

BOYCHENKO, Ye.A.; BARANOV, V.I.; OPARIN, A.I., akademik.

Photoreduction of carbon dioxide tagged with C^{14} , by chloroplasts outside the cell. Dokl. AN SSSR 91 no.2:339-341 J1 '53. (MLBA 6:6)

1. Institut geokhimii i analiticheskoy khimii im. V.I.Vernadskogo Akademii nauk SSSR. 2. Akademiya nauk SSSR (for Oparin).
(Carbon--Isotopes) (Photosynthesis)

KOLOSOV, I.I.; UKHINA, S.F.; OPARIN, A.I., akademik.

Nutrition and water supply of the main and lateral shoots of cereal plants
by various types of roots. Dokl. AN SSSR 91 no.2:413-416 JI '53.

(MLRA 6:6)

1. Institut fiziologii rastenii im. K.A. Timiryazeva Akademii nauk SSSR.
2. Akademiya nauk SSSR (for Oparin). (Roots (Botany)) (Grain)

RATNER, Ye. I.; AKINOKHINA, T. A.; SAMOYLOVA, S. A.; OPARIN, A. I., akademik.

New factors in the nutritional system of grasses in connection with the regulative functions of the microbial environment in the rhizosphere of cultivated plants. Dokl. AN SSSR 91 no.2:421-424 J1 '53. (MLR 6:6)

1. Institut fiziologii rastenii im. K. A. Timiryaseva Akademii nauk SSSR.
2. Akademiya nauk SSSR (for Oparin). (Plants, Cultivated--Nutrition)

YAKUSHKINA, N.I.; KRAVTSOVA, B.Ye.; OPARIN, A.I., akademik.

Effect of 24-hour continuous illumination on the growth and fruit formation of tomatoes. Dokl. AN SSSR 91 no.2:425-428 J1 '53. (MLRA 6:6)

1. Akademiya nauk SSSR (for Oparin). (Tomatoes) (Plants, Effect of light on)

YEL'TSINA, N.V.; OPARIN, A.I., akademik.

Role of glycolytic and oxidizing processes in the restoration of the
tumorous cell. Dokl. AN SSSR 91 no.3:601-604 JI '53. (MLRA 6:7)

1. Akademiya nauk SSSR (for Oparin). (Proteins) (Tumors)

OPARIN, A.I., akademik; PASHKINA, T.S.

Effect of the protein fraction in inflammatory exudates, on the permeability of skin capillaries. Dokl. AN SSSR 91 no.3:605-608 J1 '53. (MLRA 6:7)

1. Institut biologicheskoy i meditsinskoy khimii i Institut khirurgii Akademii meditsinskikh nauk SSSR (for Pashkina). 2. Akademiya nauk SSSR (for Oparin).
(Inflammation) (Proteins) (Skin)

IVANOVA, S.A.; OPARIN, A.I., akademik.

Histologic investigation of the gonads, thyroid glands, and hypophysis of river or lake bred sterlets (*Acipenser ruthenus*). Dokl. AN SSSR 91 no.3: 651-654 JI '53. (MLRA 6:7)

1. Akademiya nauk SSSR (for Oparin).

(Sturgeons)

OPARIN, A.I., akademik; SINYAGIN, I.I.; MOROZOVA, N.P.

Certain characteristics in the development of the sugar beet in its third year of life. Dokl.AN SSSR 91 no.3:671-673 J1 '53. (MLRA 6:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sveklovichnogo polevodatva (for Sinyagin and Morozova). 2. Akademiya nauk SSSR (for Oparin).
(Beets and beet sugar)

OPARIN, A.I., akademik; SHULYNDIN, A.F.

Investigation of the sugar storing capacity of interspecific hybrids of wheat. Dokl. AN SSSR 91 no.3:675-678 J1 '53. (MLRA 6:7)

1. Institut genetiki i selektsii Akademii nauk SSSR (for Shulyndin).
2. Akademiya nauk SSSR (for Oparin). (Wheat--Physiology)

SISAKYAN, N.M.; BEZINGER, E.N.; GUMILEVSKAYA, N.Ya.; OPARIN, A.I., akademik.

Variation in the amino-acid composition of plastid protein, occurring in life processes of the organism. Dokl. AN SSSR 91 no.4:907-910 Ag '53.

(MLRA 6:8)

1. Akademiya nauk SSSR (for Oparin). 2. Institut biokhimi im. A.N. Bakha Akademii nauk SSSR (for Siskayan, Besinger and Gumilevskaya).

(Amino acids) (Cells)

(GA 48 no.2:759 '54)

MEYSEL', M.N.; POMOSHCHNIKOVA, N.A.; OPARIN, A.I., akademik.

Use of radioisotopes for accelerated microbiologic determination
of vitamins. Dokl.AN SSSR 91 no.4:953-955 Ag '53. (MLRA 6:8)

1. Akademiya nauk SSSR (for Oparin). 2. Institut mikrobiologii
Akademii nauk SSSR (for Mysel' and Pomoshchnikova).
(Vitamins) (Radioisotopes)
(CA 48 no.2:784 '54)

OPARIN, A.I.

BAGAYEV, V.B.; OPARIN, A.I., akademik.

Effect of the condition of phosphorus feed on the composition of soybean seeds. Dokl.AN SSSR 91 no.4:961-964 Ag '53. (MLRA 6:8)

1. Akademiya nauk SSSR (for Oparin). 2. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A.Timiryazeva (for Bagayev).
(Soybean) (Plants, Effect of phosphorus on)
(CA 48 no.2:819 '54)

GUPALO, P.I.; OPARIN, A.I., akademik.

Physiological characteristics of the morphobiotypes of red clover.
Dokl.AN SSSR 91 no.4:965-968 Ag '53. (MLBA 6:8)

1. Akademiya nauk SSSR (for Oparin).
2. Krasnoufinskaya gosudarstvennaya selektsionnaya stantsiya (for Gupalo).
(Clover)

YAKUSHKINA, N.I.; KRAVTSOVA, B.Ye.; NOVOSELOVA, G.A.; OPARIN, A.I., akademik.

Effect of temperature on the growth and on the movement of substances in
tomatoes. Dokl. AN SSSR 91 no. 4:969-972 Ag '53. (MLRA 6:8)

1. Akademiya nauk SSSR (for Oparin).
(Tomatoes) (Plants, Effect of temperature on)
(CA 48 no. 2:819 '54)

KUZIN, A.M.; BUDILOVA, B.V.; OPARIN, A.I., akademik.

Mechanism of the action of penetrating radiation on the synthesis of nucleoproteins in the spleen. Dokl. AN SSSR 91 no.5:1183-1186 Ag '53. (MLRA 6:8)

1. Akademiya nauk SSSR (for Oparin). 2. Institut biologicheskoy fiziki Akademii nauk SSSR (for Kuzin and Budilova).
(X-rays--Physiological effect) (Nucleoproteins) (Spleen)

SHAVLOVSKIY, G.M.; OPARIN, A.I., akademik.

Participation of rhizospheric microorganisms in the organic sulfur compound supply of plants. Dokl. AN SSSR 91 no.5:1213-1216 Ag '53. (MLRA 6:8)

1. Akademiya nauk SSSR (for Oparin).
(Plants--Nutrition) (Soil microorganisms)

KALINENKO, V.O.; OPARIN, A.I., akademik.

Part of ammonia in the development of heterotrophs in inorganic media. Dokl.
AN SSSR 91 no.6:1335-1338 Aug '53. (data 6:3)

1. Akademiya nauk SSSR (for Oparin). 2. Institut okeanologii akademii nauk
SSSR (for Kalinenko). (Bacteria, Nitrifying)

TRACHENKO, F.A.; OPARIN, A.I., akademik.

Diversity in the development of the root system of hybrids and varieties of watermelon. Dokl. AN SSSR 91 no.6:1397-1400 Ag '53. (MLBA 6:2)

1. Akademiya nauk SSSR (for Oparin). 2. Ukrainskiy nauchno-issledovatel'skiy institut ovoshchevodstva Kharkov (for Trachenko). (Melons)

AUERMAN, L.Ya.; KRETOVICH, V.L.; ALYAKHINSKAYA, Ye.A.; BAZARNOVA, V.M.; TOKAREVA, R.R.; OPARIN, A.I., akademik.

Formation of melanoidin and the color of the bread crust. Dokl. AN SSSR 92
no.1:131-133 S '53. (MLRA 6:8)

1. Akademiya nauk SSSR (for Oparin). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut khlebopekarnoy promyshlennosti (for Auerman, Kretovich, Alyakrinskaya, Bazarnova and Tokareva). 3. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR (for Auerman, Kretovich, Alyakrinskaya, Bazarnova and Tokareva). (Melanoidin) (Bread)

KALINENKO, V.O.; OPARIN, A.I., akademik.

Organic nutrition of *Nitrosomonas europaea*. Dokl. AN SSSR 92 no.1:161-163
S '53. (MLA 6:2)

1. Akademiya nauk SSSR (for Oparin). 2. Institut okeanologii akademii nauk
SSSR (for Kalinenko). (Bacteria)

BELL, L.N.; OPARIN, A.I., akademik.

Supplementary absorption of light by plant leaves in the presence of carbon dioxide. Dokl. AN SSSR 92 no.1:165-168 S '53. (MLA 5:3)

1. Akademiya nauk SSSR (for Oparin). 2. Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii nauk SSSR (for Bell). (Plants, Effect of light on)

ZHUKOV, M.S.; OPARIN, A.I., akademik.

Effect of monovalent and bivalent cations on the formation of lyophilic colloids in plant cells and tissues. Dokl. AN SSSR 92 no.1:109-172 S '53.
(MLRA 6:8)

1. Akademiya nauk SSSR (for Oparin). 2. Kurskaya zonal'naya opytno-meliorativnaya stantsiya (for Zhukov).
(Plant cells and tissues) (Colloids)

KORNILOV, A.A.; OPARIN, A.I., akademik.

Completion of the light developmental stage of wheat. Dokl. AN SSSR 92 no. 1:
173-176 S '53. (MLRA 6:8)

1. Akademiya nauk SSSR (for Oparin). (Wheat)

BALAKHOVSKIY, S.D.; SHARTS, S.Ye.; DROZDOVA, N.N.; OPARIN, A.I., akademik.

Physiological action of an analog of the branched chain of vitamin A, 2,6-dimethyloctatrien (alloöcimene). Dokl. AN SSSR 92 no.2:377-379 S '53.
(MLRA 6:9)

1. Akademiya nauk SSSR (for Oparin). 2. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR, Moskovskaya glasnaya klinicheskaya bol'nitsa (for Balakhovskiy, Sharts and Drozdova).
(Alloöcimene)

VOTINTSEV, K.K.; OPARIN, A.I., akademik.

Organic matter in the water foam of the Baikal Lake. Dokl. AN SSSR 92 no.2:425-427 S '53. (MLBA 6:9)

1. Akademiya nauk SSSR (for Oparin). 2. Fiziko-khimicheskiy nauchno-issledovatel'skiy institut pri Irkutskom gosudarstvennom universitete im. A.A. Khdanova (for Votintsev).

(Baikal Lake--Chemistry, Organic) (Chemistry, Organic--Baikal Lake)

KALINENKO, V.O.; OPARIN, A.I., akademik.

Ammonium oxidation and albumin synthesis in pure *Nitrosomonas europaea* cultures.
Dokl. AN SSSR 92 no.2:429-430 S '53. (MIRA 6:9)

1. Akademiya nauk SSSR (for Oparin). 2. Institut okeanologii Akademii nauk
SSSR (for Kalinenko). (Bacteria, Nitrifying)

YENIKEYEV, S.O.; OPARIN, A.I., akademik.

Mechanism of cavity development in sugar beet. Dokl. AN SSSR 92 no. 2:431-434
S '53. (MLA 6:9)

1. Akademiya nauk SSSR (for Oparin). 2. Kirgisskiy sel'skokhozyaystvennyy
institut im. K.I. Skryabina (for Yenikev). (Beets and beet sugar)

KUZIN, A.M.; GARZUNOVA, G.A.; MAMUL', Ya.V.; OPARIN, A.I., akademik.

Participation of complex polysaccharides in carbohydrate metabolism. Dokl.
Ak SSSR 92 no.3:637-640 S '53. (MJA 6:9)

1. Akademiya nauk SSSR (for Oparin). 2. Laboratoriya izotopov Instituta
biofiziki Akademii nauk SSSR (for Kuzin, Garzunova and Mamul').
(Polysaccharides) (Carbohydrate metabolism) (Carbon--isotopes)

PAVLOVA, M.V.; OPARIN, A.I., akademik.

Role of the polymeric state of ribonucleic acid and its ties with protein,
for the process of oxidizing phosphorylation. Dokl. AN SSSR 92 no. 3:641-643
S '53. (MLRA 6:9)

1. Akademiya nauk SSSR (for Oparin). 2. Otdel biokhimi Institutu eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR (for Pavlova).
(Ribonucleic acid) (Cells) (Phosphorylation)

MOLOTKOVSKIY, G.Kh.; GLUSKINA, B.G.; OPARIN, A.I., akademik.

Effect of warm-water soaking of corn seeds on growth and crop results. Dokl.
AN SSSR 92 no.3:679-680 S '53. (Mlata 6:4)

1. Akademiya nauk SSSR (for Oparin). 2. Botanicheskiy sad Chernovitskogo gosudarstvennogo universiteta (for Molotovskiy and Gluskina).
(Corn (Maize)) (Plants, Effect of temperature on)

NIKITENKO, G.F.; OPARIN, A.I., akademik.

Comparative efficiency of certain methods for the increase of vitality of cereals. Dokl. AN SSSR 92 no.3:681-683 S '53. (MLA 6:3)

1. Akademiya nauk SSSR (for Oparin). 2. Mordovskaya gosudarstvennaya selektsionnaya stantsiya g. Saransk (for Nikitenko). (Grain--Physiology)

BAGAYEV, V.B.; OPARIN, A.I., akademik.

Effect of the temporary exclusion of phosphorus from the fertilizer mixture during the blooming period on the growth of the soybean plant. Dokl. Ak. SSSR 92 no.4:859-861 0 '53. (MLBA 6:9)

1. Akademiya nauk SSSR (for Oparin).

(Soybean--Physiology)

ZNAMENSKAYA, M.P.; DEMYANOVSKAYA, N.S.; BELOKERSKIY, A.N.; OPARIN, A.I., akademik.

Certain properties of desoxyribonucleic acid derived from preparations of various origin. Dokl. AN SSSR 93 no.1:119-122 N '53. (MLBA 6:10)

1. Akademiya nauk SSSR (for Oparin).

(Nucleic acid)

PRESNOV, M.A.; OPARIN, A.I., akademik.

Glycerophosphatase activity of cytomuclear nucleoprotein. Dokl. AN SSSR 93
no.1:123-126 N '53. (MLBA 6:10)

1. Akademiya nauk SSSR (for Oparin). (Nucleoprotein) (Phosphatase)

RUBIN, B.A.; GUDALINA, Ye.G.; OPARIN, A.I., akademik.

Dehydrogenation activity of apple tissues in the process of fruit development.
Dokl.AN SSSR 93 no.1:127-130 N '53. (MLRA 6:10)

1. Akademiya nauk SSSR (for Oparin). (Apple) (Dehydrogenation)

ROSKIN, G.I.; STRUVE, M.Ye.; OPARIN, A.I., akademik.

Cytochemical diversity of the protoplasm of various Protozoa species. Dokl.
AN SSSR 93 no.1:151-153 N '53. (MLR 6:10)

1. Akademiya nauk SSSR (for Oparin).

(Protozoa)

VINOGRADOVA, Kh.G.; OPARIN, A.I., akademik.

Molybdenum content in plants in relation to their taxonomic position. Dokl.
AN SSSR 93 no.1:163-166 N '53. (MLR 6:10)

1. Akademiya nauk SSSR (for Oparin). 2. Institut geokhimii i analiticheskoy
khimii im. V.I.Vernadskogo Akademii nauk SSSR (for Vinogradova).
(Plants--Chemical analysis) (Botany--Classification)
(Molybdenum organic compounds)

GRECHUSHNIKOV, A.I.; OPARIN, A.I., akademik.

Effect of watering on the intensity of transpiration in potatoes. Dokl. Akad. Nauk SSSR 93 no.1:171-173 B '53. (MLBA 6:10)

1. Akademiya nauk SSSR (for Oparin). 2. Nauchno-issledovatel'skiy institut kartofel'nogo khozyaystva Malakhovka, Moskovskaya oblast' (for Grechushnikov). (Potatoes)

STROGONOV, B.P.; KLESHNIN, A.F.; IVANITSKAYA, Ye.F.; OPARIN, A.I., akademik.

Temperature of cotton plant leaves at various types of soil salt accumulation and under the conditions of various water supply. Dokl. AN SSSR 93 no.1:179-182 B '53. (MLRA 6:10)

1. Akademiya nauk SSSR (for Oparin). 2. Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii nauk SSSR (for Strogonov, Kleshnin and Ivanitskaya). (Cotton)

TURKOVA, N.S.; LIYEPINYA, G.R.; OPARIN, A.I., akademik.

Lodging of grain under the influence of respiratory poisons. Dokl. Akad. Nauk SSSR 93
no.1:183-184 N '53. (MLRA 6:10)

1. Akademiya nauk SSSR (for Oparin). 2. Moskovskiy gosudarstvennyy universi-
tet im. M.V.Lomonosova (for Turkova and liyepinya). (Grain)

SHKOL'NIK, M.Ya.; MAKAROVA, N.A.; OPARIN, A.I., akademik.

Obtaining modifications in plant chemistry by means of pre-sowing processing of seeds in extracts of other plants. Dokl. AN SSSR 93 no.1:185-188 N '53.
(MLRA 6:10)

1. Akademiya nauk SSSR (for Oparin). (Seeds) (Botany--Physiology)

SHAPIRO, F.B.; OPARIN, A.I., akademik.

On the possible reaction of chicken embryos to lateral stimulation. Dokl.
AN SSSR 93 no.1:213-216 N '53. (MLRA 6:10)

1. Akademiya nauk SSSR (for Oparin). 2. Moskovskiy gosudarstvennyy universi-
tet im. M.V.Lomonosova (for Shapiro). (Embryology)

VOYEVODIN, A.V.; OPARIN, A.I., akademik.

Possibilities for freeing soil of weed seeds. Dokl.AN SSSR 93 no.2:325-328
N '53. (MLRA 6:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity rasteniy (for
Voyevodin). 2. Akademiya nauk SSSR (for Oparin). (Weed control)

ROSKIN, G.I.; SHOENIKOVA, M.V.; OPARIN, A.I., akademik.

Histochemical differences in sensory and motor nerve cells. Dokl. Akad. Nauk SSSR 93
no.2:349-352 H '53. (MIRA 6:10)

1. Akademiya nauk SSSR (for Oparin).

(Nerves)

KRISS, A.Ye.; TIKHONENKO, A.S.; OPARIN, A.I., akademik.

Effect of high pressure in uncoiling the spiral which forms the head of a bacteriophage. Dokl.AN SSSR 93 no.2:353-356 N '53. (MIRA 6:10)

1. Laboratoriya elektronnoy mikroskopii, Otdeleniye biologicheskikh nauk Akademii nauk SSSR (for Kriss and Tikhonenko). 2. Akademiya nauk SSSR (for Oparin). (Bacteriophagy)

VINOKUR, R.L.; OPARIN, A.I., akademik.

Growth of girdled lemon shoots as influenced by roots receiving no mineral nutritive elements. Dokl. AN SSSR 93 no.2:357 B '53. (MLRA 6:10)

1. Institut fiziologii rasteniy Akademii nauk SSSR (for Vinokur). 2. Akademiya nauk SSSR (for Oparin). (Lemon)

SAPORNIKOVA, Ye.V.; YUSUBOV, A.; OPARIN, A.I., akademik.

Conversion of certain substances during the storage of apples. Dokl. AN SSSR
93 no.4:693-695 D '53. (MLRA 6:11)

1. Akademiya nauk SSSR (for Oparin). (Pectin) (Apple) (Fruit--Storage)

OPARIN, A.I.

ALEKSEYEV, A.M.; STARTSEVA, A.V.; OPARIN, A.I., akademik.

Dynamics of substances of the "bios" group in the leaves and in the bloom
of the red clover. Dokl. AN SSSR 93 no.4:709-712 D '53. (MIRA 6:11)

1. Akademiya nauk SSSR (for Oparin). 2. Biologicheskii institut Kazanskogo
filiala Akademii nauk SSSR (for Alekseyev and Startseva). (Clover)

RUNOV, V.I.; KACHAN, S.S.; OPARIN, A.I., akademik.

Ammonium content in melon leaves affected by fusarium wilt. Dokl. AN SSSR 93
no. 4:717-719 D '53. (MIRA 6:11)

1. Akademiya nauk SSSR (for Oparin). 2. Sredneaziatskaya stantsiya zashchity
rasteniy Vsesoyuznogo instituta zashchity rasteniy (for Runov and Kachan).
(Melons--Diseases and pests)

OPARIN, A.

"The formation of life." Tr. from the Russian. p. 449. (Termesztet es Technika, Vol. 112, no. 8, Aug 1953, Budapest)

SO: Monthly List of East European Accessions, Vol 3 No 2 Library of Congress Feb 54 Uncl

OPARIN, A. I.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Oparin, A. I.	"The Problem of the Origin of Life in the Light of the Achievements of Contemporary Natural Science"	Institute of Zoology and Animal A. I. Oparin, Moscow

SO: W-30604, 7 July 1954

OPARIN, A. I.

5431. Chto govoryat nauka i religiya o proiskhozhdenii shizni. Popul. lektsiya.
(Per. s rus.: pererabot.) Kazan', Tatknigoizdat, 1954. 22 s. 22 sn. 5000 ekz.
40K.—Na tatar. yas. (54-56762) 576.1 + 2

SO: Knizhnaya Letopis', Vol. 1, 1955

OPARIN, A.I.; BERZANOVSKAYA, I., redaktor; MAN'KOVSKIY, B., tekhnicheskii redaktor.

[Origin of life on earth] *Vozniknovenie zhizni na zemle.* Moskva, Gos.
izd-vo kul'turno-prosv.lit-ry, 1954. 22 p. (Bibliotekha v pomoshch'
lektoru, no.23) [Microfilm] (MLRA 10:4)
(Life--Origin)

OFARIN, A.

184 Souremennaya Nauka o Vozniknovenii Zhiznina Zemle. Ulan-Udz, Buryat-Mongol. Kn. Izd., 1954 2FS 20SF. (B-Ka Propagandisto Ateisto) 1.000 EKZ. 35K.-- Na Buryat-Mongol. Yaz.--(54-51361` 576.1 r2

SC: Knizhnaya, Letopis, Vol. 1, 1955

OPARIN, A.I., akademik; KURSANOV, A.L., redaktor; KADER, Ya.M., redaktor;
~~LEVINSKAYA, N.Z., tekhnicheskiy redaktor~~

[Origin of life] Proiskhozhdenie zhizni. Moskva, Voen. izd-vo
Ministerstva oborony Soiuza SSR, 1954. 86 p. (MLRA B:6)
(Life--Origin)

OPARIN, A.I.

The problem of origin of life in the light of achievement of modern natural science. A. I. Oparin. *Izvest. Akad. Nauk S.S.S.R., Ser. Biol.* 1954, 1954, 1-10. —A review of chem. and biol. problems assocd. with the origin of living matter. G. M. Kosolapoff

OPARIN, A.I.

5

USSR.
Vladimir Aleksandrovich Engel'gardt, A. I. Oparin,
N. M. Chakvan, A. A. Kirzinyov, and S. M. Kozlov
Izv. Akad. Nauk S.S.S.R., Ser. Biol. 1954, No. 6, 124-6.
—Brief biography of the biochemist on 60th birthday.
G. M. Kozlovskii—

OPARIN, A. I., acad.

Problem of life origin in the light of achievements of modern
natural sciences. Analele biol 9 no.2:5-15 Ap-Je '54.

OPARIN, A. I.

USSR/Biology - Life

Card 1/1

Author : A. I. Oparin, Academician

Title : The origin of life

Periodical : Nauka i Zhizn' 21/4, 25-27, April, 1954

Abstract : A brief history of the theories on the origin of life is given, including the struggle between idealism and materialism. The author recounts the cosmic developments before life appeared and finds a milestone in the appearance of protein. Details of the processes of catabolism and anabolism are given and the conclusion is reached that the processes which distinguish organic matter from inorganic can be produced artificially. Diagram. Photographs.

Institution :

Submitted :

OPARIN, A.I., akademik; TSITSIN, N.V., akademik; KHRUSHCHOV, G.K.; ANICHOV, N.N., akademik; BYKOV, K.M., akademik; KURSANOV, A.L.; LYSENKO, T.D.; TYURIN, I.V.; NUZHDIK, N.I.; IVANOV-SMOLENSKIY, A.G.; STUDITSKIY, A.N., professor; DOZOR-TSEVA, R.L., kandidat biologicheskikh nauk.

Greetings to Academician E.N.Pavlovskii. Zool.shur. 33 no.2:241-242
Mr-Apr '54. (MLRA 7:5)

1. Akademik-sekretar' Otdeleniya biologicheskikh nauk Akademii nauk SSSR (for Oparin). 2. Zamestiteli akademika-sekretarya Otdeleniya biologicheskikh nauk (for TSitsin and Khrushchov). 3. Chlen-korrespondent Akademii nauk SSSR (for Khrushchov and Nuzhdin). 4. Chleny Byuro (Anichkov, Bykov, Kursanov, Lysenko, Tyurin, Nuzhdin, Ivanov-Smolenskiy, Studitskiy). 5. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Ivanov-Smolenskiy). 6. Uchenyy sekretar' Otdeleniya biologicheskikh nauk Akademii nauk SSSR (for Dozortseva). (Pavlovskii, Evgenii Nikanorovich, 1884-)

OPARIN, A.I., akademik

Problem of the origin of life according to modern biological
concepts. Cas. lek. cesk. 93 no.33:889-894 13 Aug 54.

(LIFE,
origin)

OPARIN, A. I.

B. T. R.
June 1954
Biochemical and Biophysical Research

7488* Certain Data Concerning the Mechanism of the Enzymatic Activity of Invertase. (Russian.) A. I. Oparin and M. S. Bardinskaja. *Doklady Akademii Nauk SSSR*; v. 94; no. 2, Jan. 11, 1954, p. 305-308.
Activities of invertases obtained from yeast, mold fungi, and higher plants compared by investigation of behavior with regard to β -diethylfructoside, β -ethylfructoside, and alkylfructoside. Photographs. 10 ref.

OPARIN, A.I.

1 Localization of enzymes in the cells of *Endomyces magnusii* by means of ultrasonic waves. A. I. Oparin, N. S. Gel'man, and I. E. B'plav (A. N. Bakhtin, V. G. Gerasimov and Blokhin). Acad. Sci. U.S.S.R., Moscow. *Doklady Akad. Nauk S.S.S.R.* 96, 573-8 (1954).—Culture suspensions of *E. magnusii* were subjected to ultrasonic waves at 740 kc. which, in a few min., led to release of intracellular matter into the suspension medium (H₂O). The treatment lowered both respiration and fermentation ability of the organisms; the former by 85-90% in 15 min. The enzymes themselves, dissolved in the yeast liquor are not affected by the treatment. When the filtered solids were concd. and dried with Me₂CO-Et₂O, the invertase activity was found to be very high as was the dehydrogenase activity. Cytochrome oxidase is sensitive to ultrasound. G. M. Kosolapoff

OPARIN, A. I.

USSR/Biology - Biochemistry

Card : 1/1

Authors : Oparin, A. I., Academician; Gel'man, N. S. and El'piner, I. E.

Title : Discovery of invertin in *Saccharomyces Globosus* 349 with the aid of ultrasonic waves

Periodical : Dokl. AN SSSR, 97, Ed. 2, 293 - 295, July 1954

Abstract : Experimental data are presented on the discovery of invertin (yeast enzyme) in *Saccharomyces Globosus* 349, the activity of which becomes evident after the effect of the ultrasonic waves resulting in partial escape of the cellular content into the surrounding solution. Five references. Drawing.

Institution : Acad. of Sc. USSR, Institute of Biophysics and the A. N. Bakh Institute of Biochemistry

Submitted : May 15, 1954

OPARIN, A. I.
USSR/ Biology - Biochemistry

Card 1/1 Pub. 22 - 23/40

Authors : Oparin, A.I., Academician.; Bardinskaya, M.S.; and El'piner, I.E.

Title : Effect of ultrasonic waves on yeast invertase

Periodical : Dok. AN SSSR 99/3, 423-426, Nov 21, 1954

Abstract : The change in the activity of a ferment, after being exposed to ultrasonic waves in an aqueous medium and in the presence of methyl alcohol, was investigated. Experimental data obtained indicate that the effect of ultrasonic waves on the invertase is connected first of all with the reaction of the ferment with the products of water molecule cleavage. The effect of polymannan contents in the albumin-carbohydrate complex of the invertase, on the stability of the ferment, is elucidated. Ten references: 3-USA; 6-USSR and 1-Swiss (1950-1954). Diagrams.

Institution : Academy of Sciences USSR, The A.N. Bakh Institute of Biochemistry and the Institute of Biological Physics

Submitted : June 22, 1954

OPARIN, A.I.

U S S R .

Effect of the nutrient medium on the carbohydrate content of yeast and their fermenting ability. A. I. Oparin, N. E. Gel'man, and I. G. Zhakov. *Doklady Akad. Nauk S.S.S.R.* 99, 503-6 (1964). — *Saccharomyces glabrus* and *S. paradoxus* were transferred from agar medium for 24 hrs. into Ryder medium with yeast water and glucose, then were grown for 24 hrs. at 20° in this medium, after which the centrifuged and washed cells were placed in various media, following which they were exposed to ultrasonic (cf. *C.A.* 48, 13750a) for measurement of enzymic activity. *S. glabrus* increases its invertase activity some 20-fold after long existence in a sucrose rich medium; each yeast shows a lowered content of total carbohydrates and the result is similar to that obtained by growth in a maltose rich medium. *S. paradoxus* failed to develop this low content of carbohydrates after similar treatment. Adaptation to a carbohydrate-rich medium generally lowers the content of sugars that are sol. in 10% CCLCOH. *S. glabrus* grown in sucrose medium shows an increase of mannose and glucose content, with a slight drop of glycogen. *S. paradoxus* on the other hand shows a rise in glycogen, no change in glucose, and a drop of mannose content. Thus the rate of carbohydrate synthesis by yeast is affected by the source of carbohydrate nutrition. O. M. Koshopad .

62

OPARIN, A.I.

[Nature and mechanism of the action of invertase of yeast; reports and papers of the Third International Congress of Biochemistry, Brussels, 1-6 August, 1955] Priroda i mekhanizm deistvii drozhzhevoi invertazy; soobshcheniia i doklady na III Mezhdunarodnom biokhimi-cheskom kongresse, Briussel', 1-6 avgusta 1955 g. Moskva, Izd-vo Akad. nauk SSSR, 1955. 21 p. [Parallel texts in Russian and French].
(INVERTASE) (YEAST) (MIRA 11:6)

OPARIN, Aleksandr Ivanovich, akademik; SHIK, M.M., redaktor;
~~ISLIT'YKVA, P.G.~~, tekhnicheskiiy redaktor.

[Origin of life on earth in the light of contemporary achievements
of natural science] Proiskhozhdenie zhizni na zemle v svete
sovremennykh dostizhenii estestvosnaniia. Moskva, Izd-vo "Znanie",
1955. 22 p. (Vsesoiuznoe obshchestvo po rasprostraneniu politi-
cheskikh i nauchnykh znani. Ser.3, no.35) (MLBA 8:10)
(Life--Origin)

OPARIN, A.I.

U S S R

Nature and the mechanism of action of yeast invertase.
 A. I. Oparin and M. S. Bardinskaya (A. N. Bakht Inst. Biochem., Acad. Sci. U.S.S.R., Moscow). *Izv. Akad. Nauk S.S.S.R., Ser. Biol.* 1958, No. 2, 3-7. — A specimen of the invertase purified by adsorption on $Ca_3(PO_4)_2$ (the specimen contained N 4-5 and carbohydrates 70% and had an absorption max. at 285-75 $m\mu$) was subjected to paper electrophoresis with C electrodes at various pH. At pH 3.2-4.7 in acetate or glycine buffer the enzymes migrated to the anode, as shown by detn. of activity on sections of the migrate. The main protein fraction contained the invertase activity and catalyzed formation of alkyl fructosides but had no maltase activity. At pH 3.25 there was detected a 2nd migration band which also catalyzed the formation of alkyl fructosides and had a greater activity than the main fraction. Migration at pH 3.25-3.8 resulted in accumulation of all carbohydrate content in this 2nd fraction, the main fraction being devoid of carbohydrates. Among the carbohydrates, mannose was found. Thus the greater activity existed in the protein-carbohydrate complex. The invertase activity was retained in electrophoresis at pH 6.8. If the sepd. fractions were eluted with 0.1N NaOH and 1:1 MeOH and the eluates were examined photometrically, the activity was still retained in the 2 fractions.
 G. M. Kosolapoff

Oparin, A.I.

USSR/ Scientists - International relations

Card 1/1 Pub. 124 - 12/45

Authors : Oparin, A. I., Academician

Title : Friendly relations between Soviet and Chinese scientists

Periodical : Vest. AN SSSR 2, 61-63, Feb 1955

Abstract : The necessity of maintaining continuous friendly relations between the scientists and scientific institutions of the Soviet Union with the Chinese Peoples Republic is stressed. The scientific and economical advantages derived from such close relationships are stated.

Institution :

Submitted :

OPARIN, A.I., akademik

Basic scientific achievements of the Department of Biological
Sciences of the Academy of Sciences of the U.S.S.R. during 1954.
Izv.AN SSSR. Ser.biol. no.3:3-15 My-Je '55. (MLRA 8:7)
(BIOLOGY,
in Russia)

OPARIN, A. I.

U S S R .

Data of modern natural history on the problem of origin of
life. A. I. Oparin. Vestnik Mosk. Univ. (Jubilee Ed.)
1955. No. 3-5, 193-200. — A brief review of recent material
with 74 references. G. M. Kozlovskii 62

USSR/Biology - Biography

FD-169b

OPARIN, A. I.
Card 1/1 : Pub. 129-21/25

Author : Petrovskiy, I. G.; Oparin, A. I. et al.

Title : Obituary of Lev Ivanovich Kursanov

Periodical : Vest. Mosk. un., Ser. fizikom. i yest. nauk, Vol. 10, 183-184, Feb 1955

Abstract : Lev Ivanovich Kursanov, Head of the Chair of Lower Plants of the Biological-Soil Faculty, died on 11 December 1954 at the age of 78. Kursanov joined the faculty of the university when he graduated in 1900. His specialty was the study of algae and fungi. His doctor's dissertation on "Morphological and Cytological Research on the Uredineae Group" which he defended in 1915 was very exhaustive and earned him a place among the foremost Russian mycologists. He became head of the Chair of Lower Plants when it was created in 1918 and occupied that position until his death. He worked on phytopathology, mycotic rots of wood, and antibiotics. He was active in the activities of the University. He received three awards from the government.

Institution : Chair of Lower Plants

Submitted : --

OPARIN, A. I.

Data of the modern natural sciences on the problem of the origin of life. Vest. Mosk. un. 10 no.45:193-206 Ap-May '55. (MLRA 8:8)
(Life (Biology))

1. *State and activity of invertase and maltase in some species of the yeast genus Saccharomyces.* A. I. Obarin, N. S. Gelman, and I. G. Zhukova-Bosharova. 1958. *FD No. 3* 571-575. *Russk. Zh. Biot.* 1958, 3: 571-575. In some forms of yeast invertase may occur in an inactive state. It may be revealed after tubular autolysis of cells or after the action of ultrasonic waves. *S. pastorianus* 47, which does not ferment maltose, contains maltase in the active state. The maltase is found within the cell in its protoplasm, while invertase is localized in the vacuoles. Under long continued cultivation on media with sucrose and maltose *S. pastorianus* and *S. cerevisiae* acquire the capacity to ferment these disaccharides. In the process of adaptation there occurs a quantitative increase in the content of ferment in the cell. Some yeast organisms acquire the capacity to ferment sucrose, but contain no invertase in the cells. The splitting of sucrose in this case is accomplished by maltase. The adaptation of the organism to the utilization of sucrose is accomplished by increasing the permeability of the cell. - (Russian).
C. C. BARNARD

OPARIN, A.I., akademik.

For the good of the people. Nauka i zhizn' 22 no.4:18 Ap '55.
(Radio biology) (MLRA 8:6)

ОПАРИН, А.

KOVRIGINA, M.; NESMEYANOV, A.; BAKULEV, I.; KOCHERGIN, I.; OPARIN, A.;
ANICHKOV, E.; NESTEROV, A.; KROTKOV, P.; CHERNOGOVSKIY, V.; YIMKOV, V.;
SEVERIN, S.; HUDNEY, G.; SERGIYEV, P.; DOYDOVSKIY, I.; OREKHOVICH, V.;
TALYZIN, F.; STRUKOV, A.; MIGUNOV, B.; SKVORTSOV, M.

A.I. Abrikosov; obituary. Vest. AN SSSR 25 no.5:65-66 My '55.
(Abrikosov, Aleksei Ivanovich, 1875-1955) (MLRA 8:?)

A. I. Oparin

110
Coacervates and enzymes. Protein-carbohydrate coacervates and α -amylase. A. I. Oparin, T. N. Hvirinova, T. A. Shuberi, and M. N. Nestynik. *Doklady Akad. Nauk S.S.S.R.* 104, 681-3 (1958); cf. *C.A.* 46, 9640c. Mixts. of sol. starch soln., protamine sulfate, gelatin, and α -amylase were made up at 50° and adjusted to pH 7, to form the coacervate droplets, which were incubated at 50°. Periodic detns. of starch were made with I-KI. This, then, was shown the progression of formation of amyloextrins, erythroextrins, and achroextrins. Starch is more rapidly attacked by amylase than is the coacervate. At pH 5.2-5.3 gelatin and protamine definitely retard amylase action on starch. G. M. Korolev

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Oparin, A. I.

010

Synthesis of p-alkyl fructosides by plant tissues. A. I. Oparin, M. S. Kordakova, and K. S. Pynzhovskaya. *Dokl. Akad. Nauk S.S.S.R.* 196, 520-2 (1968).—**Discussion of the matter of leaf buds of various trees and bushes, collected in the spring, show the presence of very active invertase in aq. soln.; in aq. EtOH the systems showed active synthesis of p-methyl fructoside, most intensively shown by opening buds. Yeast invertase acting on sucrose at pH 4.7 gave same synthesis of methyl fructoside if the system contained MeOH, EtOH, PrOH, BuOH, or Ph-CH₂OH; with AmOH the reaction was very weak, while with C₂H₅OH it was absent. G. M. Kozlovskaya.**

OPARIN, A. I.

1038. Influence of change of structure in bacterial protoplasts upon respiration and the uptake of labelled glycine. A. I. Oparin, N. S. Gelman, and I. G. Zhukova. *Dokl. Akad. Nauk. S.S.S.R.*, 1955, 165, 1036-1039; *Referat. Zh. biol. Khim.*, 1956, Abstr. No. 12463. It was found that a decrease in the concn. of sucrose in the reaction mixtures during action upon the *Micrococcus lysodeikticus* cells of lysozyme leads to a disintegration of the protoplasts liberated as a result of the dissolving of the cell envelopes. The respiration of the protoplasts is suppressed less during the rapid disturbance of their structure (in lysis in a mere concn. sol. of sucrose) than is the uptake of labelled ^{14}C on the carboxyl group of glycine. With greater disintegration of protoplasts the respiratory coefficient fall from 0.85 to 0.50, which indicates a disturbance of certain links in the respiratory process. The total nitrogen and nucleic phosphorus content of the protoplasts diminished when the disintegration of their structure was very great. The output of protoplasts when the disintegration of their structure was considerable fall to 50% of all cells. (Russian) C. C. BARNARD

3

MIKHLIN, David Mikhaylovich; OPARIN, A.I., akademik, otvetstvennyy redaktor;
MAKAROVA, O.V., redaktor izdatel'stva; NOVIKOVA, S.G., tekhnicheskii
redaktor

[Advances in our knowledge about biological oxidation; supplement to
the eleventh annual Bakh lecture, March 17, 1955] Razvitie
ucheniia o biologicheskoi oksileni; dolozheno na odinnadtsatom
eshhegodnom Bakhovskom chtenii 17 marta 1955 g. Moskva, Izd-vo
Akademii nauk SSSR, 1956. 29 p. (Bakhovskie chteniia, 11)
(OXIDATION, PHYSIOLOGICAL) (MLRA 10:3)

OPARIN, Aleksandr Ivanovich; FESENKOV, Vasilii Grigor'yevich; PEREL', Yu.G.,
redaktor; POLYAKOVA, T.B., tekhnicheskiy redaktor.

[Life in the universe] Zhizn' vo Vselennoi. Moskva, Izd-vo Akademii
nauk SSSR, 1956. 222 p. (MIRA 9:6)
(Plurality of worlds)

RUBIN, Boris Anisimovich, professor; ~~OPARIN, A. I., akademik~~, redaktor;
POTAPOV, N.G., redaktor; IMSHENNIK, I., tekhnicheskii redaktor

[Plant physiology] Fiziologiya rastenii. Pod red. A.I. Oparina.
Moskva, Gos. izd-vo "Sovetskaia nauka" Pt. 2. 1956. (MLRA 10:4)
287 p.

(Botany--Physiology)

SUKHOV, Konstantin Stepanovich; OPARIN, A.I., akademik, otvetstvennyy
redaktor; STRESHINSKIY, M.O., redaktor izdatel'stva; SHEVCHENKO,
G.N., tekhnicheskiy redaktor

[Viruses] Virusy. Moskva, Izd-vo Akademii nauk SSSR, 1956. 369 p.
(VIRUSES) (MLRA 10:1)

MIKHLIN, David Mikhaylovich; ~~OPARIN, A.I.~~, akademik, otvetstvennyy redaktor;
BAYEV, A.A., redaktor izdatel'stva; KISELEVA, A.A., tekhnicheskii
redaktor

[Biological oxidation] Biologicheskoe okislenie. Moskva, Izd-vo
Akademii nauk SSSR, 1956. 442 p. (MLRA 9:11)
(Oxidation, Physiological)

KRETOVICH, Vatslav Leonovich; OPARIN, A.I., akademik, redaktor; USPENSKAYA,
Zh.V., redaktor; POPRYADUKHIN, K.A., tekhnicheskiy redaktor

[Fundamentals of the biochemistry of plants] Osnovy biokhimi rastenii.
Pod red. A.I.Oparina. Izd. 2-oe. Moskva, Gos. izd-vo "Sovetskaya nauka,"
1956. 497 p. (MIRA 9:12)
(Botanical chemistry)

OPARIN, A.I., akademik.

A visit to Japanese biochemists. Nauka i zhizn' 23 no.4:54-56
Ap '56. (MIRA 9:7)
(Japan--Biochemistry--Congresses)

OPARIN, A. I., akademik.

Guests of Japanese biochemists. Vest. AN SSSR 26 no. 3:105-109
Mr '56. (Japan--Biochemistry) (MLRA 9:6)

OPARIN, A. I.

Complex formation in the system serum albumin-gum-arabic. A. I. Oparin, M. S. Bardinskaya, S. S. Melik-Sarkisyan, and K. B. Serebrovskaya (A. N. Bakh Biochem. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 198, 1125-7(1960). --The moving boundary method in a Tiselius app. was used to study the complex formation in a system composed of serum albumin and gum arabic, at pH 6.9, in acetate-barbital buffer in the presence of 1% sucrose. In all cases 3 electrophoretic peaks were observed; one of these was that produced by the free excess polysaccharide; the others may be caused by a pair of complexes. One of the peaks had a mobility comparable to that of the albumin, the other had a slightly higher mobility. Hydrolysis of

the migrated material gave monosaccharides characteristic of gum arabic and the complexes themselves apparently contained about 13% carbohydrate and 88% protein component. G. M. Kosolapoff

OPARIN, ALEKSANDR IVANOVICH

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614.18
.56
1957

Voznikoveniye Zhizni Na Zemle (The Origin of Life on Earth) 1ZD. 3.
Polnostiya Pere. Moskva, 1ZD-VO Akademii Nauk SSSR, 1957.
457 P. Illus., Diags., Ports., Tables.
At Head of Title: Akademiya Nauk SSSR.
Bibliographies at the End of each Chapter.

OPARIN, A. I.,

"Biochemical processes in the simplest structures," a paper presented
at the International Symposium on the origin of Life on the Earth, Aug. 19, 1961,
Moscow.

OPARIN, A. I.

"The Action of Enzymes Included in Coacervate Drops,"
paper presented at the 1957 Intl. Symposium on Enzyme Chemistry, Tokyo and
Kyoto, Japan, 15-23 Oct 57.

(Bakh- Inst. of Biochemistry, Acad. Sci. U.S.S.R., Moscow.)

B-3,093,405

6. 2. 1957
BRAUNSHTEYN, Aleksandr Yevseyevich; OPARIN, A.I., akademik, otvetstvennyy redaktor; SHREYBERG, G.L., redaktor izdatel'stva; SIMKINA, Ye.N., tekhnicheskii redaktor

[Principal methods of nitrogen assimilation and dissimilation in animals; presented at the twelfth annual Bakh lectures, March 17, 1956] Glavnye puti assimiliatsii i dissimiliatsii azota u zhivotnykh; dolozheno na dvenadtsatom ezhegodnom Bakhovskom chtenii 17 marta 1956 g. Moskva, Izd-vo Akad. nauk SSSR, 1957. 53 p.
(Bakhovskie chteniia, 12) (MLRA 10:7)
(NITROGEN METABOLISM)

~~OPARIN, Aleksandr~~ Ivanovich; BUNDEL', A.A., redaktor izdatel'stva; POLYAKOVA,
I.V., tekhnicheskiy redaktor

[Origin of life on the earth] Vozniknovenie zhizni na Zemle. Izd.
3-e, polnost'iu perer. Moskva, Izd-vo Akad.nauk SSSR, 1957. 457 p.
(Life--Origin) (MIRA 10:8)

OPARIN, A.I., akademik.

~~_____~~
For creative cooperation of science with industry. Khleb. i kond.
prom. 1 no.1:6 '57. (MLRA 10:4)
(Bakers and bakeries--Periodicals)

BAKH, L.A.; OPARIN, A.I.

Our daily bread. Kleb.i kond.prom. 1 no.10:39-42 0 '57.
(MIRA 10:11)

(Bread)

OPARIN, A.I., akademik.

Present status of the problem of the origin of life. Biol. v shkole
no.5:77-83 S-0 '57.

(Life origin)

(MLRA 10:9)

OPARIN, A. I.

USSR/General Problems. Methodology, History, Scientific Institutions
and Conferences, Instruction, Questions Concerning Biblio-
graphy and Scientific Documentation.

A

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3467.

Author : A.I. Oparin.

Inst : Academy of Sciences of USSR.

Title : A.N. Bakh - Founder of Soviet Biochemistry.

Orig Pub: Izv. AN SSSR. Ser. Biol., 1957, No 5, 635-639.

Abstract: To the 100th anniversary of his birthday. See also RZhKhim,
1957, 68091.

Card : 1/1

-18-

OPARIN, A.I.; GEL'MAN, N.S.; ZHUKOVA, I.G.

Relation of the incorporation of labeled glycine and the increase in protein nitrogen content to the structural conditions of bacterial protoplasts [with summary in English]. Biokhimiia 22 no.1/2:399-403 Ja-F '57. (MLBA 10:7)

1. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR, Moskva.
(MICROCOCCUS, metabolism,
lysodeikticus, eff. of labeled glycine incorporation &
protein nitrogen on structure of protoplasts (Rus))
(NITROGEN, metabolism,
Micrococcus lysodeikticus, eff. of labeled glycine
incorporation & protein nitrogen on structure of
protoplasts (Rus))
(GLYCINE, metabolism,
same)