"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

Histochemical Investigations of the Receptoral Structures (of the Maculae Acusticae and Auditory Crests) of the Vestibular Part of the Labyrinth of Mammals

SOV/20-122-6-44/49

cells, but is conspicuously active in the nerve fibers of the synapsis structures which are located at the base of the receptoral elements (Fig 1). DNS and RNS are characteristically distributed in the maculae acusticae. There is only little DNS in the cores of the hair cells. The RNS of the cores can be found only in the nucleolus. Cytoplasma is rich in small RNS-granulae which are distributed in the whole endoplasma. The RNS-content is high in the cytoplasma of the elements mentioned, especially in the boundary zone. In the zone of the maculae acusticae, which corresponds to the base of the auditory cells, and in which the synapses of the vestibular fibers are located, a high activity of the specific AcChE shows up (Fig 2). This is also valid for the additional macula acustica of cats (Fig 3 a). The non-specific choline esterase is less active. SDH is very active in the hair cells, but less active in the suppo cells. Its activity increases in the cytoplasma of the supporting elements of the boundary zone. Together with SDH another oxidative ferment -

Card 3/5

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

SOV/20-122-6-44/49

Histochemical Investigations of the Receptoral Structures (of the Maculae Acusticae and Auditory Crests) of the Vestibular Part of the Labyrinth of Mammals

OChO - is very active in the hair cells. It diffusely infiltrates into the body of the hair cells and even penetrates the sensitive hairs. In the following the structure and distribution of the ferments in the rest of the elements mentioned in the title are described. This paper gives an impression of the abundance in chemically active substances which safeguard metabolism and energy supply of the elements mentioned. An equal localization of these substances undoubtedly facilitates their interaction. There are 4 figures and 9 references, 7 of which are Soviet.

ASSOCIATION: Institut evolyutsionnoy fiziologii im. I. M. Sechenova Akademii nauk SSSR (Institute of Evolution Physiology imeni I. M. Sechenov Academy of Sciences, USSR)

PRESENTED: May 24, 1958, by L. A. Orbeli, Academician

Card 4/5

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya.A.

Problem of evolutionary cytochemistry and histochemistry. TSitologiia 1 no.2:141-152 Mr-Ap '59. (MIRA 12:9)

1. Laboratoriya evolyutsionnoy morfologii Instituta evolyutsionnoy fiziologii AN SSSR, Leningrad.
(CYTOLOGY) (HISTOCHEMISTRY)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, YA. A., and TITOVA, L. K. (USSR)

"Cytochemical and Biochemical Features of Receptor Cell Excitation in the Internal Ear."

Report presented at the 5th International Biochemistry Congress, Moscow, 10-16 Aug 1961

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Yakov Abramovich; TITOVA, Lidiya Konstantinovna; KARAMYAN, A.I., prof., otv. red.; NATAROVA, N.V., red. izd-va; BOCHEVER, V.T., tekhn. red.

[Organ of Corti; histophysiology and histochemistry] Kortiev organ; gistofiziologiia i gistokhimiia. Moskva, Izd-vo Akad. nauk SSSR, 1961. 260 p. (MIRA 15:1)
(LABYRINTH (EAR))

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, YA. A., YAKOVLEV, V. A., TITOVA, L. K., BRONSHTEYN, A. A.

"The Localization and Distribution of the 'Total' Protein and its Functional (SH, -SS-, COOH) Groups in Corti's Organ Under Conditions of Relative Rest and in a State of Excitation."

report submitted for the First Conference on the problems of Cyto and Histochemistry, Moscow, 19-21 Dec 1960.

Institute of Evolutionary Physiology Imeni I. M. Sechenov, Academy of Sciences USSR, Leningrad.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, YA. A., TITOVA, L. K.

"Cytochemical Theory of Hearing."

report submitted for the First Conference on the problems of Cyto and Histochemistry, Moscow, 19-21 Dec 1960.

Institute of Evolutionary Physiology Imeni I. M. Sechenov, Academy of Sciences USSR, Leningrad.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya.A. (Leningrad, K-17, B.Osipovskaya, d.8, kv.1)

Problems of the evolutional morphology of the analysors. Arkh. anat.gist.i embr. 37 no.8:3-11 Ag '59. (MIRA 12:11)

1. Laboratoriya evolyutsionnoy morfologii Instituta evolyutsionnoy fiziologii imeni I.M.Sechenova Akademii nauk SSSR.
(NERVOUS SYSTEM physiol)
(SENSATION physiol)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya.A.; TITOVA, L.K.

Method of in vivo isolation of the membranous labyrinth (the cochlea and the vestibule); preparation of and description of flat Corti's organ preparations. Arkh. anat. gist. i embr. 36 no.4:82-93 Ap '59 (MIRA 12:7)

1. Laboratoriya evolyutsionnoy morfologii (zav. - prof. Ya. A. Vinnikov) Instituta evolyutsionnoy fiziologii im. I.M. Sechenova AN SSSR.
Adres avtorov: Leningrad, Ligovskiy prosp., d.164, kv.13.
(LABYRINTH, anat. & histol.
Corti's organ, intravital prep. & description (Rus))

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya.A.; TITOVA, L.K.

Dehydrase activity in the mitochondria of nerve terminations in the region of the synapses of the inner ear of vertebrates. Dokl. AN SSSR 142 no.2:484-487 Ja '62. (MIRA 15:2)

1. Institut evolyutsionnoy fiziologii im. I.M.Sechenova AN SSSR. Predstavleno akademikom N.M.Sisakyanom.

(DEHYDRASE)
(MITOCHONDRIA)
(NERVES)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

LEYBSON, L.G.; VINNIKOV, Ya.A.; ZHELUDKOVA, Z.P.

Glycogen in the organ of Corti under conditions of relative peace and during the action of sound stimuli. Biokhimiia 26 no. 1:70-76 Ja-F '61. (MIRA 14:2)

1. Institute of Evolutionary Physiology, Academy of Sciences of the U.S.S.R., Leningrad.
(LABYRINTH) (GLYCOGEN)
(SOUND--PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

YAKOVLEV, V.A.; TITOVA, L.K.; BRONSHTEYN, A.A.; VINNIKOV, Ya.A.

Localization and cytochemical characteristics of proteins of the hair cells of Corti's organ during a state of relative rest and during acoustic stimulation. Dokl. AN SSSR 136 no.2:456-459 '61. (MIRA 14:1)

1. Institut evolyutsionnoy fiziologii imeni I.M. Sechenova Akademii nauk SSSR. Predstavleno akademikom I.I. Shmal'gauzenom.

(PROTEINS IN THE BODY)
(SOUND—PHYSIOLOGICAL EFFECT)
(LABYRINTH (EAR))

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya.A.; SOKOLOVA, M.N.

Sorption of vital dyes by hair cells of the organ of Corti in the cochlea of the guinea pig under conditions of relative peace and during the action of sound stimuli. Dokl. AN SSSR 137 no. 1:236-239 Mr-Ap '61. (MIRA 14:2)

1. Institut evolyutsionnoy fiziologii im. I.M. Sechenova Akademii nauk SSSR. Predstavleno akademikom I.I. Shmal'gauzenom.
(ABSORPTION (PHYSIOLOGY)) (LABYRINTH (EAR))
(SOUND—PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya.A.; TITOVA, L.K. (Leningrad)

Cytophysiological and cytochemical studies on hair cells in the organ of Corti; cytochemical theory of hearing. Usp. sovr. biol. 53 no.1: 105-123 '62. (MIRA 15:5)

(LABYRINTH (EAR))

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya.I.; LUKASHEVICH, T.P.

Activity of enzymes of the succinic oxidase system in the mitochondria of the epithelium cells of the anterior wall of the crystalline lens in reparative regeneration. Izv. AN SSSR. Ser. biol. no.6:916-919 N-D '64.

(MIRA 17:11)

1. I.M. Sechenov Institute of Evolutionary Physiology, Academy of Sciences of the U.S.S.R., Leningrad.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

ACCESSION NR: AT4042663 S/0000/63/000/000/0101/0104

AUTHOR: Vinnikov, Ya. A.; Gazenko, O. G.; Titova, L. K.; Bronshteyn, A. A.; Govardovskiy, V. I.

TITLE: A structural and cytochemical investigation of the organ of gravity (utriculus of the vestibular portion of the labyrinth) during rest and under the influence of accelerations

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy konferentsii. Moscow, 1963, 101-104

TOPIC TAGS: utriculus, utriculus function, acceleration effect, cytochemistry, substructure, pig, monkey, pigeon

ABSTRACT: Although the role of the utriculus under normal conditions in maintaining muscle tonus is well known, its functional mechanism in man and animals under the influence of a gravitational field is not clear. Comparative electron microscopic and cytochemical studies were conducted on the utriculi of guinea pigs, monkeys, and pigeons during relative quiescence and brief, repeated accelerations of 10 g. Shifts in the structural and cytochemical organization of ciliary cells

Card 1/2

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

ACCESSION NR: AT4042663

and synapses of the utriculus during accelerations reflected their stimulation and the transmission of impulses. Accompanying these shifts was a progression of biochemical processes beginning with protein synthesis, leading to tissue respiration and culminating in the activity of acetylcholinesterase. Results of the investigation reveal how the utriculus responds to acceleration on a subcellular level and suggest what its mechanism of regulation would be under space-flight conditions. However, processes of its specific stimulation and their correspondence with receptor regions of the vestibular organ remain unclear.

ASSOCIATION: none

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, YA. A.,

AID Nr. 972-36 21 May

EFFECTS OF AN ALTERED GRAVITATIONAL FIELD ON THE VESTIBULAR APPARATUS (USSR)

Vinnikov, Ya. A., O. G. Gazenko, L. K. Titova, and A. A. Bronshteyn. IN: Akademiya nauk SSSR. Izvestiya. Seriya biologicheskaya, no. 2, Mar-Apr 1963, 222-231. S/216/63/000/002/003/004

Morphological and histochemical studies of the receptor cells of the utricle and the neurons of the vestibular ganglia of guinea pigs and cats were made while the animals were in a state of relative rest and after exposure to transverse radial accelerations of 1.5 G for 30 min, 3 G for 10 min, and 10 G for 3 min. Accelerations of 1.5 to 3 G caused an increase in acetylcholine esterase activity in the synapse regions and a slight decrease in the cytoplasmic RNA content of the receptor cells of the utricle. Accelerations of 10 G brought about a sharp drop in the cytoplasmic RNA content of the receptor cells of the

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

AID Nr. 972-36 21 May

EFFECTS OF AN ALTERED GRAVITATIONAL FIELD [Cont'd] S/216/63/000/002/003/004

utricle and of some neurons of the vestibular ganglia, decreased the total protein and protein functional groups, and lowered the activity of oxidative enzymes in the mitochondria and the activity of acetylcholine esterase in the synapse regions. Acceleration-induced changes in RNA distribution were generally more pronounced in guinea pigs than in cats. Restoration of the amount and activity of these biochemical substances began several hours after exposure to 10 G and was complete 12 to 14 days later. [AB]

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya.A.; GAZENKO, O.G.; TITOVA, L.K.; OSIPOVA, I.V.; BRONSHTEYN, A.A.

Histochemical and ultrastructural changes in the receptor cells of the utricle in a changed gravitational field. Dokl. AN SSSR 153 no.2:450-453 N '63. (MIRA 16:12)

1. Institut evolyutsionnoy fiziologii im. I.M.Sechenova AN SSSR. Predstavleno akademikom N.M.Sisakyanom.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya. A.; TITOVA, L. K.; OSIPOVA, I. V.; BRONSHTEYN, A. A.

"Cytochemical and electron microscopical investigation of nucleolar RNA extruding into cytoplasm."

report submitted for 2nd Intl Cong, Histochemistry & Cytochemistry, Frankfurt, 16-21 Aug 64.

Leningrad.

Sechenov Inst of Evolutionary Physiology, AS USSR.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya. A.

"Vestibular structure and function in condition of changed gravitational field."

report submitted for 15th Intl Astronautical Cong, Warsaw, 7-12 Sep 64.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

ALEKSANDROV, V.Ya., prof.; BRODSKIY, V.Ya.; BRONSHTEYN, A.A.; BRUMBERG, Ye.M.; VAKHTIN, Yu.B.; VINNIKOV, Ya.A.; GAYTSKHOKI, V.S.; GOROSHCHENKO, Yu.L.; GULYAYEV, V.A.; ZHINKIN, L.N.; ZAVARZIN, A.A.; ZALKIND, S.Ya.; ZBARSKIY, I.B.; KATSNEL'SON, Z.S.; KOMISSARCHIK, Ya.Yu.; LEVIN, S.V.; MARAKHOVA, I.I.; MASHANSKIY, V.F.; MOSEVICH, T.N.; NIKOL'SKIY, N.N.; PESHKOV, M.A.; POLENOV, A.A.; POLYANSKIY, Yu.I.; ROZENTAL', D.L.; RUMYANTSEV, P.P.; TITOVA, L.K.; FEDIN, L.A.; KHEYSIN, Ye.M.; CHERNOGRYADSKAYA, N.A.; TROSHIN, A.S., otv. red.; MEYSEL', M.N., red.; MIKHAYLOV, V.P., red.; NEYFAKH, S.A., red.; PARIBOK, V.P., red.; POLYANSKIY, Yu.I., red.; RAYKOV, I.B., red.

[Manual on cytology in two volumes] Rukovodstvo po tsitologii v dvukh tomakh. Moskva, Nauka. Vol.1. 1965. 571 p. (MIRA 18:2)

1. Akademiya nauk SSSR. Institut tsitologii.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya.A.; GOVARDOVSKIY, V.I.; OSIPOVA, I.V.

Electron microscopic study of the utricle, the gravitation organ of the pike (Esox lucius). Biofizika 10 no.6:1003-1006 '65. (MIRA 19:1)

1. Institut evolyutsionnoy fiziologii i biokhimii imeni I.M. Sechenova AN SSSR, Leningrad. Submitted July 20, 1964.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

L 21579-66 EWT(1) SCTB DD

ACC NR: AP6009429 SOURCE CODE: UR/0020/66/166/006/1447/1450

32

B

AUTHOR: Vinnikov, Ya. A.; Gazenko, O. G.; Titova, L. K.; Bronshteyn, A. A.; Pevzner, R. A.; Aronova, M. Z.; Vasil'yev, P. V.

ORG: Laboratory of Evolutionary Morphology, Institute of Evolutionary Physiology and Biochemistry im. I. M. Sechenova, Academy of Sciences SSSR (Laboratoriya evolyutsionnoy morfologii Instituta evolyutsionnoy fiziologii i biokhimii Akademii nauk SSSR)

TITLE: Electron microscopy of mitochondria in the area of utricular synapses in the inner ear of vertebrates

SOURCE: AN SSSR. Doklady, v. 166, no. 6, 1966, 1447-1450

TOPIC TAGS: inner ear, animal physiology, neurophysiology, utricle, receptor cell, synapse, centripetal acceleration, acceleration effect

ABSTRACT: Comparison of utricular receptors in resting and centrifuged animals disclosed some interesting features of the spatial relationship between the mitochondria of hair cells and their synapses. A variety of animals -- white mice, land tortoises, common frogs, pigeons, chickens, and pickerel -- were subjected to single and repeated centripetal accelerations of 10—18 G for 5—10 min. The inner ear of each animal was removed before decapitation. Electron microscopy of the utricles of experimental animals showed that the mitochondria of utricular hair cells can be in close contact with the presynaptic membrane, especially in animals subjected to

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

L 21579-66

ACC NR: AP6009429

accelerations. This grouping of the presynaptic mitochondria at the membrane was especially evident in the utricular hair cells of white mice rotated for 3 min at 18 G. Grouping of presynaptic mitochondria was also observed in efferent bud-shaped nerve endings in the utricles of frogs and tortoises centrifuged three times at 10 G. A similar phenomenon was noted in utricular cells of pickerel after 10 min of centrifugation at 10 G. It is postulated from the experimental data, including electron micrographs, that the mitochondrial apparatus of utricular receptor cells in vertebrates participates in the work of utricular synaptic structures. The authors' previous observations of the change in dehydrogenase activity of the synaptic mitochondria as a result of specific stimulation of the utricle support this conclusion. Various possible mechanisms of mitochondrial participation in the activity of synapses are presented. The results of this study are of special significance in increasing the understanding of the nature of utricular receptor excitation and the neural transmission of excitation under altered gravity conditions. An interpretation of these phenomena will be the subject of future studies. [JS]

SUB CODE: 06/ SUBM DATE: 28Jul65/ ORIG REF: 008/ OTH REF: 010/ ATD PRESS: 4219

Card 2/2 ULR

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

L 26725-66

ACC NR: AP6010649 SOURCE CODE: UR/0217/65/010/006/1003/1006

AUTHOR: Vinnikov, Ya. A.; Govardovskiy, V. I.; Osipova, I. V.

ORG: Institute of Evolutionary Physiology and Biochemistry im. I. M. Sechenov, AN SSSR, Leningrad (Institut evolyutsionnoy fiziologii i biokhimii AN SSSR)

TITLE: Electron microscopic studies of a gravitational organ, the utricle of the pike (Esox lucius)

SOURCE: Biofizika, v. 10, no. 6, 1965, 1003-1006 and insert facing p. 1006

TOPIC TAGS: ~~[illegible]~~, cell physiology, animal genetics, anatomy, cytology

ABSTRACT: The utricle of this fish was removed and fixated and ultrathin sections were prepared for study. It was found to contain specific cylindric receptor cells, earlier described as cells of the secondary type for land vertebrates. The apical surface of the cells consists of 8-15 immobile fibrous stereocilia and one polar-oriented kinocilium. The basal part of the hair cells has buttonlike light and dark nerve ends. The nerve fibers entering the receptor layer of the utricle may occasionally retain a myelin layer (phylogenetic residue).

UDC: 577.37

Card 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

L 26725-66

ACC NR: AP6010649

The specific substructural organization has certain primitive features characteristic for the lateral line; they are determined both by the ecology and the phylogenetic development of the labyrinth from the lateral line. While moving onto the land was accompanied by the appearance of cells of the primary type with cup-shaped synapses, the polar position of the kinocilium in respect to the stereocilia remained unchanged, thus revealing the unitypical character of organ stimulation throughout the phylogenetic series. Orig. art. has: 6 figures.

SUB CODE: 06/ SUBM DATE: 20Jul64/ ORIG REF: 002/ OTH REF: 011

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

KREPS, Ye.M., otv. red.; VERZHBINSKAYA, N.A., red.; VINNIKOV, Ya.A., red.; VOSKRESENSKAYA, A.K., red.; ZHUKOV, Ye.K., red.; ZAGORUL'KO, T.M., red.; ITINA, N.A., red.; KARAMYAN, A.I., red.; KARMANOVA, I.G., red.; KONSTANTINOVA, M.S., red.; PLISETSKAYA, E.M., red.

[Functional evolution of the nervous system] Funktsional'naia evoliutsiia nervnoi sistemy. Moskva, Nauka, 1965. 189 p. (MIRA 19:1)

1. Akademiya nauk SSSR. Institut evolyutsionnoy fiziologii i biokhimii.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

SHAPIRO, Berta Il'inishna; VINNIKOV, ~~Ya.A.,~~ prof., otv. red.

[Opticovegetative connections of the diencephalon; comparative morphophysiological study] Optiko-vegetativnye sviazi mezhutochnogo mozga; sravnitel'nyi morfo-fiziologicheskii ocherk. Moskva, Nauka, 1965. 112 p. (MIRA 18:11)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya.A.; GOVARDOVSKIY, V.I.; OSIPOVA, I.V.

Substructural organization of the utricle as an organ of gravitation in pigeons. Biofizika 10 no.4:641-644 '65. (MIRA 18:8)

1. Institut evolyutsionnoy fiziologii i biokhimii im. I.M. Sechenova AN SSSR, Leningrad.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

VINNIKOV, Ya.A.

Structural and cytochemical organization of receptor cells of sense organs in the light of the evolution of their functions. Zhur. evol. biokhim. i fiziol. 1 no.1:67-83 Ja-F '65. (MIRA 18:6)

1. Laboratoriya evolyutsionnoy morfologii Instituta evolyutsionnoy fiziologii i biokhimii im. I.M. Sechenova AN SSSR, Leningrad.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859830011-5

L 57478-65
ACCESSION NR: AP5014191

UR/0365/65/001/001/[illegible]
591.185.1/6+612.815.1+[illegible]
611.85/87

8
B

AUTHOR: Vinnikov, Ya. A.

TITLE: Structural and cytochemical organization of the receptor cells of the sense organs in the light of their functional evolution

SOURCE: Zhurnal evolutsionnoy biokhimii i fiziologii, v. 1, no. 1, 1965, 67-83

TOPIC TAGS: sensory cell, biology, cytochemistry, cytoarchitectonics, adenosine triphosphoric acid, morphologic organ change

ABSTRACT: The sense organs evolved from an initial cell with a motile antenna. The antenna, or modified flagellum or cilium, underlies the structure and function of the retinal rods and cones responsible for the retinometer effect in light and darkness, the sensory [illegible] of olfactory cells in [illegible] rates and [illegible]

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L 57479-65
ACCESSION NR: AP5014131

as a rule, of 9 pairs of peripheral and 2 central fibrils. The fibrils are made up of polypeptide macromolecules resembling myosin. They contain adenosinetriphosphatase and contract under the influence of ATP drawn from the mitochondria. The movement of the antennae of sensory cells is like the automatic movement of the flagella or cilia of unicellular or multicellular organisms. Cells with motile cilia evolved into the varied receptors of the sense organs of vertebrates and, apparently, invertebrates. Like their ciliated cells, the [illegible]

nous structures and forms molecular compounds with a specific protein [illegible] pig-ment). By undergoing certain molecular transformations in light and in darkness, it ensures adequate perception of photons. These molecular transformations in the photoreceptors trigger excitation and [illegible]

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L 57474-65

ACCESSION NR: AP5014191

ASSOCIATION: Laboratoriya evolyutsionnoy morfologii Instituta evolyutsionnoy fiziologii i biokhimii im. I. M. Sechenova AN SSSR, Leningrad (Laboratory of Evolutionary Morphology, Institute of Evolutionary Physiology and Biochemistry, AN SSSR)

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L 53921-65

ACCESSION NR: AP5017359 UR/0239/64/050/011/1329/1334

AUTHOR: Vinnikov, Ya. A.; Zhinkin, I. L.; Shchukolyukov, S. A.

TITLE: Activity of enzymes of the succinooxidase system in mitochondria of neurons of the auditory and visual cortex and of the cerebellum under conditions of relative rest and on adequate stimulation

SOURCE: Fiziologicheskiy zhurnal SSSR, v. 50, no. 11, 1964, 1329-1334

TOPIC TAGS: experiment animal, brain, light biologic effect, acoustic biologic effect, enzyme, neurology

Abstract: A histochemical study was carried out of the enzymes of the succinooxidase system of mitochondria of neurons of the auditory and visual cortex and of the cerebellum, using sections of the brain and cerebellum of guinea pigs that had been subjected to the action of sound of 95 decibels at a frequency of 300 or 1,500 cycles for 15-30 min or 1-6 hrs. The results were compared with those obtained on brain sections of guinea pigs that had not been subjected to a sound stimulus. In another series of experiments, the brain sections of guinea pigs subjected to the action of bright intermittent light for 30 min were studied. Guinea pigs adapted to darkness were used as controls. Significant changes in the enzyme activity of mitochondria

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L 53921-65
ACCESSION NR. AP5017359

of neurons of the cortex were found on application of the stimuli, but no changes produced by the stimuli were detected in mitochondria of neurons of the cerebellum. Orig. art. has 6 figures.

ASSOCIATION: Institut Evolyutsionnoy fiziologii im. I. M. Sechenova AN SSSR, Leningrad (Institute of Evolutionary Physiology, AN SSSR)

SUBMITTED: 05May63 ENCL: 00 SUB CODE: LS

NO REF SOV: 011 OTHER: 013 JPRS

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VINNIKOV, Ya. R.

"Izmeneniya v etnicheskoy geografii Sredney Azii (1913-1959 gg.)."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

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USSR/Human and Animal Morphology - Normal and Pathological. S
Sense Organs.

Abs J ur : Ref Zhur Biol., No 11, 1958, 50405

Author : Vinnikov, Ya.V.
Inst : -
Title : On the Structure of the Olfactory Organ

Orig Pub : Arkhiv, anatomii, gistol. i embriologii, 1956, 33, No 3, 49-54

Abstract : The olfactory part of the nose of mice, rabbits, dogs, swine, monkeys and humans of different ages was studied. The receptor layer of the olfactory lining is not continuous but interrupted by polyserial ciliated epithelium deep in the folds of the labyrinth (in rodents) or along the border of the upper and middle concha (in man). The amount of ciliated epithelium in man increases with age, obviously in connection with inflammatory processes which had taken place. In mammals the rod-shaped cells

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USSR/Human and Animal Morphology - Normal and Pathological. S
Sense Organs.

Abs Jour : Ref Zhur Biol., No 11, 1958, 50405

predominate among receptor cells. In man, an almost total absence of cone-shaped elements is characteristic. The form of olfactory cells is fusiform and nucleo-containing parts occupy a median position. The peripheral process is directed into the olfactory membrane and passing through it terminates by a swelling having a round-pear-shaped form (olfactory bulb). The top of the olfactory bulb has 2-6 pointed hairs; in dogs their number is very great. The peripheral processes depending on the functional condition of the olfactory cells either approach the surface of the lining or are withdrawn inside it. The translocation is effected at the expense of thin myoid fibrils situated on the border of the olfactory bulb in the proximal part of the peripheral process. Cytoplasm of the enlarged nucleo-containing part is filled by numerous granules the function of which is perhaps

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USSR/Human and Animal Morphology - Normal and Pathological. S
Sense Organs.

Abs Jour : Ref Zhur Biol., No 11, 1958, 50405

analogous to the function of the visual purple. The basal part of the cells narrows down and is transformed into the central process deprived of neurofibrils. Supporting elements of the olfactory lining are represented by a polyserial layer of epithelioform cells (8-10 rows). Their cytoplasm contains granules of mucous secretion. In man, not infrequently, there is a complete mucosity of the supporting cells in connection with pathological processes. In underlying connective tissue a diffuse vegetative ganglion in the area of the nasal septum was found. Histogenesis of the olfactory glomeruli has been traced. -- T.N. Ulissova

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