New data on the susceptibility of warm-blooded animals to the virus of tick-borne encephalitis. Ibidem, 203-204.

45) Muria, L. M., Immunological transformation of the body after vaccination against tick-borne encephalitis according to different schemes. Ibidem, 263-266.

46) Mukhina, V. N. and Everling, K. N., Liberation of territories from foci of tick-borne encephalitis through direct destruction of the tick-vectors. Ibidem, 287-289.

47) Miasnikov, IU. A. et al., Results of a search for new tick-borne encephalitis foci in the Tula Oblast. Ibidem, 405-406.

48) Nesterov, V. S., Dynamics of the immunity reactions in tick-borne encephalitis. Ibidem, 99-101.

49) Netskii, G. I., Some aspects of the problem of virus encephalitides and hemorrhagic fevers in Siberia and the Far East. Ibidem, 15-19.

50) Nikitina, N. N. et al., Observations on the protective reactions of rodents against the ticks. Ibidem, 205-206.

51) Pivanova, G. P. et al., Analysis of the factors influencing the evaluation of the serological reactions for the diagnosis of tick-borne encephalitis. Ibidem, 103-104.

52) Pogorelenko, L. I. and Smirnov, A. V., Experience on the implementation of anti-tick measures in the Udmurt ASSR. Ibidem, 291-292.

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54) Prigorodov, V. I. et al., Incidence of tick-borne encephalitis among the rural population and basic directions of its specific and unspecific prophylaxis. Ibidem, 207-210.

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90) Slonov, M. N., Contributions to the study of the natural tick-borne encephalitis foci in the Primorsk Krai. Thesis, Moscow (1963).

931. Filimonov, M. L., Experience on sanitary aviation in virgin soil territories. Sov. zdrav. (1964) 5: 29-32. (From the Hospital of the Kustanaisk Oblast.)

932. Mursalova, N. N., Cholera epidemics and their control in the Tavrichesk Gubernium during the first half of the 19th century. (Materials of the Crimean Regional Arhive.) Sov. zdrav. (1964): 74-77. (From the Department of Public Health Organization of the Crimena MI, Simferopol.)

These two articles can be quoted by title only.

933. Roitman, E. A., Influence of prophylactic vaccinations on the incidence level of epidemic hepatitis (Botkin's disease). Vrachebnoe delo (1964) 4:103-105. (From the Sanitary-Epidemiological Station of the Pridneprovsk Railway.)

As maintained by the author of this article, infections due to the use of insufficiently sterilized instruments for prophylactic vaccinations play an appreciable role in the causation of infectious hepatitis. He urges prevention of the occurrence of such infections through an adequate sterilization of the syringes and needles used for the immunization work. Children in particular should be vaccinated preferably in medical institutions and not in their homes where the implementation of the rules of asepsis is more difficult.

934. Bubenko, V. M. et al., Review of the book Toksikologiia fosfororganicheskikh insektitsidov i gigiena truda pri ikh primenenii (Toxicology of the phosphoro-organic insecticides and labor hygiene for their use), 325 pp. Moscow, Medgiz (1963). Vrach. delo (1964) 4: 154.

This review can be quoted by title only.

935. Faibich, M. M., The invasiveness of avirulent plague cultures. Zh. mikrobiol. (1964) 5: 36-41.

The conclusions reached in this study, for the details of which the original or a translation must be consulted were that

> "1. The immunogenic activity of avirulent plague bacilli depends upon their invasive properties. Avirulent organisms capable of remaining viable at the site of administration and of penetrating into the body of the animals are endowed with immunogenic properties. After cutaneous (epidermal) inoculation they penetrate into the lymph nodes, after subcutaneous injection into the lymph nodes and the internal organs. The longer the organisms continued to exist in the body, the higher is the degree of immunity (produced). Avirulent strains which are incapable of invading the lymph nodes and internal organs, produce no immunity in the animals.
>
> 2. Highly immunogenic strains like the EV strain and the strain 150 (Faibich, Zh. mikrobiol. [1946] 6: 32) penetrated rather rapidly into the body of guinea-pigs. Already 20 minutes after cutaneous inoculation...they could be observed in the deep layers of the skin, in the inguinal lymph nodes (barrier of the first order) and in the iliac lymph nodes (barrier of the 2nd order). After subcutaneous administration...the organisms penetrate less rapidly into the body of the animals and only after 90 minutes can they be observed in the inguinal and iliac lymph nodes, in the blood and in the internal organs. In the lymph nodes the organisms could be found for 15 days, in the internal organs for 24 hours (EV strain) or 10 days (strain 150)."

936. Khokhlov, D. T., Experimental observations on the influence of streptomycin on the efficacy of immunization with live vaccines. Report I. Combination of the immunization with plague vaccine with the administration of streptomycin. Zh. mikrobiol. (1964) 5: 41-45.
(From the Order of Lenin Kirov Military-Medical Academy.)

Experimenting on white mice with the EV strain, the author found that the administration of streptomycin in the usual

or even in double doses at the time of immunization or subsequent to it did not lower the resistance of the animals to challenge tests with 5-60 LD_{50} of the EV strain, made together with the administration of cortisone. However, streptomycin administration in 3 or 10 times increased doses markedly lowered the resistance of the animals to the challenge infection.

937. Anisimov, T. I. et al., Relationship of the phagocytic activity in plague-affected small susliks with shifts in the leucocytic blood picture. Authors' review. Zh. mikrobiol. (1964) 5:143-144. (From the All-Soviet SR Anti-Plague Institute "Mikrob," Saratov.)

From observations on Citellus pygmaeus which had been vaccinated against plague or had been infected with small P. pestis doses before they were challenged with large doses of this organism the authors concluded that

> "the immunological transformation in the body of small susliks after vaccination or after recovery from plague was not accompanied by shifts in the blood picture. One could not detect a difference in the latter in recovered animals and in such succumbing after infection with small doses, whereas these two groups markedly differed in the activity of the phagocytic process."

938. Tinker, I. S* et al., Immunological comparison of the Fraction I A in different strains of P. pestis. Authors' review. Zh. mikrobiol. (1964) 5: 144. (From the SR Anti-Plague Institute in Rostov-on-Don.)

From a study of 10 plague strains the authors concluded that

> "Using methods of serological and immunological cross examination of the Fraction IA derived from different virulent plague strains it was not possible to detect substantial differences in the structure of this antigen. Evidently the Fraction I is the common antigen of all plague strains regardless to which race they belong."

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* It can be gathered that Dr. Tinker, a meritorious plague worker of long standing, died recently.

939. Ponomareva, T. N. and Rodkevich, L. V., Pasteurellosis in the rodents of a large town. Zh. mikrobiol. (1964) 5: 144-145. (From the Central Anti-Plague Observation Station.)

The authors of this note, the detailed statements of which must be studied in the original or in a translation, reported on the results of examinations of 156,282 rodents (including 55,342 grey rats and 72,430 house mice) as well as of 63,600 fleas, 49,500 gamaside ticks and 10,500 lice collected from these animals, made during the period from 1953 to 1961 in Moscow. It was possible to isolate from this material 140 strains of Pasteurella multocida, of which 85 came from the grey rats and 37 from the house mice. Thus, the authors concluded,

> "pasteurellosis is widely spread among the rodents of the town, particularly among the grey rats which necessitates a more thorough conduct of deratization and measures of general sanitation."

940. IUshchenko, G. V. and Kuzmaite, R. I., Instances of mesenterial lymph-adenitis caused by the causative organism of pseudotuberculosis. Zh. mikrobiol. (1964) 5: 96-99. (From the Central Anti-Plague Observation Station, MH, USSR and the Central Institute for ATP.)

Quoting the relevant foreign literature, the authors report on three instances in which P. pseudotuberculosis cultures were isolated from the mesenterial lymph nodes of children operated on under the suspicion of acute appendicitis.

941. Ananova, E. V., A study of the pathogenesis of experimental tularemia. Zh. mikrobiol. (1964) 5: 24-28. (From the Gameleia IEM, AMS, USSR.)

This article deals with the differences in the morbid changes caused by experimental tularemia infection in animal species varying in their susceptibility and sensitivity to the disease. It is noteworthy that more marked morbid changes were noted in animals infected with the American tularemia strain Schu than in those infected with a Soviet strain. This held true not only of the highly susceptible species but of all species under test, particularly the rabbits.

942. Adamovich, V. L., The geographical and epidemiological peculiarities of the natural tularemia focus in the

western Poles'e of the Ukrainian SSR. Zh. mikrobiol. (1964) 5: 45-50.
(From the Sanitary-Epidemiological Station of the Volynsk Oblast.)

As described by the author of this study, the contents of which do not lend themselves to a detailed review, two types of tularemia foci exist in the region studied by him--such of the floodland type and forest foci. Water-rats form the reservoir of the infection in the former, voles in the latter.

The incidence of tularemia attacks in man in the area under study from 1951 to 1961 was as follows:

Year	Case Incidence	Year	Case Incidence
1950	76	1955	799
1951	27	1956	56
1952	3	1957	1
1953	3	1958	75
1954	8	1959	8
		1960	1

No case was recorded in 1961.

Ananova ascribed the recent decrease in the incidence of tularemia to mass immunization of the population.

943. Shiriaev, D. T. et al., Use of the antibody neutralization test for the retrospective diagnosis of tularemia epizootics. Zh. mikrobiol. (1964) 5: 50-54.
(From the SR Anti-Plague Institute, Rostov-on-Don.)

Making their studies during a considerable tularemia epizootic on Birjukh Island (Kherson Oblast) among hares and small murines, the authors found that it was possible to arrive at a retrospective diagnosis of tularemia through the use of the antibody neutralization test for an examination of the mummified organs and bones of animals succumbed to the infection. The authors considered this method suitable for practical purposes.

944. Besselov, V. S. et al., A tularemia outbreak on Biriukh Island. Zh. mikrobiol. (1964) 5: 54-57. (From the Sanitary-Epidemiological Station of the Kherson Oblast and the Anti-Plague Institute, Rostov-on-Don.)

As described by the authors, in November 1961 tularemia attacks were observed among 8 persons on Biriukh Island which hitherto had been free from the infection. While contact with hares served as the immediate cause of the outbreak, the presence of the disease among animals was found to be secondary to a widespread epizootic among the small murines. The presence of the infection was also proved among ticks of the species Dermacentor marginatus and Hyalomma plumbeum from which 48 tularemia cultures were obtained.

Vaccination, prohibition of the hunting of hares, an anti-rodent campaign and quarantine measures prevented a further spread of the infection among the population.

In the opinion of the authors the appearance of tularemia on the island in 1961 was the result of an importation of the infection, possibly effected by birds. In view of the serious involvement of the ticks an entrenchment of the infection on the island was probable.

945. Miliutin, N. G. et al., Contribution to the study of the natural tularemia foci of the floodland-swamp type in the Poltava Oblast. Authors' review. Zh. mikrobiol. (1964) 5:142-143. (From the Khar'kov University and the Sanitary-Epidemiological Station of the Khar'kov Oblast.)

As described in this brief but instructive note, tularemia manifestations, causally related to the hunting of water-rats, were first reported in Poltava Oblast in 1934. During World War II and the years following (particularly in 1948 and 1949) there occurred also tularemia outbreaks of other types, due to epizootics among the small murines and the hunting of hares.

The first vector-borne tularemia outbreaks in the Ukraine were observed in 1945 in the Chernigov Semsk and Lubensk raions of the Poltava Oblast.

The presence of a natural tularemia focus in the floodlands of the Sula River was confirmed in 1959, when 3 positive cultures were obtained from spleen pools of 150 water-rats.

Tularemia attacks in man were observed in 1962 in the Orzhitskii Raion not far from the just mentioned focus. The 12 patients were all children 12 to 14 years old who had bathed in the Sula River, and some of whom had also hunted water rats. In the opinion of the authors, the absence of the disease in the population was probably due to the vaccination campaigns. Possibly, however, the adult water-rat hunters had become naturally immune through past attacks of the disease.

In 1960-1961 almost the whole of the Dnieper plain between Kremenchug and Cherkassy was covered by the waters of the Kremenchug reservoir. This led to a disappearance of the water rats from that region. The flooding comprised also parts of the above mentioned tularemia focus, but the most potentially stretch of it was not involved. Anti-tularemia campaigns there are urgently called for and at the same time the hunting of the water rats needs to be intensified.

Notice

Number 6 will conclude Series II of Selected Abstracts from Soviet Biomedical Journals.

The next issue will be Number 1 of Series II. Again a regular number of folios cannot be foreseen for Series III and therefore a similar concluding notice will be included in Series III.

An Index for Series II is in preparation and will be completed in the near future.

The Editor
August 1964