BABOSHIN, V.A.; BOROVIKOV, P.P.; ZAKHARCHENKO, A.I.; IVANOV, A.A.; NIKANOROV, A.S.; NIKITIN, V.D.; RYTSK, Yu.Ye.; SMIRNOVA, V.S.; SOKOLOV, Ya.N.; SOLOV'YEV, A.T.; TSEKHOMSKIY, A.M.

In memory of Daniil Timofeevich Misharev. Trudy VSEGEI 108:189-191 '64. (MIRA 18:2)

ACCESSION NR: AR4015134 S/0124/63/000/012/B120/B120

SOURCE: RZh. Mekhanika, Abs. 12B741

AUTHOR: Baboshin, V. M.

TITLE: Frictional resistance in the motion of a gas-liquid fuel mixture through a round pipe

CITED SOURCE: Sb. nauch. tr. Vses. n.-i. in-t metallurg. teplotekhn., no. 9, 1963, 246-253

TOPIC TAGS: fluid flow, frictional resistance, gas-liquid mixture, fuel mixture flow

TRANSLATION: The author gives results of the treatment of experimental data obtained for the motion through round pipes of fuel oil mixed with water vapor or heated compressed air and compares them with data obtained in other studies. The state of mixture flow in these experiments may be considered straight and axially-symmetrical. The Reynolds number for the liquid phase did not exceed 306. The frictional pressure losses were used to compute the coefficient of resistance of

Card 1/2

ACCESSION NR: AR4015134

the two-phase flow. The thermal state of the mixture was also determined. On the basis of the experimental data, the author shows the possibility of using the method of computing the pressure losses in a two-phase flow with a laminary liquid layer for conditions of high-velocity mixture flow through thermally-insulated small-diameter pipes. He obtains a formula for the approximate computation of the frictional resistance for the motion of steam- or air-fuel oil emulsions through small-diameter pipes. Yu.A. Chizmadzhev.

DATE ACQ: 31Dec63 SUB CODE: PH ENCL: 00

Card 2/2

BABOSHIN, V.M.

Calculating systems of feeding emulsified fuel to burners. Izv. vys. ucheb. zav.; chern. met. 7 no.2:157-163 '64. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki.

BABOSHIN, V.M., inzh.

Study of the effect of the coefficient of excess air on the flame length of emulsion burners. Teploenergetika 10 no.10: 51-56 O'63 (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki.

DURNOV, V.K.; BABUSHKIN, N.M.; PUSHKASH, I.I.; Prinimali uchastiye: KOLMOGOPOV, A.V.; KLEPTSIN, V.G.; MASLENNIKOVA, E.G.; GORYACHEVA, A.V.; BARAKHVOSTOV, V.S.; RASIN, B.S.; ZEMLYAKOV, A.A.; BABOSHINA, G.V.

Distribution of the temperature of the hot blast in the tuyere passage of the blast furnace. Stal' 25 no.3:205-209 Mr '65. (MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki i Nizhne-Tagil'skiy metallurgicheskiy kombinat (for Durnov, Babushkin, Pushkash).

38146. BABOSHINA, N. A. AND TSION, A. A.

Bor'ba s krasnukhoy i rzhavchinoy kishechnogo tovara. Trudy Azerbaydzh. Nauch-issled. Vet. opyt. stantsii, t. III, 1949, s. 161-69. - Na azerbaydzh, i rus. yaz. - Bibliogr: s. 166

38241. BABOSHINA, N. A.

Bakteritsidnyye svoystva neftenoliya, izgo tovlennogo khimicheskim zavodom mestnoy promyshlennosti Bakgorispolkoma. Trudy Azerbaydzh. Nauch.-issled. vet. opyt. stantsii, t. III, 1949, s. 170-74. - Na azerbaydzh. yaz. - Rezyume na rus. yaz.

BAROSHINA, N. A.

22597. BAROSHINA, N. A. Primenenie atss pri teylerioze krupnogo rogatogo skota. avtoreferat. Veterinariya, 1949, No. 7, S.-9

SO: LETOPIS' No. 30, 1949

BABOSHINA N.A.

27269

Ali Zadye, M.A. I Shmulyevich, A. I. Khmiotyerapiya Tyeylyerioza Krupnogo Rogatogo Skota Flavarginom. Vyetyerinariya, 1949 No. 9, S. 27-29.

SO: LETOPIS NO. 34

C ABABOSHINA, N.A.

11 H

Chemotherapy of theilerioeis with aminoacriquine. A. I. Shmulevich, N. N. Baboshina, and M. A. Ali-Zade. *Veterinariya* 28, No. 4, 31–3(1951).—7-Aminoacriquine (A-5) is an effective agent against infections by *Theileria annulata* in cattle. The recoveries reach 85% and the drug is harmless to the animals. The satisfactory dosage for calves is about 0.0035 g./kg. intravenously as 1–2% soln., best introduced in 2 doses spaced by 48–72 hrs. G. M. Kosolapoff

BABOSHINA, N. A.

"The Clinical Manifestations and Therapy of Theileriosis of Cattle in the Azerbaydzhan SSR." Cand Vet Sci, Yerevan Zooveterinary Inst, (Yerevan(?), 19 January 1955. (K, 6 Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

BABOSHINA, N. A.

USSR / Diseases of Farm Animals. Diseases Caused by Protozoa R

Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 74218

Author : ~~Baboshina, N. A.~~

Inst : Azerbayzhan Scientific-Research Veterinary Experimental Station

Title : Comparative Evaluation of Chemical-Therapeutic Drugs Used During Theileriasis in Cattle

Orig Pub: Tr. Azerb. n.-i. vet. opytn. st., 1956 (1957), 5, 36-44

Abstract: Tripaflavine, acaprene, arrhenal, neganin, euflavin, novoplasmin, hemosporidine, proflavine-dichlor-hydrate, proflavine-lactate, thiagen, injection acrichine, and bigumal were tested. All of these

Card 1/2

TYCHINO, N.Ya.; BABOSHINA, O.A.

Hydrogeological characteristics of the oil and gas horizons of the Irkutsk amphitheater. Biul.nauch.-tekh.inform VIMS no.1:26-29 '63. (MIRA 18:2)

1. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy institut, Leningrad.

PRUZHANSKIY, Konstantin Grigor'yevich; BABOSHKO, Grigoriy Romanovich; SVET, Ye.B., red.; KUZNETSOVA, O.Ya., tekhn.red.

[Protecting the area of earthwork from freezing] Predokhranenie zemlianykh zaboev ot promerzaniia. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1963. 35 p. (MIRA 17:3)

RABOSHKO, V.K., inzh.; CHARKIN, B.V., inzh.

Thermostatic and impulse types of condensation chambers. Sudostroenie 24 no.8:67-68 Ag '58. (MIRA 11:10)
(Consensers (Steam)) (Ships--Heating and ventilation)

BABOSOV, Ya.M.

Unity of analysis and synthesis in I.P.Pavlov's teaching. Vestsi AN BSSR. Ser. biial. nav. no.2:46-58 '61. (MIRA 14:7)
(PAVLOV, IVAN PETROVICH, 1849-1936)
(BIOLOGY--PHILOSOPHY)

BABOSOV, Yevgeniy Mikhaylovich, kand. filos. nauk; STEPANOV, V.I., doktor filos. nauk, prof., nauchnyy red.; PSHONIK, B.M., red.; ZIMA, Ye.G., tekhn. red.

[The new man is trained in collective work]V kollektivnom trude vospityvaetsia novyi chelovek. Minsk, 1962. 31 p. (Obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii Belorusskoi SSR, no.12) (MIRA 15:9)
(Labor and laboring classes)

ISAGULYANTS, V.I.; MEDZYKHOVSKAYA, N.A.; SHISHKOV, V.P.; BABOTINA, V.P.

Synthesis and properties of the vinyl ether of 2-decahydro-2-naphthol.
Doklady Akad. Nauk S.S.S.R. 85, 329-30 '52. (MLRA 5:8)
(CA 47 no.15:7470 '53

BABOTNOV, T. A.

"Viable seeds in the soils of meadow cenosites (?)" (p. 551) by T. A. Babotnov (Moscow)

SO: Progress of Contemporary Biology Vol. 26, No. 1 (4) Jul.-Aug. 1948

BABOTNOV, T.A.

Some data on experimental study of syngenesis in meadows. Biul. MOIP. Otd.biol. 65 no.3:63-76 My-Je '60. (MIRA 13:7)
(OKA VALLEY--PASTURES AND MEADOWS) (PHYTOSOCIOLOGY)

BABOV, D. M.

Babov, D. M.

"The dynamics of change in the agglutinability of sanitary-indicative microorganisms as they remain in an aqueous medium." Odessa State Medical Inst imeni I. P. Pirogov (sic). Odessa, 1956. (Dissertation for the Degree of Candidate in Medical Sciences).

Knizhnaya letopis'
No. 21, 1956. Moscos.

NEDIN, V.V., professor, doktor tekhnicheskikh nauk; NEYKOV, O.D., gornyy inzhener; SHABETIN, A.V., kandidat tekhnicheskikh nauk; BABOV, D.M., kandidat meditsinskikh nauk.

Mine dust removal with self-cleaning oil filters. Gor.zhur. no.6:66-69 Je '57. (MLRA 10:8)

1.Krivorozhskiy gornorudnyy institut i Krivorozhskiy institut okhrany truda.
(Mine dusts) (Filters and filtration)

LEVIN, A.I.; BABOV, D.M.; SHELEKETIN, A.V.

"Pneumoconiosis"; bibliographic index to Russian literature from 1918-1955. Reviewed by A.I.Levin, D.M.Babov, A.V.Sheleketin. Gig. truda i prof.zab. 1 no.5:62-63 S-O '57. (MIRA 10:11)
(BIBLIOGRAPHY--LUNGS--DUST DISEASES)

BABOV, D.M., SAMOYLOV, A.P., SHEVCHENKO, A.M.

Conference on the problem "Silicosis and its control", devoted to the 40th anniversary of the Ukrainina S.S.R. Gig. truda i prof. zab. 2 no.6:70-71 N-D '58 (MIRA 11:12)
(LUNGS--DUST DISEASES)

BABOV, D.M.

Duration of para properties of intestinal bacteria in aqueous medium. Gig. i san. 24 no.2:84-85 F '59. (MIRA 12:3)

1. Iz kafedry obshchey gigiyeny Odesskogo meditsinskogo instituta.
(ESCHERICHIA COLI
para-property preserv. in aqueous medium (Rus))

BABOV, D.M., dotsent; NADVORNYY, N.N.; CHUSOV, Yu.N.

Detection and survival of pathogenic serotypes of Escherichia coli in sewage and in soil. Vrach. delo no. 8:133-134 Ag '63.
(MIRA 16:9)

1. Kafedra obshchey gigiyeny (zav. - prof. A.F.Stoyanovskiy) Odesskogo meditsinskogo instituta.
(ESCHERICHIA COLI)

BABOV, D.M., dotsent (Odessa)

Purification of waste waters during their passage through canals. Vod. i san. tekh. no.9:28-29 S '63. (MIRA 17:2)

BABOV, Kiril

Aiding the learning of foreign languages. Radio y televiziia 13 no.10:318 '64.

BABOVIC, D.

The podzol soil on Northwestern Metohija [Yugoslavia]. Milivoje Ćirić, Milutin Paunović, and Dragoljub Babović (Inst. Agr. Research, Peć, Yugoslavia). *Zemljište i Biljka* 1, 115–34(1952)(English summary).—The soil investigated here changes its reaction, due to the varying chem. compn. of the irrigation water, and under the influence of rain. The total amt. of adsorbed bases is negligible, Ca^{++} predominates greatly among them. The soil ingredients are strongly washed out, and there is very little basic satn. and a high hydrolytic acidity, which makes liming a necessity. The free Al^{+++} present causes the increase of substitutional acidity and binds the PO_4^{---} as $AlPO_4$; thus, if used for agricultural purposes, these soils need heavy fertilizing, especially with superphosphates. W. I.

3

BABOVIC, D.

Results of tests in calcification, humusation, lime fertilization, compost, and mineral fertilizers. Sep 37.
(GLASNIK, Vol. 4, No. 7/8, July/Aug. 1956 (Published 1957)

SO: Monthly List of East European Accessions (EEAL) LC Vol. 6, No. 12, Dec. 1957
Uncl.

BABOVIC, Vladimir, inz. (Beograd, Proleterskih brigada 25)

Elements of galvanic fuel. Tehnika Jug 18 no. 8:
Supplement: Elektrotehnika 12 no. 8: 1508-1519 Ag '63.

USSR/Soil Science. Organic Fertilizers. J-4

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24770.

Author : Zalys, A.; Tamulaityte, E.; Dabraitis, V.
Inst :
Title : Utilization of Peat Fertilizers and Their Preparation in the Summer.

Orig Pub: Soc. zemes ukis, 1956, No 6, 5-12.

Abstract: No abstract.

Card : 1/1

BABRAUSKAS, V.

A case of combined tubal and uterine pregnancy. Sveik. apsaug. 8 no.2:29-30 F'63.

1. Skuodo rajono ligonine. Vyr. gyd. - A.Matulevicius.

*

ACC NR: AP6013473 (A) SOURCE CODE: UR/0374/66/000/002/0245/0252

AUTHOR: Kalnin', M. M.; Karlivan, V. P.; Babre, Ye. Ya.; Shkestere, I. G.

ORG: Riga Polytechnic Institute (Rizhskiy politekhnicheskiy institut)

TITLE: Adhesion of filled polyethylene-base compositions to steel

SOURCE: Mekhanika polimerov, no. 2, 1966, 245-252

TOPIC TAGS: adhesion, adhesive bonding, polyethylene, filler, steel

ABSTRACT: The effect of a series of fillers on the adhesion of polyethylene to steel during direct thermal bonding of a monolithic polymeric adhesive to a steel substrate was studied. P-20-10-V high-pressure and P-4007 low-pressure polyethylene and St3 steel were employed. The fillers were ground kaolin, talc, quartz sand, graphite, and asbestos. The strength of the adhesive bond of filled compositions of both types of polyethylene was found to increase with rising filler content up to 8-10% by volume. The character of the rupture of adhesive bonds with increasing filler content changes from adhesive to mixed, then to cohesive. A further increase in filler content weakens the adhesion. The adhesion of filler compositions and of the pure polymer increases with the degree of purity and specific surface of the steel. It also increases with rising temperature and duration of the bonding process in the range from 130° to 280°C and from 6 to 300 min. The adhesion of filled compositions is always strong-

UDC: 678:01.58

L 26013-66

ACC NR: AP6013473

er than that of the pure polymer. Orig. art. has: 6 figures, 5 tables.

SUB CODE: 11/ SUBM DATE: 06Oct65/ ORIG REF: 008/ OTH REF: 006

Card 2/2

BABRENOVIC, B.; VICIC, D.

Demagnetizers. p. 1416. Vol. 9, No. 9, 1954.
TEHNIKA. Beograd, Yugoslavia.

SOURCE: East European Accessions List, (EEAL) Library of Congress, Vol. 5, No. 8, August, 1956.

BABRIS, G.

Reform of February 19, 1861 and the peasant uprising in Latgale.
Vestis Latv ak no.6:3-13 '61.

1. Latvijas PSR Zinatnu akademija, Vestures instituts.

(Latgale--Peasant uprisings)

BABRIS, I.

Treatment of gastrointestinal haemorrhages at hospitals of the Latvian S.S.R. Izv. AN Latv.SSR no.1:76-80 '64. (MIRA 17:4)

1. III Rizhskaya gorodskaya bol'nitsa.

SPRESLIS, A.; BABRIS, Ya.[Babris, J.]

70th birthday of Janis Krastins. Vestis Latv ak no.8:164-166 '60.
(EEAI 10:9)

(Krastins, Janis) (Historians, Latvian)

9.6000

S/194/61/000/001/030/038
D216/D304

AUTHOR: Babrovinkov, L.Z.

TITLE: Transistorized phasemeters for the sub-ultrasonic range of frequencies

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 1, 1961, 12, abstract 1 I112 (V Sb. Poluprovodnik. pribory i ikh primeneniye, no. 4, M., Sov. Radio, 1960, 396-405)

TEXT: Description is given of 3 types of phasemeters for the frequency range of a few hundredths of a cycle to hundreds of kilocycles which may be used for measurements both in linear and in nonlinear circuits. The phase measurement error is 2 - 5°. One of the described types of phasemeters is suitable for spectral analysis of complex periodic voltage.

Card 1/1

BARRYNIN, B.N.

Ways of developing scientific research in the field of pressure treatment of synthetic polymer materials. Plast.massy no.1: 42-44 '60. (MIRA 13:6)

(Polymers)

KORSHAK, V.V.; VINOGRADOVA, S.V.; RABSHINITSER, T.M.

Coordination polymers. Part 3: Coordination polymers based on bis (8-hydrozyquinoline) methane. Vysokom. soed. 2 no.4:498-507 Ap '60. (MIRA 13:11)

1. Institut elementoorgainicheskikh soyedineniy AN SSSR.
(Polymers) (Methane)

BABSKA, Zofia (Warszawa)

Position preference as a basic factor influencing the choice maed by preschool children in recognition tests. Studia psychol 5:132-157 '63.

Position persistence as a basic choice factor depending on the age of children. Ibid.:158-183

BABSKA, ZOFIYA

Development of object identification in one and two-year old children. Vop.psikhol. 5 no.6:131-138 N-D '59. (MIRA 13:4)

1. Kafedra detskoy i pedagogicheskoy psikhologii Varshavskogo universiteta.
(Child study) (Learning, Psychology of)

KOSHTOYANTS, K.S.; BABSKAYA, N.Ye.

Biochemical pathways for the elimination of blocking effects of methylene blue on the action of the vagus nerve. Biul. eksp. biol. med. 47 no.1:39-43 Ja '59. (MIRA 12:3)

1. Iz kafedry fiziologii zhivotnykh i cheloveka Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova (zav. - chlen-korrespondent AN SSSR prof. Kh. S. Koshtoyants), Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.N. Chernigovskim.

(SULFHYDRYL COMPOUNDS, effects,
on vagus-blocking eff. of methylene blue (Rus))
(VAGUS NERVES, effect of drugs on,
methylene blue, elimination of blocking eff. by
sulfhydryl cpds. (Rus))
(METHYLENE BLUE, effects,
vagus-blocking eff., eff. of sulfhydryl cpds. (Rus))

BABSKAYA, N.Ye.

Effect of gamma-aminobutyric acid, beta-alanine, and L-glutamic acid on Sechenov inhibition. Dokl. AN SSSR. 144 no.6:1410-1413 Je '62. (MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akad. V.N.Chernigovskim.
(Butyric acid) (Alanine) (Glutamic acid)

ENGEL'GARDT, V.A.; LYUBIMOVA, M.N.; VENKSTERN, T.V.; TIMOVEYEVA, M.Ya.; BABSKAYA, Yu.B.

Enzymatology of myosin, splitting of adenosintriphosphatase and deaminase. Doklady Akad. nauk SSSR 85 no. 2:397-400 11 July 1952. (CLML 23:3)

1. Corresponding Member of the Academy of Sciences USSR for Engel'gardt.

BABSKAYA, Yu. Ye.

BRAUNSHTEYN, A.Ye.; SEVERINA, I.S.; BABSKAYA, Yu.Ye.

Inhibition of the ornithine cycle in urea synthesis by α-methyl-DL-aspartic acid [with English summary in insert]. Biokhimiia 21 no.6:738-745 N-D '56. (MLRA 10:7)

1. Laboratoriya obmena azotistykh veshchestv. Institut biologicheskoy i meditsinskoy khimii Akademii meditsinskikh nauk SSSR, Moskva.

(ASPARTIC ACID, related compounds
α-metyl-DL-aspertic acid, inhib. of ornithine cycle in urea synthesis (Rus))
(UREA, metabolism,
synthesis, inhib. of ornithine cycle by α-methyl-DL-aspartic acid (Rus))

20-114-3-40/60

AUTHOR: Babskaya, Yu. Ye.

TITLE: Comparative Description of the Formation of Albumin in Separate Plasma Fractions and Comparison of Albumins in the Liver Tissue in the Course of Hypothermia (Sravnitel'naya kharakteristika obrazovaniya belkov otdel'nykh fraktsiy plazmy i belkov tkani pecheni pri gipotermii)

PERIODICAL: Doklady Akademii Nauk SSSR,1957,Vol. 114,Nr 3,pp. 598-601(USSR)

ABSTRACT: Recently the attention of many scientists has been attracted by the hypothermal state as a special state of the organism in which the level of biological processes is artificially lowered. In this context, investigation of changes in metabolic processes is of profound significance, because such an investigation contributes to a clarification of the internal mechanism of the reversible transition of the animal organism to a lowered level of biological activity. Of the many investigations of metabolism of carbohydrates and fats, only a few deal with nitrogen and albumin metabolism. Nikulin studied the influence of hyperthermia upon the intensity of albumin synthesis in different tissues and organs by means of

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Comparative Description of the Formation of Albumin in Separate Plasma Fractions and Comparison of Albumins in the Liver Tissue in the Course of Hypothermia

tracer (marked) atoms. At 24°, this intensity is considerably reduced in rabbits almost everywhere. The only exception is the liver, although formation of albumin in the blood plasma was retarded by several times its original velocity. For this reason, the topic mentioned in the title of this paper deserves particularly careful attention, as the formation of some albumin substances is closely connected with the function of the liver. In the experimental part of the paper under review, a description is given of the method used in these investigations: Subcutaneous injections of atropine solution, and several minutes later of a urethane solution of 25 %, were given to a male chinchilla rabbit, weighing about 2 - 3 kg. In order to produce deeper narcotic effects, ether was applied at the same time. After this had been achieved, i.e. about 35 - 40 minutes later, aminacine was introduced intravenously (1 mg/ 1kg of body weight), and the animal was submerged in the ice water (3 - 5°). After the temperature of the body had been reduced to 24°, the radioactive amino acid was introduced. Control animals were treated in a similar way, only without the cooling part of the experiment. Results: There is a striking absence of parallels between the changes in

Comparative Description of the Formation of Albumin in Separate Plasma Fractions and Comparison of Albumins in the Liver Tissue in the Course of Hypothermia

intensity of the formation of albumin of the supratissue and of the blood plasma, in particular of albumin and fibrinogen. According to general concepts, these albumin substances are synthesized directly by the liver cells. Therefore one would rather expect developments to take place in the same direction. However, the sharp decrease in the formation of albumin and fibrinogen in the plasma, in the absence of albumin formation in the liver cells, as observed by the author of the paper under review, is in contradiction with the above concepts. The experiments described in the present paper seem to justify the assumption that albumin formation in the liver cells and in the different blood plasma fractions takes place independently of the synthesis in the liver cells; it rather is under the influence of different systems of ferments and is regulated by separate physiological mechanisms. Conclusions: 1) In the hypothermal state, no regular (explicable by mathematical interrelationships) decrease in the absorption of amino acid into the albumin substances of the liver cells

Comparative Description of the Formation of Albumin in Separate Plasma Fractions and Comparison of Albumins in the Liver Tissue in the Course of Hypothermia

is observed. 2) The intensity of absorption of amino acids into the albumins of blood plasma is always sharply reduced in all fractions in the hypothermal state. 3) The reduction in intensity of absorption of amino acids into albumin and fibrinogen of blood plasma is stronger than into the other plasma fractions. 4) The same decrease in the intensity of the absorption into the above two kinds of albumin takes place independently of the inclusion of the amino acids into the albumin substances of the liver cells. There are 1 figure, 2 tables, and 7 references, 3 of which are Soviet.

PRESENTED: January 26, 1957, by L. S. Shtern, Member of the Academy

SUBMITTED: September 2, 1956

BABSKAYA, Yu.Ye.

Effect of hypothermia on intramolecular reorganization of proteins. Dokl. AN SSSR 137 no.3:710-712 Mr '61. (MIRA 14:2)

1. Institut khirugii im.A.V.Vishnevskogo AMN SSSR. Predstavleno akademikom V.N.Chernigovskim.
(HYPOTHERMIA) (PROTEINS IN THE BODY)

27.1100

S/020/61/141/002/025/027
B101/B110

AUTHORS: Babskaya, Yu. Ye., Konikova, A. S., and Kritsman, M. G.

TITLE: Study of bonds formed as a result of the inclusion of amino acids into the proteins of a living organism

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 141, no. 2, 1961, 473-476

TEXT: The authors refer to literature data according to which the bonds of amino acids with other constituents of the protein molecule may be dissimilar and may possess different stability. They checked this assumption by examining bonds formed in vivo as a result of introducing methionine-S^{35} and cysteine-S^{35} into liver protein and into the protein fractions of blood. The experimental method has already been described (DAN, 137; 710 (1961)). The proteins obtained were purified and then treated with alkali, performic acid, and thioglycolic acid. The amount of amino acid included into the protein with formation of a stable bond was estimated from the residual radioactivity remaining after this treatment. Fig. 1 presents data obtained for methionine-S^{35} two hours after its introduction

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Study of bonds formed as a result ...

S/020/61/141/002/025/027
B101/B110

into the organism. In contradistinction to the liver which, preponderantly, firmly bound the methionine, the blood proteins showed a partially unstable addition of methionine. H. Tarver's assumption (see below) that unstable bonds are the result of a conversion of methionine into cysteine and addition of the latter by the formation of disulfide bonds was refuted by the fact that analogous to methionine-S^{35} marked methionine-C^{14} was used in the carboxyl group. Methionine-S^{35} and methionine-C^{14} showed the same behavior. Accordingly, besides disulfide bonds still other unstable bonds occur. While the bond between the liver and cysteine is mainly stable, preponderantly unstable bonding (up to 80-90%) occurs, similar to methionine, between blood proteins and cysteine. Examinations showed that unstably bound cysteine tended to decrease in the course of time after it had been introduced into the organism. 64 hours after introduction, however, 25% of cysteine-S^{35} was still unstably bound. This leads to the conclusion that proteins always contain both stable and unstable cysteine molecules, the ratio of stably to unstably bound radicals depending on the period of time for which the amino acid was subjected to metabolism. In

addition, the ratio also depends on the physiological condition of the organism. The introduction of cysteine-S^{35} into a rabbit in hypothermic condition (24°C) showed that merely 6% of cysteine was still stably bound. The ratio of stable to unstable bonds is, therefore, not constant but depends on the time of inclusion of the amino acid into the organism, on the kind of protein and on the organism's functional condition. There are 4 figures and 11 references: 4 Soviet and 7 non-Soviet. The four most recent references to English-language publications read as follows: H. Tarver, C. L. A. Schmidt, J. Biol. Chem., 146, 69 (1942); T. Winnick, E. A. Peterson, D. M. Greenberg, Arch. Biochem., 21, 235 (1949); E. A. Peterson, G. M. Greenberg, J. Biol. Chem., 194, 359 (1952); H. Borsook, Chemical Pathways of Metabol., 2, 1954, p. 173.

ASSOCIATION: Institut khirurgii im. A. V. Vishnevskogo Akademii meditsinskikh nauk SSSR (Institute of Surgery imeni A. V. Vishnevskiy of the Academy of Medical Sciences USSR)

PRESENTED: June 19, 1961, by V. N. Chernigovskiy, Academician

Card 3/4

RABSKAYA, Yu.Ye.; ROGOSOVA, A.V.

Change in various circulatory indices of oxidation-reduction processes during the use of the artificial blood circulation apparatus. Eksper. khir. 5 no.6:53-55 N-D '60. (MIRA 14:2)
(OXIDATION-REDUCTION) (BLOOD--CIRCULATION, ARTIFICIAL)

BABSKAYA, Yu.Ye.; KONIKOVA, A.S.; KRITSMAN, M.G.

Study of bonds produced by the incorporation of amino acids into proteins of the intact organism. Dokl. AN SSSR 141 no.2:473-476 N '61. (MIRA 14:11)

1. Institut khirurgii im. A.V.Vishnevskogo Akademii meditsinskikh nauk SSSR. Predstavleno akademikom V.N.Chernigovskim.
(PROTEIN METABOLISM) (CHEMICAL BONDS)

KONIKOVA, A. S.; KHARNAS, S. Sh.; BABSKAYA, Yu. Ye.; POGOSOVA, A. V.; AVRUTSKIY, M. Ya.

Metabolic change in deep hypothermia. Eksper. khir. i anest. no.2:58-62 '62. (MIRA 15:6)

1. Iz Instituta khirurgii imeni A. V. Vishnevskogo (dir. - deystvitel'nyy chlen AMN SSSR prof. A. A. Vishnevskiy) AMN SSSR.

(HYPOTHERMIA) (METABOLISM)

BABSKAYA, Yu.Ye.; KONIKOVA, A.S.; KRITSMAN, M.G.; POGOSOVA, A.V.; RAPOPORT, E.A.

Problems of the synthesis of specific proteins. Dokl. AN SSSR 146 no.2:460-463 S '62. (MIRA 15:9)

1. Institut khirurgii im. A.V. Vishnevskogo AMN SSSR i Institut terapii AMN SSSR. Predstavleno akademikom V.N. Chernigovskim.
(PROTEINS)

BANSKI, W.

City districts restricted for automobiles. Motor 12 no.3:4
20 Ja '63.

BABSKI, Wladyslaw, mgr inz.

A small dismountable bridge made of prefabricated concrete parts.
Gosp wodna 24 no.3:94-99 Mr '64.

BABSKIN, A.V.

Innervation of the vasa vasorum of the aortic arch. Vop. fiziol. no.7:165-177 '54. (MLRA 8:1)

1. Osipenskovskiy uchitel'skiy institut.
(AORTA, anatomy and histology,
vasa vasorum, innervation)

BABSKIY, A. A.

KHELIMSKII M. A., KRUGLIACHENKO A. A., BABSKII A. A.

Tkanevaia terapiia po metodu V. P. Filatova pri nekotorykh khirugicheskikh zabolevaniiakh. /Tissue therapy in certain surgical diseases by means of Filatov's method/ Khirurgia, Moskva 3 Mar 50 p. 64-7.

1. Of the Clinic for Hospital Surgery of the Therapeutic Faculty (Head — Prof. A. G. Sosnovskiy) of Odessa Medical Institute.
CIML Vol. 19, No. 1 July 1950

BABSKIY, A.A.

POPOVA, A.I. (Odessa); KATSER, L.I. (Odessa); KISILEVA, .N., nachal'nik; BABSKIY, A.A., professor, nauchnyy rukovoditel'.

Effect of intraarterial administration of novocaine in thromboangiitis obliterans; electrocardiographic data. Klin.med. 31 no.7:57-59 Jl '53. (MLRA 6:9)

1. Basseynovaya bol'nitsa moryakov.
(Blood vessels--Diseases) (Novocaine)

BABSKIY, A.A.; ROMANYUK, R.S.; LERNER, L.S.; KOROPOTNITSKAYA, O.L.; MIL'SHTEYN, M.A.

Seromarin, a colloid-salt blood substitute. Trudy Kiev. nauch.-issl. inst. perel. krovi i neotlozh. khir. 3:103-106 '61. (MIRA 17:10)

1. Odesskaya oblastnaya stantsiya perelivaniya krovi.

KAVUN, Vasiliy Mikhaylovich. Prinimali uchastiye: BABSKIY, I.I.; BOROVSKIY, V.A.; VITKOVSKIY, M.P.; ZIMOVETS, V.N.; SEREDENKO, B.N.; PITUL'KO, V.Ye.; CHEPURNOV, I.A.; BLAZHEVSKIY, V.K.; YAROPUD, V.N.; RYBAK, V.N.; KUZIK, G.I.; ZADNEPRYANETS, G.V.; IVANOV, A.N., red.; BELOVA, N.N., tekhn. red.

[Efficient farm management] Ratsional'noe vedenie khoziaistva. Moskva, Sel'khozizdat, 1963. 205 p. (MIRA 16:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut ekonomiki i organizatsii sel'skogo khozyaystva (for Babskiy, Borovskiy, Vitkovskiy, Zimovets, Seredenko, Pitul'ko, Chepurnov). 2. Vinnitskaya gosudarstvennaya sel'skokhozyaystvennaya opytnaya stantsiya (for Blazhevskiy, Yaropud). 3. Ukrainskiy nauchno-issledovatel'skiy institut zemledeliya (for Rybak). 4. Sekretar' partiynoy organizatsii kolkhoza imeni XXII s"yezda Kommunisticheskoy partii Sovetskogo Soyuza (for Kuzik). 5. Glavnyy agronom kolkhoza imeni XXII s"yezda Kommunisticheskoy partii Sovetskogo Soyuza (for Zadnepryanets).

(Collective farms—Management)

BABSKIY, V.A., inzh.; RUBCHINSKIY, A.V., kand.tekhn.nauk; KHROMOY, Yu.D., inzh.

Density of mercuty vapor in open-type ignitrons. Vest. elektroprom. 34 no.8:34-40 Ag '63. (MIRA 16:9)
(Mercury-arc rectifiers)

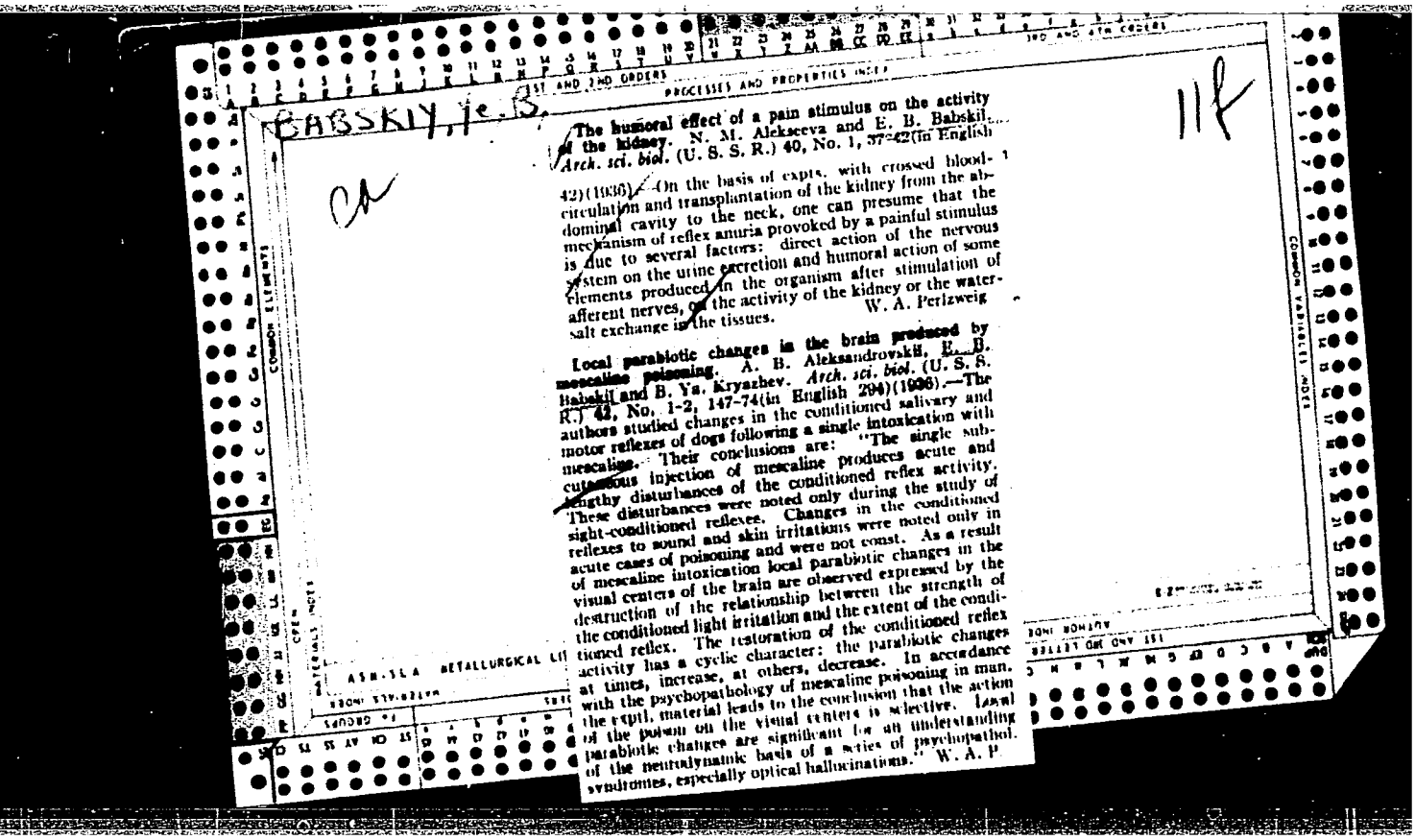
BABSKIY, V.A., inzh.; RUBCHINSKIY, A.V., kand.tekhn.nauk; KHROMOY, Yu.D., inzh.

Density of mercuty vapor in open-type ignitrons. Vest. elektroprom. 34 no.8:34-40 Ag '63. (MIRA 16:9)
(Mercury-arc rectifiers)

BABSKIY, Ye., akademik; SORIN, A., inzh.

Radio pills. Radio no.8:31-32 Ag '64. (MIRA 17:11)

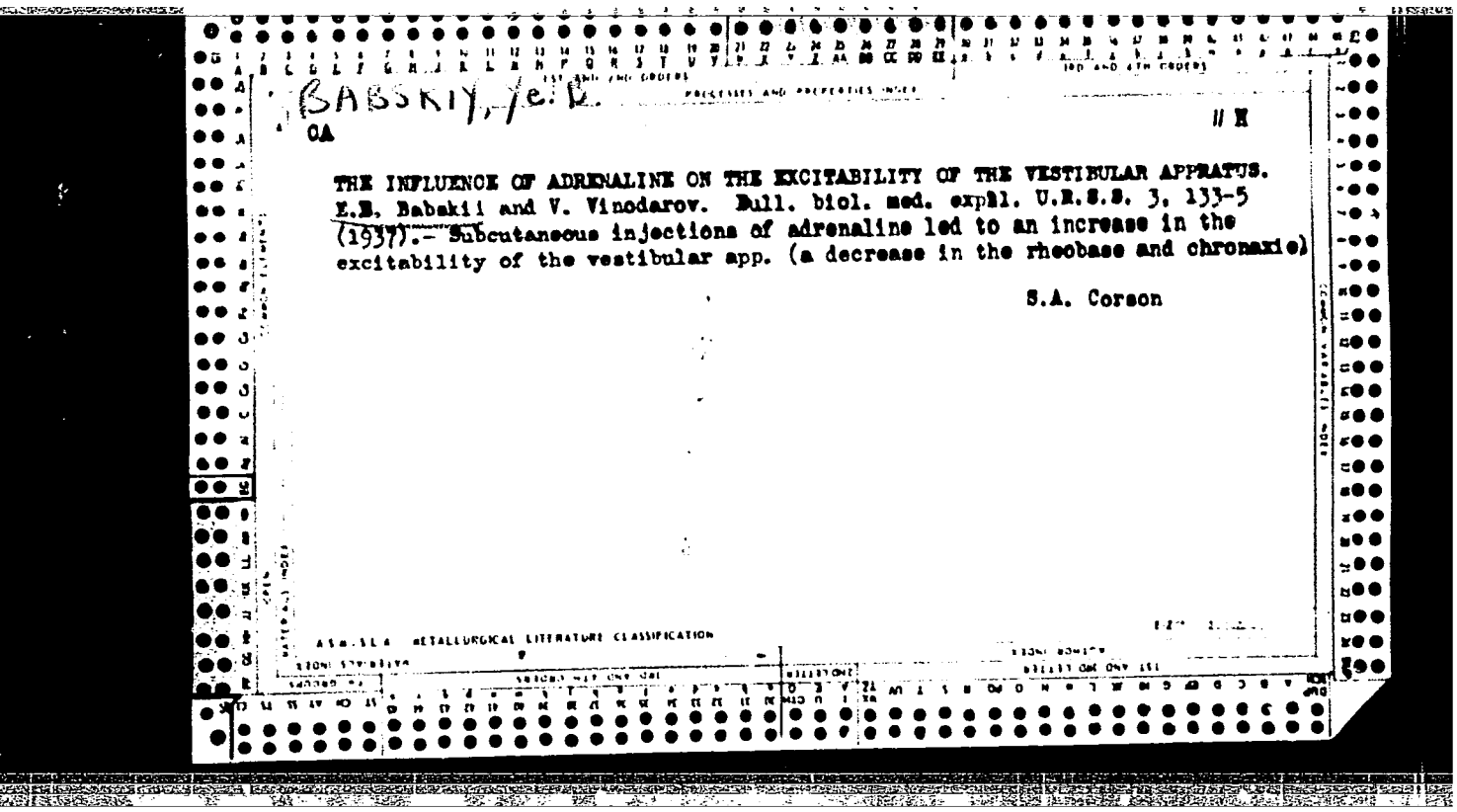
1. AN UkrSSR (for Babskiy).



BABSKIY, Ye. B.

The humoral effect of a pain stimulus on the activity of the kidney. N. M. Alekseeva and E. B. Babskii. *Arch. sci. biol.* (U. S. S. R.) 40, No. 1, 37-42(in English 42)(1936).—On the basis of expts. with crossed blood-circulation and transplantation of the kidney from the abdominal cavity to the neck, one can presume that the mechanism of reflex anuria provoked by a painful stimulus is due to several factors: direct action of the nervous system on the urine excretion and humoral action of some elements produced in the organism after stimulation of afferent nerves, on the activity of the kidney or the water-salt exchange in the tissues. W. A. Perlzweig

Local parabiotic changes in the brain produced by mescaline poisoning. A. B. Aleksandrovskii, E. B. Babskii and B. Ya. Kryazhev. *Arch. sci. biol.* (U. S. S. R.) 42, No. 1-2, 147-74(in English 294)(1936).—The authors studied changes in the conditioned salivary and motor reflexes of dogs following a single intoxication with mescaline. Their conclusions are: "The single subcutaneous injection of mescaline produces acute and lengthy disturbances of the conditioned reflex activity. These disturbances were noted only during the study of sight-conditioned reflexes. Changes in the conditioned reflexes to sound and skin irritations were noted only in acute cases of poisoning and were not const. As a result of mescaline intoxication local parabiotic changes in the visual centers of the brain are observed expressed by the destruction of the relationship between the strength of the conditioned light irritation and the extent of the conditioned reflex. The restoration of the conditioned reflex activity has a cyclic character: the parabiotic changes at times, increase, at others, decrease. In accordance with the psychopathology of mescaline poisoning in man, the exptl. material leads to the conclusion that the action of the poison on the visual centers is selective. Exptl. parabiotic changes are significant for an understanding of the neurodynamic basis of a series of psychopathol. syndromes, especially optical hallucinations." W. A. P.



BABSKIY, E.B.

OA

II R

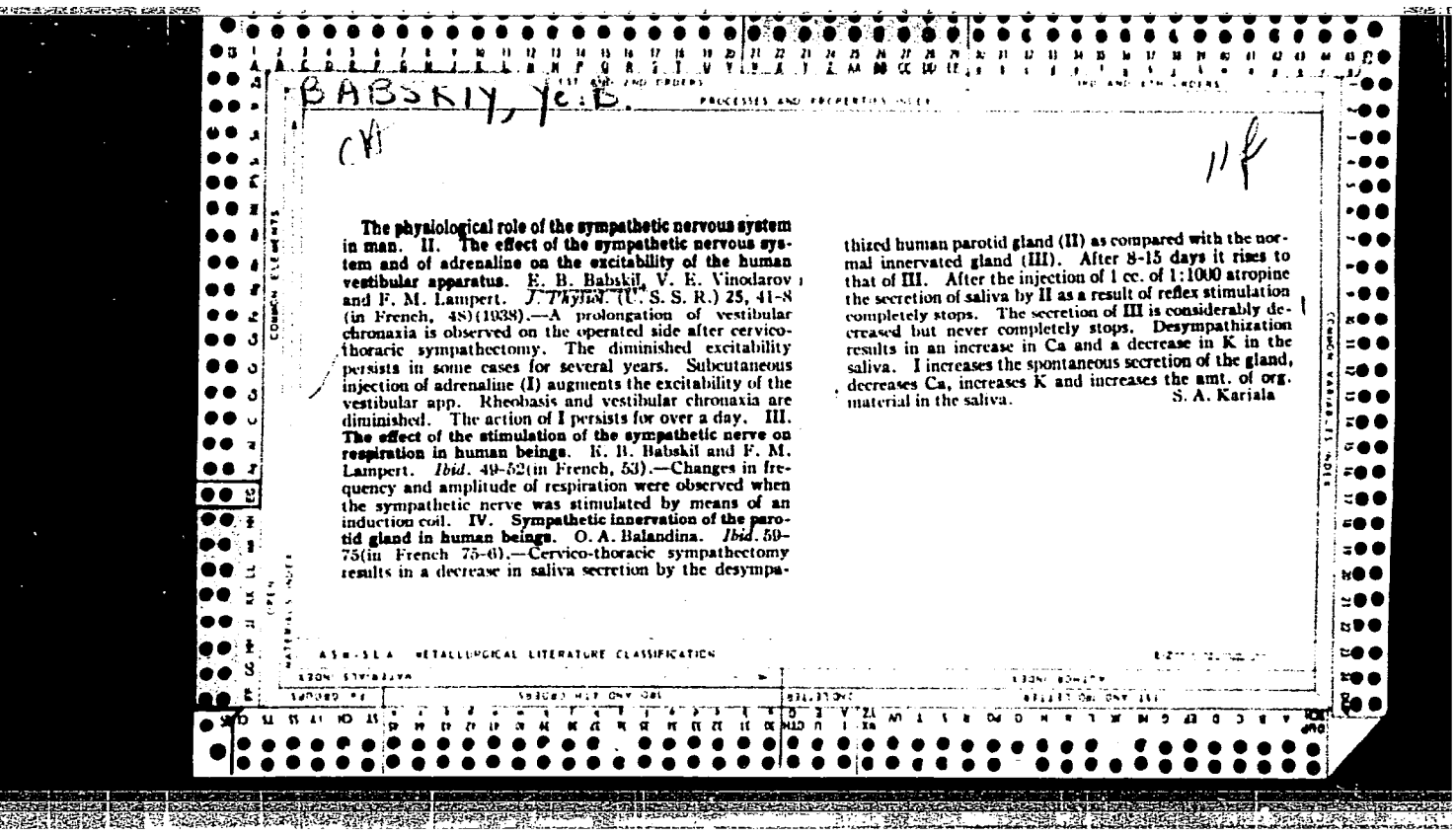
THE INFLUENCE OF ADRENALINE ON THE EXCITABILITY OF THE VESTIBULAR APPARATUS. E.B. Babskii and V. Vinodarov. Bull. biol. med. exptl. U.R.S.S. 3, 133-5 (1937).- Subcutaneous injections of adrenaline led to an increase in the excitability of the vestibular app. (a decrease in the rheobase and chronaxie)

S.A. Corson

BABSKY, Ye. B.

"Babsky, E. (editor) Human Physiology." (p. 156) Rev. by Konradi, G.

SO: Advances in Contemporary Biology (Uspekki Sovremennoi Biologii) Vol. VII, No. 1, 1937

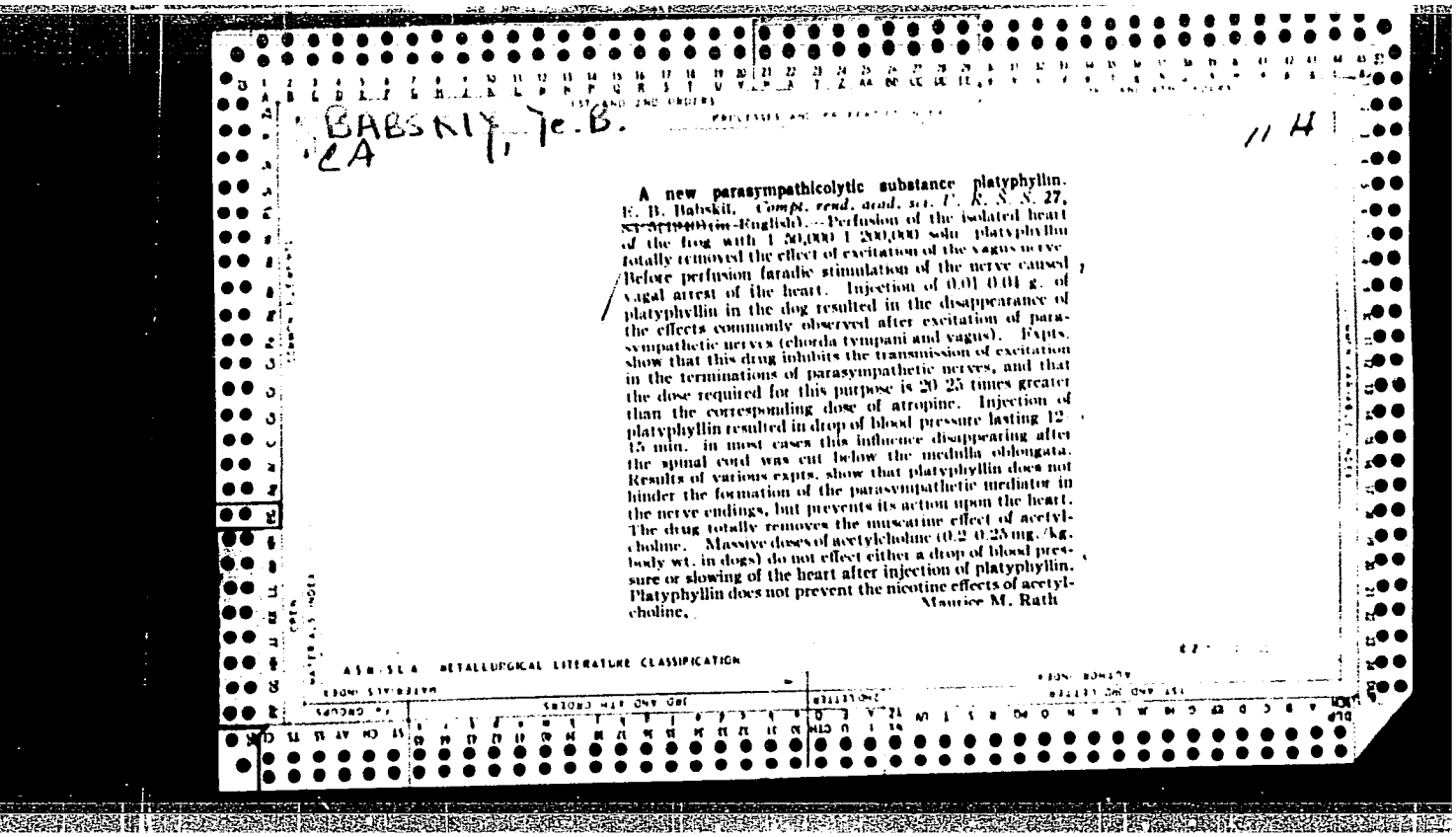


BABSKIY, Ye. B.

The physiological role of the sympathetic nervous system in man. II. The effect of the sympathetic nervous system and of adrenaline on the excitability of the human vestibular apparatus. E. B. Babskil, V. E. Vinodarov and F. M. Lampert. *J. Physiol.* (U. S. S. R.) 25, 41-8 (in French, 48)(1938).—A prolongation of vestibular chronaxia is observed on the operated side after cervico-thoracic sympathectomy. The diminished excitability persists in some cases for several years. Subcutaneous injection of adrenaline (I) augments the excitability of the vestibular app. Rheobasis and vestibular chronaxia are diminished. The action of I persists for over a day. III. **The effect of the stimulation of the sympathetic nerve on respiration in human beings.** E. B. Babskil and F. M. Lampert. *Ibid.* 49-52(in French, 53).—Changes in frequency and amplitude of respiration were observed when the sympathetic nerve was stimulated by means of an induction coil. IV. **Sympathetic innervation of the parotid gland in human beings.** O. A. Balandina. *Ibid.* 59-75(in French 75-6).—Cervico-thoracic sympathectomy results in a decrease in saliva secretion by the desympathized human parotid gland (II) as compared with the normal innervated gland (III). After 8-15 days it rises to that of III. After the injection of 1 cc. of 1:1000 atropine the secretion of saliva by II as a result of reflex stimulation completely stops. The secretion of III is considerably decreased but never completely stops. Desympathization results in an increase in Ca and a decrease in K in the saliva. I increases the spontaneous secretion of the gland, decreases Ca, increases K and increases the amt. of org. material in the saliva. S. A. Karjala

BABSKIY, Ye. B.

"Electronic Changes of Activity of Cholinesterase in Nerve Fibers," Byull. Eksp. Biol. Med., 18, No.3, pp 58-60, 1940



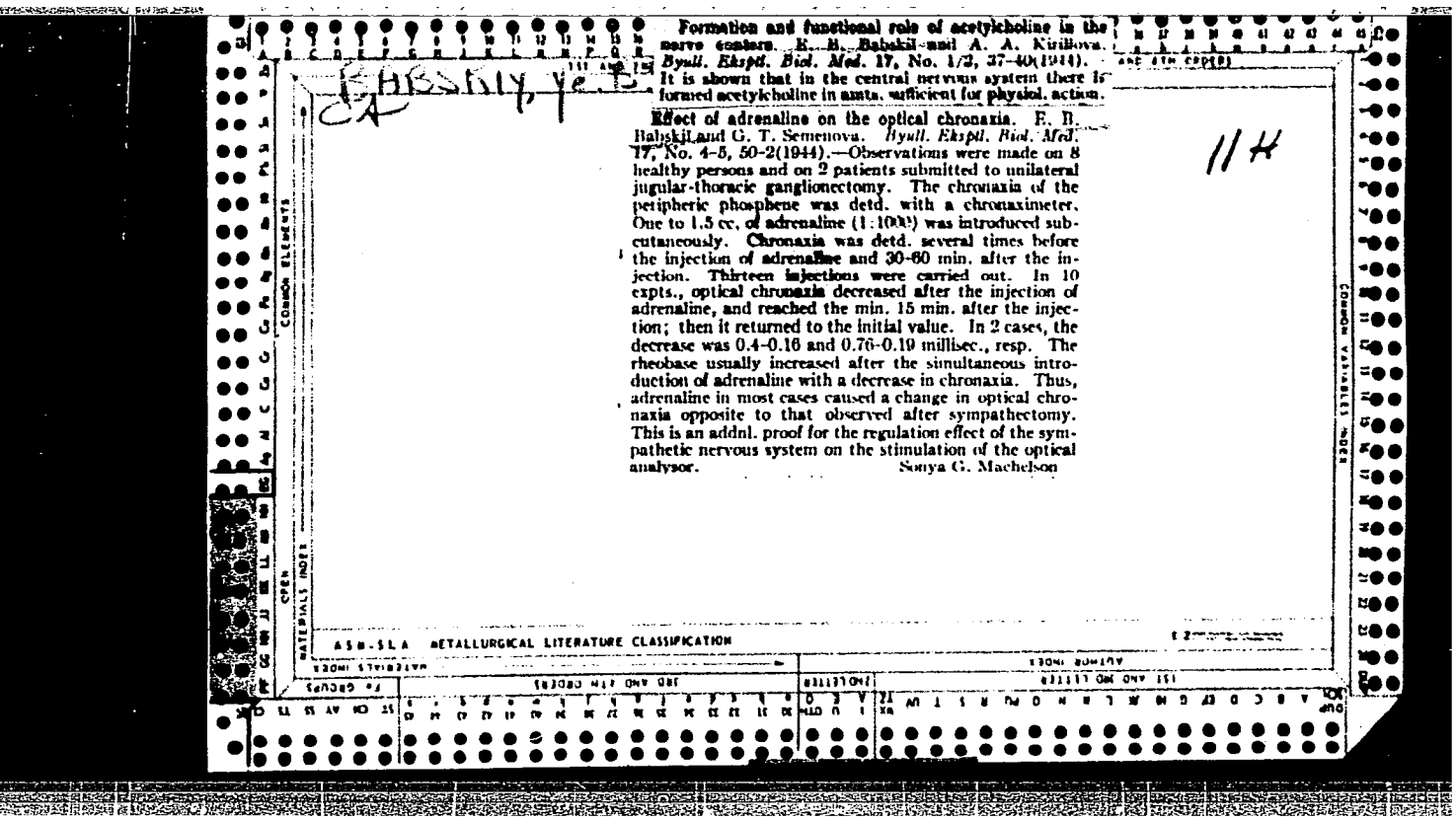
BABSKII, Ye. B.
CA

11 H

A new parasympathicolytic substance platyphyllin. E. B. Babskii. *Compt. rend. acad. sci. U. R. S. S.* 27, [illegible] (in English).—Perfusion of the isolated heart of the frog with 1:50,000–1:200,000 soln. platyphyllin totally removed the effect of excitation of the vagus nerve. Before perfusion faradic stimulation of the nerve caused vagal arrest of the heart. Injection of 0.01–0.04 g. of platyphyllin in the dog resulted in the disappearance of the effects commonly observed after excitation of parasympathetic nerves (chorda tympani and vagus). Expts. show that this drug inhibits the transmission of excitation in the terminations of parasympathetic nerves, and that the dose required for this purpose is 20–25 times greater than the corresponding dose of atropine. Injection of platyphyllin resulted in drop of blood pressure lasting 12–15 min., in most cases this influence disappearing after the spinal cord was cut below the medulla oblongata. Results of various expts. show that platyphyllin does not hinder the formation of the parasympathetic mediator in the nerve endings, but prevents its action upon the heart. The drug totally removes the muscarine effect of acetylcholine. Massive doses of acetylcholine (0.2–0.25 mg./kg. body wt. in dogs) do not effect either a drop of blood pressure or slowing of the heart after injection of platyphyllin. Platyphyllin does not prevent the nicotine effects of acetylcholine.

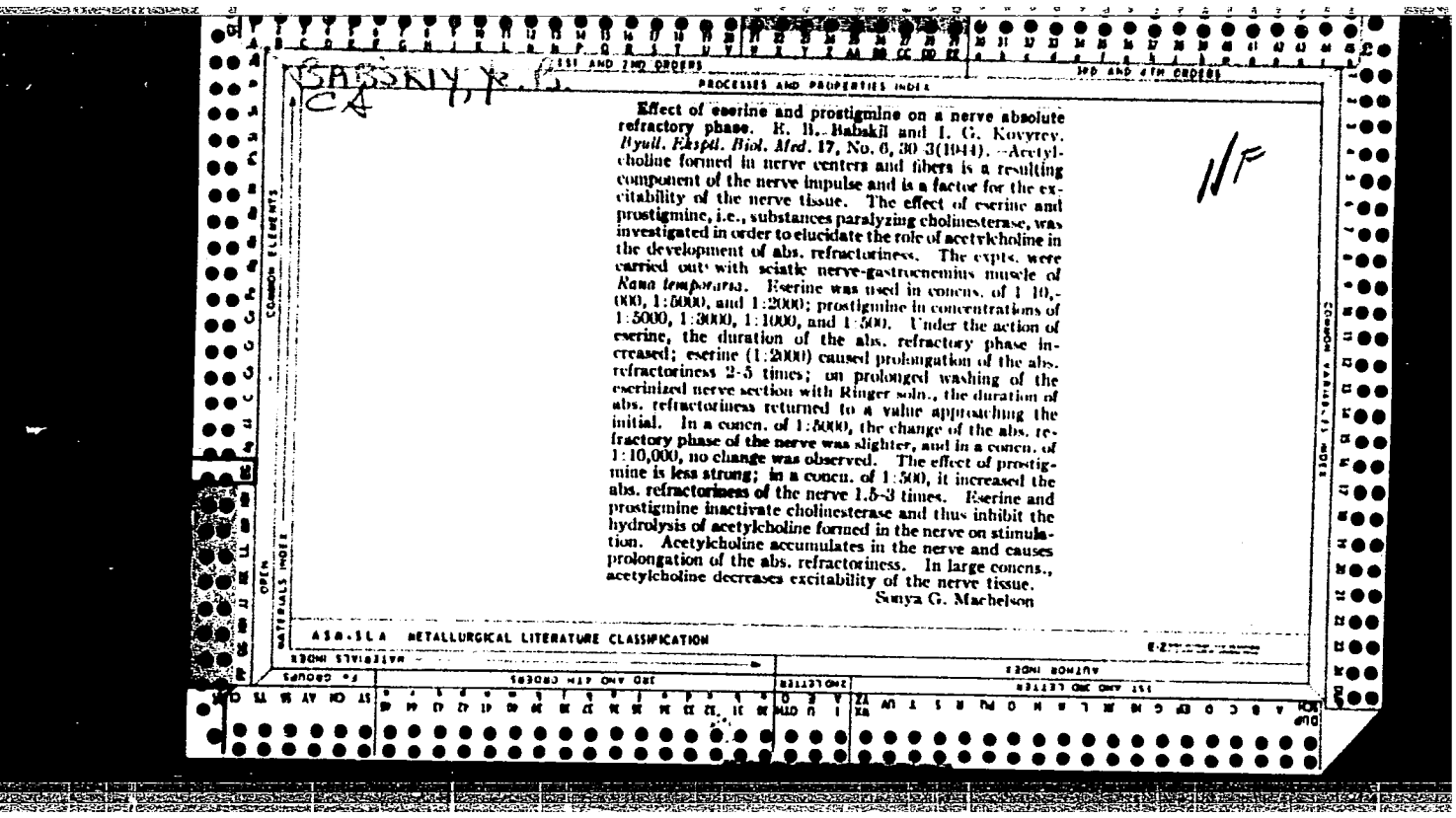
Maurice M. Rath

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Formation and functional role of acetylcholine in the nerve centers. E. B. Babskii and A. A. Kirillova. *Byull. Eksptl. Biol. Med.* 17, No. 1/2, 37-40(1944). It is shown that in the central nervous system there is formed acetylcholine in amts. sufficient for physiol. action.

Effect of adrenaline on the optical chronaxia. E. B. Babskii and G. T. Semenova. *Byull. Eksptl. Biol. Med.* 17, No. 4-5, 50-2(1944).—Observations were made on 8 healthy persons and on 2 patients submitted to unilateral jugular-thoracic ganglionectomy. The chronaxia of the peripheric phosphene was detd. with a chronaximeter. One to 1.5 cc. of adrenaline (1:1000) was introduced subcutaneously. Chronaxia was detd. several times before the injection of adrenaline and 30-60 min. after the injection. Thirteen injections were carried out. In 10 expts., optical chronaxia decreased after the injection of adrenaline, and reached the min. 15 min. after the injection; then it returned to the initial value. In 2 cases, the decrease was 0.4-0.16 and 0.76-0.19 millisec., resp. The rheobase usually increased after the simultaneous introduction of adrenaline with a decrease in chronaxia. Thus, adrenaline in most cases caused a change in optical chronaxia opposite to that observed after sympathectomy. This is an addnl. proof for the regulation effect of the sympathetic nervous system on the stimulation of the optical analysor. Sonya G. Machelson



GABSKIY, R. S.

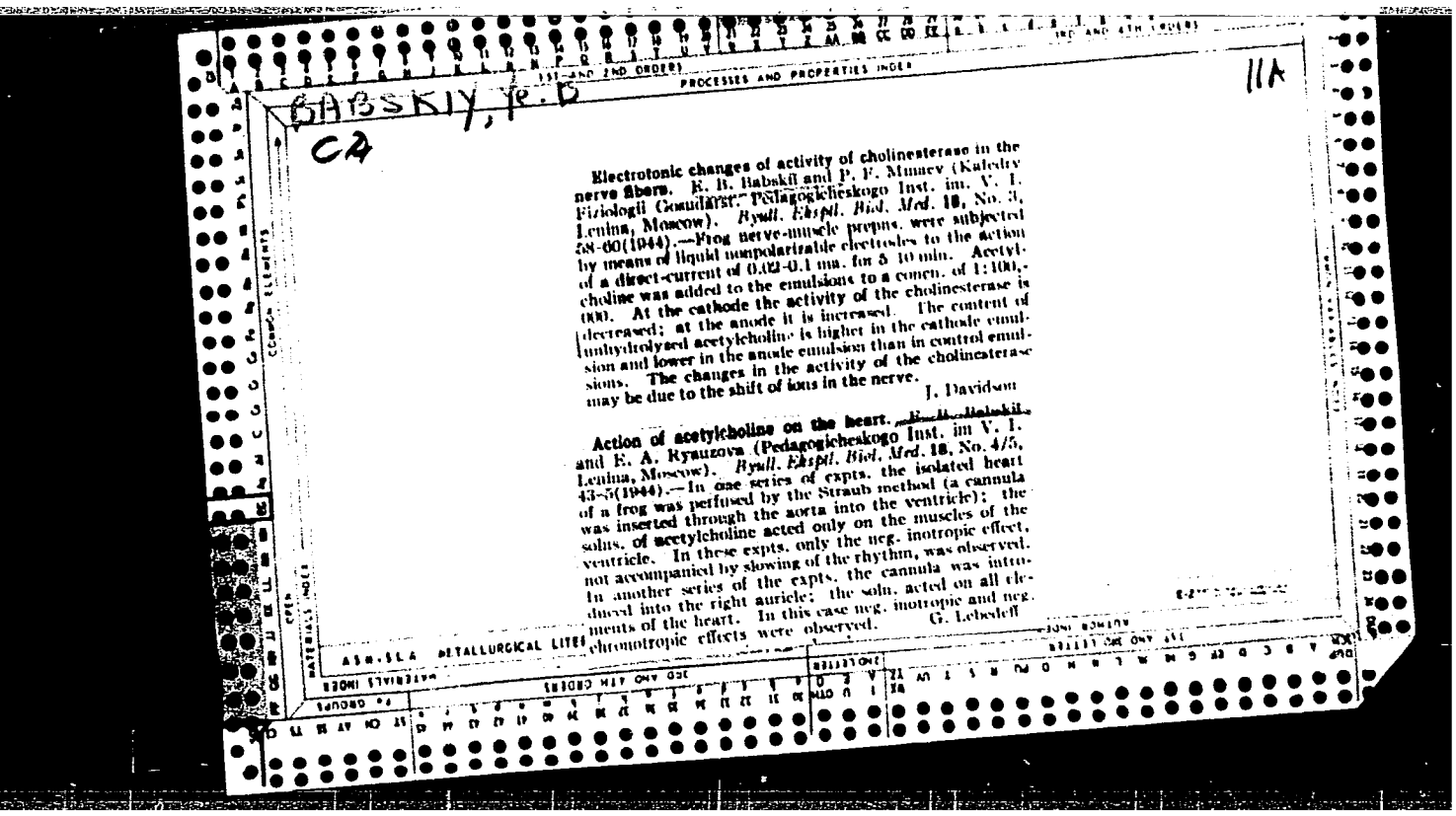
CA

PROCESSES AND PROPERTIES INDEX

Effect of eserine and prostigmine on a nerve absolute refractory phase. R. B. Babskii and I. G. Kovyrev. *Byull. Eksptl. Biol. Med.* 17, No. 6, 30-3(1944).—Acetylcholine formed in nerve centers and fibers is a resulting component of the nerve impulse and is a factor for the excitability of the nerve tissue. The effect of eserine and prostigmine, i.e., substances paralyzing cholinesterase, was investigated in order to elucidate the role of acetylcholine in the development of abs. refractoriness. The expts. were carried out with sciatic nerve-gastrocnemius muscle of *Rana temporaria*. Eserine was used in concns. of 1:10,000, 1:5000, and 1:2000; prostigmine in concentrations of 1:5000, 1:3000, 1:1000, and 1:500. Under the action of eserine, the duration of the abs. refractory phase increased; eserine (1:2000) caused prolongation of the abs. refractoriness 2-5 times; on prolonged washing of the eserinized nerve section with Ringer soln., the duration of abs. refractoriness returned to a value approaching the initial. In a concn. of 1:5000, the change of the abs. refractory phase of the nerve was slighter, and in a concn. of 1:10,000, no change was observed. The effect of prostigmine is less strong; in a concn. of 1:500, it increased the abs. refractoriness of the nerve 1.5-3 times. Eserine and prostigmine inactivate cholinesterase and thus inhibit the hydrolysis of acetylcholine formed in the nerve on stimulation. Acetylcholine accumulates in the nerve and causes prolongation of the abs. refractoriness. In large concns., acetylcholine decreases excitability of the nerve tissue.

Sonya G. Machelson

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



BABSKIY, E. B.

C4

PROCESSES AND PROPERTIES INDEX

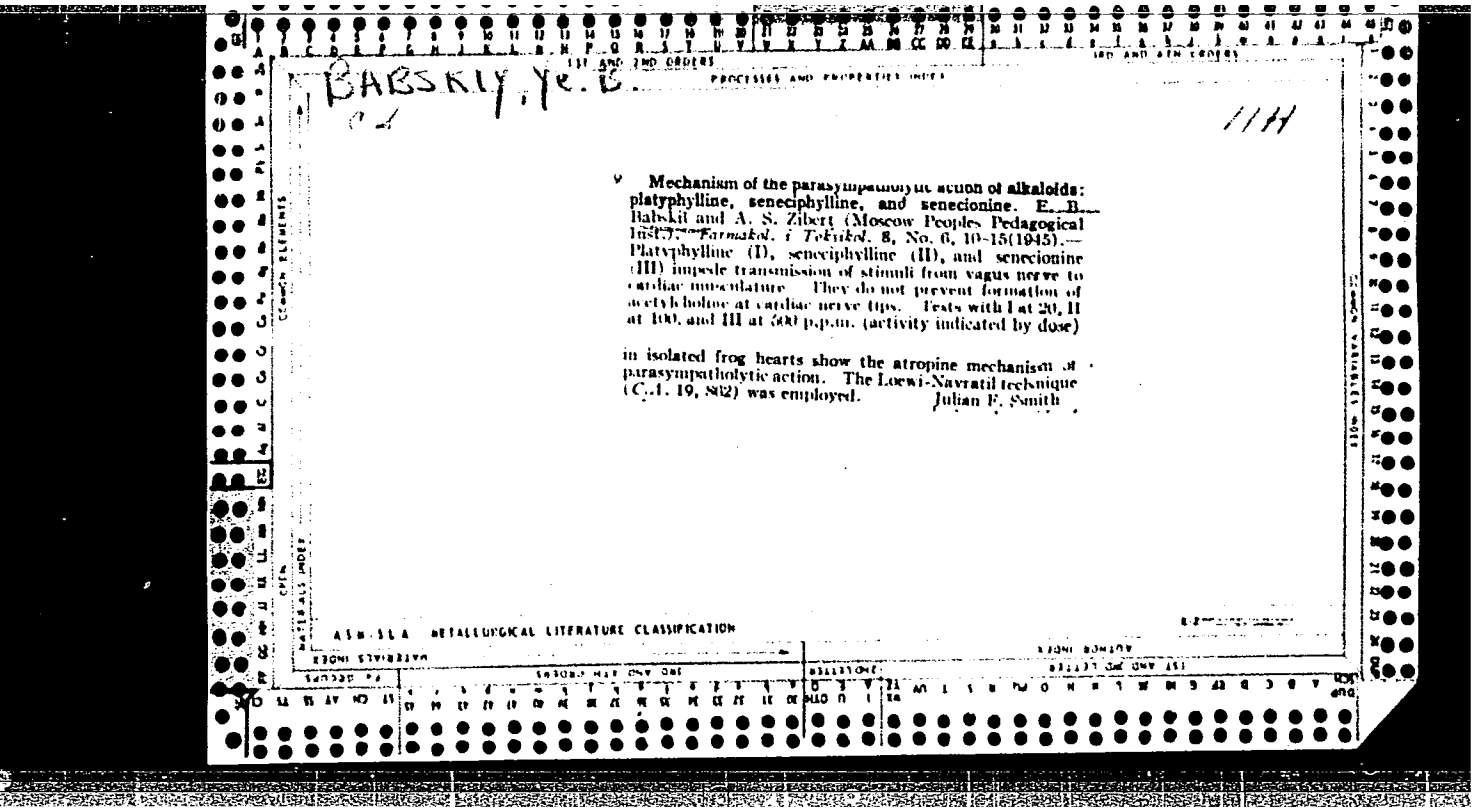
11A

Electrotonic changes of activity of cholinesterase in the nerve fibers. E. B. Babskii and P. F. Mumev (Kafedry Fiziologii Gosudarstv. Pedagogicheskogo Inst. im. V. I. Lenina, Moscow). *Byull. Eksptl. Biol. Med.* **18**, No. 3, 58-60(1944).—Frog nerve-muscle preps. were subjected by means of liquid nonpolarizable electrodes to the action of a direct-current of 0.02-0.1 ma. for 5-10 min. Acetylcholine was added to the emulsions to a concn. of 1:100,000. At the cathode the activity of the cholinesterase is decreased; at the anode it is increased. The content of unhydrolyzed acetylcholine is higher in the cathode emulsion and lower in the anode emulsion than in control emulsions. The changes in the activity of the cholinesterase may be due to the shift of ions in the nerve.

J. Davidson

Action of acetylcholine on the heart. E. B. Babskii and E. A. Ryauzova (Pedagogicheskogo Inst. im V. I. Lenina, Moscow). *Byull. Eksptl. Biol. Med.* **18**, No. 4/5, 43-5(1944).—In one series of expts. the isolated heart of a frog was perfused by the Straub method (a cannula was inserted through the aorta into the ventricle); the solns. of acetylcholine acted only on the muscles of the ventricle. In these expts. only the neg. inotropic effect, not accompanied by slowing of the rhythm, was observed. In another series of the expts. the cannula was introduced into the right auricle; the soln. acted on all elements of the heart. In this case neg. inotropic and neg. chronotropic effects were observed.

G. Lebedeff



BABSKIY, Ye. B.

1144

Mechanism of the parasympatholytic action of alkaloids: platyphylline, seneciphylline, and senecionine. E. B. Babskii and A. S. Zibert (Moscow Peoples Pedagogical Inst.). *Farmakol. i Toksikol.* 8, No. 6, 10-15(1945).—Platyphylline (I), seneciphylline (II), and senecionine (III) impede transmission of stimuli from vagus nerve to cardiac musculature. They do not prevent formation of acetylcholine at cardiac nerve tips. Tests with I at 20, II at 100, and III at 500 p.p.m. (activity indicated by dose) in isolated frog hearts show the atropine mechanism of parasympatholytic action. The Loewi-Navratil technique (*C.A.* 19, 802) was employed. Julian F. Smith

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

BABSKIY, YE. B.

CA

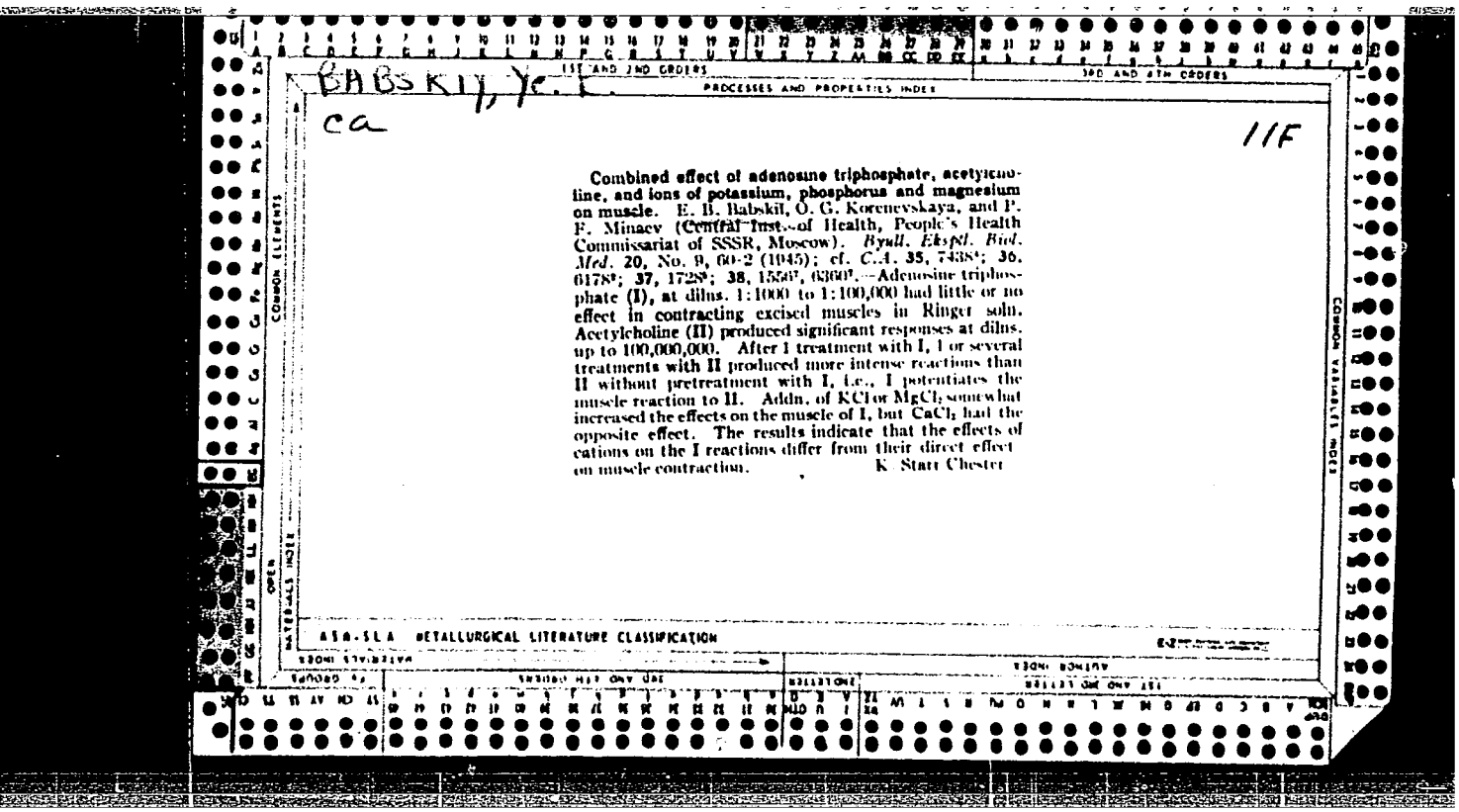
11-4

Polarization effect under the action of acetylcholine on the nerve commissure of Anodonta. E. B. Babskil, A. G. Mershchikov and F. D. Sheikhon. *Byull. Eksptl. Biol. Med.* 19, No. 4-5, 17-20(1945).—Expts. were made with large *Anodonta cygnea*. When acetylcholine is applied in concns. of 1:10,000-1:1,000 to the interganglionic commissure, a pos. elec. reaction is noted in the nerve tissue. This polarizing effect is usually equiv. to 5 to 6 mv., but in exceptional cases may be as high as 25-30 mv. The authors believe that this pos. reaction is connected with the formation of acetylcholine.

Changes in cholinesterase activity during the rhythmic polarization of nerve fibers. E. B. Babskil and P. F. Minaev (Pedagogic Inst., Moscow). *Byull. Eksptl. Biol. Med.* 19, No. 6, 14-16(1945); cf. *C.A.* 40, 1845.—Previously it has shown, that during the passage of a d.c. through nerve fibers or the central nervous system, the cholinesterase activity was increased at the anode and decreased at the cathode. The same effect is obtained by the rhythmic polarization of nerve fibers with a condenser.

H. Priestley

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



BABSKII, Ye. B.

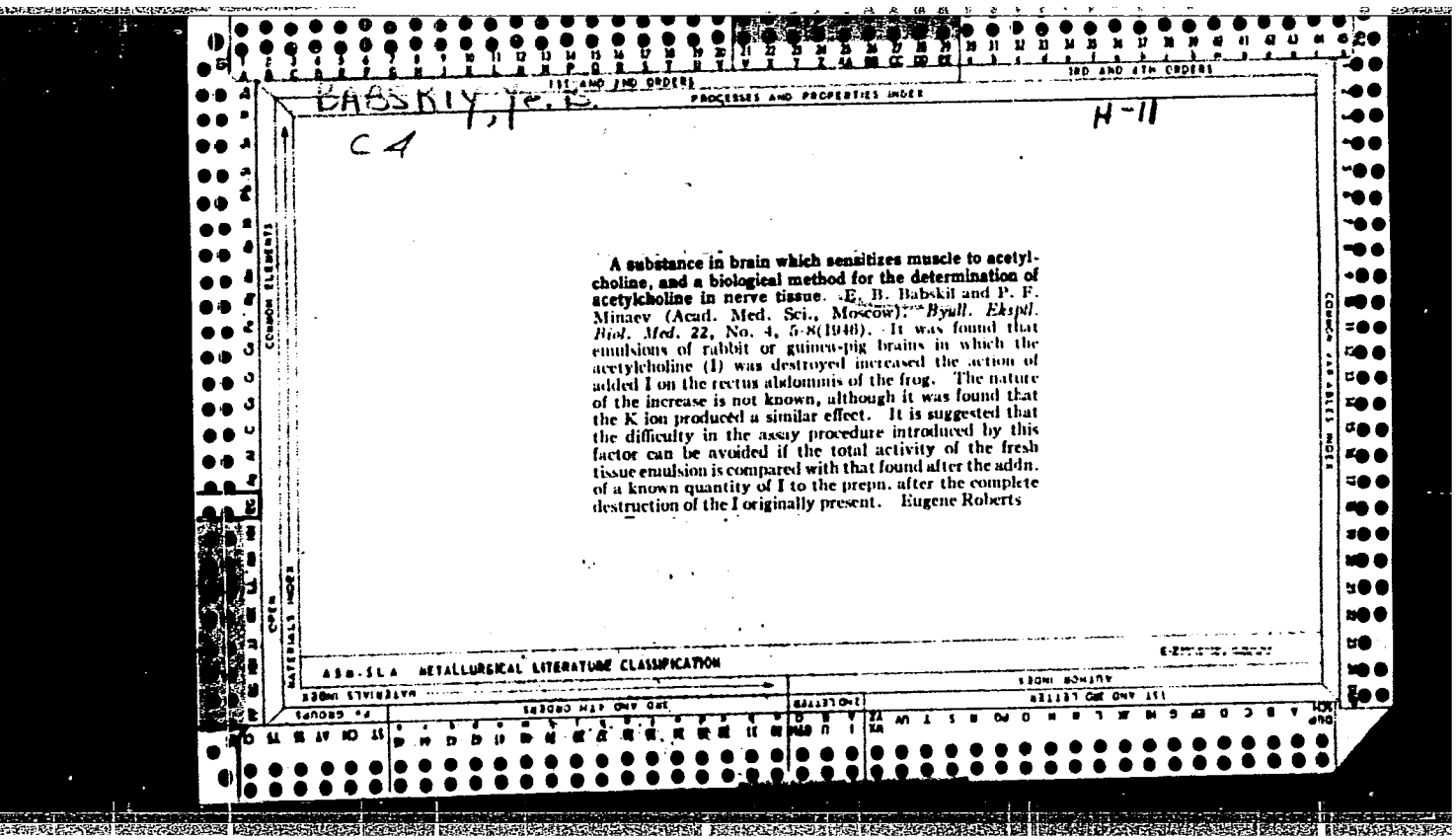
ca

11F

Combined effect of adenosine triphosphate, acetylcholine, and ions of potassium, phosphorus and magnesium on muscle. E. B. Babskii, O. G. Korenevskaya, and P. F. Minaev (Central Inst. of Health, People's Health Commissariat of SSSR, Moscow). *Byull. Eksptl. Biol. Med.* 20, No. 9, 60-2 (1945); cf. *C.A.* 35, 7438[8]; 36, 6178[9]; 37, 1728[8]; 38, 1558[7], 6360[1].—Adenosine triphosphate (I), at dilns. 1:1000 to 1:100,000 had little or no effect in contracting excised muscles in Ringer soln. Acetylcholine (II) produced significant responses at dilns. up to 100,000,000. After I treatment with I, 1 or several treatments with II produced more intense reactions than II without pretreatment with I, i.e., I potentiates the muscle reaction to II. Addn. of KCl or $MgCl_2$ somewhat increased the effects on the muscle of I, but $CaCl_2$ had the opposite effect. The results indicate that the effects of cations on the I reactions differ from their direct effect on muscle contraction. K. Starr Chester

BABSKIY, Yevgeniy Borisovich

"Physiology of Humans and Animals," Moscow, Sovetskaya Nauka, 1946

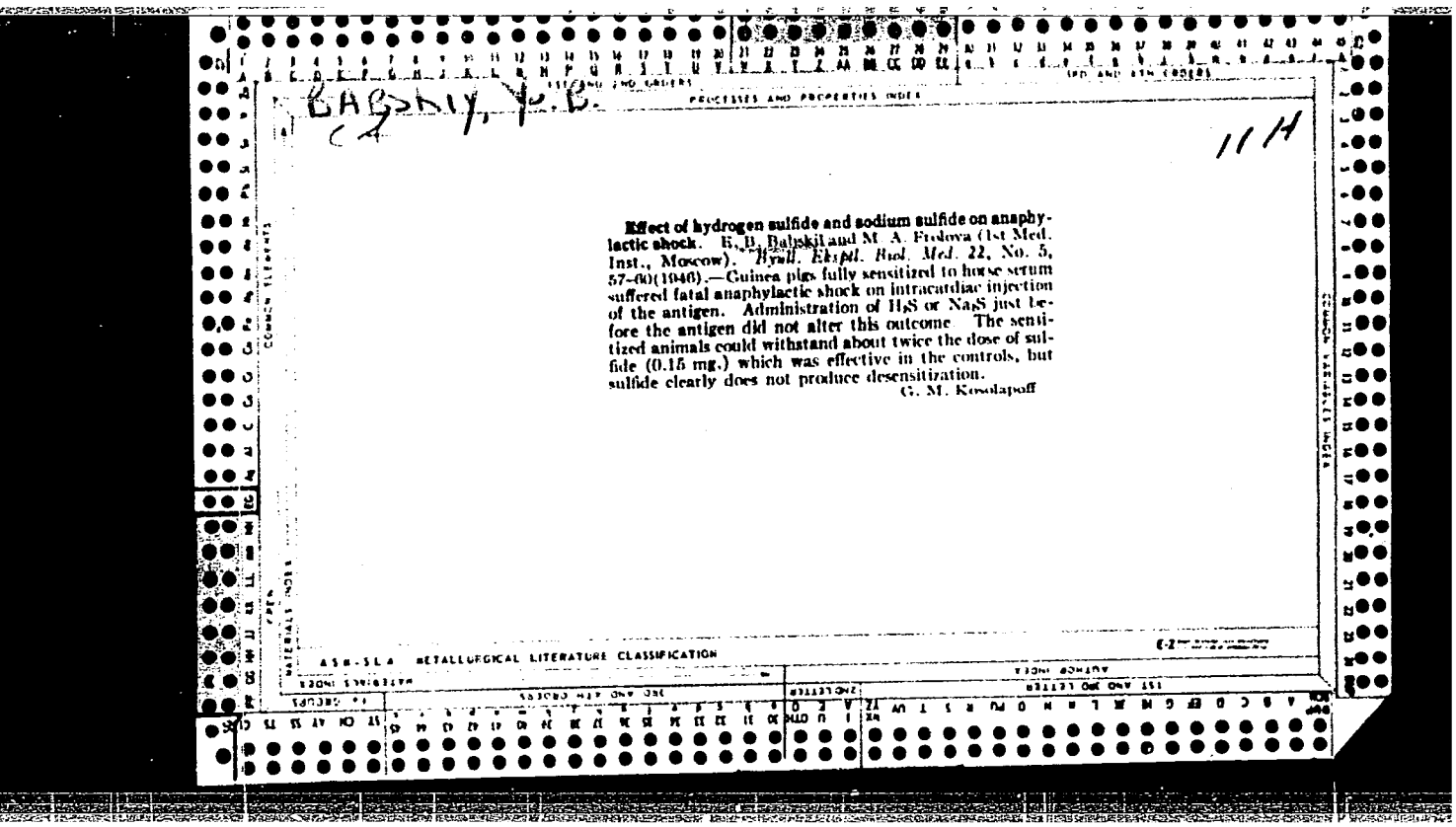


BABSKIY, Ye. B.

C 4

H-11

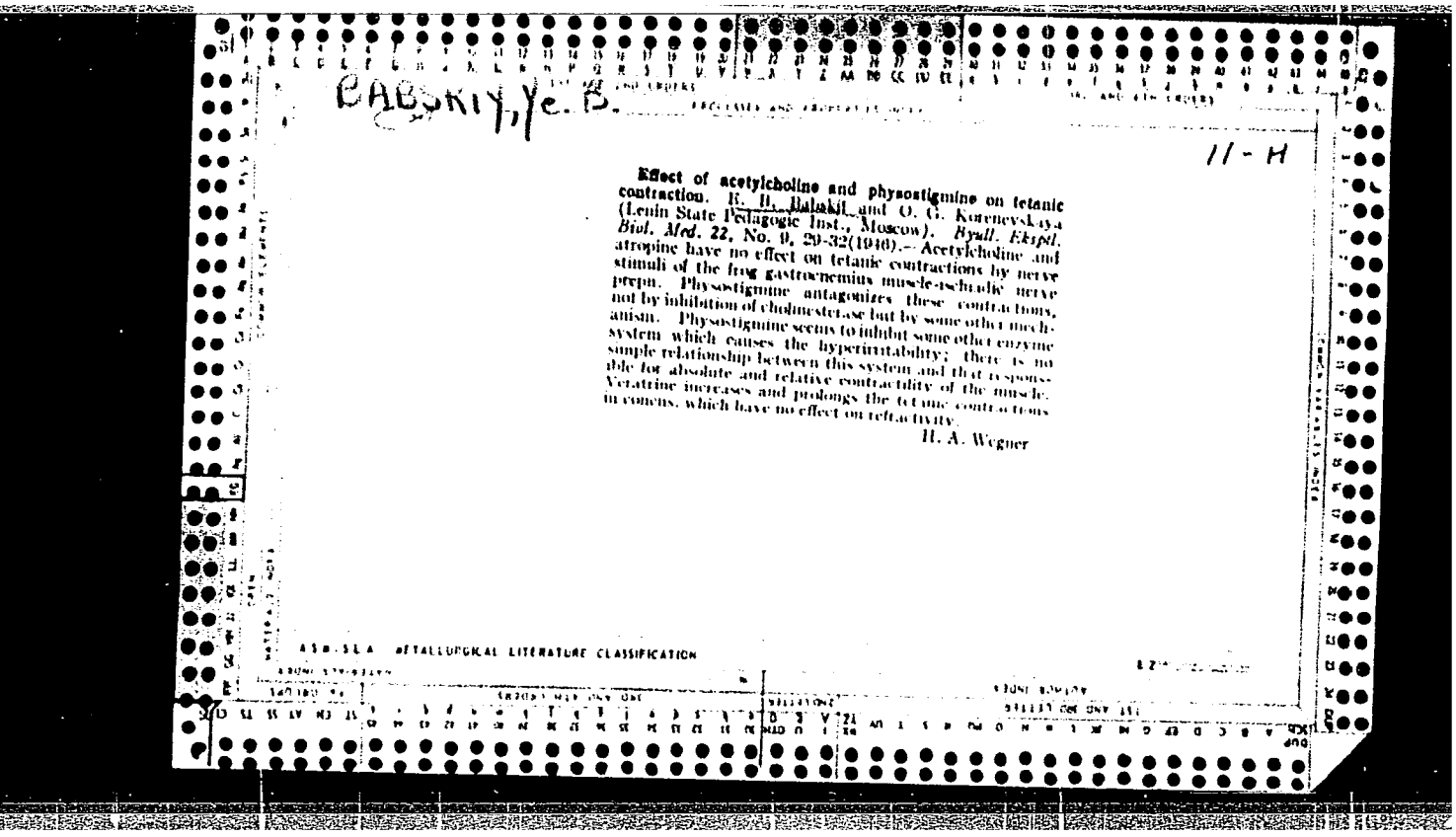
A substance in brain which sensitizes muscle to acetylcholine, and a biological method for the determination of acetylcholine in nerve tissue. E. B. Babskii and P. F. Minaev (Acad. Med. Sci., Moscow). *Byull. Eksptl. Biol. Med.* 22, No. 4, 5-8(1940). It was found that emulsions of rabbit or guinea-pig brains in which the acetylcholine (I) was destroyed increased the action of added I on the rectus abdominis of the frog. The nature of the increase is not known, although it was found that the K ion produced a similar effect. It is suggested that the difficulty in the assay procedure introduced by this factor can be avoided if the total activity of the fresh tissue emulsion is compared with that found after the addn. of a known quantity of I to the prepn. after the complete destruction of the I originally present. Eugene Roberts



BABSKIY, Ye. B.

11H

Effect of hydrogen sulfide and sodium sulfide on anaphylactic shock. E. B. Babskii and M. A. Fridova (1st Med. Inst., Moscow). *Byull. Eksptl. Biol. Med.* 22, No. 5, 57-60(1946).—Guinea pigs fully sensitized to horse serum suffered fatal anaphylactic shock on intracardiac injection of the antigen. Administration of H_2S or Na_2S just before the antigen did not alter this outcome. The sensitized animals could withstand about twice the dose of sulfide (0.15 mg.) which was effective in the controls, but sulfide clearly does not produce desensitization.
G. M. Kosolapoff



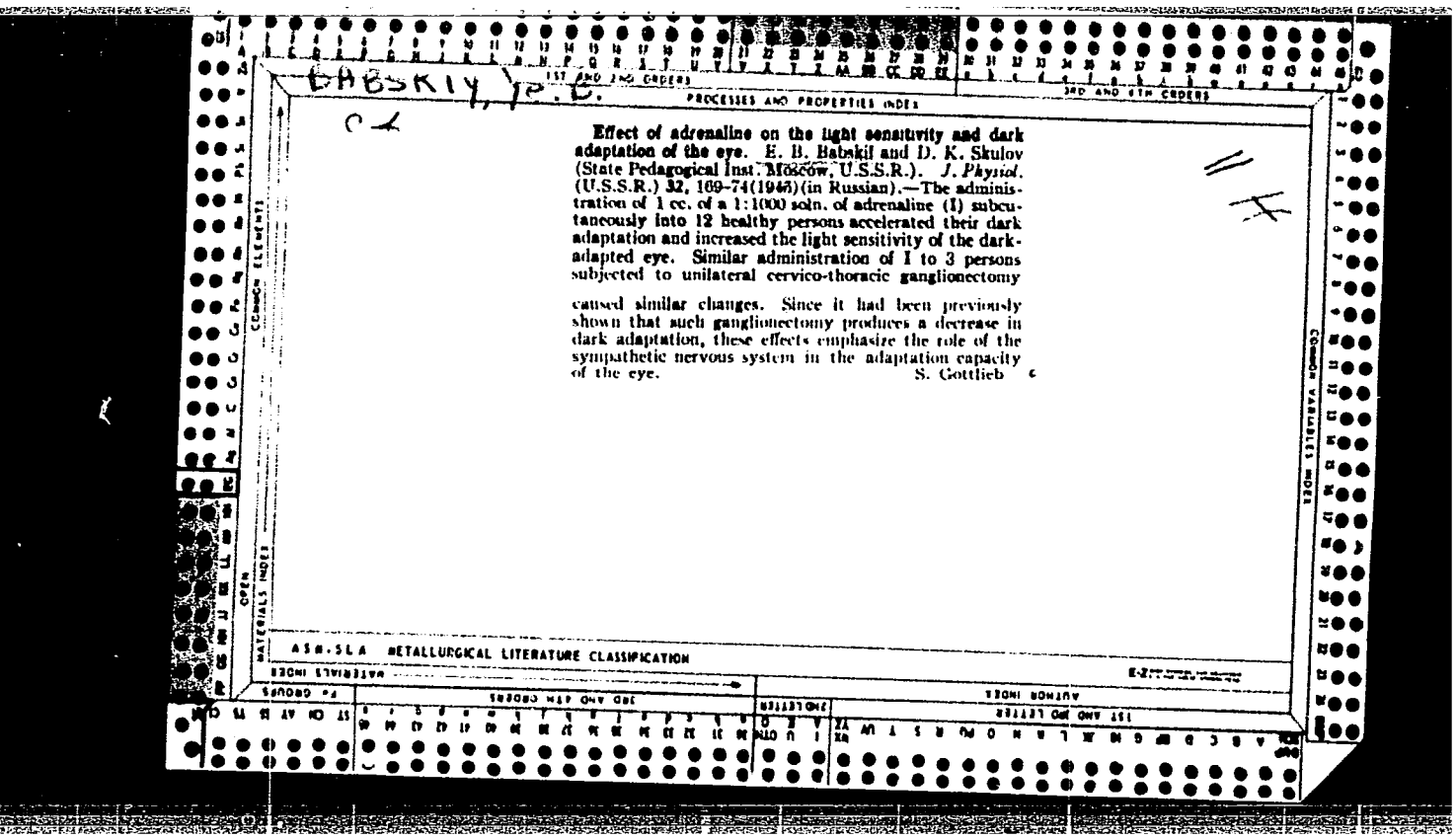
BABSKIY, Ye. B.

11-H

Effect of acetylcholine and physostigmine on tetanic contraction. E. B. Babskii and O. G. Kurenevskaya (Lenin State Pedagogic Inst., Moscow). *Byull. Eksptl. Biol. Med.* 22, No. 9, 29-32(1946).—Acetylcholine and atropine have no effect on tetanic contractions by nerve stimuli of the frog gastrocnemius muscle-ischiadic nerve prepn. Physostigmine antagonizes these contractions, not by inhibition of cholinesterase but by some other mechanism. Physostigmine seems to inhibit some other enzyme system which causes the hyperirritability; there is no simple relationship between this system and that responsible for absolute and relative contractility of the muscle. Veratrine increases and prolongs the tetanic contractions in comens, which have no effect on refractivity.

H. A. Wegner

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



BABSKIY, I.B.

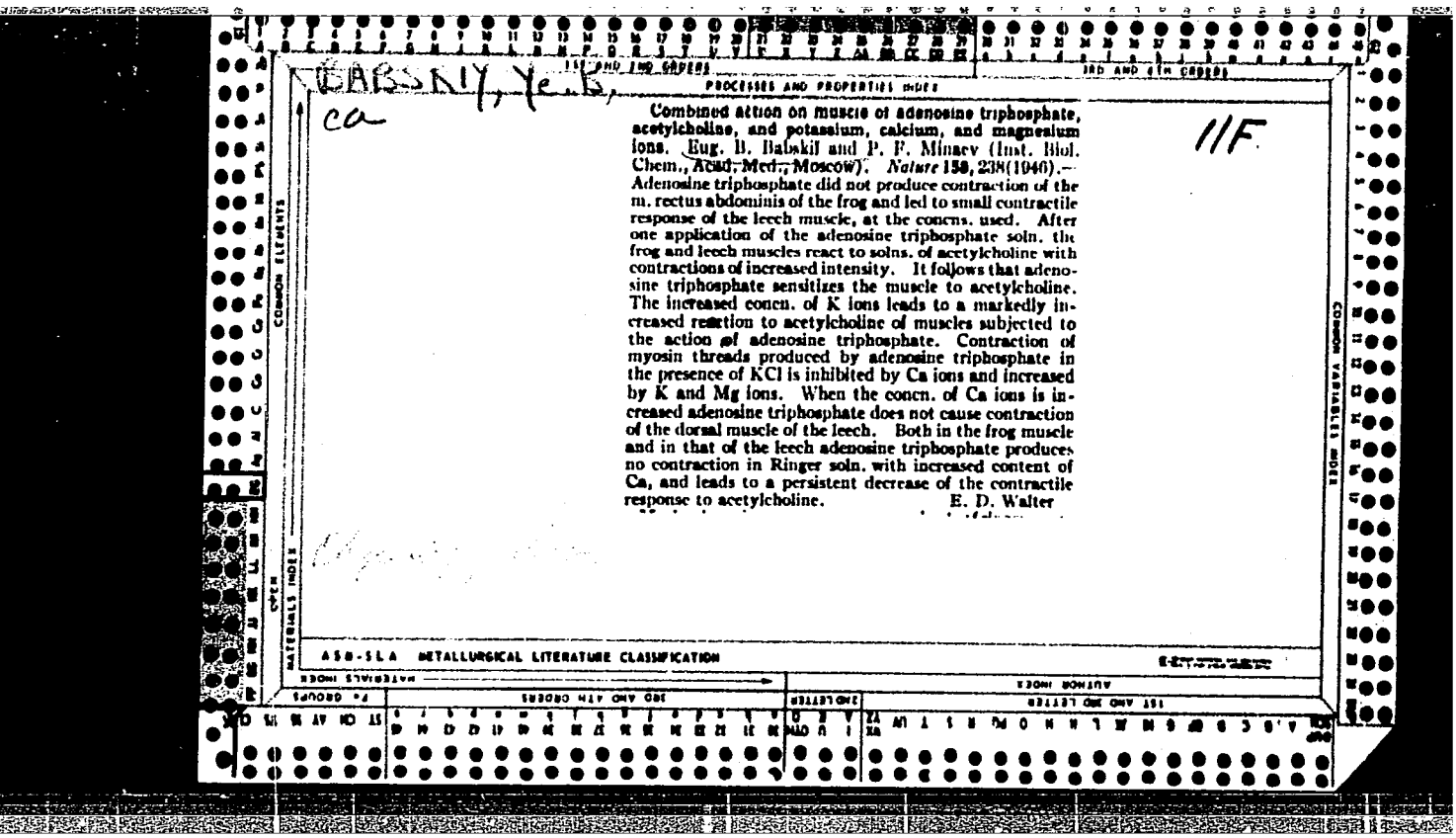
C-1

PROCESSES AND PROPERTIES INDEX

Effect of adrenaline on the light sensitivity and dark adaptation of the eye. E. B. Babskif and D. K. Skulov (State Pedagogical Inst., Moscow, U.S.S.R.). *J. Physiol.* (U.S.S.R.) **32**, 169–74(1945)(in Russian).—The administration of 1 cc. of a 1:1000 soln. of adrenaline (I) subcutaneously into 12 healthy persons accelerated their dark adaptation and increased the light sensitivity of the dark-adapted eye. Similar administration of I to 3 persons subjected to unilateral cervico-thoracic ganglionectomy caused similar changes. Since it had been previously shown that such ganglionectomy produces a decrease in dark adaptation, these effects emphasize the role of the sympathetic nervous system in the adaptation capacity of the eye.

S. Gottlieb

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



GABSKIY, Ye. B.

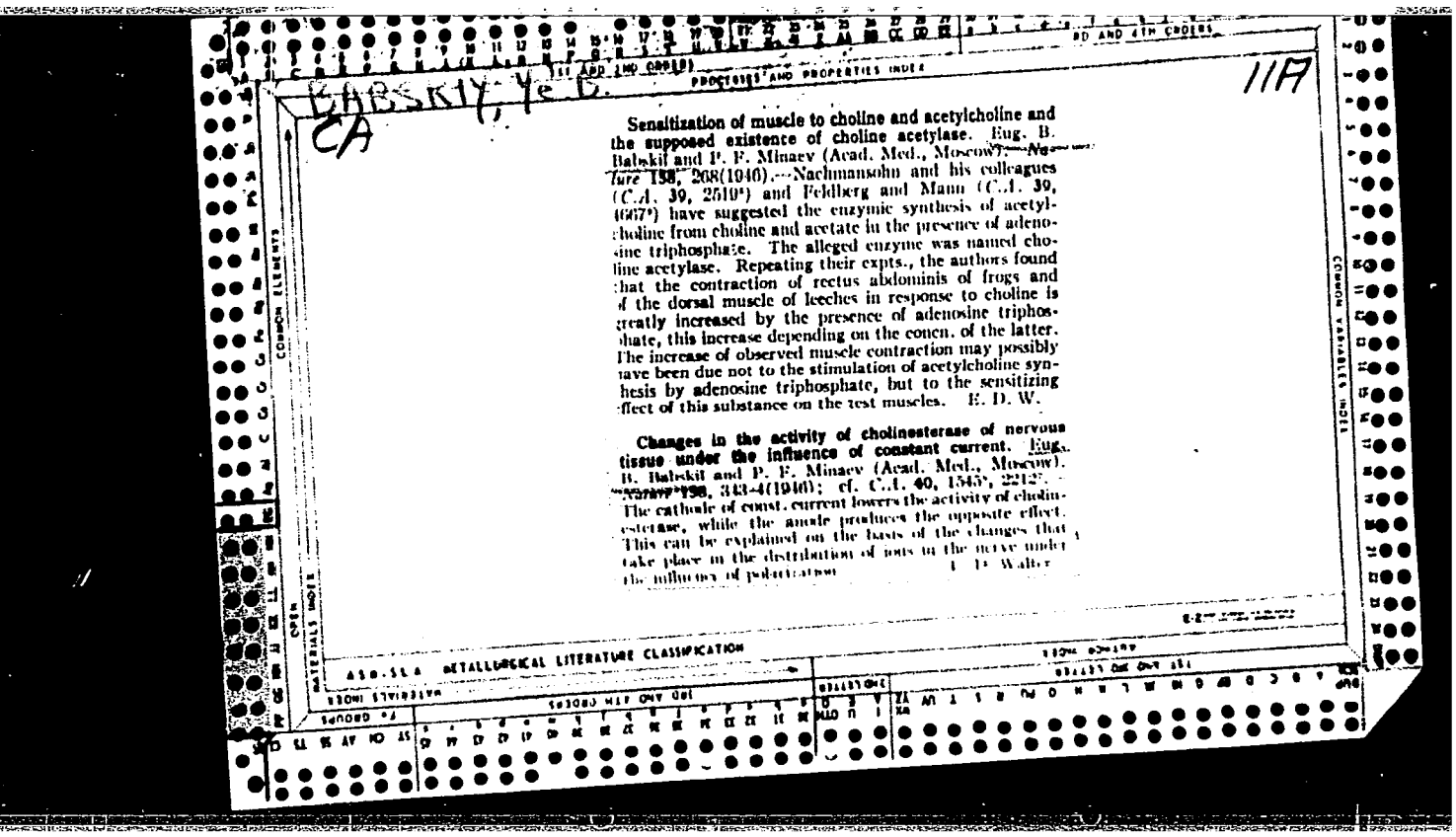
Ca

11F

PROCESSES AND PROPERTIES INDEX

Combined action on muscle of adenosine triphosphate, acetylcholine, and potassium, calcium, and magnesium ions. Eug. B. Babskil and P. P. Minaev (Inst. Biol. Chem., Acad. Med., Moscow). *Nature* 158, 238(1946).—Adenosine triphosphate did not produce contraction of the m. rectus abdominis of the frog and led to small contractile response of the leech muscle, at the concns. used. After one application of the adenosine triphosphate soln. the frog and leech muscles react to solns. of acetylcholine with contractions of increased intensity. It follows that adenosine triphosphate sensitizes the muscle to acetylcholine. The increased concn. of K ions leads to a markedly increased reaction to acetylcholine of muscles subjected to the action of adenosine triphosphate. Contraction of myosin threads produced by adenosine triphosphate in the presence of KCl is inhibited by Ca ions and increased by K and Mg ions. When the concn. of Ca ions is increased adenosine triphosphate does not cause contraction of the dorsal muscle of the leech. Both in the frog muscle and in that of the leech adenosine triphosphate produces no contraction in Ringer soln. with increased content of Ca, and leads to a persistent decrease of the contractile response to acetylcholine. E. D. Walter

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



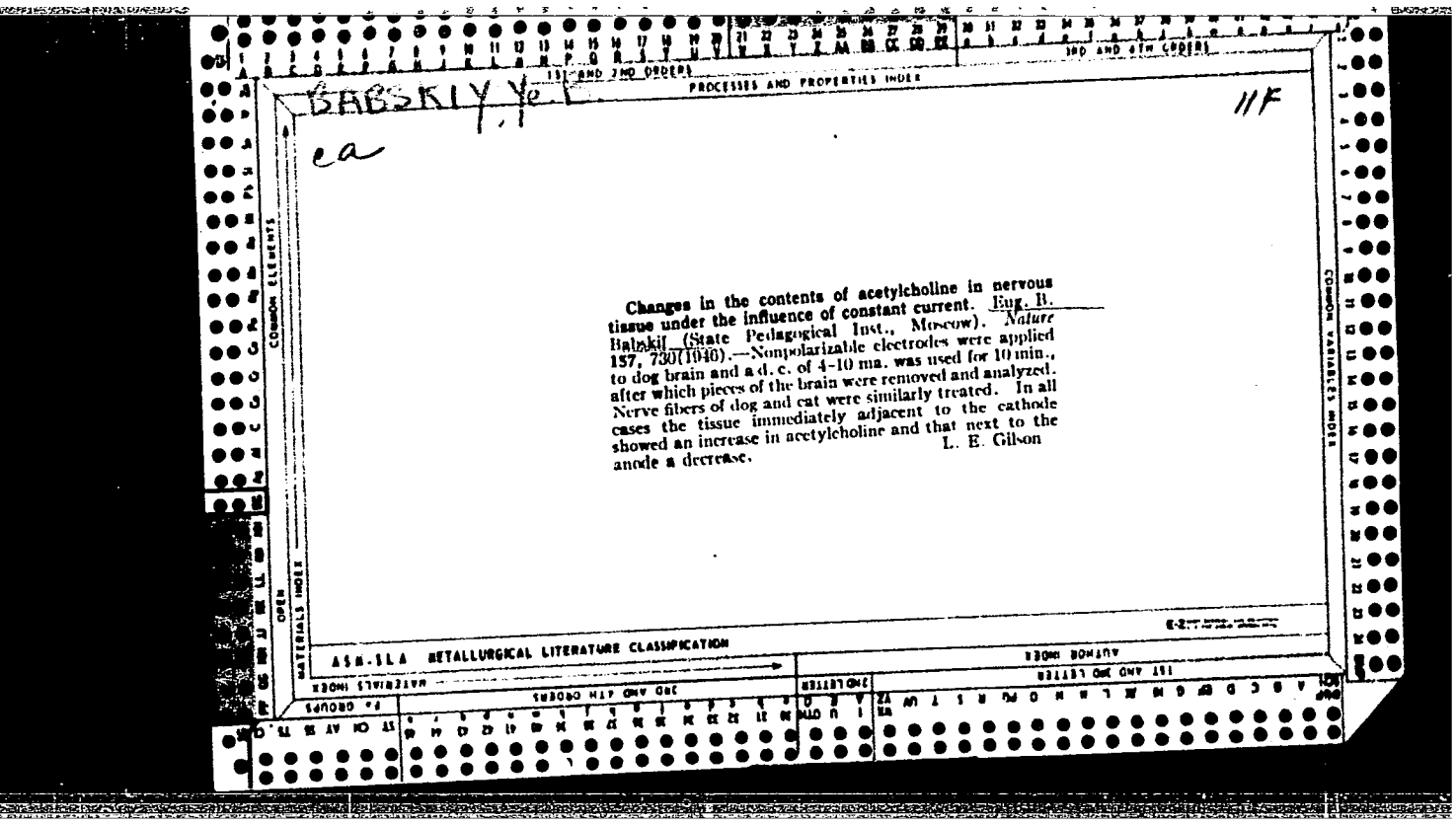
BABSKIY, Ye. B.

CA

11A

Sensitization of muscle to choline and acetylcholine and the supposed existence of choline acetylase. Eug. B. Babskii and P. F. Minaev (Acad. Med., Moscow). *Nature* **158**, 268(1946).—Nachmansohn and his colleagues (*C.A.* **39**, 2519⁸) and Feldberg and Mann (*C.A.* **39**, 4667⁹) have suggested the enzymic synthesis of acetylcholine from choline and acetate in the presence of adenosine triphosphate. The alleged enzyme was named choline acetylase. Repeating their expts., the authors found that the contraction of rectus abdominis of frogs and of the dorsal muscle of leeches in response to choline is greatly increased by the presence of adenosine triphosphate, this increase depending on the concn. of the latter. The increase of observed muscle contraction may possibly have been due not to the stimulation of acetylcholine synthesis by adenosine triphosphate, but to the sensitizing effect of this substance on the test muscles. E. D. W.

Changes in the activity of cholinesterase of nervous tissue under the influence of constant current. Eug. B. Babskii and P. F. Minaev (Acad. Med., Moscow). *Nature* **158**, 343-4(1946); cf. *C.A.* **40**, 1545⁵, 2212⁷. The cathode of const. current lowers the activity of cholinesterase, while the anode produces the opposite effect. This can be explained on the basis of the changes that take place in the distribution of ions in the nerve under the influence of polarization. I. D. Walter



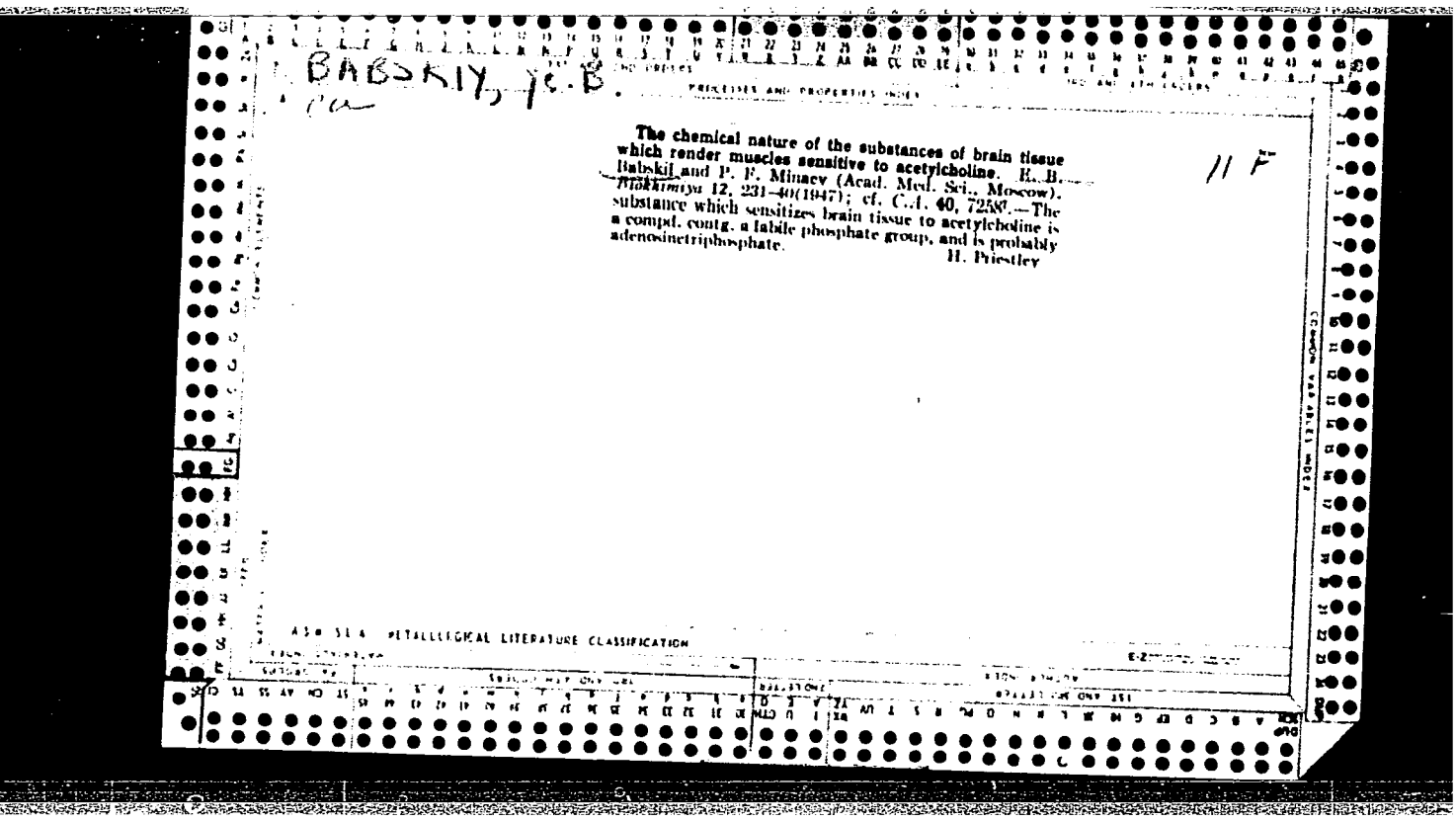
BABSKIY, Ye. L.

ea

11F

Changes in the contents of acetylcholine in nervous tissue under the influence of constant current. Eug. B. Babskii (State Pedagogical Inst., Moscow). *Nature* 157, 730(1940).—Nonpolarizable electrodes were applied to dog brain and a d. c. of 4-10 ma. was used for 10 min., after which pieces of the brain were removed and analyzed. Nerve fibers of dog and cat were similarly treated. In all cases the tissue immediately adjacent to the cathode showed an increase in acetylcholine and that next to the anode a decrease.

L. E. Gilson

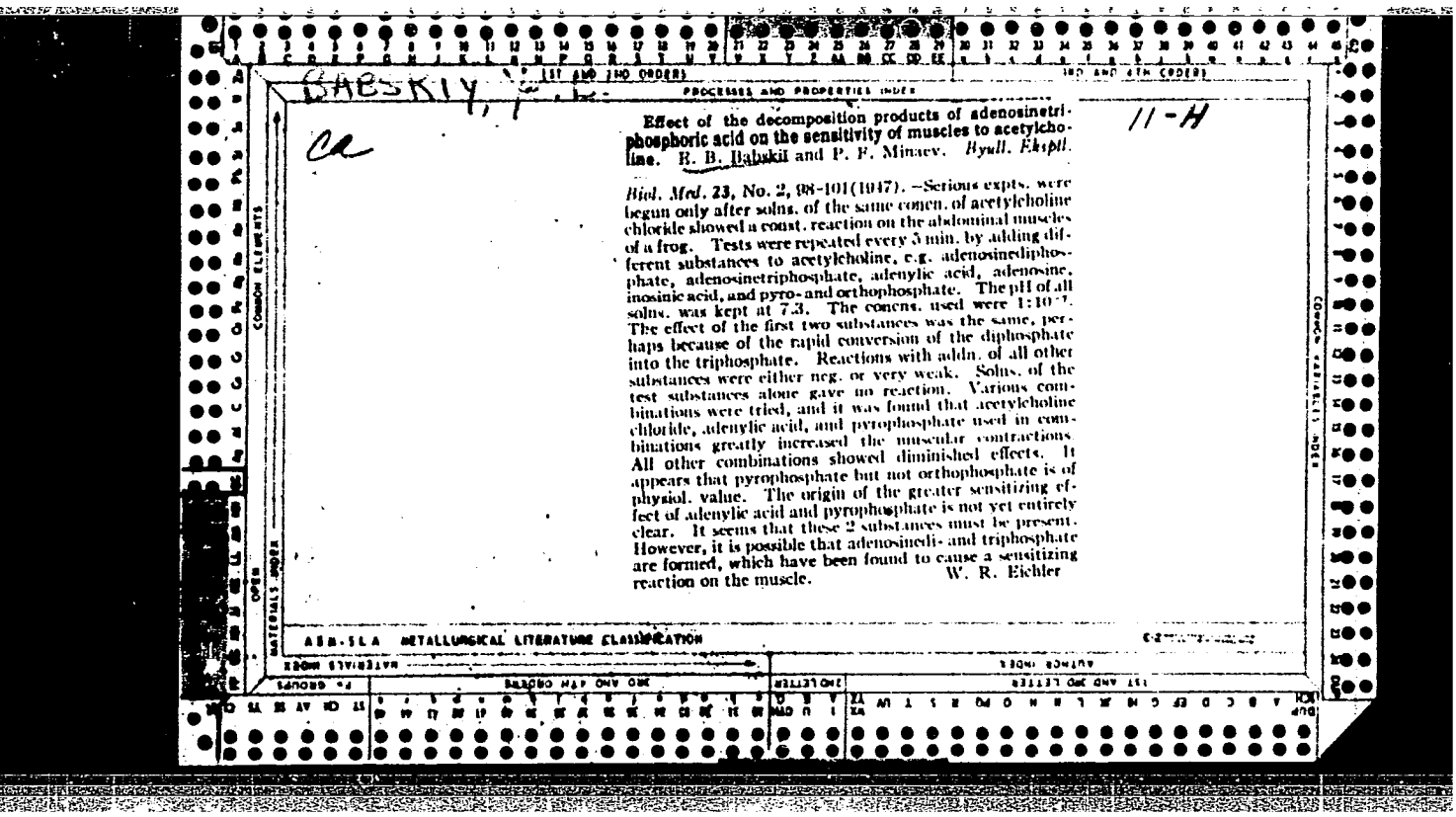


BABSKIY, Ye. B.

The chemical nature of the substances of brain tissue which render muscles sensitive to acetylcholine. E. B. Babskii and P. F. Minaev (Acad. Med. Sci., Moscow). *Biokhimiya* 12, 231–40(1947); cf. C.A. 40, 7258*f*.—The substance which sensitizes brain tissue to acetylcholine is a compd. contg. a labile phosphate group, and is probably adenosinetriphosphate.
H. Priestley

11 F

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

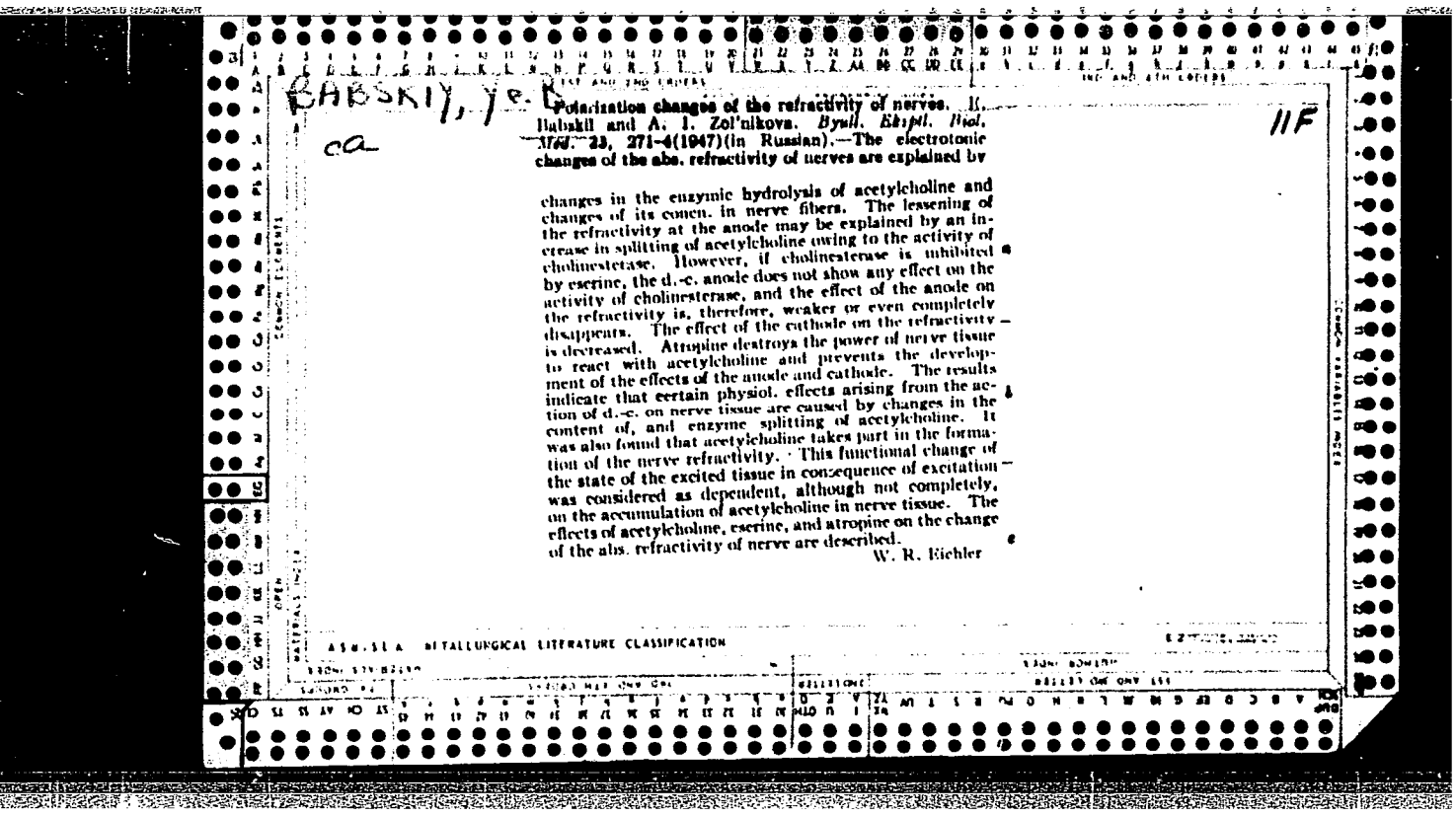


PROCESSES AND PROPERTIES INDEX

11-H

Effect of the decomposition products of adenosinetriphosphoric acid on the sensitivity of muscles to acetylcholine. B. B. Babukii and P. F. Minaev. *Ryull. Eksptl. Biol. Med.* 23, No. 2, 98-101(1947). —Serious expts. were begun only after solns. of the same concn. of acetylcholine chloride showed a const. reaction on the abdominal muscles of a frog. Tests were repeated every 5 min. by adding different substances to acetylcholine, e.g. adenosinediphosphate, adenosinetriphosphate, adenylic acid, adenosine, inosinic acid, and pyro- and orthophosphate. The pH of all solns. was kept at 7.3. The concns. used were $1:10^{-7}$. The effect of the first two substances was the same, perhaps because of the rapid conversion of the diphosphate into the triphosphate. Reactions with addn. of all other substances were either neg. or very weak. Solns. of the test substances alone gave no reaction. Various combinations were tried, and it was found that acetylcholine chloride, adenylic acid, and pyrophosphate used in combinations greatly increased the muscular contractions. All other combinations showed diminished effects. It appears that pyrophosphate but not orthophosphate is of physiol. value. The origin of the greater sensitizing effect of adenylic acid and pyrophosphate is not yet entirely clear. It seems that these 2 substances must be present. However, it is possible that adenosinedi- and triphosphate are formed, which have been found to cause a sensitizing reaction on the muscle. W. R. Eichler

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



GABSKI, Je. L.

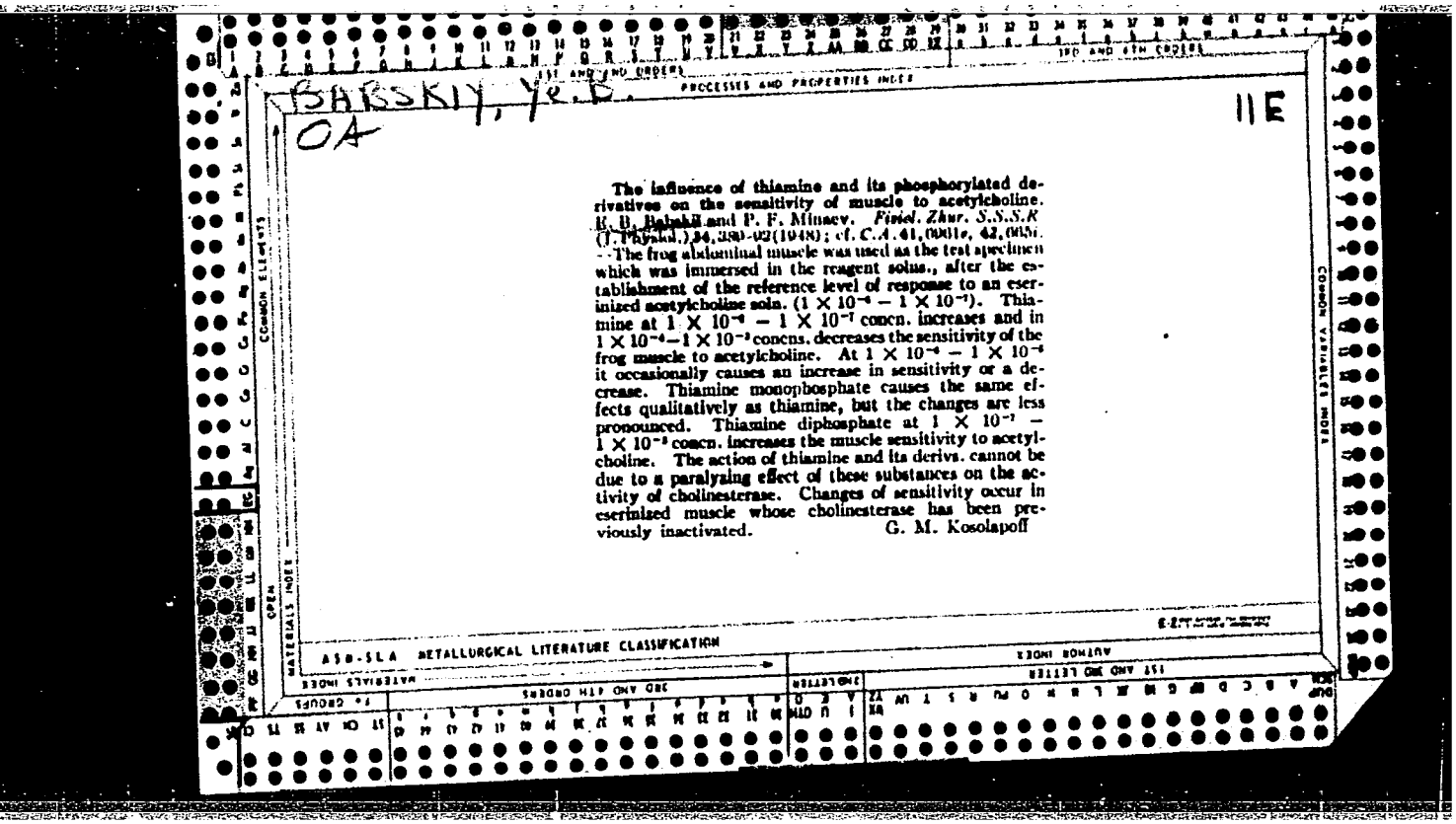
ca

Polarization changes of the refractivity of nerves. II. Babakil and A. I. Zol'nikova. *Byull. Eksptl. Biol. Med.* 23, 271–4(1947)(in Russian).—The electrotonic changes of the abs. refractivity of nerves are explained by changes in the enzymic hydrolysis of acetylcholine and changes of its concn. in nerve fibers. The lessening of the refractivity at the anode may be explained by an increase in splitting of acetylcholine owing to the activity of cholinesterase. However, if cholinesterase is inhibited by eserine, the d.-c. anode does not show any effect on the activity of cholinesterase, and the effect of the anode on the refractivity is, therefore, weaker or even completely disappears. The effect of the cathode on the refractivity is decreased. Atropine destroys the power of nerve tissue to react with acetylcholine and prevents the development of the effects of the anode and cathode. The results indicate that certain physiol. effects arising from the action of d.-c. on nerve tissue are caused by changes in the content of, and enzyme splitting of acetylcholine. It was also found that acetylcholine takes part in the formation of the nerve refractivity. This functional change of the state of the excited tissue in consequence of excitation was considered as dependent, although not completely, on the accumulation of acetylcholine in nerve tissue. The effects of acetylcholine, eserine, and atropine on the change of the abs. refractivity of nerve are described.

W. R. Eichler

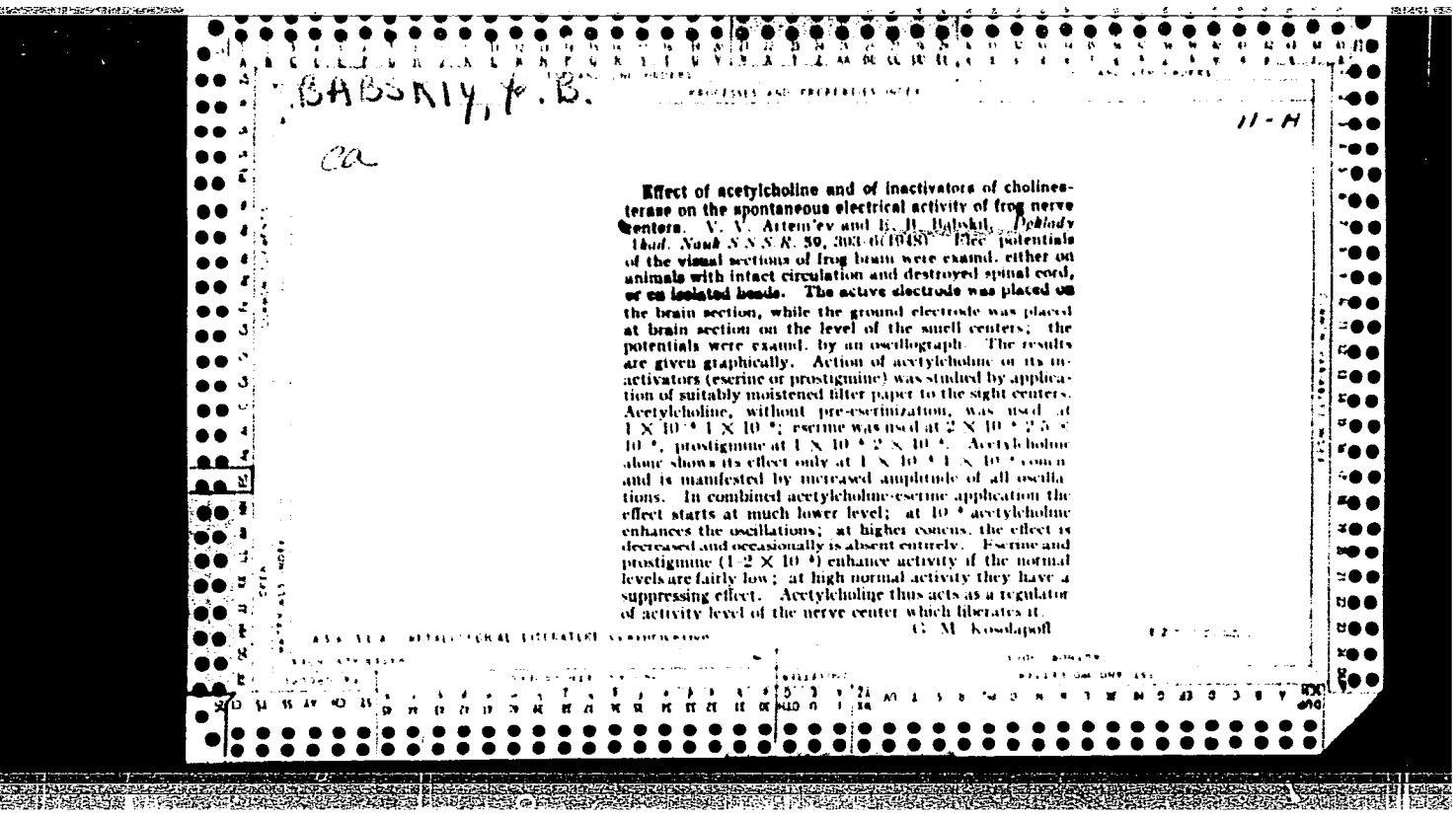
11F

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



BARSKII, Ye. B.
OA
11E

The influence of thiamine and its phosphorylated derivatives on the sensitivity of muscle to acetylcholine. E. B. Barskii and P. F. Minaev. *Fiziol. Zhur. S.S.S.R* (J. Physiol.) 34, 389-92(1948); cf. C.A. 41, 6001e, 42, 6051i. The frog abdominal muscle was used as the test specimen which was immersed in the reagent solns., after the establishment of the reference level of response to an eserinized acetylcholine soln. ($1 \times 10^{-6} - 1 \times 10^{-7}$). Thiamine at $1 \times 10^{-6} - 1 \times 10^{-7}$ concn. increases and in $1 \times 10^{-4} - 1 \times 10^{-5}$ concns. decreases the sensitivity of the frog muscle to acetylcholine. At $1 \times 10^{-6} - 1 \times 10^{-5}$ it occasionally causes an increase in sensitivity or a decrease. Thiamine monophosphate causes the same effects qualitatively as thiamine, but the changes are less pronounced. Thiamine diphosphate at $1 \times 10^{-7} - 1 \times 10^{-8}$ concn. increases the muscle sensitivity to acetylcholine. The action of thiamine and its derivs. cannot be due to a paralyzing effect of these substances on the activity of cholinesterase. Changes of sensitivity occur in eserinized muscle whose cholinesterase has been previously inactivated. G. M. Kosolapoff

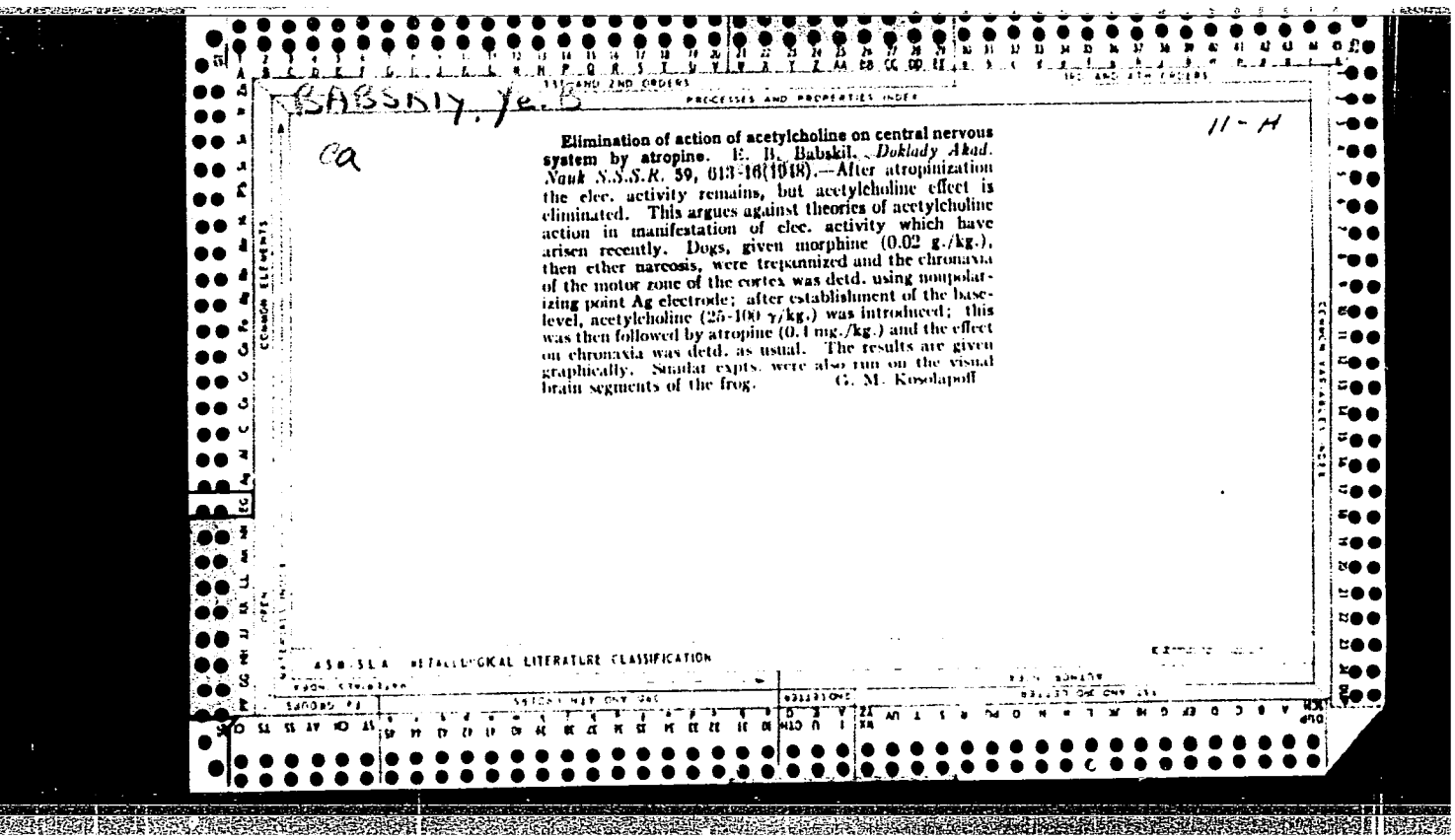


GABSRIY, P. B.

11-H

Effect of acetylcholine and of inactivators of cholinesterase on the spontaneous electrical activity of frog nerve centers. V. V. Artem'ev and P. B. Gabsriy. *Doklady Akad. Nauk S.S.S.R.* 59, 303-6(1948). Elec. potentials of the visual sections of frog brain were exaind. either on animals with intact circulation and destroyed spinal cord, or on isolated heads. The active electrode was placed on the brain section, while the ground electrode was placed at brain section on the level of the smell centers; the potentials were exaind. by an oscillograph. The results are given graphically. Action of acetylcholine or its inactivators (eserine or prostigmine) was studied by application of suitably moistened filter paper to the sight centers. Acetylcholine, without pre-eserinization, was used at 1×10^{-4}-1×10^{-6}; eserine was used at 2×10^{-4}-2.5×10^{-6}, prostigmine at 1×10^{-4}-2×10^{-6}. Acetylcholine alone shows its effect only at 1×10^{-4}-1×10^{-5} concn. and is manifested by increased amplitude of all oscillations. In combined acetylcholine-eserine application the effect starts at much lower level; at 10^{-6} acetylcholine enhances the oscillations; at higher concns. the effect is decreased and occasionally is absent entirely. Eserine and prostigmine ($1-2 \times 10^{-6}$) enhance activity if the normal levels are fairly low; at high normal activity they have a suppressing effect. Acetylcholine thus acts as a regulator of activity level of the nerve center which liberates it.

G. M. Kosolapoff



BABSKII, E. B.

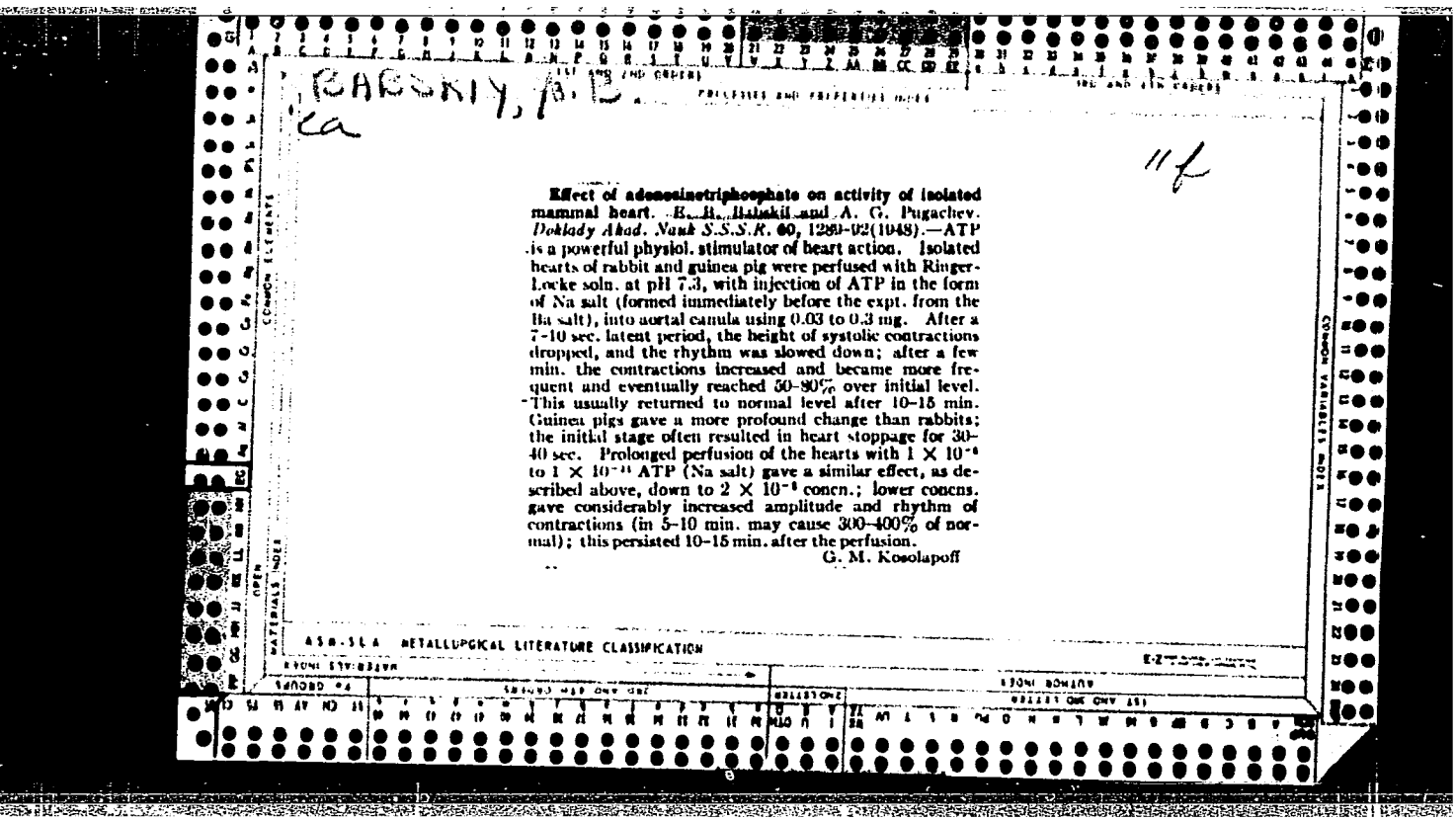
CA

11-H

PROCESSES AND PROPERTIES INDEX

Elimination of action of acetylcholine on central nervous system by atropine. E. B. Babskii. *Doklady Akad. Nauk S.S.S.R.* 59, 613-16(1948).—After atropinization the elec. activity remains, but acetylcholine effect is eliminated. This argues against theories of acetylcholine action in manifestation of elec. activity which have arisen recently. Dogs, given morphine (0.02 g./kg.), then ether narcosis, were trepannized and the chronaxia of the motor zone of the cortex was detd. using nonpolarizing point Ag electrode; after establishment of the base-level, acetylcholine (25-100 γ/kg.) was introduced; this was then followed by atropine (0.1 mg./kg.) and the effect on chronaxia was detd. as usual. The results are given graphically. Similar expts. were also run on the visual brain segments of the frog. G. M. Kosolapoff

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



BARSKIY, A. B.

Ca

11f

Effect of adenosinetriphosphate on activity of isolated mammal heart. B. B. Balakii and A. G. Pugachev. *Doklady Akad. Nauk S.S.S.R.* **60**, 1289-92(1948).—ATP is a powerful physiol. stimulator of heart action. Isolated hearts of rabbit and guinea pig were perfused with Ringer-Locke soln. at pH 7.3, with injection of ATP in the form of Na salt (formed immediately before the expt. from the Ba salt), into aortal canula using 0.03 to 0.3 mg. After a 7–10 sec. latent period, the height of systolic contractions dropped, and the rhythm was slowed down; after a few min. the contractions increased and became more frequent and eventually reached 50–80% over initial level. This usually returned to normal level after 10–15 min. Guinea pigs gave a more profound change than rabbits; the initial stage often resulted in heart stoppage for 30–40 sec. Prolonged perfusion of the hearts with 1×10^{-6} to 1×10^{-10} ATP (Na salt) gave a similar effect, as described above, down to 2×10^{-6} concn.; lower concns. gave considerably increased amplitude and rhythm of contractions (in 5–10 min. may cause 300–400% of normal); this persisted 10–15 min. after the perfusion.

G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

BABSKIY, Ye.B.

4F

Electrophysiological analysis of action of acetylcholine on nerve centers. I. V. V. Artem'ev and E. B. Babskii (Moscow State Pedagog. Inst.). *Fiziol. Zhur.* (U.S.S.R. Physiol.) **35**, 623–30(1949).—Application of acetylcholine (concn. 10^{-6} to 10^{-4}) to the visual lobes of the frog, without eserine, causes a variable and temporary increase of elec. activity. At 10^{-6} to 5×10^{-6} concn. combined with 2.5×10^{-6} concn. of eserine a considerable and lasting enhancement of spontaneous elec. oscillations takes place, with large amplitudes of both slow and fast oscillations. Eserinized acetylcholine solns. of higher than 10^{-6} concn. repress elec. activity of nerve centers. Hence acetylcholine appears to act in the regulation of the state of central nervous stimulation. G. M. Kosolapoff

CA BABSKIY, Ye. B.

11F

Effect of blocking of glycolysis in a nerve on a single tetanized contraction. E. B. Babskii and V. A. Novi. *Doklady Akad. Nauk S.S.S.R.* 70, 335-8(1950).—The specimen of sciatic nerve-leg muscle of a frog, tetanized by a pair of electrodes at the distal end of the nerve and provided with a pair of impulse electrodes 2 cm. closer, and blocked for glycolysis by Na iodoacetate, lactate, or pyruvate, alone or combined, gave the following results: Iodoacetate leads to initial enhancement of the single contractions, followed by decline and even disappearance. The course of the entire phenomenon takes 5–8 hrs. in early spring specimens and 2–5 hrs. in late spring specimens. While veratrine stimulates the contractions, when applied near the tetanizing electrodes, it fails to affect the nerve treated with iodoacetate. Lactate and pyruvate (weaker of the 2) both stimulate the single contractions. It is suggested that the results are explained by lack of synthetic generation of adenosinetriphosphate and creatine phosphate in the 1st instance, and ample opportunity for synthesis in the latter instance. G. M. K.

Electrophysiological analysis of the action of acetylcholine on nerve centers. II. Action of eserine, prostigmine, and atropine on the electrical activity of the visual lobes of a frog. V. V. Artem'ev and E. B. Babskii (Lenin State Pedagog. Inst., Moscow). *Fiziol. Zhur. (U.S.S.R. Physiol.)* 36, 151-60(1950); cf. C.A. 44, 4105b.—Eserine or prostigmine at 1×10^{-6} to 2×10^{-4} concn. acting on the visual lobes of a frog enhance the spontaneous elec. activity of the nerve centers. Atropine in similar concn. does not affect or lower the activity and completely eliminates (blocks) the action of acetylcholine; applied after the latter it leads to restoration of the normal oscillations, although reflex actions are not eliminated. G. M. K.