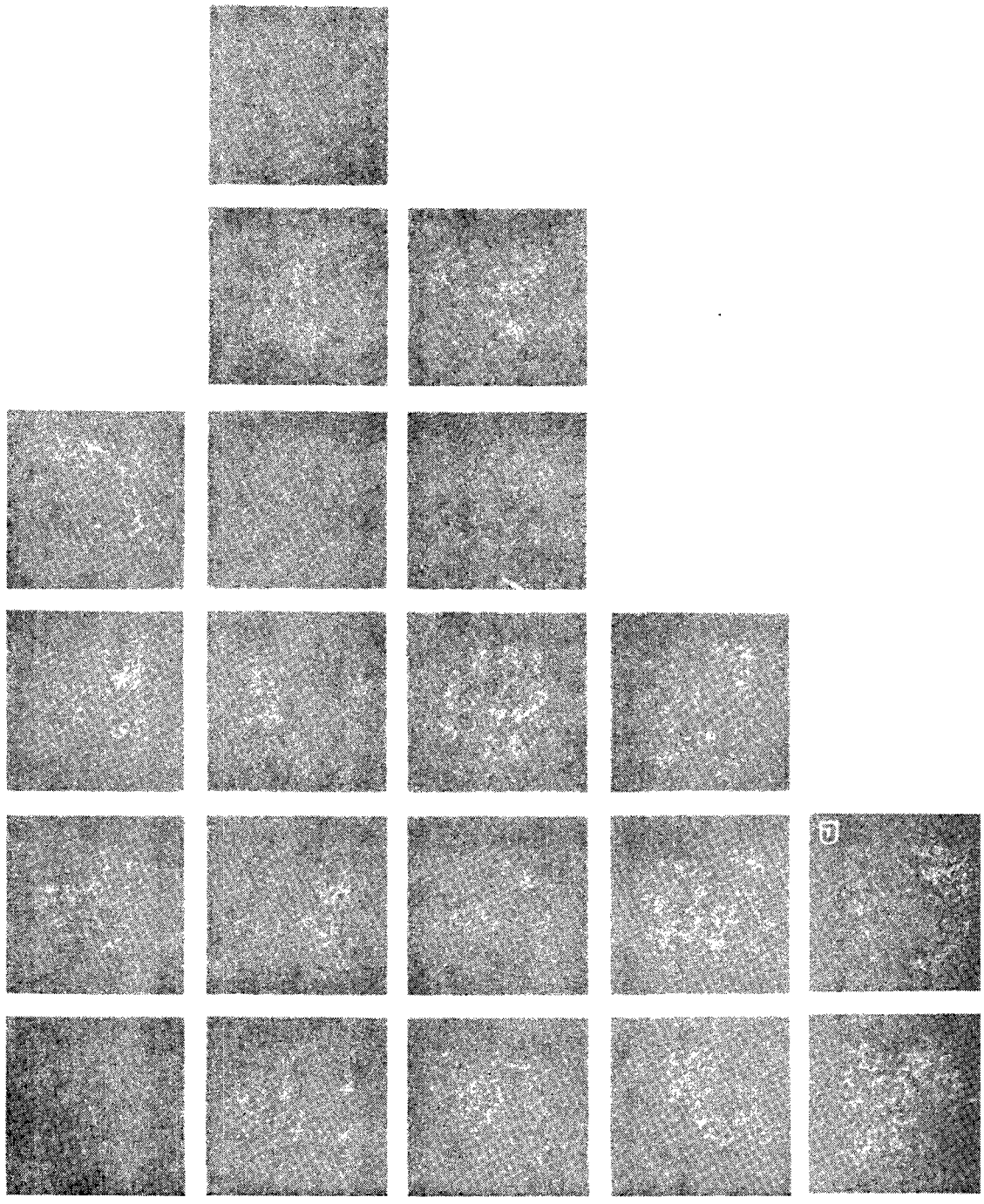
神経化学

VOL. 5 NO. 4 AUGUST 1966



神 経 化 学 懇 話 会

—神経化学文献—

CLASSIFICATION OF NEUROCHEMISTRY TITLES

I.	General Neurochemistry	558-580
II.	Electrolytes, Metals & Inorganic Constituents	581-598
III.	Carbohydrates & Related Compounds	599-609
IV.	Amino Acids, Peptides & Related Compounds	610-633
V.	Proteins	634-639
VI.	Nucleic Acids & Related Compounds	640-645
VII.	Lipids, Steroids & Related Compounds	646-675
VIII.	Biogenic Amines	676-707
IX.	Neuro- & Psychotropic Drugs	708-761
X.	Subcellular Units	762-777
XI.	Enzymes & Cofactors	778-801
XII.	Metabolism	802-807

LIST OF JOURNALS COVERED

A	Acta Neurol. Scand.	42(2), Supl.(17)*, (18)*, (19)*, (20)*
	Acta Physiol. Scand.	66(1-2), (3)*, Supl.(259)*, (260)*, (261), 66(4), Supl.(262)*, (263)*, (264)*
	Acta Psychiat. Scand.	41(4), Supl.(187)*, (188)*
	Am. J. Physiol.	210(4), (5)*
	Am. J. Psychiat.	122(10), (11), (12)Supl.*
	Analyst	91(1081)*, 92(1082)*
	Anal. Biochem.	14(3)*, 15(1), (2)*, (3)
	Anal. Chem.	38(5)*, (6)*, (7)*
	Arch. Biochem. Biophys.	114(1), (2)
B	Biochem. Biophys. Res. Commun.	23(2)*, (3), (4)
	Biochem. J.	99(1), (2), (3)*
	Biochem. Pharmacol.	15(4), (5)
	Biochem. Z.	344(3)*, 345(1)*
	Biochemistry	5(5)*, (6)*
	Biochim, Biophys. Acta	114(3), 116(3)*, 117(2)*, 118(2), 119(1)*, (2)*, 120(1)*, 121(1)
	Brain	89(1)
	Brain Res.	1(3), (4)
	Brit. J. Pharmacol.	26(3)
	Brit. J. Psychiat.	112(486)*
C	Can. J. Biochem.	44(4)*, (5)*, (6)
	Can. J. Physiol. Pharmacol.	44(3)
E	Electroencephalog. Clin. neurophysiol.	20(5), (6)

	Ergeb. Physiol. Biol. Chem. Exp. Pharmakol.	56(1965)*
	Exp. Brain Res.	1(3)
	Exp. Cell Res.	42(1), (2)
	Exp. Neurol.	15(1), (2)
F	Federation Proc.	25(3), pt. 1 & 2
H	Hoppe-Seylers Z. Physiol. Chem.	343(4-6)*, 344(1-3)*
I	Intern. J. Neuropharmacol.	---
	Intern. Rev. Neurobiol.	---
J	Jap. J. Pharmacol.	16(1)
	Jap. J. Physiol.	16(2)
	J. Biochem. Tokyo	59(4)*, (5)*
	J. Biol. Chem.	241(6), (7)*, (8), (9), (10), (11)*
	J. Cell Biol.	29(1)*, (2)
	J. Cell. Physiol.	67(1)*, (2)*
	J. Clin. Endocrinol. Metab.	26(3)*, (4)*, (5)*
	J. Clin. Invest.	45(5)
	J. Exp. Med.	123(4)*, (5)*, (6)*
	J. Gen. Physiol.	49(5)
	J. Histochem. Cytochem.	---
	J. Lipid Res.	7(3)
	J. Neurochem.	13(5), (6)
	J. Neurol. Sci.	3(3)
	J. Neurophysiol.	29(3)*
	J. Pharmacol. Exp. Therap.	152(1), (2)
	J. Physiol. London	183(3), 184(1), (2)
	J. Psychiat. Res.	3(4)
L	Life Sci.	5(5), (7), (8), (9), (10), (11)
N	Nature	210(5031)*, 210(5034), (5035), (5036), (5037), (5038), (5039), (5040), (5041), (5042)
	Naturwissenschaften	53(8)*, (9), (10)*, (11)*, (12)*
	Neurology	16(5), (6)
	Neuropsychologia	4(1)
P	Pflugers Arch. Ges. Physiol. ...	288(4)*, 289(1)*, (2)*, (3)*
	Pharmacol. Rev.	---
	Physiol. Rev.	46(2)*
	Proc. Nat. Acad. Sci. U.S.A.	55(3), (5)
	Proc. Roy. Soc. London Ser. B. .	164(996)*
	Proc. Soc. Exp. Biol. Med.	121(3), (4), 122(1)
	Psychopharmacologia	9(1), (2)
S	Science	152(3722)*, (3723), (3724), (3725)*, (3726)*, (3727), (3728)*, (3729)
	Sci. Am.	214(4), (5), (6)*

※印は，その号についても検索したが，神経化学文献が見当らなかったことを示します。

I. GENERAL NEUROCHEMISTRY

558. Agranoff, B.W., et al.
Chemical studies on memory fixation in goldfish.
Brain Res. 1(3): 303-9, '66

559. Bernard-Weil, E., et al.
'Inappropriate' secretion of antidiuretic hormone without corresponding hyponatraemia in cerebral pathology. Therapeutic implications.
J. Neurol. Sci. 3(3): 300-12, '66

560. Boullin, D.J., et al.
Discharge of tritium-labeled guanethidine by symphthetic nerve stim ulation as evidence that guanethidine is a false transmitter.
Life Sci. 5(9): 803-8, '66

561. Bovet, D., et al.
Short and long term memory in two ibred strains of mice.
Life Sci. 5(5): 415, '66

562. Broman, T., et al.
Intravital and postmortem studies on air embolism damage of the blood-brain barrier tested with trypan blue.
Acta Neurol. Scand. 42(2): 146-52, '66

563. Brozek, J.
Russian contributions on brain and behavior.
Science 152(3724): 930-2, '66

564. Davis, R.E. & Agranoff, B.W.
Stages of memory formation in goldfish: Evidence for an environmental trigger.
Proc. Nat. Acad. Sci. U.S.A. 55(3): 555-9, '66

565. Duke, H.N. & Edwards, M.W. Jr.
The reversal by carbon monoxide of the pressor response to cooling of the cervical vagus nerves.
J. Physiol. 184(1): 32p-33p, '66

566. Hosein, E.A. & Orzeck, A.
Acetylcholine-like activity in narcotized brain extracts; studies with d-tubocurarine.
Can. J. Physiol. Pharmacol. 44(3): 510-2, '66

567. Hosein, E.A. & Orzeck, A.
Acetylcholine-like activity of acetylcarnityl Co A in the brains of narcotized rats.
Nature 210(5037): 731-2, '66

568. Kauffman, S.L.

An autoradiographic study of the generation cycle in the ten-day mouse embryo neural tube.
Exp. Cell Res. 42(1): 67-73, '66

569. Kikuchi, R. & Takeda, Y.
Effect on retinal potentials of intracellularly applied tetraethyl ammonium ions.
Naturwissenschaften 53(9): 227, '66

570. Krnjević, K., et al.
Pharmacology of cortical inhibition.
J. Physiol. 184(1): 78-105, '66

571. Leitch, G.J.
Some ion exchange properties of a myelin extract from bovine optic nerve.
Proc. Soc. Exp. Biol. Med. 121(4): 1253-6, '66

572. Levine, S.
Sex differences in the brain.
Sci. Am. 214(4): 84-90, '66

573. Lowry, O.H.
Metabolite levels as indicators of control mechanisms.
Federation Proc. 25(3 pt.1): 846-9, '66

574. Rosenblatt, F., et al.
The transfer of learned behavior from trained to untrained rats by means of brain extracts. I.
Proc. Nat. Acad. Sci. U.S.A. 55(3): 548-55, '66

575. Still, A.W.
Memory and spontaneous alternation in the rat.
Nature 210(5034): 400-1, '66

576. Tsukada, Y. & Lajtha, A.
United States - Japan committee on scientific cooperation: Neurochemistry Conference.
Science 152(3723): 801-3, '66

577. Usherwood, P.N.R. & Machili, P.
Chemical transmission at the insect excitatory neuromuscular synapse.
Nature 210(5036): 634-6, '66

578. Watson, W.E.
Alteration of the adherence of glia to neurons following nerve injury.
J. Neurochem. 13(6): 536-7, '66

579. Wilson, V.J.
Inhibition in the central nervous system.
Sci. Am. 214(5): 102-10, '66

580. Yomamoto, C. & McIlwain, H.
Potentials evoked in vitro in preparations from the mamalian brain.
Nature 210(5040): 1055-6, '66

II. ELECTOLYTES, METALS & INORGANIC CONSTITUENTS

581. Ames, A., III & Nesbett, F.B.
Intracellular and extra-cellular compartments of mamalian central nervous tissue.
J. Physiol. 184(1): 215, '66

582. Friedman, S.M., et al.
Effects of aldosterone, vasopressin, and corticosterone on salt and water distribution in the neurohypophysectomized rat.
Can. J. Physiol. Pharmacol. 44(3): 409-16, '66

583. Friedman, S.M., et al.
Combined effects of aldosterone, vasopressin, and corticosterone on salt and water distribution in the neurohypophysectomized adrenal-ectomized rat.
Can. J. Physiol. Pharmacol. 44(3): 417-27, '66

584. Friedman, S.M., et al.
An attemp to reporoduce experimentally the pattern of salt and water distribution of age in the young neurohypophysectomized adrenal-ectomized rat.
Can. J. Physiol. Pharmacol. 44(3): 429-33, '66

585. Hills, B.
Common mode of action three agents that decrease the transient change in sodium permeability in nerves.
Nature 210(5042): 1220-2, '66

586. Johansen, K. & Lenfant, C.
Gas exchange in the cephalopod, octopus dofleini.
Am. J. Physiol. 210(4): 910-8, '66

587. Kerkut, G.A. & Meech, R.W.
Microelectrode determination of the intracellular chloride concentration in nerve cells.
Life Sci. 5(5): 453, '66

588. Kjellin, K.G.
Determination of the iron content in the cerebrospinal fluid.
J. Neurochem. 13(5): 413-21, '66

589. Lieberman, E.M. & Wright, E.B.
Determination of transmembrane water movement in crustacean axons by interference microscopy.
Exp. Cell. Res. 42(2): 328-39, '66

590. Manthey, A.A.
The effect of calcium on the desensitization of membrane receptors at the neuromuscular junction.
J. Gen. Physiol. 49(5): 963-76, '66

591. Miledi, R. & Slater, C.R.
The action of calcium on neuronal synapses in the squid.
J. Physiol. 184(2): 473-98, 66

592. Neumann, P.Z. & Silverberg, M.
Active copper transport in mammalian tissues - a posible role in Wilson's disease.
Nature 210(5034): 414-6, '66

593. Pappano, A.J. & Volle, R.L.
Observations on the role of calcium ions in ganglionic responses to acetylcholine.
J. Pharmacol. Exp. Therap. 152(2): 171-80, '66

594. Pappenheimer, J.R.
Cerebral HCO_3^- transport and control of breathing.
Federation Proc. 25(3 pt. 1): 884-6, '66

595. Takata, M., et al.
Blockage of sodium conductance increase in lobster giant axon by tarichatoxin. (tetrodotoxin)
J. Gen. Physiol. 49(5): 977-88, '66

596. Van Harreveld, A., et al.
Sulfate concentrations in cerebrospinal fluid and serum of rabbits and cats.
Am. J. Physiol. 210(4): 777-80, '66

597. Villegas, G.M. & Fernández, J.
Permeability to thorium dioxide of the intercellular spaces of the frog cerebral hemisphere.
Exp. Neurol. 15(1): 18-36, '66

598. Yoshino, Y., et al.
Distribution of mercury in the brain and its subcellular units in experimental organic mercury poisonings.
J. Neurochem. 13(5): 397-406, '66

III. CARBOHYDRATES & RELATED COMPOUNDS

599. Cheng, S.-C. & Mela, P.
CO_2 fixation in nervous system. — II. environmental effects on CO_2 fixation in lobster nerve.
J. Neurochem. 13(5): 281-7, '66

600. Cheng, S.-C. & Mela, P.
CO_2 fixation in the nervous system. — III. Effect of acetylcholene on CO_2 fixation in lobster nerve.
J. Neurochem. 13(5): 289-92, '66

601. Côté, L.J., et al.
CO_2 fixation in the nervous system. — I. CO_2 fixation in the sciatic nerve of the bullfrog.
J. Neurochem. 13(5): 271-9, '66

602. Feldman, S., et al.
Gluconeogenesis following hypothalamic stimulation.
Nature 210(5038): 860, '66

603. Giacobini, E. & Marchisio, P.C.
Pyruvate, glutamate and tricarboxylic acid intermediates in the crustacean stretch receptor neurone after prolonged impulse activity.
Acta Physiol. Scand. 66(1-2): 247-8, '66

604. Hoskin, F.C.G.
Anaerobic glycolysis in parts of the giant axon of squid.
Nature 210(5038): 856-7, '66

605. Ionaşescu, V. & Luca, N.
Studies of carbohydrate metabolism in myathenia gravis in conditions of ischaemic exercise.
Acta Neurol. Scand. 42(2): 244-54, '66

606. Naruse, H., et al.
CO_2 fixation in the nervous tissue IV. CO_2 fixation and citrate metabolism in lobster nerve.
Exp. Brain Res. 1(3): 284-90, '66

607. Naruse, H., et al.
CO_2 fixation in the nervous system V. CO_2 fixation and citrate metabolism in rabbit nerve.
Exp. Brain Res. 1(3): 291-8, '66

608. Nicolescu, P., et al.
The effect of deprivation of glucose on the ultrastructure and function of the superior cervical ganglion of the rat in vitro.
J. Cell Biol. 29(2): 267-85, '66

609. Shimazu, T., et al.
Reciprocal influences of the ventromedial and lateral hypothalamic nuclei on blood glucose level and liver glycogen content.
Nature 210(5041): 1178-9, '66

IV. AMINO ACIDS, REPTIDES & RELATED COMPOUNDS

610. Adams, D.H. & Lim, L.
Amino acid incorporation by preparations from the developing rat brain.
Biochem. J. 99(2): 261-5, '66

611. Berl, S. & Purpura, D.P.
Regional development of glutamic acid compartmentation in immature brain.
J. Neurochem. 13(5): 293-304, '66

612. Berlingnet, L. & Laliberté, M.
Metabolism of N-acetyl-L-aspartic acid in mice.
Can. J. Biochem. 44(6): 783, '66

613. Carver, M.J., et al.
Entry of L-phenylalanine-C^{14} into brain and cerebrospinal fluid.
Proc. Soc. Exp. Biol. Med. 122(1): 75-8, '66

614. Edström, A.
Amino acid incorporation in isolated Mauthner nerve fibre components.
J. Neurochem. 13(5): 315-21, '66

615. Graham, L.T.Jr. & Aprison, M.H.
Fluorometric determination of aspartate, glutamate, and γ-amino-butyrate in nerve tissue using enzymic methods.
Anal. Biochem. 15(3): 487-97, '66

616. Hess, S.M., et al.
A comparison of behavioral tests for measuring the effects of phenyl-ketonuria in rats.
Life Sci. 5(10): 927-37, '66

617. Joanny, P., et al.
The effect of some amino acids, glycolytic intermediates and citric acid cycle intermediates on the swelling, and the potassium and sodium concentrations, of guinea pig cerebral cortex slices in vitro.
J. Neurochem. 13(5): 371-4, '66

618. Laszlo, I.
Estimation of substance P and adenine nucleotides in the brain of the dog.
J. Physiol. 184(1): 17P., '66

619. Levi, G., et al.
Substrate specificity of cerebral amino acid exit in vitro.
Arch. Biochem. Biophys. 114(2): 339-51, '66

620. Mandel, P., et al.
The distribution of free amino acids in the central nervous system of garden dormice during hibernation.
J. Neurochem. 13(6): 533-6, '66

621. Nakamura, R. & Nagayama, M.
Amino acid transport by slices from various regions of the brain.
J. Neurochem. 13(5): 305-13, '66

622. Oja, S.S. & Piha, R.S.
Changes in the concentration of free amino acids in the rat brain during postnatal development.
Life Sci. 5(10): 865-70, '66

623. Perry, T.L., et al.
Homocystinuria: Excretion of a new sulfur-containing amino acid in urine.
Science 152(3723): 776-8, '66

624. Roberts, E., et al.
Influence of intraperitoneally administered amino acids on amino acid patterns of Ehrlich ascites tumor cells and brain in mice.
Biochem. Pharmacol. 15(5): 615-26, '66

625. Schade, J.P. & Pascoe, E.G.
Cellular mechanisms in experimental epilepsy-I. The effect of methionine sulfoximine on structure and function cortical neurons.
Brain Res. 1(4): 407-12, '66

626. Shome, B. & Saffran, M.
Peptides of the hypothalamus.
J. Neurochem. 13(5): 433-48, '66

627. Singer, M. & Salpeter, M.M.
Transport of tritium-labelled l-histidine through the schwann and myelin sheaths into the axon of peripheral nerves.
Nature 210(5042): 1225-7, '66

628. Thoenen, H., et al.
The effect of α-methyl-tyrosine on peripheral sympathetic transmission.
Life Sci. 5(8): 723-30, '66

629. Van den Berg, C.J., et al.
On the contribution of the tricarboxylic acid cycle to the synthesis of glutamate, glutamine and aspartate in brain.
Biochem. Biophys. Res. Commun. 23(4): 479-84, '66

630. van Gelder, N.M.
The effect of aminooxyacetic acid on the metabolism of γ-amino-

butyric acid in brain.
Biochem. Pharmacol. 15(5): 533-9, '66

631. Wada, J.A. & Ikeda, H.
The susceptibility to auditory stimuli of animals treated with methionine sulfoximine.
Exp. Neurol. 15(2): 157-65, '66

632. Wood, J.D., et al.
A comparative study of hyperbaric oxygen-induced and drug-induced convulsions with particular reference to γ-aminobutyric acid metabolism.
J. Neurochem. 13(5): 361-70, '66

633. Zachmann, M., et al.
The occurrence of γ-aminobutyric acid in human tissues other than brain.
J. Biol. Chem. 241(6): 1355-8, '66

V. PROTEINS

634. Elul, R.
Dependence of synaptic transmission on protein metabolism of nerve cells: A possible electrokinetic mechanism of learning?
Nature 210(5041): 1127-31, '66

635. Lajtha, A., & Toth, J.
Instability of cerebral proteins.
Biochem. Biophys. Res. Commun. 23(3): 294-8, '66

636. Piha, R.S., et al.
Metabolism of histones of brain and liver.
J. Biol. Chem. 241(10): 2397-404, '66

637. Scott, D. Jr., et al.
Regeneration in spinal neurons: Proteosynthesis following nerve growth factor administration.
Science 152(3723): 787-8, '66

638. Weiner, L.P., et al.
Cerebral plasmacytoma with myeloma protein in the cerebrospenal fluid.
Neurology 16(6): 615-8, '66

639. Weiss, P. & Bueker, E.D.
Ligation of mouse submandibular glands and its effects on components of nerve growth factor.
Proc. Soc. Exp. Biol. Med. 121(4): 1135-40, '66

VI. NUCLEIC ACIDS & RELATED COMPOUNDS

640. Albert, D. J.
Memory in mammals: Evidence for a system involving nuclear ribonucleic acid.
Neuropsychologia 4(1): 79-92, '66

641. Bernsohn, J. & Norgello, H.
Base composition of ribosomal ribonucleic acid in newborn and adult rat brain.
Proc. Soc. Exp. Biol. Med. 122(1): 22-4, '66

642. Egyházi, E.
Microchemical fractionation of neuronal and glial ribonucleic acid.
Biochim. Biophys. Acta 114(3): 516-26, '66

643. Gordon, M. W., et al.
RNA and memory: A negative experiment.
Am. J. Psychiat. 122(10): 1174-8, '66

644. Mahler, H. R., et al.
Isolation and characterization of ribonucleic acid from cerebral cortex of rat.
J. Biol. Chem. 241(6): 1283-9, Mar. '66

645. Shimada, M. & Nakamura, T.
RNA synthesis in the neurons of the brain of mouse and kitten as visualized by autoradiography after injection of ^{3}H uridine.
J. Neurochem. 13(5): 391-6, '66

VII. LIPIDS, STEROIDS & RELATED COMPOUNDS

646. Booth, D. A., et al.
Abnormal gangliosides in Tay-Sachs disease, Niemann-Pick's disease, and gargoylism.
J. Lipid Res. 7(3): 337-40, '66

647. Bradley, P. B., et al.
Pharmacological properties of cholinoceptive neurones in the medulla and pons of the cat.
J. Physiol. 183(3): 658-74, '66

648. Breyer, U. & Quadbeck, G.
The relative affinity of phosphatidylserine for mono-and bivalent cations measured in a biphasic solvent system.
J. Neurochem. 13(6): 493-500, '66

649. Canepa, F. G., et al.
Structure of acetylcholine and other substrates of cholinergic systems.
Nature 210(5039): 907-9, '66

650. Clausen, J.
The beta-lipoprotein of serum and cerebre-spinal fluid.
Acta Neurol. Scand.
42(2): 153-60, '66

651. Collier, B. & Mitchell, J. F.
Release of acetylcholine from the cerebral cortex during stimulation of the optic pathway.
Nature 210(5034): 424-5, '66

652. Collier, B. & Mitchell, J. F.
The central release of acetylcholine during stimulation of the visual pathway.
J. Physiol. 184(1): 239-54, '66

653. D'Angelo, S. A. & Young, R.
Chronic lesions and ACTH: effects of thyroid hormones and electrical stimulation.
Am. J. Physiol. 210(4): 795-800, '66

654. De Venuto, F. & Chader, G.
Interactions between cortisol or corticosterone and fractions of rat thymus, brain and heart cell.
Biochim. Biophys. Acta 121(1): 151-8, '66

655. Durell, J. & Sodd, M. A.
Studies on the acetylcholine-stimulated incorporation of radioactive inorganic orthophosphate into the phospholipid of brain particulate preparations. II. Subcellular distribution of enzymatic activity.
J. Neurochem. 13(6): 487-91, '66

656. Garcia-Bengochea, F.
The effect of cortisone on cerebrospinal fluid production in castrated adult cats.
Neurology 16(5): 512-4, '66

657. Goldfien, A., et al.
Evidence for centers in the central nervous system that regulate fat mobilization in dogs.
J. Lipid Res. 7(3): 357-67, '66

658. Grosser, B. I.
11 β-hydroxysteroid metabolism by mouse brain and glioma 261.
J. Neurochem. 13(6): 475-8, '66

659. Hajra, A. K., et al.
Cerebroside galactosidase of brain.
J. Lipid Res. 7(3): 379-86, '66

660. Hooghwinkel, G., et al.
Biochemical studies in Huntington's chorea. II. Composition of

blood lipids.
Acta Neurol. Scand. 42(2): 213-20, '66

661. Levine, S. & Mullins, R. F.
Hormonal influences on brain organizations in infant rats.
Science 152(3729): 1585-92, '66

662. Long, D. M., et al.
The response of human cerebral edema to glucosteroid administration: An electron microscopic study.
Neurology 16(5): 521-8, '66

663. Lundgren, G.
Interaction of oxotremorine and hemicholinium on brain acetylcholine formation in vitro.
Life Sci. 5(11): 977-86, '66

664. Malven, P. V. & Sawyer, C. H.
Sleeping patters in female guinea pigs; effects of sex hormones.
Exp. Neurol. 15(2): 229-39, '66

665. Matthews, E. K.
The presynaptic effects of quaternary ammonium compounds on the acetylcholine metabolism of a sympathetic ganglion.
Brit. J. Pharmacol. 26(3): 552-66, '66

666. Meltzer, H. L.
The accumulation of excess salt by solutions of strandin.
J. Neurochem. 13(5): 423-8, '66

667. Meltzer, H.
The cation specificity of solutions of strandin.
J. Neurochem. 13(5): 429-32, '66

668. Menkes, J. H., et al.
Molecular composition of the major glycolipids in globoid cell leukodystrophy.
Neurology 16(6): 581-93, '66

669. Pascal, T. A., et al.
Immunochemical studies on normal and Tay-Sachs' brain gangliosides.
Proc. Soc. Exp. Biol. Med. 121(3): 739-43, '66

670. Sattin, A.
The synthesis and storage of acetylcholine in the striatum.
J. Neurochem. 13(6): 515-24, '66

671. Schuberth, J., et al.
Uptake of choline by mouse brain slices.
J. Neurochem. 13(5): 347-52, '66

672. Wells, M.A. & Dittmer, J.C.
The identification of glycerophosphorylglycerol phosphate as the deacylation product of a new brain lipid.
J. Biol. Chem. 241(9): 2103-5, '66

673. Williams, C.H., et al.
Cholesterol content of spinal cord and sciatic nerve of hens after organophosphate and carbamate administration.
J. Neurochem. 13(6): 471-4, '66

674. Wolfgram, F.
A new proteolipid fraction of the nervous system — I. Isolation and amino acid analyses.
J. Neurochem. 13(6): 461-70, '66

675. Zamenhof, S., et al.
Stimulation of the proliferation of cortical neurons by prenatal treatment with growth hormone.
Science 152(3727): 1396-7, '66

VIII. BIOGENIC AMINES

676. Abenson, M.H.
An analysis of urinary amine values on routine admissions to a mental hospital.
Acta Psychiat. Scand. 41(4): 582-7, '65

677. Anderson, E.G. & Holgerson, L.O.
The distribution of 5-hydroxytryptamine and norepinephrine in cat spinal cord.
J. Neurochem. 13(6): 479-85, '66

678. Baldessarini, R.J. & Kopin, I.J.
Tritiated norepinephrine: Release from brain slices by electrical stimulation.
Science 152(3729): 1630-1, '66

679. Bhargava, K.P. & Gupta, M.L.
A study of central adrenergic mechanisms in the regulation of the oestrous cycle of albino mice.
Brit. J. Pharmacol. 26(3): 601-5, '66

680. Bloom, F.E. & Barrnett, R.J.
Fine structural localization of noradrenaline in vesicles of autonomic nerve endings.
Nature 210(5036): 599-601, '66

681. Blumberg, A.G. & Klein, D.F.
Methoxy-catecholamine excretion and the mecholyl test.
J. Psychiat. Res. 3(4): 239, '65

682. Brodie, B. B., et al.
The role of brain serotonin in the mechanism of the central action of reserpine.
J. Pharmacol. Exp. Therap. 152(2): 340-9, '66

683. Brundin, T.
Storage and in vitro release rate of catecholamines from granules isolated from preaortal paraganglia and adrenals of newborn rabbits.
Acta Physiol. Scand. 66(4): 406-9, '66

684. Bygdeman, S.
Effect of respiratory acidosis on vasoconstrictor effects of directly and indirectly acting sympathomimetic amines in cats.
Acta Physiol. Scand. 66(4): 444-7, '66

685. Cervino, P. & Kirpekar, S. M.
Studies on the decentralized nictitating membran of the cat. I. Effect of postganglionic electrical stimulation on the response to exogenous catecholamines.
J. Pharmacol. Exp. Therap. 152(1): 8-17, '66

686. Charalampous, K. D., et al.
Metabolic fate of mescaline in man.
Psychopharmacologia 9(1): 48-63, '66

687. Corrodi, H., et al.
Refillment of the catecholamine stores with 3, 4-dihydroxyphenyl-alanine after depletion induced by inhibition of tyrosine-hydroxylase.
Life Sci. 5(7): 605-11, '66

688. Davies, B. N. & Withrington, P. G.
The release of noradrenaline by the postganglionic nerves to the spleen of the cat in response to low frequency stimulation.
J. Physiol. 184(1): 18P-19P, '66

689. Frontali, N. & Norberg, K. A.
Catecholamine containing neurons in the cockroach brain.
Acta Physiol. Scand. 66(1-2): 243-4, '66

690. Fuxe, K. & Hokfelt, T.
Further evidence for the existence of Tubero-infundibular dopamine neurons.
Acta Physiol. Scand. 66(1-2): 245-6, '66

691. Gaal, P. G., et al.
Effects of adrenaline and noradrenaline on coronary blood flow before and after beta-adrenergic blockade.
Brit. J. Pharmacol. 26(3): 713-22, '66

692. Gangarosa, L. P. & DiStefano, V.
Participation of a CNS-thyroid neural pathway in epinephrine-induced hyperglycemia in the cat.
J. Pharmacol. Exp. Therap. 152(2): 325-31, '66

693. Gebber, G. & Volle, R. L.
Mechanisms involved in ganglionic blockage induced by tetramethylammonium.
J. Pharmacol. Exp. Therap. 152(1): 18-28, '66

694. Hebb, C. M. S. & Perkins, D.
Histochemical demonstration of catecholamines and of cholinesterases on adjacent sections of tissue.
J. Physiol. 184(1): 12P, '66

695. Hertting, G. & Suko, J.
Influence of angiotensin, vasopressin or changes in flow rate on vasoconstriction, changes in volume and [^{3}H]-noradrenaline release following postganglionic sympathetic nerve stimulation in the isolated cat spleen.
Brit. J. Pharmacol. 26(3): 686-96, '66

696. Iversen, L. L. & Glowinski, J.
Regional differences in the rate of turnover of norepinephrine in the rat brain.
Nature 210(5040) 1006-8, '66

697. Kimura, M. & Waki, I.
Potentiation of β-adrenergic receptor to musk.
Jap. J. Pharmacol. 16(1): 129, '66

698. Kovanic, B. & Robinson, R. L.
The effects of reserpine on catecholamine levels in the gravid rat and its offspring.
J. Pharmacol. Exp. Therap. 152(1): 37-41, '66

699. Palaić, D. & Supek, Z.
Liberation of 5-hydroxytryptamine in the brain stem of adrenalectomized rats after X-irradiation.
Nature 210(5039): 970-1, '66

700. Poirier, L. J., et al.
Striatal amines, experimental tremor and the effect of harmaline in the the monkey.
Brain 89(1): 37-52, '66

701. Porter, C. C., et al.
The effect of the optical isomers of α-methyl-p-tyrosine upon brain and heart catecholamines in the mouse.
Biochem. Pharmacol. 15(5): 583-90, '66

702. Pscheidt, G.R. & Himwich, H.E.
Biogenic amines in various brain regions of growing cats.
Brain Res. 1(4): 363-8, '66

703. Rudzik, A.D. & Mennear, J.H.
Antagonism of anticonvulsants by adrenergic blocking agents.
Proc. Soc. Exp. Biol. Med. 122(1): 278-80, '66

704. Schildraut, J.J., et al.
Catecholamine metabolism in affective disorders: I. Normethanephrine and VMA excretion in depressed paients treated with imipramine.
J. Psychiat. Res. 3(4): 213, '65

705. Westlake, R.J. & Tew, J.M.
Urinary amines in patients undergoing thalamotomy for Parkinson's disease.
Neurology 16(6): 619-20, '66

706. Wilkins, R.H., et al.
The role of circulating substances in intracranial arterial spasm: I. Serotonin and histamine.
Neurology 16(5): 482-90, '66

707. Wurtman, R.J. & Axelrod, J.
A 24-hour rhythm in the content of norepinephrine in the pineal and salivary glands of the rat.
Life Sci. 5(7): 665-9, '66

IX. NEURO-& PSYCHOTROPIC DRUGS

708. Adam, K.R., et al.
The effect of scorpin venom on single myelinated nerve fibers of the frog.
Brit. J. Pharmacol. 26(3): 666-77, '66

709. Aldridge, W.N. & Barnes, J.M.
Further observations on the neurotoxicity of organophosphorus compounds.
Biochem. Pharmacol. 15(5): 541-8, '66

710. Allsop, J. & Turner, B.
Cerebellar degeneration associated with chronic alchoholism.
J. Neurol. Sci. 3(3): 238-58, '66

711. Bass, B.G. & Buckley, N.M.
Chloralose anesthesia in the dog: a study of drug actions and analytical methodology.
Am. J. Physiol. 210(4): 854-62, '66

712. Blaustein, M.P. & Goldman, D.E.
Competitive action of calcium and procaine on lobster axon. A study of the mechanism of action of certain local anesthetics.
J. Gen. Physiol. 49(5): 1043-63, '66

713. Borbély, A.A.
The influence of amphetamine on the periodic feeding behavior of the albino rat.
Brain Res. 1(4): 395-402, '66

714. Bratfos, O. & Haug, J.O.
Electroconvulsive therapy and antidepressant drugs in manic-depressive disease. Treatment results at discharge and 3 months later.
Acta Psychiat. Scand. 41(4): 588-96, '65

715. Brown, D.A.
Depolarization of normal and preganglionically denervated superior cervical ganglia by stimulant drugs.
Brit. J. Pharmacol. 26(3): 511-20, '66

716. Brown, D.A.
Effects of hexamethonium and hyoscine on the drug-induced depolarization of isolated superior cervical ganglia.
Brit. J. Pharmacol. 26(3): 521-37, '66

717. Brown, D.A.
Electrical responses of cat superior cervical ganglia in vivo to some stimulant drugs and their modification by hexamethonium and hyoscine.
Brit. J. Pharmacol. 26(3): 538-51, '66

718. Chen, G., et al.
The neuropharmacology of 2-(o-chlorophenyl) -2-methylaminocyclohexanone hydrochloride.
J. Pharmacol. Exp. Therap. 152(2): 332-9, '66

719. Clark, F.C. & Steele, B.J.
Effects of D-amphetamine on performance under a multiple schedule in the rat.
Psychopharmacologia 9(2): 157-69, '66

720. Coceani, F., et al.
The effect of intracarotid amobarbital injections upon experimentally induced epileptiform activity.
Electroencephalog. Clin. Neuro-physiol. 20(6): 542-58, '66

721. Desiraju, T.
An analysis of the action of succinylcholine on transmission in the superior cervical ganglion of the cat.
J. Neurochem. 13(5): 323-32, '66

722. Diamond, I. & Schmid, R.
Experimental bilirubin encephalopathy. The mode of entry of bilirubin-^{14}C into the central nervous system.
J. Clin. Invest. 45(5): 678-89, '66

723. Edington, N. & Howell, J.M.
Changes in the nervous system of rabbits following the administration of sodium diethyldithiocarbamate.
Nature 210(5040): 1060-2, '66

724. Epstein, M.H. & O'Connor, J.S.
Effects of convulsive doses of penicillin on the metabolism of single neurons.
Exp. Neurol. 15(2): 172-9, '66

725. Forstad, A.L., et al.
Influence of personality type on drug response.
Am. J. Psychiat. 122(10): 1153-8, '66

726. Ginsburg, M., et al.
The preperation and properties of porcine neurophysin and the influence of calcium on the hormone-neurophysin comples.
J. Physiol. 184(2): 387-401, '66

727. Goldberg, S.C., et al.
Sex and race differences in response to drug treatment among schizophrenics.
Psychopharmacologia 9(1): 31-47, '66

728. Goldman, P.S. & Docter, R.F.
Facilitation of far pressing and "supression" of conditioned supression in cats as a function of alcohol.
Psychopharmacologia 9(1): 64-72, '66

729. Gundlach, R., et al.
A double-blind outpatient study of diazepam (valium) and placebo.
Psychopharmacologia 9(2): 81-92, '66

730. Hanson, L.C.F.
Evidence that the central action of amphetamine is mediated via catecholamines.
Psychopharmacologia 9(1): 78-80, '66

731. Hariga, J., et al.
Effects de l'application d'alcool dilue sur le nerf, Partie 1. (Confrontation de l'etude dynamographique et de l'etude histologique chez le chat decerebre.)
J. Neurol. Sci. 3(3): 284-99, '66

732. Hebbard, F.W. & Fischer, R.
Effect of psilocybin, LSD, and mescaline on small, involuntary eye movements.
Psychopharmacologia 9(2): 146-156, '66

733. Hobson, G.N.
Ethanol inhibition of formation of conditioned eyeblink response in man.
Psychopharmacologia 9(2): 93-100, '66

734. Hubin, P. & Servais, J.
Etude comparative des effets psychophysiologiques de l'amphétamine chez des sujets de race blanche et de race noire.
Psychopharmacologia 9(2): 118-36, '66

735. Hukuhara, T., et al.
Effects of nicotine on the unitary activity of medullary respiratory neurones in the cat.
Jap. J. Pharmacol. 16(1): 126, '66

736. Hunt, E. & Krivanek, J.
The effects of pentylenetetrazole and methylphenoxypropane on discrimination learning.
Psychopharmacologia 9(1): 1-16, '66

737. Katz, R.L. & Eakins, K.E.
A comparison of the effects of neuromuscular blocking agents and cholinesterase inhibitors on the tibialis anterior and superior rectus muscles of the cat.
J. Pharmacol. Exp. Therap. 152(2): 304-12, '66

738. Kellerth, J.O. & Szumski, A.J.
Two types of stretch-activated post-synaptic inhibitions in spinal motoneurones as differentiated by strychnine.
Acta Physiol. Scand. 66(1-2): 133-45, '66

739. Kellerth, J.O. & Szumski, A.J.
Effects of picrotoxin on stretch-activated post-synaptic inhibitions in spinal motoneurones.
Acta Physiol. Scand. 66(1-2): 146-56, '66

740. Kletzkin, M., et al.
Tranquillizers in pregnancy and behavioural effects on the offspring.
Nature 210(5042): 1290-1, '66

741. Leaf, R.C. & Muller, S.A.
Effects of scopolamine on operant avoidance acquisition and retention.
Psychopharmacologia 9(2): 101-9, '66

742. Lomax, P.
The hypothermic effect pentobarbital in the rat: sites and mechanisms of action.
Brain Res. 1(3): 296-302, '66

743. Matts, S.G.F.
The hypnotic and sedative effects of 3-methyl-3, 4-dihydroxy-4-phenyl-butin-1, a two phase investigation employing double blind techniques and sequential analysis.
Psychopharmacologia 9(1): 73-7, '66

744. McDonald, I.M., et al.
A controlled comparison of amitriptyline and electro-convulsive therapy in the treatment of depression.
Am. J. Psychiat. 122(12): 1427-31, '66

745. Metcalf, D.R., et al.
An EEG-behavioral study of sodium hydroxybutyrate in humans.
Electroencephalog, Clin. Neurophysiol. 20(5): 506-12, '66

746. Nakazato, Y. & Ohga, A.
Effects of drugs on the reflex response of the cervical vagus nerve.
Jap. J. Pharmacol. 16(1): 117, '66

747. Nishi, K. & Sato, M.
Blocking of the impluse and depression of the receptor potential by tetrodotoxin in non-myelinated nerve terminals in Pacinian corpuscles.
J. Physiol. 184(2): 376-86, '66

748. Olmsted, F. & Page, I.H.
Hemodynamic changes in dogs caused by sodium pentobarbital anesthesia.
Am. J. Physiol. 210(4): 817-20, '66

749. Owen, J.E.Jr., & Rathbun, R.C.
Sustained changes of avoidance behavior after chronic nortriptyline administration.
Psychopharmacologia 9(2): 137-45, '66

750. Payan, H., et al.
Inhibition of experimental epilepsy by chemical stimulation of cerebellum.
Neurology 16(6): 573-6, '66

751. Reas, H.W. & Tsai, T.H.
The antagonism by atropine of the response of the nictitating membrane to sympathetic nerve stimulation.
J. Pharmacol. Exp. Therap. 152(2): 186-96, '66

752. Rech, R.H.
Amphetamine effects on poor performance of in a shuttle-box.
Psychopharmacologia 9(2): 110-7, '66

753. Rinkel, M.
Psychiatric drugs. (editor's notebook)
Am. J. Psychiat. 122(12): 1415-6, '66

754. Ross, S.B. & Renyi, A.L.
Active uptake of tritiated metaraminol by mouse brain slices in vitro.
Life Sci. 5(7): 639-47, '66

755. Sachs, E., et al.
Effects of chlordiazepoxide on the acquisition of avoidance learning and its transfer to the normal state and other drug conditions.
Psychopharmacologia 9(1): 17-30, '66

756. Sampson, S.R., et al.
Effects of confine on peripheral and central synaptic transmission.
J. Pharmacol. Exp. Therap. 152(2): 313-24, '66

757. Sawa, M., et al.
Action of strychnine to cortical neurons.
Jap. J. Physiol. 16(2): 126-41, '66

758. Schuster, C.R., et al.
Behavioral variables affecting the development of amphetamine tolerance.
Psychopharmacologia 9(2): 170-82, '66

759. Simmons III, J.Q., et al.
Modification of autistic behavior with LSD-25.
Am. J. Psychiat. 122(11): 1201-11, '66

760. Vidal-Beretervide, K., et al.
Ganglionic blocking action of some methylpiperidines.
J. Pharmacol. Exp. Therap. 152(2): 181-5, '66

761. Wisniewski, K. & Danysz, A.
The study on the insulin controlling and directing of chlorpromazine action and level in brain tissue.
Biochem. Pharmacol. 15(5): 669-73, '66

X. SUBCELLULAR UNITS

762. Beattie, D.S. & Basford, R.E.
Brain mitochondria. IV. The activation of fatty acids in bovine brain mitochondria.

J. Biol. Chem. 241(6): 1412-8, '66

763. Beattie, D.S. & Basford, R.E.
Brain mitochondria. V. Incorporation of fatty acids into phospholipids in bovine brain mitochondria.
J. Biol. Chem. 241(6): 1419-23, '66

764. Glowinski, J., et al.
Subcellular localization of H^3- norepinephrine in the rat brain and the effect of drugs.
J. Pharmacol. Exp. Therap. 152(2): 282-92, '66

765. Hosein, E.A. & Koh, T.Y.
Acetylcholine-like activity of acetyl-L-carnityl CoA in subcellular particles of narcotized brain homogenates.
Arch. Biochem. Biophys. 114(1): 94-101, '66

766. Hosein, E.A. & Levy, R.
Effects of ultrasonics on the release of material with acetylcholine-like activity from brain subcellular particles.
Exp. Neurol. 15(2): 166-71, '66

767. Hunter, G.D. & Millson, G.C.
Distribution and activation of lysosomal enzyme activities in subcellular components of normal and scrape-affected mouse brain.
J. Neurochem. 13(5): 375-83, '66

768. Inouye, A., et al.
Cytochrome b_5 and related oxidative activities in brain microsomes of fowl, toad and carp.
J. Neurochem. 13(5): 385-90, '66

769. Kajikawa, K., et al.
Effect of reserpine on spontaneous release of norepinephrine accumulated in mitochondrial fraction of brain stem of guinea pig.
Jap. J. Pharmacol. 16(1): 122, '66

770. Kato, R. & Takayanagi, M.
Species difference in the inhibition of drug metabolism in liver microsomes by SKF 525A.
Jap. J. Pharmacol. 16(1): 127, '66

771. Musacchio, J.M., et al.
Subcellular distribution and release by sympathetic nerve stimulation of dopamine and α-methyl dopamine.
J. Pharmacol. Exp. Therap. 152(1): 51-5, '66

772. Panchenko, L.F.
Oxidative phosphorylation in brain mitochondria during traumatic schock.

Federation Proc. 25(3 pt. 2): T482-T484, '66

773. Patel, A.A. & Rao, S.S.
Action of tetanus toxin on brain, liver and muscle mitochondria from resistant and susceptible species.
Brit. J. Pharmacol. 26(3): 730-9, '66

774. Porcellati, G., et al.
The conversion of L-serine ethanolamine phosphate and L-threonine ethanolamine phosphate to microsomal phospholipid in brain tissue.
Life Sci. 5(9): 769-74, '66

775. Robertis, E. de., et al.
Isolation of different types of synaptic membranes from the brain cortex.
Life Sci. 5(7): 577-82, '66

776. Sellinger, O.Z. et al.
Morphological and biochemical correlates of cerebral microsomes---II. A study of the structural association of glutamine synthetase, ATP ase, and an esterase acting on o-nitrophenyl acetate.
J. Neurochem. 13(6): 501-13, '66

777. Williams, W.J.
The activ ity of human placenta microsomes and brain particles in blood coagulation.
J. Biol. Chem. 241(8): 1840-6, '66

XI. ENZYMES & COFACTORS

778. Albers, R.W. & Koval, G.J.
Sodium-potassium-actaivated adenosine triphosphatase of electrophorus electric organ. III. An associated potassium-activated neutral phosphatase.
J. Biol. Chem. 241(8): 1896-8, '66

779. Aldridge, W.N. & Barnes, J.M.
Esterases and neurotoxicity of some organophosphorus compounds.
Biochem. Pharmacol. 15(5): 549-54, '66

780. Bignami, A., et al.
Effect of cardiazol on sodium-potasium-activated adinosine triphophatase of the rat brain in vivo.
Brain Res. 1(4): 413-4, '66

781. Braun, P.E. & Drummond, G.I.
A study of phosphoglucomutase from brain tissue.
J. Neurochem. 13(6): 525-31, '66

782. Davrainville, J.-L. & Gayet, J.
Effect of two blood plasma protein fractions on the adenosine triphosphatase system of brain cortex slices in vitro.
J. Neurochem. 13(5): 353-9, '66

783. Fahn, S., et al.
Sodium-potassium-activated adenosine triphosphatase of electrophorus electric organ. I. An associated sodium-activated transphosphorylation.
J. Biol. Chem. 241(8): 1882-9, '66

784. Fahn, S., et al.
Sodium-potassium-activated adenosine triphosphatase of electrophorus electric organ. II. Effects of N-ethylmaleimide and other sulfhydryl reagents.
J. Biol. Chem. 241(8): 1890-5, '66

785. Garcia-Bunuel, L., et al.
Lactate dehydrogenase forms in denervation and disuse atrophy of red and white muscle.
Neurology 16(5): 491-5, '66

786. Gonnard, P. & Duhault, J.
Action de la cyanacetylhydrazone de phospho-5'-pyridoxal sur la glutamate décarboxylase cérébrale, Modification du trace électrocorticographique du rat.
J. Neurochem. 13(5): 407-12, '66

787. Gould, R.P. & Holt, S.J.
The distribution of hydrolytic enzymes in nerve cells of the rat lumber spinal cord after section of the sciatic nerve.
J. Physiol. 184(1): 2P-3P, '66

788. Green, H. & Sawyer, J.L.
Demonstration, characterization, and assay procedure of tryptophan hydroxylase in rat brain.
Anal. Biochem. 15(1): 53-64, '66

789. Holowach, J., et al.
Effects of various anions and cations on the release of four dehydrogenases from brain mitochondria by a non-ionic detergent.
Biochim. Biophys. Acta. 118(2): 230-9, '66

790. Hooper, K.C.
Some observations on the behaviour of hypothalamic enzymes during the time of blastocyst implantation in the rabbit.
Biochem J. 99(1): 128-32, '66

791. Hoskin, F.C.G., et al.

Re-examination of the effect of DFP on electrical and cholinesterase activity of squid giant axon.
Proc. Nat. Acad. Sci. U.S.A. 55(5): 1231-5, '66

792. Kokko, A.
Histochemical and cytophotometric observations on esterases in the spinal ganglion of the rat.
Acto Physiol. Scand. 66(suppl.) 261: 1-76, '66

793. Maletta, G.J., et al.
Pre-and post-natal development of the spinal cord: Increased acetylcholinesterase activity.
Proc. Soc. Exp. Biol. Med. 121(4): 1210, '66

794. Miller, J.Q. & Hyde M.S.
Leukocyte alkaline phosphatase in mongolism.
Neurology 16(6): 577-80, '66

795. Morris, D. & tucek, S.
The influence of inorganic cations on the activities of choline acetyltransferase, phosphate acetyltransferase and acetylphosphatase.
J. Neurochem. 13(5): 333-45, '66

796. Prince, A.K.
A sensitive fluorometric procedure for the determination of small quantaities of acetylcholinesterase.
Biochem. Pharmcol. 15(4): 411-7, '66

797. Rosenberg, P., et al.
Acetylcholine and choline acetylase in squid giant axon, ganglia and retina.
Nature 210(5038): 858-9, '66

798. Rutter, L.
Transaminase deficiency in alcoholics and cases of peptic ulcers.
Nature 210(5035): 538, '66

799. Sorsby, A., et al.
Effect of vitamin A deficiency on the retina of the experimental rabbit.
Nature 210(5040): 1011-5, '66

800. Stahl, W.L. et al.
Separation of sdenosine diphosphate-adenosine triphosphate-adenosine triphosphate-exchange activity from the cerebral microsomal sodium-plus-potassium ion-stimulated adenosine triphosphatase.
Biochem. J. 99(2): 404-12, '66

801. Swanson, P.D. & Stahl, W.L.
The adenosine diphosphate-adenosine triphosphate-exchange reaction of cerebral microsomes and its relation to the sodium ion-stimulated

adenosine-triphosphatase reaction.
Bicohem. J. 99(2): 396-403, '66

XII. METABOLISM

802. Bennett, C. D., et al.
The effects of thiamine deficiency on the metabolism of the brain. I. Oxidation of various substrates in vitro by the liver and brain of normal and pyrithiamine-fed rats.
J. Neurochem. 13(5): 449-59, '66

803. Giacobini, E.
The effect of metabolic and ion transport inhibitors on the impulse activity and oxygen uptake of an isolated crustacean neurone.
Acta Physiol. Scand. 66(1-2): 34-48, '66

804. Giacobini, E. & Grasso, A.
Variations of glycolytic intermediatae, Phosphate compounds and pyridine nucleotides after prolonged stimulation of an isolated crustacean neurone.
Acta Physiol. Scand. 66(1-2): 49-57, '66

805. Giacobini, E. & Marchisio, P. C.
The action of tricarboxylic acid cycle intermediates and glutamate on the impluse activity and respiration of the crayfish stretch receptor neurone.
Acta Physiol. Scand. 66(1-2): 58-66, '66

806. Martin, K. & Shaw, T. I.
The formation of ATP by the perfused giant axons of Loligo.
J. Physiol. 184(1): 25P-26P, '66

807. Moguilevsky, J. A., et al.
Effect of castration on the oxygen uptake of different parts of hypothalamus.
Life Sci. 5(5): 447, '66

日米神経化学 Conference 報告—Scieuce 152 (3723) より—

United States-Japan Committee on Scientific Cooperation: Neurochemistry Conference

Under the auspices of the joint United States-Japan Committee on Scientific Cooperation, a conference on the function and metabolism of the nervous system took place 11 - 15 October 1965, at Ohiso, Japan. The scientific cooperation program between the two countries was initiated in 1961 to design and support studies on subjects of mutual interest. This neurochemistry conference was the third in the field of research on the nervous system under the program and brought together 8 American and 9 Japanese participants and 15 Japanese observers. There was no serious language barrier, because most of the Japanese participants and observers had studied in the United States. All the reports were presented in English.

The first session dealt with lipids in the nervous system. J. Folch-Pi (Belmont, Massachusetts) reviewed the structure, composition, and biochemistry of myelin. He discussed the electron-microscopic evidence of the protein-lipid, double-laver structure of myelin and the chemical components of myelin. The lipid part contains cholestrol, cerebrosides, and phosphatides, and all its proteins are soluble in a mixture of chloroform and methanol. The protein obtained from isolated myelin is not identical in composition with the proteolipids obtained from whole white matter because the individual lipids of the preparation influence the extractability of the protein component. The linkage between protein and phospholipid is of various types, such as Van der Waals, coulombic, or ionic; perhaps the most stable is that between proteins and tri-phosphoinositides, which is a saltlike linkage.

K. Hayashi (Maebashi) discussed the possibility that di- and tri-phosphoinositides play a role in excitation. These compounds show a remarkably high turnover, which is stimulated by sodium ions and inhibited by ouabain. They show a very rapid post-mortem depletion.

T. Yamakawa (Tokyo) classified glycolipids into two groups, ceramides hexosides and mucolipids (gangliosides). The composition of these compounds and the ratios of kerasine, phrenosine, and cerebroside sulfuric

ester varied in the brains of various species. These compounds are metabolically active, as glucose or galactose is rapidly incorporated into them.

T. Taketomi (Tokyo) reported on obtaining brain-specific antigens by complexing various lipid haptens with proteins. Artificial antigens can be used to study the immunological activity of lipids, for the immunological study of membrane architecture, and for clarifying the possible role of immunological mechanisms in demyelinating diseases.

As the first speaker on the topic of amino acids and proteins, Y. Tsukada (Tokyo) discussed the relationship between glutamate and ammonia metabolism and brain function. He found that conditioned and unconditioned stimuli increased the concentration of ammonia in the brain, with a return to normal within 60 seconds after the stimulation. No increase occurred when a second stimulus was applied within 2 hours after the first stimulation. Prolonged stimulation resulted in an increase in glutamine in the brain, which can serve for ammonia removal. Enzymes for glutamate metabolism were shown to be localized mainly in mitochondria. Tsukada also described experimental phenylketonuria induced by a high-phenylala nine diet, which resulted in decreased intellectual performance in monkeys. With increasing phenylalanine in the brain, γ-aminobutyric acid was decreased.

A. Ames, III (Boston) summarized his studies of the intracellular and extracellular spaces and the distribution of electrolytes in retina. Incubated, isolated rabbit retina could produce electrical responses to photostimulation, maintain physiological electrolyte distribution, and preserve histological structure for 1 or 2 hours. Glutamate caused swelling, with an increase in sodium, calcium, and cell water.

M. Kohsaka (Okayama) reported on the composition of a low-phenylalanine diet made of available Japanese foods and used in the treatment of phenylketonuria. Such a diet resulted in improvement in patients even if they were over 3 years old. Kohsaka also described changes in the diet for bringing it slowly back to normal. K. Taniguchi (Osaka) showed evidence for the enhanced metabolism of phenylalanine to o-hydroxyphenylacetic acid via phenylpyruvic acid in phenylketonuric patients.

G. Takagaki (Tokyo) discussed the accumulation of D-aspartate in brain slices. This accumulation is accompanied by potassium ions, and asparatate

is accumulated in preference to D-glutamate. Aspartate inhibited the increased aerobic glycolysis caused by the addition of D-glutamate without inhibiting the uptake of potassium ions. These investigations suggest that glutamate and aspartate may play a role in regulating cerebral glucose metabolism.

A. Lajtha (New York) reviewed transport mechanisms that control the concentration of amino acids in the brain. Amino acids are transported by a process that requires energy, and mediated transport occurs not only in the uptake but also in the exit of amino acids. The levels are determined by the processes of uptake, exchange, and exit, and any alteration of the physiological level is most likely the result of alterations in uptake or exit rates, which can be individually controlled.

I. Sano (Osaka) reported the isolation and identification of eight new dipeptides from bovine brains, which were the γ-glutamyl peptides of glutamate, glutamine, glycine, β-aminobutyric acid, serine, alanine, valine, and S-methylglutathione. From the same laboratory, the isolation and identification of some basic dipeptides from bovine brains, such as 3, 7-diamino heptanoic acid, 2, 2'-aminoethyl-3, 7-aminoheptanoic acid, and homocarnosine, were also reported by Y. Kakimoto (Osaka).

Y. Takahashi (Niigata) examined the mechanism of protein biosynthesis in cerebral ribosomal systems. He reported the synthesis of phosphatidyl peptides in microsomal and mitochondrial systems.

S. Ishikawa (Tokyo) reported the rapid labeling of the phosphoserine moiety of brain phosphoproteins by P^{32}-labeled adenosine triphosphate (ATP) in vitro and presented a scheme for the relation of the soluble and particle-bound phosphoprotein kinases to their respective substrates.

Y. Kawakita (Osaka) compared the physicochemical characteristics of of brain microsomes and ribosomes with the respective particles in other tissues. After the molecular size, sedimentation pattern, RNA content, and the base composition of the RNA of the various particulate fractions were determined, the fractions were examined in the electron microscope. Incorporation of P^{32} into various RNA's was measured, with the highest specific activity being found in the nuclear fraction.

O. Hayaishi (Kyoto) investigated the biosynthesis of nicotinamide adenine

dinucleotide (NAD) in rat brain with subarachnoidally administered C^{14}-labeled precursors. Nicotinic acid was rapidly converted to NAD, but tryptophan could not be utilized as a precursor because quinolinate transphosphoribosylase is not present.

In sessions on biogenic amines, S. Udenfriend (Bethesda. Maryland) reviewed the biosynthesis of noradrenaline, involving tyrosine hydroxylase, 3,4-dihydroxyphenylalanine decarboxylase, and dopamine-β-hydroxylase. Tyrosine hydroxylase was suggested as a rate-limiting step in the overall synthesis. It was shown that the turnover rates of noradrenaline varied from tissue to tissue and, within a tissue, depend on factors which influence sympathetic activity.

M. Kurokawa (Tokyo) reported on the Na-K-adenosine triphosphatase in nerve-ending particle fractions, obtained by Ficoll density gradient ultracentrifugation. The enzymic activity in the fraction was localized in the synaptosomal limiting membrane rather than in the synaptic vesicles. Such studies show the physiological significance of the synaptosomal membrane, which represents a special type of membrane system characteristic of the nervous tissue. A study on the metabolism of monoamines in pigeon brain was presented by R. Takahashi (Tokyo), who reported the inhomogenous distribution of monoamines and their related enzymes. He found a linear correlation of the levels of at least three of four neurohumors in each brain area.

J. Axelrod (Bethesda, Maryland) discussed the uptake, storage, release, and metabolism of catecholamines in the adrenergic nervous system. H^3-noradrenaline is selectively taken up in tissues rich in adrenergic nerves, although this amine hardly crosses the blood-brain barrier. When the sympathetic nerves were denervated, noradrenaline uptake and retention were not observed. Noradrenaline which was taken up was localized in the sympathetic synaptic vesicles. Stimulation of sympathetic nerves caused a release of noraderenaline. When H^3-noradrenaline was introduced into the lateral ventricle, if rapidly mixed with the endogenous brain noradrenaline and was taken up in the synaptosomes. Imipramine and amphetamine blocked this uptake. This neurohumor is stored in an easily releasable and more firmly bound form.

O. Hayaishi described the properties of the particle-bound tryptophan-

5-hydroxylase. This enzyme, which with a decarboxylase converts tryptophan to serotonin, is highly concentrated in brain. It is located in the same particle as the decarboxylase, where the product, serotonin, also is stored.

T. Nagatsu (Nagoya) purified mitochondrial monoamine oxidase of brain by the combined use of cutscum and sonication. This made it possible to investigate some of its properties, such as substrate specificity and *p*H optimum, and it was found that it is a metal-dependent sulfhydryl enzyme.

M. Ozaki (Nagoya) studied the metabolism of monoamines in a hypertensive strain of rats. The higher concentrations of serotonin and noradrenaline in the tissues of this strain are due to the lower activity of monoamine-oxidase in the liver and to renal dysfunction. This was indicated by the effects of nephrectomy and of adrenalectomy on amine levels.

H. Utena (Maebashi) reported behavior abnormalities and changes in brain constituents in mice and cats during prolonged administration of metamphetamine. The animals showed marked reduction of motor activity. The ammonia content of the brain was decreased and acetylcholine was increased; the amounts of AIP. creatine phosphate, and lactic acid were not changed. Serotonin concentration increased in most brain areas and decreased in the caudate nucleus. The time course of these changes paralleled behavioral aberrations.

E. W. Sutherland (Nashville, Tennessee) described his studies on adenylcyclase. This enzyme, which catalyzes the formation of cyclic adenylic acid (AMP), is particularly high in mammalian brain. A number of physiological and biochemical actions of catecholamines can be explained by the increased accumulation of cyclic AMP in the tissues. The accumulation is a result of the stimulatory effect of amines on adenyl cyclase. This enzyme in brain is stable in association with particulate material, but is very labile when solubilized. The significance of this enzyme in brain was discussed in relation to membrane permeability and neuronal function. Purification of adenyl cyclase from bacteria was reported by O. Hayaishi who found that, in addition to magnesium, another low-molecular cofactor is essential for enzyme activity.

M. G. Larrabee (Baltimore, Maryland) discussed metabolic changes caused by electric stimulation in excised cervical sympathetic ganglia. Ex-

citation produced increase in oxygen consumption, production of carbon dioxide, glucose utilization, and lactate formation, while lack of glucose or oxygen impaired synaptic transmission. It seems likely that the oxidation of glucose is the main energy source for maintenance of activity in sympathetic ganglia. Electric stimulation also increased incorporation of P^{32} into phosphatidyl inositol; this increase was eliminated by curare, a blocking agent for synaptic transmission.

Y. Nagata (Tokyo) discussed the changes in amino acid metabolism in excised cervical sympathetic ganglia upon electrical stimulation. Absence of γ-amino-butyric acid (GABA) and its related enzymes in the ganglia was indicated, and although certain amino acids accumulated, no GABA uptake could be shown.

O. H. Lowry (St. Louis, Missouri) described his microanalytical methods which make it possible to measure substrate levels and enzyme activities in single nerve cells. By measuring changes in metabolite levels in the first few minutes after death, major control steps in glucose metabolism could be established. These seem to be those which are concerned with the phosphorylation of glycogen, glucose, and fructose-6 phosphate.

M. Satake (Niigata) described his technique for obtaining pure neuronal perikaria by sucrose density gradient centrifugation after gentle homogenization of the tissue in a solution of sucrose-glycrol-acetone. The isolation made it possible to determine protein, RNA, and DNA content of perikaria. He found a rapid incorporation of C^{14} lysine into nerve-cell proteins.

H. Naruse (Tokyo) discussed the mechanism of carbon dioxide fixation into amino acids and into intermediates of the tricarboxylic acid cycle in nervous tissue. This mechanism might participate in the regulation of carbohydrate metabolism.

S. Hirano (Tokyo) analyzed the mechanism of incorporation of P^{32} from ATP into microsomal proteins. This is the fraction in which Na-K-adenosine triphosphatase is concentrated, and phosphorylation of an unstable intermediate may be a part of the activity of transport adenosine triphosphatase. H. Yoshida (Osaka) reported that calcium binding in brain microsomal and nerve ending particles is accelerated by ATP and magnesium, which suggests a possible role of this reaction in the neuronal excitation-inhibition processes.

J. Axelrod reported the neural regulation of hormonal secretion of the pineal gland. This gland synthesizes and secretes melatonin, which has an inhibitory action on the gonads. The amount of melatonin and the activity of the enzyme which synthesizes it are decreased by continuous light. The effect of light is transmitted to the pineal gland from the eyes by way of the cervical sympathetic nerves. The pineal gland responds to the diurnal change of light and shows the circadian rhythm, being highest at midnight and lowest at noon. Thus the pineal gland may be one of the biological clocks in the body.

R. Takahashi discussed changes in brain ammonia and acetylcholine content caused by electrically induced convulsions in mice. He stressed the close relation between the level of acetylcholine in the brain and the threshold of electric stimulation for convulsions.

O. H. Lowry discussed the major control steps of the various pathways of carbohydrate metabolism in the brain. He analyzed the substrate concentrations and the sequential changes in these concentrations in anoxia. He also discussed mechanisms controlling metabolic rates.

Y. Tsukada reported the incorporation of P^{32} in vitro into highly polymerized RNA in the isolated rabbit retina in which the electrical responses to light stimulation could be recorded. Nuclear RNA was actively labeled in both light and dark conditions although no such incorporation occurred in brain cortex slices. The rapidly labeled RNA was not identical with ribosomal RNA in its sedimentation in sucrose density gradients.

Discussion after formal presentations dealt with the present findings and future possibilities in the relationship between neural function and metabolic regulation in the nervous system. The evidence for the participation of biochemical processes in memory were discussed, and also a possible differentiation between short and long term memory on biochemical grounds.

The topic of the roundtable session was metabolic compartmentation. G. Takagaki, H. Naruse (Tokyo), and A. Lajitha discussed the metabolic compartments of amino acids, especially glutamic acid, in the brain. M. Kurokawa (Tokyo) reported compartments of acdtylcholine in brains of normal and epileptogenic mice in the subcellular particles. The discussion centered on the structural basis of these compartments and the compartments of enzymes

and substrates. The influence of such compartments on kinetic measurements of metabolic rates was stressed.

YASUZO TSUKADA
ABEL LAJTHA
Keio University, Tokyo, Japan, and
New York State Research Institute for
Neurochemistry and Drug Addiction,
New York, New York

DEVELOPING BRAIN

No. 16 August, 1966

News seems to be rather scarce this summer. I sometimes feel this newsletter is becoming largely a bibliography of recent publications on the developing brain. I am not sure this is a bad idea but would find it much more enlivening to have news to report. As always I would appreciate changes of addresses, new staff members, news of trips to Europe, of grants received, etc. Some of this information I get by the grapevine but I prefer to have you send it to me.

****

CURRENT CONTENTS: 9: June 14, 1966

Adams, D. H. and Lim, L. Amino acid incorporation by preparations from the developing rat brain. Biochem. J., 99: 261, 1966. Berl, S. and Purpura, D. P. Regional development of glutamic acid compartmentation in immature brain. J. Neurochem., 13: 293, 1966. Bovet, D., Bovet-Nitti, F. and Oliverio, A. Short and long term memory in two inbred strains of mice. Life Sci., 5: 415, 1966. Freyz, L., Bieth, R. and Mandel, P. Les inositolphosphatides du cerveau de rat au cours de la croissance postnatale. Bull. Soc. Chim. Biologique (France), 48: 287, 1966. Koch, R., Williamson, M. L., Donnell, G. N., Guthrie, R., Straus, R., Coffelt, W. and Fish, C. H. A cooperative study of two methods for phenylalanine determination: McCaman-Robins fluorimetric and microbiologic inhibition methods. J. Pediat., 68: 905, 1966. Lee, C. S. N., Boyer, S. H., Bowen, P., Weatherall, D. J., Rosenblum, H., Clark, D. B., Liboro, C., Bias, W. and Borgaonkar, D. S. The D_1 trisomy syndrome: three subjects with unequally advancing development. Bull. Johns Hopkins Hosp., 118: 374, 1966. O'Brien, J. R., Usher, R. H. and Maughan, G. B. Causes of birth asphyxia and trauma. Can. Med. Assoc. J., 94: 1077, 1966. Peters, J. M. and Krijnen, C. J. Organ weights and water contents of rats fed purified diets. Growth, 30: 99, 1966. Roubicek, C. B. Stress adaptation in the rat as measured by postweaning growth.

Growth, 30: 79, 1966. Scarpa, F. J. and Borgaonkar, D. S. A-V communis defect in trisomy E_1 (17-18): report of a case. Bull. Johns Hopkins Hosp., 118: 395, 1966. Spencer, R. P., Coulombe, M. J. and Van Wagenen, G. Intraspecies comparison of fetal growth. Growth, 30: 1, 1966. Yarbro, M. T. and Anderson, J. A. L-Tryptophan metabolism in phenylketonuria. J. Pediat., 68: 895, 1966.

CURRENT CONTENTS: 9: June 21, 1966.

Hinde, R. A., Spencer-Booth, Y. and Bruce, M. Effects of 6-day maternal deprivation on rhesus monkey infants. Nature, 210: 1021, 1966. Hrbek, A., Vitova, Z., Mares, P. Optic evoked potentials in children, using different stimulation frequencies. Physiol. Bohemoslov., 15: 201, 1966. Nygren, A. Serum creatine phosphokinase activity in chronic alcoholism in connection with acute alcohol intoxication. Acta Med. Scand., 179: 623, 1966. Oja, S. S. and Piha, K. S. Changes in the concentration of free amino acids in the rat brain during postnatal development. Life Sci., 5: 865, 1966. Reinis, St., Obrucnik, M. and Kotrle, M. Some histochemical changes in the central nervous system of the rat after its surgical damage in different developmental stages. Acta Histochem., 23: 94, 1966. Trojanova, M. and Mourek, J. The effect of thyroidectomy at early ontogenetic stages upon oxidative processes in the rat brain. Physiol. Bohemoslov., 15: 231, 1966.

CURRENT CONTENTS: 9: June 28, 1966.

Levine, S. and Mullins, R. F., Jr. Hormonal influences on brain organization in infant rats. Science, 152: 1585, 1966. Work, H. H. Something wrong with his brain--II. Am. J. Dis. Children, III: 571, 1966. Work, H. H. and Haldane, B. A. Cerebral dysfunction in children. Am. J. Dis. Children, III: 573, 1966.

CURRENT CONTENTS: 9: July 9, 1966

Johnson, T. C. and Luttges, M. W. The effects of maturation on in vitro protein synthesis by mouse brain cells. J. Neurochem., 13: 545, 1966.

CURRENT CONTENTS: 9: July 12, 1966.

Farkas-Bargeton, E. and Thieffry, M. S. Maturation histoenzymologique du cortex cérébelleuz et de la corne d'Ammon chez l'enfant. Comp. Rendu., 262: 2271, 1966. Hagberg, B., Hamfelt, A. and Hansson, O. Tryptophan load tests and pyridoxal-5-phosphate levels in epileptic children. I. Non-progressive brain damage and degenerative brain disorders. Acta Paediat. Scand., 55: 363, 1966. Hagberg, B., Hamfelt, A. and Hansson, O. Tryptophan load tests and pyridoxal-5-phosphate levels in epileptic children. II. Cryptogenic epilepsy. Acta Paediat. Scant., 55: 371, 1966. Lauria, P. and Sharma, V. N. Effects of three recently synthesized indole derivatives on central nervous system. Indian J. Med. Res., 54: 374, 1966. Menkes, J. H., Philippart, M. and Concone, M. C. Concentration and fatty acid composition of cerebrosides and sulfatides in mature and immature human brain. J. Lipid Res., 7: 479, 1966. Venkatachalam, P. S. and Ramanathan, K. S. Severe protein deficiency during gestation in rate on birth weight and growth of offspring. Indian J. Med. Res., 54: 402, 1966.

****

CALLING ATTENTION TO:

The First International Meeting of the International Society for Neurochemistry will be in Strasbourg, France, July 23-28, 1967. The meeting is open to all interested persons but the number of participants will be limited to the capacity of the local facilities. The general theme of the meeting is BIOCHEMICAL FACTORS CONCERNED IN THE FUNCTIONAL ACTIVITY OF THE NERVOUS SYSTEM. For further information communicate with: Dr. J. Folch-Pi, McLean Hospital, Belmont, Massachusetts - 02178.

****

A meeting to be held in Coimbra, Portugal, July 12-15, 1967 by the Neurochemical Commission of the World Federation of Neurology on "Cerebral lipidosis". Information can be obtained from: Dr. A. Lowenthal, Neurochemical Laboratory of the Born-Bunge Foundation, 59, rue Philippe Williot - Berchem-Antwerp, Belgium.

****

NEW BOOKS:

Contributions to Developmental Neuropsychiatry, L. Bender (Ed.), P, Shilder, International Universities Press, Inc., New York.

Advances in the Study of Behavior, D. S. Lehrman, R. A. Hinde and E. Shaw (Eds.), Volume 1, Academic Press, New York and London.

WFN Neurochemistry Symposium

来年7月12～15日，Coimbra, Porlugalでシンポジュームが開催される。
これについて，A. Lowenthalよりの Informationの抜萃を掲載する。

We have the intention of organizing a Symposium in 1967 devoted to cerebral lipidosis (included spongy idiocy, leucodystrophy, gargoylism, Refsum's diseases, Fabri's diseases and the classical lipidosis ...) and particularly a comparison of results obtained by anatomopathological and biochemical clinical examinations. We truthfully hope that these confrontations will succeed in specifying the definition of cerebral lipidosis and will also result in the classification and assumption of useful work in the future.

The Symposium will take place in 1967, July 12-15 at Coimbra. All information concerning room reservations and local conditions will be given to you by

Prof. A. Nunes Vicente
Clinica de Santa Teresa
Penedo de Saudada
Coimbra, Portugal

During this Symposium, 25 to 30 communications will be presented. Each speaker will be allowed 20 minutes. A general discussion will terminate the Sumposium before the synthesis of the speakers. Only speakers and authors of accepted communications will be allowed to present a work. To all others present at the Symposium, participation will be open and they may intervene during the discussion. Last date for inscription: 1st January 1967, abstracts should be sent before 1st April, 1967 to Dr. Guazzi ar to me (Dr. A. Lowenthal) at the Born-Bounge Foundation, 59, rue Philippe Williot, Berchem-Antwerp, Belgium.

Subscription rate will be fixed at $20.00. More favorable conditions can be accorded eventually on request. Those of you who may have difficulties in obtaining a travel grant are asked to contact the Secretariat and we shall do everything possible to help you with governmental or academic authorities.

第9回　神経化学懇話会

プ　ロ　グ　ラ　ム

会長　　佐　野　　勇

日　　時　　昭和41年10月7日（金）・8日（土）
午前9時より

会　　場　　北御堂本願寺大阪津村別院1階講堂
大阪市東区本町4の27　電話　大阪 261－6796

第1日　－10月7日(金)－

9：00～12：00

1．脳アセチルコリンの新抽出法(10分)……融　道男（東京医歯大，神経）
M・H・Aprison（インディアナ大，生化）

2．鳥脳のカテコールアミン代謝，(2)モノアミンオキシダーゼ（MAO）の特性(10分)
……十河孝博，高橋　良（東京医歯大，神経）

3．脳の Carnitine 定量法の吟味(10分)……斉藤章二，松本茂信，徳永友喜子（慶大，医，薬理）
木原弘二（慶大，医，分子生物）

4．人脳内および動物組織内のホモカルノシンの定量(5分)
……金沢　彰，宮本英七，公文　明，佐野　勇（阪大，医，神経）

5．ウシ脳からの－N－アセチル－α－アスパラチルグルタミン酸の精製，同定および動物体内分布(15分)
……宮本英七，柿本泰男，公文　明，佐野　勇（阪大，医，神経）

6．フラビンの血液・脳関門透過性と脳内の FAD，FMN生合成(5分)……永津俊治（愛知学院大，歯，生化）
永津郁子（名大，医，解剖）
奥田　潤，八木国夫（名大，医，第一生化）

7．ニコチン酸ヌクレオチドの脳細胞膜透過性とその代謝経路(15分)
……出口武夫，市山　新，西塚泰美，早石　修（京大，医，医化）

8．脳乳酸脱水素酵素アイソザイムの研究，II，発育過程におけるホルモンおよびアクチノマイシンD
の影響(10分)……伊藤　斉，三浦貞則，森　文彦，舛沢都二，浅香富允（慶大，医，神経）

9．脳ミトコンドリアの特性，特にMg^{++}の脳ミトコンドリアに対する作用(10分)
……瀬田喜一郎，荒木　裕，小沢和恵，半田　肇（京大，医，脳神経外科）

12：00～13：00　　昼　食[委員会]

13：00～14：30

10．神経系細胞核の研究――ノイロイ性と非ノイロン性核の分別分離法――(15分)
……加藤尚彦，黒川正則（東大，医，脳研）
稲村　博（東大，医，精神）

11．神経系細胞核の研究――ATP：NMN・アデニリルトランスフェラーゲ活性――(10分)
……黒川正則，加藤尚彦（東大，医，脳研）
稲村　博（東大，医，精神）

12．脳灌流法によるネコ脳代謝の研究(10分)
……大月三郎，渡辺昌祐，森光淳介，枝松一安，中島良彦，帆秋孝幸，二宮淳明（岡山大，医，神経）

13．脳解糖呼吸系の研究，（I）アミノ酸・アセチルコリンとの関係(15分)……成瀬　浩（国立精神衛生研）
永山素男，中村陸郎（東大，医，神経）
S－C, Cheng（コロンビア大）

――休　憩（20分）――

14：50～16：20

14．モルモット大脳皮質切片におけるγ-アミノ［1－^{14}c］酪酸の代謝(15分)……町山幸輝（東大，医，精神）
R. Balázs, D. Richter (MRC Neuropsychiat. Res. Unit, England)

15．脳組織の解糖系の調節(10分)……高垣玄吉郎（慶大，医，生理）

16．節後神経切断・白鼠剔出交感神経節のアミノ酸代謝の研究(10分)……永田　豊，渡部昌子（東邦大，医，2生理）
塚田裕三（慶大，医，生理）

17．脳組織の3′，5′－AMP濃度に及ぼす神経ホルモンの影響(15分)……垣内史郎（大阪府立中宮病院）
T. W. Rall (Western Reserve Univ.)

16：20

特別講演（30分）　Recent Studies on Pharmacodynamic Amines.
BERNHARD WITKOP (NIAMD, NIH, Bethesda, Maryland, U.S.A.)

18：00～

懇親会　　於　随　園

第2日　—10月8日(土)—

9：00～11：45

18. Glia Cell-Line（培養株）とその性状——とくに細胞別の単離培養株との比較から——(10分)
……中沢恒幸，鶴水　隆，望月延泰（慶大，医，神経）
塚田裕三，野口鉄也（慶大，医，生理）
立沢　寧（慶大，医，相沢内科）

19. 異染性白質変性症およびGargoylism脳皮質の脂質分析　—糖脂質の変化を中心として—(10分)
……横井　晋（群大，医，精神神経）酒井正雄，田野稔郎，金子善彦（横浜市大，医，神経）

20. 中毒性神経障害時のポルフィリン体とCoA活性（第1報）(10分)……猪股丈二，中沢恒幸（慶大，医，神経）
高杉　正，須藤忠四，中山栄基，菊野正隆（上智大，理，生物化学）

21. 「水俣病」の発病機構，とくに「水俣病」原因物質の胎仔への移行についての実験的研究(10分)
……清田一民，井上　赳，高木元昭，藤田英介，寺岡　葵（熊大，医，精神）

22. 慢性覚せい剤中毒動物脳の解糖減退機序の解析(5分)……加藤伸勝，小林暉佳，江副　勉（都立松沢病院）

23. 慢性覚せい剤中毒動物の脳セロノニンと関連酵素活性(5分)
……高野介佐，五十貝いち，船渡川誠一郎（群大，医，精神）
台　弘（東大，医，精神）

24. Methamphetamine 慢性中毒マウスの行動ならびに脳内アンモニアに対する NH_4Cl 投与の効果(10分)
……荒川　泰（群大，医，精神）
台　弘（東大，医，精神　）

25. 躁うつ病とカテコールアミン代謝(10分)……長尾佳子，高見沢ミサ，土屋健二，小林暉佳，
小林健一，仮屋哲彦，高橋　良（東京医歯大，医，神経）

26. Eck氏瘻犬におけるL－トリプトファン誘発性「昏睡」(5分)……荻原一晃，茂在敏司（東大，医，中尾内科）
平井俊策（東大，医，老人）

12：00～13：00　昼　食（常任委員会）

13：00～13：30　総　会（会名・会則変更の重要議題があります。出来るだけ御出席下さい。）

13：30～15：25

27. リボヌクレオシド—2′，3′—環状フォスフォジェステラーゼの神経組織に於ける分布(10分)
……栗原　正，塚田裕三（慶大，医，生理）

28. 神経組織の蛋白質の抽出分離に関する研究(15分)……野口鉄也，野村正彦，塚田裕三（慶大，医，生理）

29. 白鼠神経細胞体蛋白えのアミノ酸の取り込みに対する麻酔剤の影響(10分)
……佐武　明，阿部幸子，松川恵子（新大，医，脳研）

30. 脳ポリソームの調製(15分)……高橋康夫，鈴木雄二（新大，医，脳研）

31. ラッテ脳ミクロゾームの免疫化学的研究(15分)……植村慶一，塚田裕三（慶大，医，生理）

——休　憩　(20分)——

15：45～16：55

32. 実験的アレルギー性脳脊髄炎（EAE）の脂質化学的研究——I（10分）
……立沢　寧，相沢豊三（慶大，医，相沢内科）

33. 脳脂質に関する研究——第II報，髄鞘形成期のニワトリ脳脂質への ^{14}C－acetate および
^{14}C－glucose　のとりこみについて——(5分)……立沢　寧（慶大，医，相沢内科）
菅野剛史（慶大，医，医化）
中沢恒幸（慶大，医，神経）

34. [γ－^{32}P]ATPによる脳のイノシタイドおよびホスファチヂンへの ^{32}P 組入れ（10分）
……林　浩平，八木原嘉幸，中村　勇，片桐　章，荒川　泰，山添三郎（群大，医，生化）

35. 脳隣脂質への ^{32}P の取り込みにおよぼすINAH痙攣の影響について（5分）
……田尾重良，鈴木　隆，小林義康（北大，医，精神）

（　　）内は各自講演時間

神経化学懇話会常任委員会議事録

昭和41年8月6日(土)
於：東　京

出席者：林　浩平，石川晋次，川北幸男，小林龍男，高坂睦年
黒川正則，成瀬　浩，佐野　勇，高垣玄吉郎，高橋　良
高橋康夫，田崎義昭，塚田裕三，宇尾野公義，
欠席者：鳩谷　竜（外国留学中）　　事務局　　永田　豊

1：神経シンポジウムの件

昭和43年春，新潟大学で神経学会，神経病理学会，筋電図学会等が合同して神経シンポジウムが開催される予定である。神経化学懇話会もこれに対して参加を求められたが，本会としては，Joint-Meeting には参加するが，研究発表会は新潟では行わないことになった。

2：国際生化学会の件

昭和42年8月　東京に於て，国際生化学会が開催されるが，神経化学関係では英国のMcllwain，仏国の Mandel 等の来日が予想されている。これら諸学者をまじえた会合を行う件については，更に来日学者のメンバーが出揃ったあとで次期常任委員会で協議することとなった。

3：Tower 博士講演会の件

昭和42年春，名古屋に於て，開催される医学会総会に米国NIHの D. Tower 博士が来日される。その機会に東京に於ても講演会を開催することになった。

期日：昭和42年4月11日（火）午后
場所：東京・第一製薬株式会社　会議室

4：中間会計報告ならびに第9回懇話会運営費の件

昭和41年度の賛助会費の集りが悪いので，事務局より催促状を出すようにする。本年度の経理状況は順調であるので，大阪での研究発表会の運営費として200,000円を支出することを可決した。

昭和41年度上半期会計報告

（昭和41年1月1日～41年6月30日）

収　入		支　出	
一般会費	179,300	会議費	63,140
賛助会費	10,000	通信連絡費	61,325
雑収入	7,000	備品費	6,000
計	196,300	人件費	97,000
		交通連絡費	8,490
前年度繰越金	1,675,654	文房具費その他	22,556
		計	258,511
計	1,871,954		
		本年度残金	1,613,443

第9回　神経化学懇話会運営費予算

会　場　費	50,000
会　議　費（委員会食事代を含む）	50,000
謝　　金（ウイトコップ博士）	20,000
事　務　費	50,000
アルバイト代（延20人）	30,000
	200,000

内50,000円は送金済　　7月21日に送付
昭和41年8月6日

5：神経化学会会則変更の件

「日本神経化学会」発足にあたり，役員選出方法に議論が集中し，理事を会員中より直接選出するよりも評議員を選出した上で，その中から理事を互選した方がよいのではないかという意見もあったが，事務手続の簡易さと，役員選挙の大義名文から事務局の原案通り直接選挙を行うことに決定した。尚会則変更についての論義の焦点は従来からの「神経化学懇話会」のもつ若さと情熱が失われ，ややもすると大学会の弊風とみられる大御所のみによって役員が占められ，具体的運営に清新の気風が失われるおそれがあるということであった。これらの点は会員各自の自覚にまつ以外になく，一応すじの通った会則を作製することに意見の一致をみた。本原案を10月7日の神経化学懇話会総会に提出し，最終的に決定する。

6：機関紙「神経化学」投稿規定の件

従来「神経研究の進歩」に掲載していた論文集は，本年度からは，「神経化学」に原著論文として分割掲載することゝなった。従って原著論文の投稿規定が必要となり，新編集委員会が発足する迄暫定的な投稿規定が必要となり，事務局より出された原案を可決した。尚学会での討論は各論文の要約と共に「神経化学」に掲載する。

7：昭和42年度会長候補選出の件

千葉大の小林龍男教授（薬理学）にお願いし，東京で開催することとなった。

8：第9回　神経化学懇話会プログラム編成の件

本年度も昨年度と同様各常任委員が応募論文について事前に充分検討した上で採否の決定を行った。

応募論文40篇，このうち不採用としたもの9篇，同一研究室より出された同一系統の論文2篇をまとめて1篇として発表するもの2篇，合計35篇の研究発表を行うこととした。採用論文の口演時間については，希望時間を参考にして時間的調整を行った。本年度不採用としたものは，内容に新鮮味のないものおよびデーターが不足しており，討論の材料になり難いものである。

[編　集　後　記]

編集の手ちがいで，裏表紙に出ている目次と本誌の内容が大巾に変ってしまいました。ほんとうの目次は下記の通りです。

[神経化学文献]…… 129
日米神経化学 Conference 報告—Scieuce 152 (3723) より …… 156
Developing Braiu, No. 16 (August, 1966)…… 164
WFN Neurochemistry Symposium, 1967 …… 168
第9回神経化学懇話会プログラム(於大阪)…… 169
神経化学懇話会常任委員会議事録…… 173

編集委員　(ABC順)

鳩谷　竜　　川北　幸男　　高坂　睦年　　黒川　正則
成瀬　浩　　佐野　勇　　佐藤　倚男　　高垣玄吉郎
高橋　良　　高橋　康夫　　塚田　裕三　　宇尾野公義

昭和41年8月25日　印刷　　神経化学　第5巻　第4号
昭和41年8月28日　発行
編集者　(代表) 塚田裕三
編集所　東京都新宿区信濃町35番地　慶応義塾大学医学部生理学教室内　日本神経化学会事務局
印刷及製本　東京都文京区後楽1丁目5番地　中央商会
表紙印刷所　東京都北区西ヶ原3丁目46番地　杏林舎
発行所　東京都文京区曙町11番地　緒方書店

会員外の方で本誌の希望は、実費でお頒けしますから上記の編集所宛にお申出下さい

神 経 化 学　　VOL. 5 NO.4

目　次

〔神経化学文献〕

日米神経化学コンファレンスの記録 (Nature 掲載)

〔書　架〕

緒 方 書 店 刊