POPOVA, T.V.; CHERNIGOVSKIY, V.N., professor, deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR, zavedunyushchiy; BYKOV, K.M., akademik, direktor.

Interoceptive reflexes under conditions of methemoglobinemia and hypoxia, caused by the introduction of KCN. Vop.fiziol.int. no.1:469-483 '52. (MLRA 6:8)

1. Laboratoriya fiziologii retseptorov Instituta fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Chernigovskiy). 2. Institut fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Bykov). 3. Akademiya meditsinskikh nauk (for Chernigovskiy). (Reflexes) (Potassium cyanide--Physiological effect)

POPOVA, T.V.; CHERNIGOVSKIY, V.N., professor, deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR, zaveduyushchiy; BYKOV, K.M., akademik, direktor.

Effect of temperature shifts in the organism upon interoceptive reflexes. Vop.fiziol.int. no.1:484-500 '52. (MLRA 6:8)

1. Laboratoriya fiziologii retseptorov Instituta fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Chernigovskiy). 2. Institut fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Bykov). 3. Akademiya meditsinskikh nauk (for Chernigovskiy). (Reflexes) (Temperature, Animal and human)

KHAYUTIN, V.M.; CHERNIGOVSKIY, V.N., professor, deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR, zaveduyushchiy; BYKOV, K.M., akademik, direktor.

Data for the functional characteristics of localized and general interoceptive reflexes. Vop.fiziol.int. no.1:524-539 '52. (MLRA 6:8)

1. Laboratoriya fiziologii retseptorov Instituta fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Chernigovskiy). 2. Institut fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Bykov). 3. Akademiya meditsinskikh nauk (for Chernigovskiy). (Reflexes)

KHAYUTIN, V.M.; CHERNIGOVSKIY, V.N., professor, deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR, zaveduyushchiy; BYKOV, K.M., akademik, direktor.

Conditions of excitation of mechanoreceptors. Vop.fiziol.int. no.1:540-550 '52. (MLRA 6:8)

1. Laboratoriya fiziologii retseptorov Instituta fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Chernigovskiy). 2. Institut fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Bykov). 3. Akademiya meditsinskikh nauk (for Chernigovskiy). (Nervous system)

CHERNIGOVSKIY, V.N.

Certain problems of physiology and clinical aspects in the light of I.P. Pavlov's theory of nervosism. Vop.fiziol.int. no.1:551-581 '52. (MLRA 6:8)

1. Laboratoriya fiziologii retseptorov Instituta fiziologii im. I.P.Pavlova Akademii nauk SSSR. (Physiology, Psychological) (Nervous system)

YAROSHEVSKIY, A.Ya.; CHERNIGOVSKIY, V.N., professor, deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR, zaveduyushchiy; BYKOV, K.M., akademik, direktor.

Interoceptive effects upon blood composition. Vop.fiziol.int. no.1:596-614 '52. (MLRA 6:8)

1. Laboratoriya fiziologii retseptorov Instituta fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Chernigovskiy). 2. Institut fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Bykov). 3. Akademiya meditsinskikh nauk SSSR (for Chernigovskiy). (Blood--Corpuscles and platelets)

YAROSHEVSKIY, A.Ya.; CHERNIGOVSKIY, V.N., professor, deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR, zaveduyushchiy; BYKOV, K.M., akademik, direktor.

Interoception in the bone marrow. Vop.fiziol.int. no.1:615-628 '52. (MLRA 6:8)

1. Laboratoriya fiziologii retseptorov Instituta fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Chernigovskiy). 2. Institut fiziologii im. I.P.Pavlova Akademii nauk SSSR (for Bykov). 3. Akademiya meditsinskikh nauk SSSR (for Chernigovskiy). (Marrow) (Nervous system)

CHERNIGOVSKIY, V.N.

Results of analysis of certain pathological processes according to the Pavlovian theory on nervosism. Khirurgiia, Moskva no. 5:6-17 May 1952. (CLML 22:3)

1. Leningrad.

CHERNIGOVSKIY, V.N.;YAROSHEVSKIY, A.Ya,

Effect of functional state of the cortex of the larger hemisphere on the blood and blood pressure. Zh. vysshei nerv. deiat. 2 no. 1:30-45 Jan-Feb 1952. (CIML 23:3)

1. Laboratory of the Physiology of Receptors of the Physiology of Receptors of the Institute of Physiology imeni I. P. Pavlov of the Academy of Sciences USSR.

CHERNIGOVSKIY, V.N.

[Problems of neuroregulation of the blood system] Voprosy nervnoi reguliatsii sistemy krovi. Moskva, Medgiz, 1953. (MIRA 7:12D)

LEPESHINSKAYA, O.B., professor; USIYEVICH, M.A., professor; ASRATYAN, E.A., professor; SMIRNOV, A.I., professor; FILIPPOVICH, S.I., doktor meditsinskikh nauk; VOLOKHOV, A.A., professor; FILIMONOV, I.N., professor; SNYAKIN, P.G., professor; CHERNIGOVSKIY, V.N., professor; SPERANSKIY, A.D., akademik; DOLIN, A.O., doktor meditsinskikh nauk; KOTLYAREVSKIY, L.I., professor; NEGOVSKIY, V.A., professor; KASATKIN, N.I., professor; STEL'CHUK, I.V., professor; YEGOROV, B.G., professor; BAKULEV, A.N., professor; SMIRNOV, L.I., professor; USPENSKIY, V.N., redaktor; PETROV, S.P., redaktor.

[Teachings of I.P.Pavlov in theoretical and practical medicine] Uchenie I.P.Pavlova v teoreticheskoi i prakticheskoi meditsine. Vol.2. Moskva, Izd-vo Ministerstvo zdravookhraneniia SSSR, 1953. 611 p. (MLRA 7:3)

1. Deystvitel'nyy chlen AMN SSSR (for Lepeshinskaya, Chernigovskiy and Bakulev). 2. Chlen-korrespondent Akademii nauk SSSR (for Asratyan). 3. Chlen-korrespondent AMN SSSR (for Smirnov, Filimonov, Yegorov and L.I.Smirnov). 4. Moscow. TSentral'nyy institut usovershenstvovaniya vrachey. (Pavlov, Ivan Petrovich, 1849-1936) (Nervous system) (Physiology)

KAN,G.S., kandidat meditsinskikh nauk, zaveduyushchiy (Leningrad); SEMENOV, A. D., kandidat meditsinskikh nauk, direktor; CHERNIGOVSKIY, V.N. deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR, nauchnyy rukovoditel'.

Data on role of the nervous system in pathogenesis of tuberculosis. Arkh. pat. 15 no.1:13-21 Ja-F '53. (MLRA 6:5)

1. Eksperimental'nyy otdel Leningradskogo nauchno-issledovatel'skogo tuberkuleznogo instituta (for Kan). 2. Leningradskiy nauchno-issledovatel'skiy tuberkuleznyy institut (for Semenov and Chernigovskiy). 3. Akademiya meditsinskikh nauk SSSR (for Chernigovskiy). (Tuberculosis) (Nervous system)

AMIGAROVA, M.G.; VISHNEVSKIY, A.A., professor, direktor; CHERNIGOVSKIY, V.N., professor.

Functional condition of the central nervous system in thyrotoxicosis. Klin.med. 34 no.4:46-55 Ap '53. (MLRA 6:7)

1. Institut khirurgii imeni A.V.Vishnevskogo Akademii meditsinskikh nauk SSSR. (Thyroid gland--Diseases) (Nervous system)

KAN, G.S.; CHERNIGOVSKIY, V.N., professor, deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR, zaveduyushchiy; BYKOV, K.M., akademik, direktor.

Nervous system and acute pulmonary emphysema. Vest.khir. 73 no.3:20-24 My-Je '53. (MLRA 6:6)

1. Akademiya meditsinskikh nauk SSSR (for Chernigovskiy). 2. Laboratoriya fiziologii retseptorov Instituta fiziologii Akademii Nauk SSSR im. Pavlova (for Kan and Chernigovskiy). 3. Institut fiziologii Akademii nauk SSSR im. Pavlova (for Bykov).

(Emphysema, Pulmonary) (Nervous system)

CHERNIGOVSKIY, V.N.

[Role of the kidneys in the development of experimental hypertension.] O roli pochek v razvitii eksperimental'noi gipertonii. Moskva, Izd-vo Akademii nauk SSSR, 1954. 34 p.
(KIDNEYS) (HYPERTENSION) (MLRA 8:11)

CHERNIGOVSKIY, V. N.

"The Prophylactic Trend in Medicine and the Tasks of Physiology and Pathophysiology," Vest. Ak. Med. Nauk SSSR, No.2, pp 21-34, 51-67, 1954

Acting Member of the Academy of Medical Sciences USSR
Presented at the Eighth Session of the General Meeting of the AMS USSR

Translation Sum. No. 447, 19 Aug 55

CHERNOGOVSKIY, V.N. (Moskva)

Prophylactic trends in medicine and the tasks of physiology and pathophysiology. Klin. med. 32 no.7:3-11 Jl '54. (MLRA 7:8)
(MEDICINE, PREVENTIVE
*role of physiol. & pathophysiol. in)
(PHYSIOLOGY
*physiol. & pathophysiol. in prev. med.)

CHERNIGOVSKIY, V.N.

PETROVICH, I.K. (Moscow)

"Problems of neural regulation of the blood system." V.N.CHernigovskii, A.IA IAreshevskii. Reviewed by I.K.Petrovich. Klin.med. 32 no.9: 90-94 S '54. (MLRA 7:12)

(BLOOD) (NERVOUS SYSTEM) (CHERNIGOVSKII, V.N.) (IAROSHEVSKII, A.IA.)

CHERNIGOVSKIY, V.N.

"ON CORTICAL REPRESENTATION OF THE INTERNAL ORGANS"

pp. 378, Reports given at the 20th International Congress of Physiologists, Brussels, 30 Jul- 4 Aug 56

Translation E-5368

CHERNIGOVSKIY, V.N.

Physiological characteristics of the interoceptive analysor. Zhur. vys.nerv.deiat. 6 no.1:53-64 Ja-F' 56. (MLRA 9:7)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR.
(NERVOUS SYSTEM, physiology,
interoceptive analysors (Rus))

CHERNIGOVSKIY, V.N.

Results of the 20th International Congress of Physiologists. Vest. AN SSSR 26 no.11:62-65 N '56. (MLRA 9:12)

1. Chlen-korrespondent Akademii nauk SSSR.
(Brussels--Physiology--Congresses)

CHERNIGOVSKIY, V.N.

SOLOV'YEV, A.V., otvetstvennyy redaktor; AYRAPETIYANTS, F.Sh., redaktor; BIRYUKOV, D.A., redaktor; VLADIMIROV, G.Ye., redaktor; KOLOSOV, N.G., redaktor; KRASUSKIY, V.K., redaktor; KURTSIN, I.T., redaktor; MAYOROV, F.P., redaktor; OL'NYANSKAYA, R.P., redaktor; RIKKL', A.V., redaktor; CHERNIGOVSKIY, V.N., redaktor; FEDOROVA-GROT, A.K., redaktor; BARSUKOVA, Z.A., redaktor izdatel'stva; KRUGLIKOVA, N.A., tekhnicheskiy redaktor.

[Problems of the physiology of the central nervous system; a collection celebrating the 70th birthday of Academician K.M.Bykov] Problemy fiziologii tsentral'noi nervnoi sistemy; sbornik. posviasuchennyi 70-letiiu so dnia rozhdeniia akademika K.M.Bykova. Moskva, 1957. 632 p.
(MLRA 10:10)

1. Akademiya nauk SSSR. Institut fiziologii.
(NERVOUS SYSTEM)

CHERNIGOVSKIY, V.N.

USSR / General Division, Congresses, Conventions, Conferences A-4

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 116

Author : Chernigovskiy, V.N.

Inst : Not Given

Title : On the Results of the Conference on Problems of the Physiology and Pathology of the Nervous System

Orig Pub : Vestn. Akad. med. nauk SSSR, 1957, No 1, 51-58

Abstract : The conference took place in Moscow on November 19-24, 1956. Discussed were various questions of the morphology of the nervous system (the cytoarchitectonics and detailed structure of the cells of the cortex of the large hemispheres, the evolution of the cortex of the large hemispheres, the neuron-architectonic analysis of the cortex of the large human brain, questions of the reactivity of the periferal receptors and the interneuron synapses and other questions), the physiology of the central nervous system (new data on the role of the labyrinths in the traveling orientation of man, the changes of the structure of the nerve fibers during the spread of an

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Abs Jour : Ref Zhur - Biol., No 1, 1958, No 116

impulse along them, and the influence of the centers of the brain on the development of parabiosis in the nerve-muscular apparatus of the heart. Extensive material was introduced on the electrophysiology of the central and periferal nervous systems, on the physiology and pathophysiology of the nervous system during mental sickness and internal diseases.

CHERNIGOVSKIY, V.N.

CHERNIGOVSKIY, V.N., prof.

Forty years of Soviet physiology. Vest. AMN SSSR 12 no.5:9:18 '57. (MIRA 11:1)

1. Deystvitel'nyy chlen AMN SSSR
(PHYSIOLOGY,
in Russia (Rus))

USSR/Human and Animal Physiology. Blood. Blood Diseases. T

Abs Jour: Ref Zhur-Biol., No 20, 1958, 93153.

Author : Chernigovskiy, V.N., Yaroshevskiy, A. Ya.
Inst :
Title : Problem of Nerve Regulation of the Blood Composition in Experiments and Practice.

Orig Pub: Terapevt. arkhiv, 1957, 29, No 10, 69-84.

Abstract: Following denervation (D) of the carotid sinuses and aortic zones in rabbits and cats there was observed persistent and periodically occurring episodes of anemia. The first episode was hemolytic in character, while subsequent ones were characterized by disturbances in maturation and release of erythrocytes. Splenectomy prevented the first attack

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but did not have an effect on the later ones. D of the spleen in dogs and cats led to development of hypochromic anemia, which was not characterized by hemolysis or retention of blood in the spleen. Similar periodically occurring bouts of anemia were observed after D of other viscera, especially the stomach or parts thereof (Heidenhain's small ventricle). According to the authors, CNS influenced the blood composition in that it maintained a constant balance between the needs of the organism, redistribution of the elements formed, their destruction, maturation and release. The effect of the nervous system on the "blood system" is realized through trophic influence of metabolism in the blood-

Abs Jour: Ref Zhur-Biol., No 20, 1958, 93153.

forming organs and through numerous humoral mechanisms. -- K.S. Rotner.

CHERNIGOVSKIY, V.N.

20-2-59/62

AUTHOR ARDASHNIKOVA, L.I., DZHELIYEV, I.T. and CHERNIGOVSKIY, V.N., Corresponding Member of Academy.

TITLE A Study of Interoceptive Signalization under Conditions of Chronic Experiment.
(Issledovaniye interotseptivnoy signalizatsii v usloviyakh khronicheskogo eksperimenta.- Russian)

PERIODICAL Doklady Akademii Nauk SSSR 1957, Vol 115, Nr 2, pp 411-413 (U.S.S.R.)

ABSTRACT The afferent systems of inner organs are mainly studied by means of the perfusion method of the organs separated from the general blood flow whose nerve connection with the organism remains intact. This problem is much more rarely tackled under conditions of chronic experiments. As we know a new reflectoric reaction can be produced by means of a stimulation of certain receptor zones; this reaction is characteristic of that center to which the impulses are adressed via the new nerve passages of the nerve anastomosis. In the present work the authors tried to use the formation between the n.vagus and those nerves which ennervate inner organs/ the kidney and the salivary gland. Thus the afferent signalization on the part of the inner organs was to be disclosed. Two kinds of operations were carried out:

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ARDASHNIKOVA, DZHELIEV, CHERNIGOVSKIY, 20-2-59/62
Corresponding Member of Academy.

A Study of Interoceptive Signalization under Conditions of Chronic Experiment.

1) Sewing together the central end of the n.vagus with the peripheral end of the "barabannaya struna"
2) Sewing the same end of the n.vagus to the peripheral end of the kidney nerve the kidney being transplanted to the neck Pilokarpin was injected subcutanuously and intramascularly to some of the dogs in order to increase the secretion of saliva. Shortly after the operation this lead only to increased saliva secretion, but later to vomiting and asthma (oedema). After two to three more months the Pilokarpin injection led to vomiting. Control animals which were administered only physiologic solution did not show such reactions and Pilokarpin did not cause vomiting with normal animals. We therefore can assume that vomiting was caused by the stimulation of the n.vagus which again was caused by the impulsation on the part of the salivary gland increasingly functioning under the influence of Pilokarpin. The animals with their kidneys transplanted to their necks did not develop any noticeable effects following the injection of acetylcholin into the kidney parenchyma. Starting with the 3rd-5th month after the operation this injection showed the same effects as was the case with the first experimental series.

CARD 2/3

A Study of Interoceptive Signalization under Conditions of Chronic Experiment.

Therefore the injection of an interoceptor-stimulating agens in the case of the majority of animals caused a reflectoric reaction. If we consider that a complete re-ennervation might not have been attained in all cases the results obtained justify the assumption that the method used makes it possible to prove an afferent impulsation from the inner organs in the case of a chronic experiment.
(2 Tables and 5 Slavic references)

ASSOCIATION: Institute for Normal and Pathologic Physiology of the Academy of Medical Sciences of the USSR.
(Institut normal'noy i patologicheskoy fiziologii Akademii meditsinskikh nauk SSSR)

PRESENTED BY: -
SUBMITTED: 15.4.57
AVAILABLE: Library of Congress

CHERNIGOVSKIY, V.N., prof.

Introduction. Trudy Inst. norm. i pat. fiziol. AMN SSSR no.1: 3-7 '58 (MIRA 16:12)

1. Deystvitel'nyy chlen AMN SSSR.

CHERNIGOVSKIY, V.N.

PHASE I BOOK EXPLOITATION SOV/4693

Nekhozhennymi tropami Vselennoy (Untrodden Paths of the Universe) Moscow, Izd-vo "Pravda," 1959. 63 p. (Series: Biblioteka "Komsomol'skoy pravdy," no. 11) 131,000 copies printed.

Ed.: V. Kukushkin; Tech. Ed.: L. Novikova.

PURPOSE: This popular science booklet is intended for the general reader.

COVERAGE: The booklet contains 14 articles dealing with early and recent efforts and accomplishments in space exploration. Though popular in style, the articles are written by leading Soviet scientists in the field. The contributions of K. E. Tsiolkovskiy to space science are briefly presented. Satellites, space rockets, future space craft, and certain pertinent engineering problems are discussed. No personalities are mentioned. No references are given.

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Untrodden Paths of the Universe SOV/4693

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I. ASSAULT OF THE SKIES

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CHERNIGOVSKIY, V.N.

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ral closely adjoining protein bands between Alpha-2 and Beta serve as the substrate for the formation of bradykinin. The BFE in saliva has been found to migrate to the pre-albumin position. The BFE activity of tissue fluids as demonstrated by bio-assay parallels closely esterase action on synthetic amino acid esters which have arginine as the amino acid residue (e.g. benzoly-arginine ethyl ester). Titrimetric determination of esterase activity with these substrates permits quantitative estimation of BFE activity. These synthetic substrates can serve as competitive inhibitors in the BFE -Bradykinin reaction, i.e., addition of BAEE to reaction mixture inhibits bradykinin formation.

Heightened neural activity is associated with BFE release. Increased BFE activity was observed in cerebrospinal fluid collected from human subjects with augmented catabolism of the central nervous system. Increased amounts of BFE were found in cerebrospinal fluid removed from the cisterna magna of cats following induced convulsions. The BFE in cerebrospinal fluid apparently is not plasmin; it has been hypothesized that it may be a neural intracellular proteinase. Increased amounts of bradykinin were observed in perfusate collected from the subcutaneous space of the forearm during axon reflex flare.

Many of the body's proteolytic enzymes form bradykinin in the presence of serum proteins. Bradykinin is a potent vasodilator. It is suggested that bradykinin is implicated in local vasomotor control and that this mechanism is of major importance in some tissues of the body. Bradykinin induces many of the features of the inflammatory reaction. It is suggested that bradykinin participates in inflammation.

Chen, K. K. and Henderson, F. G.: The cat method of assaying digitalis-like glycosides and aglycones for structure-activity relationship. (Lilly Res. Lab., Indianapolis, Ind., U.S.A.)

For the last thirty years we have been employing the cat for the evaluation of the potency of digitalis-like substances. The method consists of slow intravenous injection of a suitable solution so that the etherized cat expires between 30 and 60 minutes. Generally the geometrical mean lethal dose (LD) of ten adult cats for each compound is reproducible. For example, the variations of monthly assays of digitoxin and ouabain for a year are both within the allowable tolerance of the United States Pharmacopoeia. Sex does not appear to change the results significantly. Even if some glycosides are known to be rapidly eliminated in man, they do not necessarily give rise to large mean LD's in cats. When the figures of some 400 compounds, either natural or partially synthetic, are compared, a few generalizations may be offered. Invariably bufadienolides are more active than cardenolides. Among the glycosides of the same aglycone, the monosides are usually more potent than those with two or more molecules of sugar (s). The methyl derivatives at C_{10} are less active than those substituted with a carbinol or aldehyde group. Acetylation of OH at C_{4} or C_{16} enhances the activity. A change of the asymmetric centre at C_{3}, C_{5}, C_{14} or C_{17} from the natural configuration causes a loss of the specific effect on the heart. Similarly saponification or saturation of the lactone ring results in disappearance of the cardiotonic action.

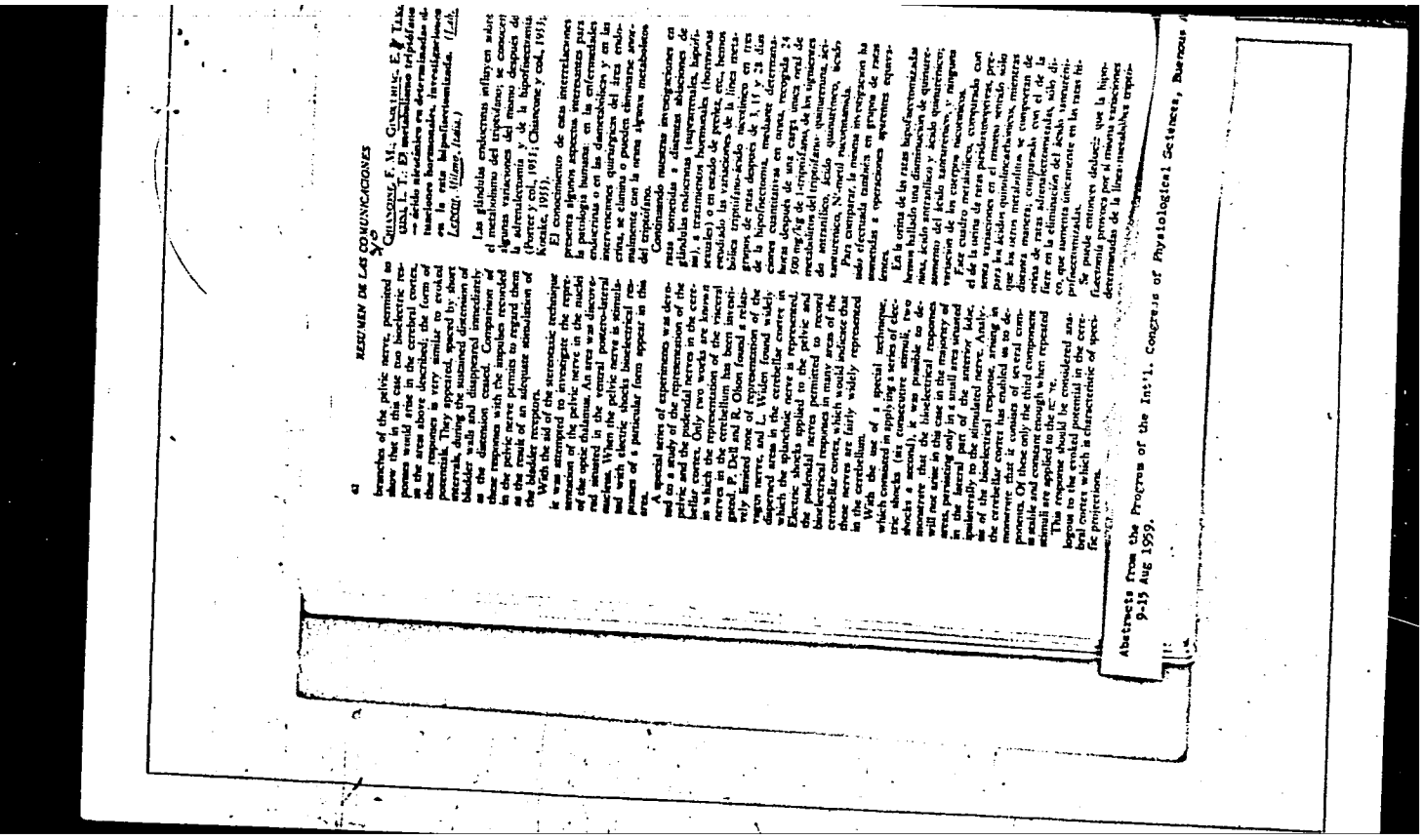
Chernigovsky, V. N.: On the central representation of the internal organs. (Inst. of Normal and Pathol. Physiol., URSS Acad. Med. Sci., Moscow, Russia.)

The report gives further data enlarging the earlier investigations the results of which were submitted to the XX International Congress of Physiologists. The author studied the specific projections of the pelvic and the pudendal nerves in the cerebral cortex, in the optic thalamus and in the cerebellum of cats and dogs. The more important conclusions are as follows:

Like the pelvic nerve, the pudendal nerve is represented in the cerebral cortex, of cats and dogs in four areas, two areas in each hemisphere. These areas coincide with the areas found previously for the pelvic nerve. The first area is situated on both sides of sulcus cruciatus, the second at gyrus ectosylvius anterior. However within the limits of these areas common to the pelvic and the pudendal nerves it is possible to detect foci of maximal activity for each nerve. Thus, each nerve has independent areas of representation.

Adequate stimulation of the receptors of the urinary bladder, accompanied by simultaneous recording of impulses in one of the

[illegible]stracts from the Program of the Int'l. Congress of Physiological Sciences, Buenos Aires
9-15 Aug 1959.



CHERNIGOVSKIY, V.N., prof.

Morphophysiological structure of the interoceptive analyzer and some features of its function. Vest.AMN SSSR 14 no.4:3-18 '59. (MIRA 14:5)

1. Deystvitel'nyy chlen AMN SSSR.
(SENSES AND SENSATION) (BRAIN--LOCALIZATION OF FUNCTIONS)

CHERNIGOVSKIY, V.N.

NESTEROV, A.I. (Moskva); TUSHINSKIY, M.D. (Leningrad); GOREV, N.N.(Kiyev); DOLGO-SABUROV, B.A. (Leningrad); ZAKUSOV, V.V. (Moskva); MUROMTSEV, S.N. (Moskva); CHUMAKOV, M.P. (Moskva); ZHDANOV, V.M., prof. (Moskva); NEGOVSKIY, V.A., prof. (Moskva); BIRYUKOV, D.A. (Leningrad); LITVINOV, N.N., prof. (Moskva); SOKOLOVA-PONOMAREVA, O.D. (Moskva); KUPALOV, P.S. (Leningrad); BATKIS, G.A. (Moskva); KOSYAKOV, P.N., prof. (Moskva); SHMELEV, N.A. (Moskva); BUSALOV, A.A., prof. (Moskva); MOLCHANOVA, O.P. (Moskva); STRASHUN, I.D.; BLOKHIN, N.N. (Moskva); PREOBRAZHENSKIY, B.S. (Moskva); VISHNEVSKIY, A.A. (Moskva) CHERNIGOVSKIY, V.N. (Moskva); PAVLOVSKIY, Ye.N., akademik (Leningrad); MYASNIKOV, A.L. (Moskva); VINOGRADOV, V.N. (Moskva); MAYEVSKIY, V.I.: DAVYDOVSKIY, I.V. (Moskva); IOFFE, V.I. (Moskva); KURASHOV, S.V.: ANOKHIN, P.K. (Moskva); BOGDANOV, I.D. (Kiyev); ZIL'BER, L.A. (Moskva); BRONOVITSKIY, A.Yu.; CHEBOTAREV, D.F., prof.

Debate on the address by Professor V.V.Parin, academician secretary of the Academy of Medical Sciences of the U.S.S.R.; abridged comments by members of the Academy of Medicine and the directors of institutes. Vest.AMN SSSR 14 no.8:19-31 '59. (MIRA 12:11)

1. Deystvitel'nyye chleny AMN SSSR (for Nesterov, Tushinskiy, Gorev, Zakusov, Kupalov, Strashun, Preobrazhenskiy, Vishnevskiy, Chernigovskiy, Myasnikov, Vinogradov, Anokhin, Zil'ber).

(Continued on next card)

NESTEROV, A.I.----(continued) Card 2.

2. Chleny-korrespondenty AMN SSSR (for Dolgo-Saburov, Chumakov, Zhdanov, Biryukov, Sokolova-Ponomareva, Batkis, Shmelev, Molchanova, Blokhin, Ioffe, Bogdanov). 3. Direktor Instituta gerontologii AMN SSSR (for Gorev). 4. Direktor Instituta farmakologii i khimioterapii AMN SSSR (for Zakusov). 5. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (VASKhNIL); direktor Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR (for Muromtsev). 6. Direktor Instituta po izucheniyu poliomiyelita AMN SSSR (for Chumakov). 7. Direktor Instituta eksperimental'noy meditsiny AMN SSSR (for Biryukov). 8. Direktor Instituta obshchey i kommunal'noy gigiyeny AMN SSSR (for Litvinov). 9. Direktor Instituta pediatrii AMN SSSR (for Sokolova-Ponomareva). 10. Direktor Instituta virusologii AMN SSSR (for Kosyakov). 11. Direktor Instituta tuberkuleza AMN SSSR (Shmelev). 12. Direktor Instituta grudnoy khirurgii AMN SSSR (for Busalov). 13. Direktor Instituta pitaniya AMN SSSR (for Molchanova). 14. Direktor Instituta eksperimental'noy i klinicheskoy onkologii AMN SSSR (for Blokhin). 15. Direktor Instituta khirurgii AMN SSSR (for Vishnevskiy).

NESTEROV, A.I.---- (continued) Card 3.

16. Direktor Instituta fiziologii AMN SSSR (for Chernigovskiy). 17. Direktor Instituta terapii AMN SSSR (for Myasnikov). 18. Direktor Gosudarstvennogo izdatel'stva meditsinskoy literatury (for Mayevskiy). 19. Vitse-prezident AMN SSSR (for Davydovskiy). 20. Ministr zdravookhraneniya SSSR (for Kurashov). 21. Direktor Instituta infektsionnykh bolezney AMN SSSR (for Bogdanov). 22. Chlen-korrespondent AN BSSR: predsedatel' Uchenogo meditsinskogo soveta Ministerstva zdravookhraneniya BSSR (for Bronovitskiy). 23. Predsedatel' Uchenogo meditsinskogo soveta Ministerstva zdravookhraneniya USSR (for Chebotarev).
(MEDICINE)

9,4120

S/058/61/000/004/026/042
A001/A101

AUTHORS: Potsar, A.A., Chernigovskiy, V.N.

TITLE: Extinction of arc discharge by a transverse magnetic field

PERIODICAL: Referativnyy zhurnal. Fizika, no 4, 1961, 355, Abstract 4Zh111 ("Izv. Leningr. elektrotekhn. in-ta", 1959, v 39, 105 - 111)

TEXT: Processes taking place in an arc discharge are theoretically considered in a simple manner; it is shown that application of a transverse magnetic field to discharge can lead to its extinction. Moreover, a pressure increase and current increase, which generates an excessive negative charge on the walls, must increase the critical magnitude of magnetic field which extinguishes discharges. Experiments were carried out which corroborated the correctness of the conclusions drawn. The possibility of arc discharge extinction by magnetic fields may, in the authors' opinion, be used for designing powerful gas-discharge devices with a short time of deionization.

V. Belyayev

[Abstracter's note: Complete translation.]

Card 1/1

DZHELIYEV, I.T.; CHERNIGOVSKIY, V.N.

Sensitization of mechanoreceptors under the influence of acetylcholine. Biul.eksp.biol. i med. 48 no.10:3-7 O '59. (MIRA 13:2)

1. Iz laboratorii obshchey fiziologii (zav. - deystvitel'nyy chlen AMN SSSR V.N. Chernigovskiy) Instituta normal'noy i patologicheskoy fiziologii (dir. - deystvitel'nyy chlen AMN SSSR V.N. Chernigovskiy) AMN SSSR, Moskva.
(ACETYLCHOLINE pharmacol.)
(INTESTINES physiol.)

17(4) SOV/20-126-2-62/64

AUTHORS: Ugolev, A. M., Chernigovskiy, V. N., Corresponding Member AS USSR

TITLE: On the Role of Interoceptors in the Formation of the Behavior of Animals
(O roli interotseptorov v formirovanii povedeniya vysshikh zhivotnykh)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 2, pp 450-453 (USSR)

ABSTRACT: The participation of the interoceptors mentioned in the title is one of the most discussed and least investigated problems of the higher nerve function (Refs 5-8, 13-15). All papers mentioned in the references deal, however, with obviously pathological shifts or with continuously abruptly changing nutrition conditions. Thus the problem of the effects of the interior on the behavior under normal conditions is still unsolved, like before. Healthy white rats were used as experimental animals by the authors. Their cages were provided with special watering devices with different solutions which the animals could select: Ist series: I - glucose solution of 40% in water; II - the same in 1% NaCl. Figure 1 shows that

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the animals preferred the solution with NaCl. If 1 ml physiological NaCl solution per 24 hours was introduced into the animals they preferred obviously glucose solution without salt (Table 1). Thus the nutrition behavior of the animals makes possible the restoration of the normal state of their interior. The problem which mechanisms analyze the interior arises if internal changes are signalled to the nervous system. The nutrition behavior of the rats was investigated in the case of the elimination of two reflexogenic zones which are connected with the digestive apparatus. The consumption of the glucose of 40% by rats was not changed after this operation. The distribution of the consumption in the course of day and night was, however, changed. Whereas not operated animals drank glucose rather regularly, the same animals drank after the operation approximately 1/3 during the first 12 hours, and 2/3 during the following 12 hours. The same conditions were found in satiated animals. Hungry animals with a nervus vagus which had been cut through under the diaphragm drank the major part of the glucose solution during the first 12 hours. This allows the conclusion that the removal of the afferent impulsation which is caused by the re-

On the Role of Interoceptors in the Formation of the Behavior of Animals

ceptors of the digestive tract changes the rhythm of the nutrition consumption. These receptors are apparently able to inhibit and also to increase the stimulating effect of the nutrition (pishchevaya vozbudimost'). This is well in line with the most recent electrophysiological investigations (Refs 3, 9, 11). Only the rhythm of the glucose is changed not its consumption level. Quite different changes were caused by the removal of the carotide glomus on both sides: the glucose solution of 40% was used to a reduced extent, whereas that of 8%, and water were consumed to an increased extent. This occurred immediately after the operation and lasted for 2-3 months. In consequence of this it is assumed that the carotide glomus plays a considerable role in the regulation of the reactions which guarantee the absorption of water and of nutritive substances from outside by the organism. The investigations are to be continued. There are 2 figures, 1 table, and 15 references, 8 of which are Soviet.

On the Role of Interoceptors in the Formation of the Behavior of Animals

ASSOCIATION: Institut normal'noy i patologicheskoy fiziologii Akademii meditsinskikh nauk SSSR
(Institute of Normal and Pathological Physiology of the Academy of Medical Sciences, USSR)

SUBMITTED: March 5, 1959

17 (1)

AUTHORS: Kassil', V. G., Ugolev, A. M., Chernigovskiy, V. N., Corresponding Member AS USSR

SOV/20-126-3-65/69

TITLE: Gastric Reception and Control of Food Behaviour in Dogs (Retseptsiya zheludka i regulyatsiya pishchevogo povedeniya u sobak)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 3, pp 692 - 695 (USSR)

ABSTRACT: The statement that an excess or lack of different substances in the inner part of the organism is able to influence specifically such a complicated behaviour reaction as the food selection is based upon the hitherto collected facts. The investigation of the mechanisms which secure such influences is in this connection very necessary. The osmoreception and possibly the reception of other blood components is caused by the carotid nodules (karotidnyye klubochki) according to several present observations. It is, however, as well possible that a chemical analysis of the substances introduced into the organism occurs already earlier in the bowel before they are absorbed by the blood (Refs 1, 3-5). The authors tried to explain in

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this connection the possibility of specifically reflex influences of the intestine interoceptors of higher animals on their food behaviour. Approximately 250 experiments were carried out with 8 dogs which had gastric fistulas. A soundproof chamber or an isolated room served this purpose. 15 ml solution with an equal quantity of milk, however, with different sodium chloride concentrations were offered to the dogs in 4-8 containers. A cover was removed from the food containers before each experiment so that the dog could choose the milk--salt solutions. The taken solutions flowed out again through the gastric fistula which was opened during this interval. The stomach was rinsed with warm water after each experiment. First a salt concentration was detected above which the dogs refused the solutions. Only dogs were chosen in the case of which this maximum concentration remained constantly on the same level. NaCl, glucose, et al. were introduced into the stomach by the fistula. Already after the first experiments it became obvious that the food reaction changes after the introduction of 300 - 500 ml hypertonic NaCl solution (3-5%). In 2 - 3 cases the dogs refused the most concentrated NaCl solutions in milk (Fig

1). Sometimes the reaction was so distinctly marked that the dogs drank pure milk. The selection reaction was changed in almost all experiments in which a NaCl solution of 5 or 3% had been introduced into the stomach by the fistula. The reaction occurred after only 3-5 minutes, sometimes 15-20 minutes and more. The above mentioned reaction could be stopped neither by filling the stomach with 300-500 ml water nor by expansion by means of an introduced balloon. The change in the reaction vanished, however, after repeated experiments with water filling or expansion by means of a balloon. The mentioned phenomena are of reflex nature. Figure 2 shows that the introduction of 300-500 ml glucose- or saccharose solution does not influence the selection of milk-salt solutions. The change in the selection is realized under the participation of afferent systems of the nervus vagus, although also other centripetal ways play a certain rôle (in line with reference 2). There are 2 figures and 5 references, 3 of which are Soviet.

SUBMITTED: March 5, 1959
Card 3/3

CHERNIGOVSKIY, Vladimir Nikolayevich, akademik; KONRADI, G.P., red.; ZAKHAROVA, A.I., tekhn. red.

[Interoceptors] Interotseptory. Moskva, Gos. izd-vo med. lit-ry Medgiz, 1960. 657 p. (MIRA 14:7)
(RECEPTORS (NEUROLOGY))

CHERNIGOVSKIY, V.N. (Doctor)

"Nervous Regulation of Circulation."

report to be submitted at the Intl Symposium on Hypertensive Heart Disease, Prague, 22-27 May 1960.
Director of the Institute for Experimental Medicine, Moscow.

CHERNIGOVSKIY, V.N. (Leningrad)

Role of interoceptive signalization in the feeding behavior of animals. Zhur. vys. nerv. deiat. 10 no. 3:313-323 My-Je '60. (MIRA 14:2)

(BEHAVIOR) (REFLEXES)

SOVETOV, A.N.; CHERNIGOVSKIY, V.N.

Effect of extirpation of the zones of cortical representation of the vagus nerves on interoceptive conditioned reflexes from the stomach and intestines. Biul. eksp.biol.i med. 50 no.9:16-20 S '60. (MIRA 13:11)

1. Iz laboratorii obshchey fiziologii (zav. - deystvitel'nyy chlen AMN SSSR V.N.Chernigovskiy) Instituta normal'noy i patologicheskoy fiziologii AMN SSSR, Moskva.
(CONDITIONED RESPONSE) (STOMACH--INNERVATION)
(INTESTINES--INNERVATION)

LANGE, Kirill Aleksandrovich; CHERNIGOVSKIY, V.N., akademik, otv. red.; GOL'DINSKAYA, M.I., red.izd-va; SOROKINA, V.A., tekhn. red.

[I.P.Pavlov Institute of Physiology of the Academy of Sciences of the U.S.S.R., Leningrad - Pavlovo] Institut fiziologii im. I.P.Pavlova AN SSSR, g.Leningrad - s.Pavlovo. Moskva, Izd-vo AN SSSR, 1961. 69 p. (MIRA 16:12)
(Physiology--Research)

CHERNIGOVSKIY, V., akademik

How the exploit was prepared. Vest. Vozd. Fl. no.4:47-53 Ap '61. (MIRA 14:7)

(SPACE MEDICINE)

CHERNIGOVSKIY, V.N., akademik

The door to the stars has opened wide. IUn. nat. no.7:8-9 Jl '61. (MIRA 14:7)

1. Direktor Instituta fiziologii imeni I.P. Pavlova AN SSSR.
(SPACE MEDICINE)

CHERNIGOVSKIY, V.N.

Morphophysiological structure of the interoceptive reflex arch.
Trudy 1-go MMI 11:256-274 '61. (MIRA 15:5)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR, Moskva.
(REFLEXES) (NERVOUS SYSTEM, AUTONOMIC)

CHERNIGOVSKIY, V.N. akademik; LANGE, K.O., nauchnyy sotrudnik (Leningrad)

Tomorrow of the science of physiology. Nauka i zhyttia 11 no. 4:44-47 Ap '61. (MIRA 14:5)

1. Direktor Instituta fiziologii imeni I.P. Pavlova AN SSSR (for Chernigovskiy).

(Physiological research)

CHERNIGOVSKIY, V.N., akademik; DURINYAN, R.A.; ZARKHINA, E.M.

Some data on the analysis of evoked potentials. Dokl. AN SSSR 136 no. 3:749-752 Ja '61. (MIRA 14:2)

1. Institut normal'noy i patologicheskoy fiziologii Akademii meditsinskikh nauk SSSR.

(Electroencephalography)

3

CHERNIGOVSKIY, V.N., ARKIND, M.V., KASSIL, V.G., UGOLEV, A.M.

"Interoception and alimentary behaviour of the animal."

Report submitted, but not presented at the 22nd International Congress of Physiological Sciences.
Leiden, the Netherlands 10-17 Sep 1962

SISAKYAN, N.M.; PARIN, V.V.; CHERNIGOVSKIY, V.N.; YAZDOVSKIY, V.I.

Some problems of studying and conquering outer space. Probl. kosm.biol. 1:5-16 '62. (MIRA 15:12)
(SPACE BIOLOGY)

GAZENKO, O.G.; YAZDOVSKIY, V.I.; CHERNIGOVSKIY, V.N.

Medicobiological investigations in artificial earth satellites.
Probl.kosm.biol. 1:285-289 '62. (MIRA 15:12)
(ARTIFICIAL SATELLITES) (SPACE BIOLOGY--RESEARCH)

S/216/62/000/002/001/002
I021/I221

AUTHOR: Sisakyan, N. M., Parin, V. V., Chernigovskiy, V. N. and Yazdovskiy, V. I.

TITLE: Problems of space biology and physiology

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya biologicheskaya, no. 2, 1962, 153-162

TEXT: Lecture at the General Session of the Department of Biological Sciences.

The article deals with space biology and physiology in the USSR. Although a young science, it has already created new methods of biological experimentation, realized automatically by special devices installed on spaceships. The results of these experiments are registered and delivered to observation points on the earth. According to the authors, 3 problems are at present of great importance: 1) study of the effects of cosmic factors on living organisms of the earth, 2) study of forms of life in outer space, 3) investigations into the biological basis for securing cosmic flights and life on planets. The authors outlined 5 periods in the development of space biology in the USSR. The first was connected with biological interpretation of the data on physical characteristics of the upper layers of the atmosphere, cosmic space and flights of rockets. In the second period experiments were carried out under conditions near to those of cosmic flight. In the third—experiments were carried out on Sputnik II. It was demonstrated that life is possible under conditions free from gravity. In the fourth period biological experiments were carried out on spaceships with animals. These assembled the data

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necessary for putting a man in to orbit. The fifth period was characterized by the flight of man in space. The authors deal further with all factors liable to affect living organism in a spaceship. They divide them into 3 groups; 1) factors connected with the dynamics of the flight-vibration, lack of gravity, 2) ultraviolet, infrared and visible parts of radiation, ionizing radiation, concentration of gases, 3) factors connected with more or less prolonged life of organisms under artificial conditions of a spaceship-isolation, lack of room in the capsule, microclimate and nutrition and rhythm of life. The authors also refered to exobiology.

CHERNIGOVSKY, V.N. [Chernigovskiy, V.N.]

Morphophysiological structure of the introceptive analyser and its role in the feeding behaviour of animals. Activ. nerv. sup. 4 no.3/4: 256-274 '62.

1. I.P. Pavlov's Institute of Physiology, Leningrad, USSR.
(RECEPTORS NEURAL) (NUTRITION)

LUK'YANENKO, P.P., akademik (Krasnodar); CHERNENKO, S.F., prof. (Michurinsk); LITOVCHENKO, G.R., kand. sel'skokhozyaystvennykh nauk; KOREN'KOV, V.A.; SELIVANOV, A.I., prof.; CHERNIGOVSKIY, V.N.; DUBROVSKIY, A.A.; BAKHTADZE, K.Ye., akademik (Stantsiya Chakva)

Great strides of Soviet science. IUn. nat. no.11:3, 27, 31, 33, 35-36 O '62. (MIRA 16:5)

1. Chleny-korrespondenty Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni Lenina (for Koren'kov, Slivanov). 2. Deystvitel'nyy chlen Akademii nauk SSSR (for Chernigovskiy). 3. Rukovoditel' laboratorii Vsesoyuznogo nauchno-issledovatel'skogo instituta mekhanizatsii sel'skogo khozyaystva (for Dubrovskiy).
(Science news)

AL'BERTINSKIY, B.I.; KAN, G.S.; CHERNIGOVSKIY, V.N.

Analysis of the protective functions of the body on the basis of the concepts of the theory of regulation and physiology; the example of tuberculosis infection. Vest.AMN SSSR 17 no.5:72-87 '62. (MIRA 15:10)

(TUBERCULOSIS) (IMMUNITY)

CHERNIGOVSKIY, V.N.

Reception by the stomach and the regulation of feeding behavior in dogs. Biul.MOIP.Otd.biol. 67 no.5:150-151 S-O '62. (MIRA 15:10)

(STOMACH--INNERVATION) (ANIMALS, FOOD HABITS OF)

CHERNIGOVSKIY, V.N., akademik; ZARAYSKAYA, S.M.

Projection of the vagus nerve in the cerebral cortex and the limbic lobe of the brain in cats. Dokl. AN SSSR 147 no.3:742-744 N '62. (MIRA 15:12)

1. Laboratoriya obshchey fiziologii Instituta fiziologii im. I.P. Pavlova AN SSSR.
(VAGUS NERVE) (ELECTROENCEPHALOGRAPH)

UGOLEV, Aleksandr Mikhaylovich; CHERNIGOVSKIY, V.N., akademik, otv. red.; NATAROVA, N.V., red. izd-va; GALIGANOVA, L.M., tekhn. red.

[Parietal (contact) digestion]Pristenochnoe (kontaktnoe) pishchevarenie. Moskva, Izd-vo Akad. nauk SSSR, 1963. 169 p. (MIRA 16:1)

(DIGESTION) (ABSORPTION (PHYSIOLOGY))

CHERNIGOVSKIY, V.N., akademik; LANGE, K.A.

Study of human and animal physiology from the experience gained in coordination work by the Sciencific Council. Vest. AN SSSR 33 no.7:33-39 Jl '63. (MIRA 16:8)
(Physiology)

RABKIN, Yefim Borisovich, prof.; SOKOLOVA, Yelena Georgiyevna, kand. med. nauk; FRID, Yudol'f Vladimirovich, kand. tekhn. nauk; KOVAL'SKIY, Nikolay Nikolayevich, inzh.-khim.; CHERNIGOVSKIY, V.N., akademik, red.; KARPOVA, N.L., red.

[Aid for efficient color schemes; with colorimetrical index of samples] Rukovodstvo po ratsional'nomu tsvetovomu oformleniiu; s naborom kolorimetrirovannykh obraztsov tsvetov. Moskva, Izd-vo "Transport," 1964. 46 p. (MIRA 17:4)

1. Predsedatel' komissii po fiziologicheskoy optike pri Institute fiziologii im. I.P.Pavlova AN SSSR (for Chernigovskiy).

OBRAZTSOVA, Galina Alekseyevna; CHERNIGOVSKIY, V.N., akademik, otv. red.

[Ontogenetic problems of higher nervous activity] Voprosy ontogeneza vysshei nervnoi deiatel'nosti. Moskva, Nauka, 1964. 200 p. (MIRA 17:11)

OL'YANSKAYA, Regina Pavlovna; CHERNIGOVSKIY, V.N., akademik, otv. red.; VASIL'YEVA, Z.A., red.izd-va; KONDRAT'YEVA, M.N., tekhn. red.

[Essays on metabolism regulation] Ocherki po reguliatsii obmena veshchestv. Moskva, Izd-vo "Nauka," 1964. 232 p. (MIRA 17:4)

*

IOYRISH, Naum Petrovich ; CHERNIGOVSKIY, V.N., akademik, otv. red.; NIKITINSKAYA, I.V., red.izd-va; MAKAGONOVA, I.A., tekhn. red.; YEFIMOVA, A.P., tekhn.red.

[Bees as winged pharmacists] Pchely - krylatye farmatsevty. Moskva, Izd-vo "Nauka," 1964. 156 p.
(MIRA 17:3)

CHERNIGOVSKIY, V.N., akademik, otv. red.; KRASUSKIY, V.K., red.; FEDOROV, V.K., red.

[Methods for studying the typological characteristics of higher nervous activity in animals] Metodiki izucheniia tipologicheskikh osobennostei vysshei nervnoi deiatel'nosti zhivotnykh. Moskva, Nauka, 1964. 229 p. (MIRA 17:10)

1. Akademiya nauk SSSR. Ob"yedinennyy nauchnyy sovet "Fiziologiya cheloveka i zhivotnykh."

KHAYUTIN, Vladimir Mikhaylovich, doktor med. nauk; CHERNIGOVSKIY, V.N., akademik, otv. red.; GORYUNOVA, T.I., red.

[Vasomotor reflexes] Sosudodvigatel'nye refleksy. Moskva, Nauka, 1964. 375 p. (MIRA 17:9)

GAZENKO, O.G.; CHERNIGOVSKIY, V.N.; YAZDOVSKIY, V.I.

Biological and physiological studies during flights on board of rockets and artificual earth satellites. Probl. kosm. biol. 3: 23-36 '64. (MIRA 17:6)

ACCESSION NR: AP4036405 S/0030/64/000/004/0045/0048

AUTHOR: Chernigovskiy, V. N. (Academician)

TITLE: Department of physiology (Report of Academician V. N. Chernigovskiy)

SOURCE: AN SSSR. Vestnik, no. 4, 1964, 45-48

TOPIC TAGS: physiological analysis, nerve tissue physiology, cell structure, brain cell, psychic process, neurophysiology, nerve excitation process

ABSTRACT: This report concerning the state and development of the science of physiology in 1963 was presented by Academician V. N. Chernigovskiy at the general assembly of the Academy of Sciences SSSR. The general topic of this convention was "State and Development of Science in 1963." The report was very brief and general in nature because this department has been in existence for only slightly more than one year. The main report was presented by the Chief Secretary [Abstracter's note: name not mentioned]. In 1963 the work was centered on the physiology of nerve tissue. I. S. Beritashvili of Georgia made an attempt to determine a relation between certain definite cell structures of brain tissue and psychic processes. P. G. Kostyuk achieved considerable success in the study of neurophysiology of

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ACCESSION NR: AP4036405

separate nerve cells. The application of mathematical evaluation methods to the physiology of the nervous system was regarded as a major achievement. New directions which originated in 1963 in this science were pointed toward the physiological analysis of memory, the problems of foresight, and the nerve excitation processes. The solutions are being sought on the basis of the morphological analysis of substrata in which these processes originate and on the basis of physicochemical and physiologicochemical analyses.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 20May64	ENCL: 00
SUB CODE: LS	NO REF SOV: 000	OTHER: 000

Card 2/2

CZERNIKOWSKI, Vladimir [Chernigovskiy, Vladimir Nikolayevich]

What does an organism know about itself? Problemy 20 no.5:276-278 '64

1. Member, Academy of Sciences of the U.S.S.R., Head of the Institute of Physiology, Academy of Sciences of U.S.S.R.

CHERNIGOVSKIY, V.N.

Morphophysiological structure of subcortical and cortical projections of afferent vagus nerve fibers. Fiziol. zhur. 50 no.8:913-923 Ag '64. (MIRA 18:12)

1. Institut fiziologii imeni Pavlova AN SSSR, Leningrad.

YERMOLAYEVA, V.Yu.; CHERNIGOVSKIY, V.N., akademik

Viscerosomatic signalization in reticular structures of the midbrain of a cat. Dokl. AN SSSR 159 no. 2:489-492 Jl '64. (MIRA 17:7)

1. Institut fiziologii imeni I.P.Pavlova AN SSSR.

L 55947-65

ACCESSION NR: [illegible]

AUTHOR: Yermolayeva, [illegible] Chernigovski [illegible]

TITLE: Participation of some structures of [illegible] of viscera, and somatic stimuli

SOURCE: AN SSSR. Doklady, v. 159, no. 3, 1964, [illegible]

TOPIC TAGS: nervous system, neurology, experiment animal

Abstract: The biopotentials arising upon [illegible]
[illegible]
hippocampus, fornix, tract, habenulo-peduncu[illegible]
[illegible]
[illegible]
[illegible] of the
transmission of [illegible] stimuli [illegible]

ASSOCIATION: Institut [illegible]
of Physiology, Academy of Sciences SSSR

SUBMITTED: [illegible]

NO REF SOV: [illegible]

Card 1/2

CHERNIGOVSKIY, V.N., akademik, otv. red.

[Problems of modern neurophysiology] Problemy sovremennoi neirofiziologii. Moskva, Nauka, 1965. 132 p.
(MIRA 18:6)

1. Akademiya nauk SSSR. Ob"yedinennyy nauchnyy sovet. "Fiziologiya cheloveka i zhivotnykh."

ZARAYSKAYA, S.M.; MUSYASHCHIKOVA, S.S.; CHERNIGOVSKIY, V.N.

Cortical representation of the afferent systems of the alimentary tract. Zhur. vys. nerv. deiat. 15 no.2:405-413 Mr-Ap '65. (MIRA 18:5)

1. Laboratoriya obshchey fiziologii Instituta fiziologii imeni I.P. Pavlova AN SSSR, Leningrad.

BAZANOVA, I.S.; YEVICKIMOV, G.A.; MAYOROV, V.N.; MERKULOVA, O.S.; CHERNIGOVSKIY, V.N.

Morphoelectrophysiological study of the interneuronal synapse in a live preparative of a parasympathetic ganglion of the urinary bladder in frogs. Fiziol.zhur. 51 no.3:309-317 Mr '65. (MIRA 18:5)

1. Laboratoriya obshchey fiziologii Instituta fiziologii imeni Pavlova AN SSSR, Leningrad.

BAZANOVA, I.S.; YEVDOKIMOV, S.A.; MAYOROV, V.N.; MERKULOVA, O.S.; CHERNIGOVSKIY, V.N.

Morphological and bioelectrical changes in the interneuronal synapsis during the transmission of rhythmical impulses. Fiziol. zhur. 51 no.4:457-462 Ap '65. (MIRA 18:6)

1. Laboratoriya obshchey fiziologii Instituta fiziologii imeni Pavlova AN SSSR, Leningrad.

L 25803-66
ACC NR: AP6015931 SOURCE CODE: UR/0239/65/051/003/0309/0317

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AUTHOR: Bazanova, I. S.; Yevdokimov, S. A.; Mayorov, V. N.; Merkulova, O. S.; Chernigovskiy, V. N.--Chernigovski, V. N.

ORG: Laboratory of General Physiology, Institute of Physiology im. I. P. Pavlov, Leningrad (Laboratoriya obshchey fiziologii Instituta fiziologii AN SSSR)

TITLE: Morpho-electrophysiological investigation of the interneuron synapse on a living preparation of the parasympathetic ganglion of the urinary bladder of the frog

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SOURCE: Fiziologicheskiy zhurnal SSSR, v. 51, no. 3, 1965, 309-317

TOPIC TAGS: electrophysiology, autonomic nervous system, experiment animal

ABSTRACT: Parallel morphological and electrophysiological study of interneuron synapses of the parasympathetic ganglion of the urinary bladder of the frog was carried out on living histological preparations at +2°. It was established that in the process of irritation of a synapse with electric currents of various frequencies, a hypotonic solution (Leningrad city water), and a solution of methylene blue, morphological and functional changes took place in the synapse. Conduction of nerve impulses through the synapse was retained in all stages of morphological change, although it was altered in magnitude and type. The morphological

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and structural changes (which involved enlargement of the synapse contact plates) as well as the functional changes were reversible. The structural changes lagged behind the functional shifts both during their development and regression. The dynamics of stages of the structural changes observed were similar to those of stages of paranecrosis. Orig. art. has: 4 figures. [JPRS]

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YERMOLAYEVA, V.Yu.; CHERNIGOVSKIY, V.N.

Evoked potentials in the nucleus ruber and tractus tegmentalis centralis in cats following stimulation of the splanchnic nerve. Biul. eksp. biol. i med. 60 no.7:3-6 Jl '65. (MIRA 18:8)

1. Laboratoriya obshchey fiziologii Instituta fiziologii imeni I.P. Pavlova AN SSSR, Leningrad.

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D256/D301

9.4120

AUTHORS: Potsar, A. A. and Chernigovskiy, V. V.

TITLE: Ignition of discharge between cold electrodes in a transverse magnetic field

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 3, 1962, abstract 3-3-15d (Izv. Leningr. elektrotekhn. in-ta, 1961, no. 45, 90-100)

TEXT: The influence is theoretically considered of a transverse magnetic field on the ignition voltage of an electric discharge between cold electrodes in a gas medium. The ignition voltage U_3 can be determined from the equation:

$$\gamma(U_{3/x})U_3 = \frac{U_1}{W_i(U_1)}$$

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Ignition of discharge ...

where

$$U_1 = \frac{4}{3}\frac{m}{e}\frac{U_3}{(dH)^2}$$

is the mean velocity of electrons in their motion from the cathode towards the anode along a cycloidal trajectory; $\gamma\frac{U_3}{2}$ is the coefficient of secondary emission of electrons under positive ion bombardment; $W_i(U_1)$ is the ionization probability; d is the distance between the electrodes; H is the strength of the magnetic field. It is borne out from the equation solved graphically that the ignition voltage is a function of the product H·d; this fact resembles the similarity relation in gas discharges, and the relation $U_3 = f(H.d)$ has a minimum with two rising branches similar to the Paschen curves. The presented solution is valid only for pressures corresponding to a high directional component of the electron velocity; with increasing pressure the chaotic component of the velocity increases and the influence of the magnetic field on the discharge

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becomes less significant. For small H·d values the electrons can reach the anode practically without collisions owing to the comparatively large diameter of the cycloidal orbits, and in this case the presence of the magnetic field is in its effect similar to an increased pressure. It is shown that the proposed theory is in agreement with the basic experimental results obtained using a glow-discharge rectifier with a transverse magnetic field. 19 references. [Abstracter's note: Complete translation.]

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AUTHOR: Chernigovskiy, V. V.

TITLE: Noise in gas-discharge devices placed in a transverse magnetic field

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 3, 1962, abstract 3-3-73y (Izv. Leningr. elektrotekhn. in-ta, 1961, no. 45, 120-134)

TEXT: The noise in gas discharge devices at a low pressure and a comparatively low concentration of charged carriers can be considered as oscillation processes in an automatic control system with a strongfeedback coupling. An equation was derived from which the existence of noise generation can be determined as well as the frequency of the damped oscillations. An external disturbance is necessary to start the noise generation, and in the considered case the disturbance was introduced by the cyclotron oscillations of particles induced by a magnetic field of a strength up to 1500 Oe. Investigations were carried out using tubes of an axially symmetric

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Noise in gas-discharge ...

construction with cylindrical anodes of a diameter 10, 20 and 32 mm, and a hot cathode; the tubes were filled with argon, neon, hydrogen and helium. The experimentally obtained dependence of the total noise voltage on the electron mean free path λ_m was found to be in agreement with the conclusion derived from the equation that the noise should be present only for $\Delta_m < \lambda_m$. The flat region of the curve of the noise voltage versus λ_m corresponds to values of λ_m comparable with the distance d between the electrodes. Since using higher pressures ensures longer life of the device it is preferred to use hydrogen or helium rather than the other gases owing to the larger value of λ_m at a given pressure. The theoretically considered mechanism of the oscillations assumes the presence of a negative space charge at the cathode which disappears when the anode current exceeds the current of thermo-electronic emission of the cathode. Therefore, in a hot cathode gas-discharge noise generator the anode current should not exceed the current emitted by the cathode. In addition the noise was investigated for a glow-discharge tube com-

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prising a rectangular flat cathode and a frame anode, filled with neon at 20 mmHg. Intense noise was observed in the region below the main region of the glow-discharge. In the region of glow-discharge the noise intensity was much lower. This can be explained by the fact that in the conditions of glow-discharge a change of the current is not followed by an adequate change of the electron output from the cathode. In a hot-cathode device a shift of the noise spectrum towards higher frequencies was observed when increasing the anode current. At low currents generation of harmonic oscillation occurred, possibly due to a resonance of the cyclotron oscillations of the ions with the self-oscillations of the equivalent system of automatic control. 5 references. [Abstracter's note: Complete translation.]

CHERNIGOVSKIY, Ye., inzh.; STERLIK, I., inzh.

Electric heaters for oil dispensers. Avt.transp. 40 no.9:25-26 S '62. (MIRA 15:9)

1. Gruzovoy avtopark No.25 Glavkiyevavtotransa.
(Electric heating)

CHERNIK, A.V.; ALIYEV, S.G.

Lipoma of the bones. Vop. onk. 11 no.6:112-114 '65.
(MIRA 18:8)

1. Iz rentgenologicheskogo otdeleniya (ispolnyayushchiy obyazannosti zaveduyushchego otdeleniyem - doktor med.nauk A.P.Lazareva) Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I. Serebrov).

CHERNIK, G.V.

Using automated diesel generators in geological prospecting.
Biul.nauch.-tekh.inform VIMS no.1:73-76 '63.
(MIRA 18:2)

1. Leningradskiy gornyy institut.