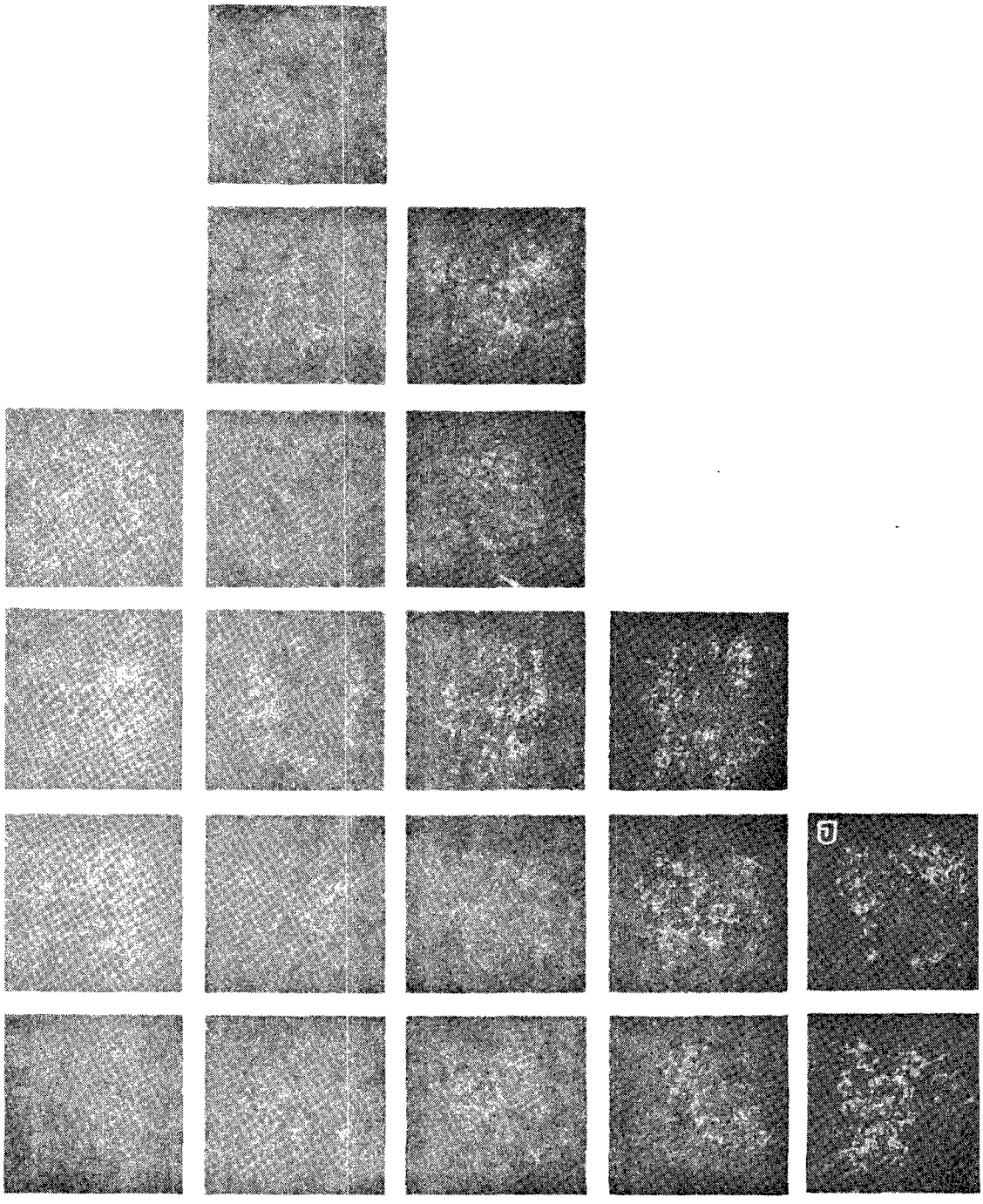
神経化学

VOL. 4 NO. 3 JUNE 1965



神 経 化 学 懇 話 会

—神経化学文献—

凡例

1）*印はこの号に，その雑誌から拾い出した神経化学文献表題がのっていることを示します。

2）右側の巻(号)は，その雑誌のその巻(号)について目を通してしらべたことを示します。従って右側に巻(号)が記載されていながら*印のないものは，神経化学文献が見当らなかったことを示すわけです。

1. REVIEWS

Ergebn. Physiol.
Pharmacol. Rev.
Physiol. Rev.

2. FUNDAMENTALS

General:

Analyst
Analyt. Chem.
Exp. Cell Res.
*Fed. Proc. ..... 24(1, 3) Translation Suppl. (1, 2, 3)
J. exp. Med.
Life Science
Nature
Naturwissenschaften
Proc. nat. Acad. Sci. (Wash.)
Proc. roy. Soc. B.
Proc. Soc. exp. Biol. (N. Y.)
Science

Biochemical:

Arch. Biochem. Biophys.
Biochem. biophys. Res. Comm.
Biochem. J.
Biochim. biophys. Acta
Biochemistry (USSR)
Canad. J. Biochem. Physiol.
Hoppe-Seylers Z. physiol. Chem.
J. Amer. chem. Soc.
J. biol. Chem.
J. Cell Biol.
J. Histochem. Cytochem.
*J. Neurochem. ..... 12(1, 2, 3)

Pharmacological:

Biochem. Pharmacol.
Brit. J. Pharmacol.
J. Pharmacol. exp. Ther.
Psychopharmacol.

Physiological:

Acta physiol. scand.
Amer. J. Physiol.
J. Cell. comp. Physiol.
J. gen. Physiol.
J. Neurophysiol.
J. Physiol.
Pflüg, Arch. ges. Physiol.

3. CLINICALS

Acta neurol. scand.
Acta psychiat. scand.
Amer. J. Psychiat.
Ann. med.-psychol.
Arch. gen. Psychiat.
Arch. Neurol.
Arch. Psychiat. Nervenkr.
Brain
Brit. J. Psychiat.
Clin. chim. Acta
Dtsch. Z. Nervenheilk.
Electroenceph. clin. Neurophysiol.
Encephale
Endocrinology
Epilepsia
Exp. Neurol.
Fortschr. Neurol. Psychiat.
J. clin. Endocr.
J. clin. Invest.
J. Endocr.
J. nerv. ment. Dis.
J. Neuropsychiat.
Nervenarzt
Neurology (Minneap.)
Psychiat. et Neurol.
Schweiz. Arch. Neurol. Psychiat.

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BASIC_NEUROLOGY

An INTRODUCTION TO THE STRUCTURE AND FUNCTION OF THE NERVOUS SYSTEM

by J. P. SCHADÉ

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DEPARTMENT OF ANATOMY, STATE UNIVERSITY OF NEW YORK. DOWNSTATE MEDICAL CENTER, BROOKLYN (N. Y.)

ELSEVIER PUBLISHING COMPANY / Amsterdam London New York / 1965

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—ニュース—

神経化学・外人招待講演会のお知らせ

第8回　神経化学懇話会の招待外人講演会が9月16日(木)，東京平川町全共連ビルで開催されます。
招待外人学者達は第23回国際生理科学会議に来日される欧米一流学者たちばかりです。
猶当日迄に発表演題の抄録集を配布する様に致します。来日学者の名前及び発表演題名は下記の通りです。

INVITED LECTURES

Thursday, September 16th, 1965, at Zen-Kyo-Ren Building, Tokyo.

"Neurochemical correlates of behavior"

- Dr. M.H. APRISON, Professor of Biochemistry, Indiana University Medical Center, Indianapolis, Ind. U.S.A.

"Neurochemical studies in subcellular fractions of the brain"

- Dr. E. De ROBERTIS, Professor and Director of Institute, Instituto de Anatomia General y Embryologia, Facultad de Ciencias Medicas, Universidad de Buenos Aires, Buenos Aires, Argentina

"The interaction of injected reserpine and dihydroxyphenylalanine or D-amphetamine on electrophysiological and behavioral responses in a conditioned situation in the cat"

- Dr. K.F. KILLAM, Associate Professor of Pharmacology, Stanford University, School of Medicine, Palo Alto, Calif. U.S.A.

"The effect of psychotropic drugs on the metabolism of cerebral monoamines"

- Dr. A. PLETSCHER, Professor and Director of the Medical Research Department, F. Hoffmann-La Roche Co. Ltd., Basle, Switzerland

"Trend in developmental neurochemistry"

Movie: "Basic mechanism in neurophysiology"

- Dr. J.P. SCHADÉ, Associate Director, Netherlands Central Institute for Brain Research, Amsterdam, The Netherlands

"Protein specificity and nervous functions"

- Dr. F.O. SCHMITT, Institute Professor and Professor of Biology, Massachusetts Institute of Technology, Cambridge, Mass. U.S.A.

"The enzymic basis for the active transport of Na^+ and K^+ through the cell membrane"

- Dr. J.C. SKOU, Fisiologisk Institut, Aarhus Universitet, Aarhus C. Denmark

****

第23回　国際生理科学会議について

第23回国際生理科学会議（XXIII International Congress of Physiological Sciences）は来る9月1～9日，東京に於て開催されることになっており，すでにプログラムも大要が決定している。最終プログラムは会議の直前に完成する予定であるが Provisional Program は“Schedule of Scientific Sessions”として6月下旬，登録会員に発送された。

12の招待講演と12のシンポジウムが予定されており，発表口演（Free Communication）は1200題に及んでいる。6月末現在の参加申込者は国内1200名，外国1500名である。

会場は霞ケ関の国立教育会館を第一会場とし第二会場は有楽町の日生会館である。両会場の間には無料バスが運行される。

招待口演及びシンポジウムの論文をおさめたProceedingsはオランダのExcerpta Medica Foundationで発行され，会議に間に合うよう日本にとどくことになっている。会議のAbstracts VolumeにはFree CommunicationのAbstracts のほか，招待講演及びシンポジウムのAbstractsも含まれており，会議の会員に配布される。尚，これらのProceedings及びAbstracts Volumeは登録会員とならなくても購入することが出来る。

会議のプログラムのうち，神経化学の領域に関連した，懇話会の会員に興味あると思われる部分を以下にあげることとする。

XXIII INTERNATIONAL CONGRESS OF PHYSIOLOGICAL SCIENCES

President: Genichi Kato

September 1 - 9, 1965

INVITED LECTURES

Saturday Morning, September 4, Congress Hall, National Education Center.

Intra- and extracellular analysis of mechanism in motor control.
- R. Granit, Karolinska Institutet, Stockholm, Sweden.

The control of neuronal activity by postsynaptic inhibitory action.
- J. C. Eccles, Australian National University, Canberra, Australia.

Saturday Afternoon, September 4, Room 601, National Education Center.

The physiology of motor nerve endings.
- B. Katz, University College, London, U. K.

Tuesday Morning, September 7, Room 602, National Education Center.

Excitation and inhibition in smooth muscle.
- Edith Bulbring and H. Kuriyama, University of Oxford, U. K. and Kyushu University, Fukuoka, Japan.

Tuesday Afternoon, September 7, Grand Hall, Nissei Kaikan.

Receptor mechanism in human vision.
- G. Wald, Harvard University, Cambridge, Mass. U. S. A.

SYMPOSIUM

Friday Afternoon, September 3, Congress Hall: National Education Center.

NEURAL MECHANISM OF CONDITIONED REFLEX AND BEHAVIOR

Organizer and Chairman: K. Lissak (Hungary)
Co-chairman: N. Yoshii (Japan)

Introductory remarks. - K. Lissak (Hungary)

Electrophysiological patterns and cerebral impedance characteristics in orienting and discriminative behavior
- W. A. Adey (U. S. A.)

Inhibitory conditioned reflex on single unit level.
- E. N. Sokolov (U. S. S. R.)

Behavioural and EEG effects of paradoxical sleep deprivation in the cat.
- M. Jouvet (France)

Background activities controlling the conditioned reflex and behavior.
- N. Yoshii

DISCUSSION

Plasticity at the single neurone level.
- J. Bures and O. Buresova (Czechoslovakia)

Chronic radio-stimulation of the brain in monkey colonies.
- J. M. R. Delgando (U. S. A.)

Operant conditioning of single unit responses.
- J. Olds (U. S. A.)

Unitary analysis of the mechanism of temporary connection.
- Y. Hori (Japan)

Conclusive remarks. - K. Pribram (U. S. A.)

Friday Afternoons, September 3, Grand Hall : Nissei Kaikan

EXCITATORY AND INHIBITORY MECHANISMS IN SENSORY CODING

Organizer and Chairman: W. A. Rosenblith (U. S. A.)
Co-chairman: Y. Katsuki (Japan)

Sensory coding, its ambiguity as a concept and its dimensions as a nervous process. - A. Fessard (France)

A duplex theory of the mechanism of cutaneous sensation with special reference to pain. -P. D. Wall and R. Melzack (U. S. A.)

DISCUSSIONS

Gentrifugal auditory control system.
-J. E. Desmedt (Belgium)

Processing of optical information from stationary patterns by the complex eye of Limulus. -W. Reichardt (Germany)

' Edges ' in auditory information processing.
-I. C. Whitfield (U. K.)

Action of acetylcholine on cochlear responses.
-Y. Katsuki (Japan)

On the exponents of Stevens' power functions neurophysiologically recorded and electronically computed in man.
-W. D. Keidel (Germany)

Saturday Afternoon, September 4, Congress Hall : National Education Center

STRUCTURAL AND CHEMICAL ASPECTS OF CONDITIONED REFLEX

Organizer and Chariman : E. A. Asratyan (U. S. S. R.)
Co-chairman: T. Hayashi (Japan)

Opening remarks. -E. A. Asratyan (U. S. S. R.)

The role of distant synchronization of cortical biopotenitials in realization of temporary connections.
-M. N. Livanov (U. S. S. R.)

Dominant and its role in formation of temporal connections.
-V. S. Rusinov (U. S. S. R.)

Electrophysiological studies of generalization using both peripheral and central conditioned stimuli.
-E. R. John, D. S. Ruchkin, A. Leiman, E. Sachs and H. Ahn (U. S. A.)

Changes in functional state and pattern of electrical activity in cortical areas involved in establishment of conditioned connection.
-E. S. Asratyan (U. S. S. R.)

Electrochemical coupling in cellular behavior.
-F. Morrell (U. S. A.)

Mechanisms for the selction and preservation on acquired stimulus-response patterns. -H. H. Jasper (Canada)

DISCUSSIONS

Phylo-and ontogenetical study on the formation of temporary connection.
-H. Tuge (Japan)

Quasi-genetic preservation of epileptic and antiepileptic state in dogs and in men. -T. Hayashi (Japan)

Monday Afternoon, September 6, Grand Hall : Nissei Kaikan

NEURAL CONTROL OF ANTERIOR PITUITARY SECRETION BY RELEASING FACTORS.

Organizer and Chairman : G. W. Harris (U. K.)
Co-chairman: S. Itoh (Japan)

Hormonal activities of beef and pig hypothalamus.
-A. V. Schally, C. Y. Bowers, A. Kuroshima, Y. Ishida, T. W. Redding and A. J. Kastin (U.S.A.)

Hypothalamic polypeptides stimulating the secretion of pituitary hormones.
-R. Guillemin (U. S. A.)

Physiology and chemistry of hypothalamic factors which influence gonadotrophin secretion. -S. M. McCann, J. Antunes-Rodrigues and A. P. S. Dhariwal (U. S. A.)

The purification of the luteinnizing hormone releasing factor (LRF).
-C. P. Fawcett, G. W. Harris and May Reed (U. K.)

Studies on gonadotropin-releasing factor (GRF) of rat hypothalamus.
-T. Kobayashi (Japan)

On the mechanism of the hypothalamic control of the gonadotrophic function of the anterior pituitary.
-E. V. Sokolva (U. S. S. R.)

Tuesday Afternoon, September 7, Congress Hall : National Education Center

TRANSMITTERS IN THE CENTRAL NERVOUS SYSTEM.

Organizer : H. Blaschko (U. K.)
Chairman : B. Katz (U. K.)
Co-chairman : H. Kumagai (Japan)

Subcellular localization of transmitter substances and relating enzymes in the central nervous system.
-E. De Robertis (Argentina)

Central monoaminergic neurons and monoamine neuro-transmission.
-K. Fuxe, A Dahlstrom and N. A. Hillarp (Sweden)

Transmitter in the cerebral cortex.
-K. Krnjevic (Canada)

Recent findings on catecholamines and their metabolites in the brain.
-M. Vogt. (U. K.)

Mechanism of catecholamine release from subcellular granules.
-R. Imaizumi and H. Yoshida (Japan)

Tuesday Afternoon, September 7, Grand Hall : Nissei Kaikan

ELECTROPHYSIOLOGICAL BASIS OF VISION

Organizer and Chairman : H. K. Hartline (U. S. A.)
Co-chairman : T. Tomita and K. Motokawa (Japan)

Introductory remarks. -H. K. Hartline (U. S. A.)

The first step in the analysis of colour.
-K. I. Naka and W. A. H. Rushton (U. K.)

Brightness signals from the cat's retina.
-H. B. Barlow and W. R. Levick (U. S. A.)

A comparison of receptivr fields and functional architecture in three cortical visual areas (17, 18 and 19) of the cat.
-D. H. Hubel and T. N. Wiesel (U. S. A.)

Thursday Morning, September 9, Congress Hall : National Education Center

BIOPHYSICS OF EXCITABLE MEMBRANE OF NERVE

Organizer and Chairman : I. Tasaki (U. S. A.)
Co-chairman : A. Watanabe (Japan)

Some elementary factors involved in specific permeation.
-G. Eisenman (U. S. A.)

Physiological properties of thegiant axon from Dosidicus gigas.
-M. Luxoro, M. Cannesa and F. Vargas (Chile)

Present status of the ionic theory in perfused nerve fibres.
-A. L. Hodgkin (U. K.)

The role of calcium in membrane excitation.
-K. Koketsu (Japan and U. S. A.)

DISCUSSIONS

Cardiac-like responses from internally perfused squid axons.
-W. J. Adelman, Jr. (U. S. A.)

Contributions of electropharmacology to the analysis of membrane structure.
-D. E. Goldman (U. S. A.)

Membrane properties of barnacle muscle fiber.
-S. Hagiwara (U. S. A.)

FREE COMMUNICATIONS

Friday Morning, September 3, Room 201: National Education Center

CEREBRAL CORTEX

P. G. Kodtyuk and D. A. Vasilenko (U. S. S. R.). Synaptic organization of the pyramidal motor system in cats.

E. Jacobson and R. Lange (U. S. A.). Does the motor cortex have motor function?

E. Sh. Airapetyants (U.S.S.R.). Brain mechanisms and space analysis.

H. Asanuma and H. Sakata (Japan). Functional relationship of the cerebral cortex and spinal cord.

A. L. F. Gorman (Canada). Effects of surface cortical polarization on the behavior of pyramidal cells.

J. D. Schlag (U.S.A.). Lateral inhibition in the motor cortex and modulation of pyramidal activity.

H. D. Patton (U.S.A.). Modality characteristics and population response of neurons in the somatosensory cortex of the cat.

V. B. Brooks (U.S.A.). Sensory input relations of motor cortex.

R. Elul and W. R. Adey (U.S.A.). The intracellular correlate of gross evoked responses.

H.H. Kornhuber and L. Deecke (Germany). Cerebral potentials accompanying voluntary and passive movements in man: readiness potential and reafferent potentials.

Friday Morning, September 3, Room 401: National Education Center

BRAINSTEM AND POSTURE

P. L. Parmeggiani, W. A. Petersen., S.A. Stone and J. M. Brookhart (U.S.A.) Postural reactions in the dog.

G. N. Ganchev (Bulgaria). Regulation of postural activity in man.

S. Shanzer (U.S.A.). Effect of brainstem lesions on individual semicircular canal responses.

T. Pasik (U.S.A.). Oculomotor and visual dysfunctions in monkeys with lesions of the pretectum.

M. B. Bender (U.S.A.). Anatomic and physiologic basis for vertical eye movement.

A. Costin, F. Bergmann, Y. Gutman, M. Chaimovitz and S. Zelig (Israel). Functional correlations between optic and vestibular systems in the rabbit.

P. Pasik (U.S.A.). Visuo-oculomotor integration and brain commissures in the monkey.

H. Drischel and P. Lassig (Germany). Experimental investigations about the pursuit movements of the human eye (a non-lineary selfregulatory system).

K. Goto and K. Tokumasu (U.S.A.). Influence of initial head and eye position on head and eye movements induced by semicircular canal nerve stimulation.

G. M. Jones and N. Sugie (Canada). Evidence for a new component of responses in the oculomotor system.

Friday Morning, September 3, Room 403: National Education Center

ACTIVE TRANSPORT 1

S. R. Kruglicoff, W. H. Dennis, M. O. Breitmeyer and M. B. Yatvin (U.S.A.) Electrophysiology of ovarian cyst wall.

D. Frazier, H. Sonnenberg and S. Solomon (U.S.A.). Movement of solutes and water into and out of the central canal of cat spinal cord.

Friday Morning, September 3, Room 501: National Education Center

PARADOXICAL SLEEP 1

S. Kiyono (Japan). Frequency analyiss of the EEGs in wakefulness-sleep cycle of cats with special reference to paradoxical sleep.

K. Tabushi (Japan). Cortical DC potential changes associated with spontaneous sleep in cat.

J. Villablanca (Chile). Ocular behavior in chronic high mesencephalic cats.

R. Hodes (U.S.A.). Sleep and rapid eye movement periods (REMPs) Two different states of consciousness.

K. Kubota and Y. Kidokoro (Japan). Excitability change of the motoneuron during activated sleep in the chronic cat.

Z. Kaneko and Y. Hishikawa (Japan). H-reflex and EMGs of the mental and hyoid muscles during sleep of man.

M. Demetrescu (Rumania). Cortical evoked activity induced by intermittent light stimulation during the different sleep phases.

K. Iwama (Japan). Synaptic transmission of cat's lateral geniculate body (LGS) during sleep-wakefulness cycle.

Friday Morning, September 3, Room 602: National Education Center

CENTRAL AUTONOMIC NERVOUS SYSTEM

B. Singh (India). Effect of caudate stimulation on some vegetative functions.

S. Feldman (Israel). Effects of caudate nucleus on afferent projections to the hypothalamus.

O. A. Smith, D. Humphrey and M. Nathan (U.S.A.). Midline brainstem structure as cardiovascular control paths.

T. Ban (Japan). The septo-preoptico-hypothalamic system (SPH-system).

T. Semba, K. Fujii and N. Kimura (Japan). The vagl inhibitory responses of the stomach to stimulation of the dog's medulla oblongata.

R. W. Hunsperger (Switzerland). Stimulation with pure sine-wave middle frequency current in areas of the hypothalamus mediating threat and flight behaviour in the cat.

V. N. Chernigovsky (U.S.S.R.). Cortical representation of internal organs innervated by Nn. vagi in cat.

N. I. Grashchenkov and G. N. Kassil (U.S.S.R.). The hypothalamus and the functional control of the vegetative nervous system.

N. Raiciulescu and E. Bittman (Rumania). Autonomic effects of reciprocal innervation type produced by mesencephalic reticular formation stimulation.

P. Teitelbaum (U.S.A.). Spreading cortical depression and recovery from subcortical damage.

F. Stutinsky (France). Effects de diverses lesions cerebrales sur le reflexe d'ejection de lait chez la ratte.

M. I. Cohen and P. M. Gootman (U.S.A.). Characteristics of efferent splanchnic discharge, spontaneous and evoked.

S. Okubo and K. Itakura (Japan). The research of mental function by the use of psychogalvanic phenomenon.

Friday Morning, September 3, Grand Hall: Nissei Kaikan

CARDIOVASCULAR CENTER

H. Weidinger: E. Monos and A. G. B. Kovach (Germany and Hungary). Pathway of vasopressor and vasodepressor reflex in the medulla oblongata of the cat.

F. Bergmann and A. D. Korczyn (Israel). Blood pressure responses to peripheral nerve stimulation as a means to determine the distribution of vasomotor neurons in the brain stem.

M. J. Brody and V. S. Aoki (U.S.A.). Relationship of vascular reflexs to electrical activity in medullary vasomotor areas.

W. M. Booker, W. Mitchell and J. Bolling (U.S.A.). Further observations on blood pressure responses to stimulation of hypothalamic nuclei in anesthetized cats.

K. Sagawa and K. Watanabe (Japan). Central summation of bilateral carotid sinus signals.

J. Stegemann (Germany). The unidirectional rate sensitivity of baroreceptors in dogs.

J. Iriuchijima and M. Kumada (Japan). The neural mechanism of respiratory arrhythmia.

J. Alanis, D. Mascher and J. Miyamoto (mexico). The influence of the cerebral self-sustained activity on the systemic blood pressure and the coronary flow of the dog.

K. Miyakawa and A. Murata (Japan). Blood pressure oscillation caused by automaticity in the regulation of blood supply to the brain.

T. Takeuchi and K. Uzi (Japan). Periodic EEG pattern with blood pressure

oscillation in rabbits.

Friday Morning, September 3, Room 709: Nissei Kaikan

AUDITION

T. Furukawa (Japan). The effect of pressure change on auditory action potentials in goldfish.

B. M. Johnstone (Australia). Investigations into synaptic transmitter substances at the hair cells of the organ of corti.

P. E. Stopp (U. K.). Summating potentials in the pigeon cochlea.

A. Starr (Denmark). Aftereffects of sound on single unit activity in cochlear nucleus of cat.

T. Watanabe (Japan). Cortical efferent flow influencing unit responses of medial geniculate body.

N. Maruyama and T, Kawasaki (Japan). Unitary responses to tone stimulation recorded from the cerebellar cortex of the cat.

F. Infantellina, E. R. Sanseverino and L. Sperti (Italy). Interaction of cortical responses to cerebellar parafloccular and auditory stimuli in middle ectosylvian gyrus of cat.

I. C. Whitfield and E. F. Evans (U. K.). Dynamic response of auditory cortical units in the cat.

T. Jauhiainen (Finland). On the interaction of pitch and loudness.

B. E. Mulligan (U. S. A.). The effect of noise at one ear on the detection of signals at the other ear.

F. A. Steiner and G. Weber (Switzerland). The effect of labyrinth stimulation on neurons in the brainstem.

Friday Afternoon, September 3, Room 401: National Education Center

BRAINSTEM AND CEREBELLUM

V. V. Fanarjian (U. S. S. R.). On certain mechnism of the ascending influence of cerebellum.

N. Tsukahara (Japan). Common activation of the red nucleus and the thalamus from the cerebellar nucleus.

P. P. Newman and D. H. Paul (U. K.). Interaction between cutaneous and splanchnic afferents in the cerebellum.

A. N. Kabanov (U. S. S. R.). New data on the cerebellum participation in mo-

tor activity organization.

B. Cohen and A. Weiss (U.S.A.). Eye movements from cerebellar stimulation.

M. Ito, N. Kawai and M. Udo (Japan). The origin of cerebellar-induced inhibition and facilitation in the neurones of Deiters' and intracerebellar nuclei.

R. Davis (Australia). A comparison of physiological and pharmacological properties of neurons in red nucleus and ventrolateral thalamic nucleus following brachium conjunctivum stimulation.

R. Siminoff (U.S.A.). A neural network for mesencephalic reticular formation control of spinal cord neurons.

T. Sumi (Japan). Postnatal development of the reflex deglutition in the kittens.

Y. Kawamura and M. Funakoshi (Japan). Auto-regulatory neuro-mechamism of the tongue muscle activity.

Friday Afternoon, September 3, Room 602: National Education Center

SYNAPTIC TRANSMISSION

J.I. Hubbard and P.W. Gage (Australia). A method for the investigation of post-tetanic hyperpolarization in motor nerve terminals.

C.Y. Lee and C.C. Chang (Taiwan). Modes of neuromuscular blocking action of neurotoxins isolated from Elapine venoms.

F.T. Dun (U.S.A.). The nature of directly recorded neuromuscularjunctional delays.

J.I. Hubbard and Løyning (Australia). Effects of hypoxia on neuromuscular transmission.

S. Iwasaki and E. Florey(U.S.A.). Miniature potentials of stretch receptor neuron of crayfish.

H. McLennan and D.H. York (Canada). Cholinoceptive receptors on crayfish neurones.

M. Talaat and I. El-Bagoury (U.S.A.). Effect of ATP on neuro-muscular fatigue.

T. Tosaka and B. Libet (U.S.A.). Slow postsynaptic potentials recorded intracellularly in sympathetic ganglia of frog.

B. Libet (U.S.A.). Long synaptic delays and slow postsynaptic potentials in mammalian sympathetic ganglia.

K. Uchizono (Japan). Electron microscopic and electrophysiologic studies on synaptic transmission.

A. Portela, J. C. Peres, M. Luchelli de Fortis and P. Stewart (U. S. A.). Cholinergic receptors in muscle membrane.

Saturday Morning, September 4, Room 201: National Education Center

COMPARATIVE ENDOCRINOLOGY

K. Yagi and H. A. Bern (USA). Electrical activity of caudal neurosecretory units in the teleost fish, Tilapia mossambica, in response to ionic alterations.

Saturday Morning, September 4, Room 401: National Education Center

LIMBIC SYSTEM 1: STIMULATION AND DESTRUCTION

M. R. Covian, C. Tomo-Iaria, M. C. Lico and E. M. Krieger (Brazil). Effects of stimulation of the septal area upon blood pressure and respiration.

K. Seto and M. Kawakami (Japan). Ovulations induced by electrical stimulation upon hippocampus in rabbits.

S. Yoshida, S. Murakawa, H. Ibayashi and K. Nakao (Japan). The effect of electrical stimulation of the limbic system on secretion of antidiuretic hormone.

T. Hara, S. Saito and M. Murasaki (Japan). A contribution to the mechanism of facial twitches produced by electrial stimulation of the amygdala.

T. Hanai and J. M. R. Delgado (U. S. A.). Micorinjections of drugs within the brain of awake monkeys.

B. W. Robinson (U. S. A.). Behavioral accompaniments of evoked vocalization in M. mulatta.

A. Kling (U. S. A.). Effects of temporal lobe lesions in the infant macaque.

K. N. Sharma, S. Sharma and H. L. Jacobs (U. S. A.). Effect of orbitohypothalamic lesions on restraint ulceration in rats.

B. G. Hoebel (U. S. A.). Weight regulation in hypothalamic hyperphagic rats.

R. Kido, K. Hirose, K. Yamamoto and A. Matsushita (Japan). Pharmacological properties of (+)-3-methoxy-N-methyl-^{6}-morphinan hydrobromide (175-S), a taming effect possessing drug.

C. C. Pfeiffer, L. Goldstein, S. D. Nelson, R. A. Beck and H. B. Murphree (U. S. A.). Quantitative EEG analysis as a measurement of CNS drug effects.

T. Kobayashi and T. Ishikawa (Japan). Effects of psychotropic drugs on the limbic system.

Saturday Morning, September 4, Room 403: National Education Center

ACTIVE TRANSPORT III

O. Honda, K. Igarashi and M. Yoshino (Japan). Influence of protamine and gangliosides on the binding of rubidium by the Na^+, K^+ -ATPase preparation solubilized from cerebral microsomes.

I. Ohtsuki, M. Otsuka and S. Ebashi (Japan). ATP-dependent Ca accumulation of brain microsomes.

Y. Shinagawa and A. Inouye (Japan). Cytochrome b_5 in brain microsomes and its physiological role.

Y. Nagata and Y. Tsukada (Japan). Amino acid metabolism in excised cervical sympathetic ganglion from rat.

Saturday Morning, September 4, Room 501: National Education Center

PARADOXICAL SLEEP II

Y. Iwamura and H. Hirayama (Japan). Blood pressure responses during natural sleep in the cat.

T. Ogawa, T. Satoh and K. Takagi (Japan). Sweat rate in association with EEG pattern during sleep.

M. Mancia and A. Rosina (Italy). Desynchronized sleep induced by selective injection of barbiturate into the vertebral circulation of the cat.

J. Matsumoto and M. Jouvet (France). The effect of reserpine, 5-HTP. DOPA on the two phases of sleep.

M. Kawakami (Japan). Influences of precursors, members and inhibitors of the TCA cycle, or DPNH, DPN, TPNH and 2, 4 dinitrophenol on the paradoxical sleep (EEG afterreaction) in the rabbit.

M. Matsuzaki and H. Takagi (Japan). Chemically-induced paradoxical phase of the sleep in the " encephale isole" cat.

H. Yanagida, N. Tachibana, H. Mizota and H. Yamamura (Japan). Parasleep during anesthesia by sodium 4-hydroxy-butyrate in man.

N. Yamaguchi, S. Chikazawa, M. Okabe, M. Hayashi, J. Ando, T. Takeshima and Y. Shimazono (Japan). The effects of microinjection of autonomic drugs in the pontine reticular formation on the cycle of sleep and wakefulness.

Saturday Morning, September 4, Room 503: National Education Center

NEUROENDOCRINE

I. T. Kurtsin (U. S. S. R.). Hormonal link of cortico-visceral relationships.

S. K. Karapetian, N. G. Mikaelian and M. B. Nazarian (U. S. S. R.). Functional, morphological and biochemical changes in animal generative and endocrine organs due to lesions in various fields of the prosencephalic hemispheres.

W. Z. Traczyk, B. Jakubowska, J. W. Guzek, T. Toczyski and H. Leśnik (Poland). Effect of preoptic area chronic stimulation on behaviour, ADH, ACTH, TSH, and gonadotropins secretion of guinea pigs.

A. P. S. Dhariwal, L. Krulich, J. Antunes-Rodrigues, I. Chowers, F. Reeser, C. Grosvenor and S. M. McCann (U. S. A.). Factors in hypothalamus which control pituitary secretion.

L. Thiéblot, S. Blaise and J. Berthelay (France). La melatonine possede-T-elle un effet sur les gonaders, la glande thyroide, et la corticosurrenale du jeune rat?

S. Taleisnik and R. Orías (Argentina). Hypothalamic extract inducing release of melanocyte stimulating hormone.

L. Tomus, A. Suciu and M Rusu (Rumania). Modifications dans les correlations neuro-endocrinnes et metaboliques dans les conditions de l'insuffisance circulatoire cerebrale chronique, (I. C. C. Cr) chez le chien.

V. Benetato, Z. Covasneanu and L. Parteni (Rumania). Effect of hypothalamic stimulation on methionin-35 S uptake in rat tissues.

T. Miura, T. Nakazawa, Y. Suzuki, Y. Kabeshima, M. Yamamoto and C. Moriwaki (Japan). Effects of the nerve growth promoting factor (NGF) from bovine submaxillary gland on the nervous system.

S. Matsumoto and I. Sato (Japan). Relationship between endocrine status and electroencephalographic pattern in women.

Monday Morning, September 6, Room 201: National Education Center

BRAIN AND FUNCTIONAL SPECIALIZATION

P. J. Morgane and W. L. McFarland (U. S. A.). The neuroanatomical correlates of functional specializations in the dolphin (Tursiops truncatus).

R. T. Kado, W. R. Adey and D. O. Walter (U. S. A.). Regional specificity of impedance characteristics of cortical and subcortical structures evaluated in hypercapnea and hypothermia.

R. M. Bergström, R. Blåfield, Y. Hytönen and G. Johansson (Finland).

Human cortical potentials during voluntary muscle contraction.

I. Suda, K. Kito and C. Adachi (Japan). The viability of long-term frozen cat brain in vitro.

E. K. Zhukov (U. S. S. R.). Concerning the evolution of the peripheral mechanisms responsible for the muscular tone in mammals.

M. N. Carroll, Jr. (U. S. A.). Experimental motor abnormalities in the cat.

G. Krauthamer (U. S. S. R.). Single cell inhibition in the thalamus following stimulation of the caudate nucleus.

P. Stern and N. Ruzdić (Yugoslavia). The importance of globus pallidus in the production of rest tremor.

K. Toyama (Japan). The 'disfacilitation' of the red nucleus neurones.

D. Albe-Fessard, G. Guiot, G. Arfel and A. Fessard (France). Unitary thalamic activities at the origin of tremor in Parkinsonian patients.

Monday Morning, September 6, Room 401: National Education Center

LIMBIC SYSTEM II - ELECTRICAL ACTIVITY-

J. S. McKenzie and M. H. Muntz (Australia). Hippocampal responses to cortical stimulation in the cat.

L. Sperti, T. Gessi and E. Riva Sanserverino (Italy). Synaptic organization of dorsal psalterium commissural projections in the hippocampal region of the guinea pig.

J. A. Gergen (U. S. A.). Subcortical effects of hippocampal stimulation in a primate.

M. D. Egger (U. S. A.). Effects of amygdaloid stimulation on hypothalamic units.

D. E. Woolley and P. S. Timiras (U. S. A.). Electrophysiological relations between the hippocampus and prepyriform cortex in the rat.

B. K. Anand (India). Chemosensitive mechanisms in the hypothalamus related to feeding.

E. Terasawa and M. Kawakami (Japan). Differential control of oxytocin upon the evoked potentials in the hypothalamus.

B. B. Brown (U. S. A.). Some brain electrical correlates of personality patterns in cats.

F. Gault and D. R. Coustan (U. S. A.). Genesis of rhinencephalic 40 c/sec. rhythms.

M. J. Wayner (U. S. A.). Electrical activity in the limbic system associated with the salt arousal of drinking.

Monday Morning, September 6, Room 501: National Education Center

CONDITIONED REFLEX AND BEHAVIOR I

I. S. Beritashvili (U. S. S. R.). Structural and physiological bases of psychic activity:

P. V. Simonov (U. S. S. R.). The decisive role of pragmatic information deficiency in occurence of emotions.

H. Chorazyna, L. Stepien and B. Sychowa (Poland). Changes in auditory conditioning in dogs after lesions of the claustrum.

N. A. Buchwald, C. Romero, F. Horvath and S. Soltysik (U. S. A.). Variable behavioral responses to uniform stimuli applied to the caudate nucleus.

S. Goldrich and J. Stamm (U. S. A.). Electrical stimulation of temporal cortex in monkeys during learning.

S. Ueki and H. Sugano (Japan). Effect of olfactory lesion on behavior.

A. M. Marits (U. S. S. R.). On the role of brain stem reticular formation in dishibition and inhibition of conditioned reflexes.

H. Nakao (Japan). Switch-off behavior induced by mesencephalic stimulation during limbic after-discharges in cats.

R. W. Doty (U. S. A.). Ability of macaques to discriminate locus of electrical stimuli applied to neocortex.

F. A. King, L. Roberts, R. L. King, H. Pennypacker and N. R. Remley (U. S. A.). The influence of cortical lesions and stimulation on instrumental learning and classical conditioning in the South American squirrel monkey.

M. Gerbner (Hungary). The role of frontal lobar structures in behaviour.

Monday Morning, September 6, Room 602: National Education Center

NERVOUS CONDUCTION AND TRANSMISSION

T. Smyth, Jr. (U. S. A.). Muscle potentials of the American cockroach.

K. Kosaka (Japan). Electrophysiological and electron-microscopic studies on crayfish stretch receptors.

R. Waziri, W. T. Frazier and E. R. Kandel (U. S. A.). Prolonged alterations in the efficacy of inhibitory synaptic transmission in Aplysia Calif.

M. Sato, G. Austin, H. Yagi and J. Maruhashi (U.S.A.). K-depolarization during synaptic excitation and inhibitation of Aplysia ganglion cells.

G. A. Kerkut (U.K.). Liberation of glutamate at the snail nerve muscle junction.

Y. Oomura, H. Ooyama and M. Sawada (Japan). Ionic basis of the effect of ACh on Onchidium D- and H-neurons.

D. C. Sandeman (U.S.A.). Electrical activity in the radial nerve cord of sea urchins.

N. Saito (U.S.A.). Electrotonic junctions in cardiac ganglion of blue crab.

D. Mellon (U.S.A.). Organization of reflex pathways in the surf clam, Spisula.

M. V. L. Bennett (U.S.A.). Electric receptors in the mormyrid electric fish, Gnathonemus petersii.

A. K. Voskresenskaya, M. Y. Kuntsova, S. I. Plotnikova and V. L. Svidersky (U.S.S.R.). New data concerning innervation influences in the locomotor muscles of invertebrates (Arthropoda).

Monday Morning, September 6, Grand Hall: Nissei Kaikan

CARDIOVASCULAR REFLEX I

B. Rybak (France). Mise en evidence d'un reflexe vegetatif complexe (Pulmo-cardio-vasculaire) par polarographie d'oxygene.

D. J. Randall (Canada). Sinus arrhythemia and bradycardia in fish resulting from deoxygenation of the water passing over the gills.

M. J. Scott (Australia). The effects of carotid body chemoreceptor stimulation in the rabbit.

M. Guazzi, G. Baccelli and A. Zanchetti (Italy). Role of pressoceptive and chemoceptive reflexes in the regulation of circulation during sleep.

G. Paulet, R. Le Bars and J. P. Bernard (France). Action des pneumogastriques sur le debit cardiaque et la masse sanguine pulmonaire chez le chien anesthesie.

B. S. Bevegård and J. T. Shepherd (U.S.A.). Circulatory effects of stimulating the carotid artery stretch receptors in man at rest and during exercise.

I. F. S. Mackay and R. L. Walker (Puerto Rico). The Bainbridge reflex in man.

H. Okada (Japan). Effects of venous infusion upon the efferent impulses in the cardiovascular nerves of the dog (Bainbridge's reflex).

Monday Morning, September 6, Room 704: Nissei Kaikan

VISION I : INVERTEBRATES, AND VERTEBRATE PHOTOPIGMENTS

J. Negrete, G. Yankelevich, G. Theodoridis and L. Stark (U.S.A.). Signal information carried by a train of nerve pulses.

R. Kikuchi and K. Ueki (Japan). Localization of action potentials arising within single ommatidia of horseshoe crab, Tachypleus tridentatus.

M. E. Behrens and V. J. Wulff (U.S.A.). Light-initiated responses of retinula and eccentric cells in Limulus lateral eye.

H. K. Hartline, F. Ratliff and D. Lange (U.S.A.). The dynamics of inhibitory interaction in the eye of Limulus.

W. Reichardt (Germany). Quantum sensitivity of light receptors in the fly, Musca.

T. H. Goldsmith (U.S.A.). Photoreceptor sensitivity and carotenoid metabolism in an insect.

I. Honjo (Japan). On the transconformation of rhodopsin.

K. Mizuno and K. Ozawa (Japan) Synthesis of lumi-, meta-rhodopsin and indicator yellow analogues.

W. Lohmann, C. F. Fowler and W. H. Perkins (U.S.A.). Energy-charge transfer in the retina: Electron spin resonance investigations.

E. Kimura, Y. Hosoya and K. Shirane (Japan). Photogalvanic effect of rhodopsin and choline esterase activity of the rod cell.

Monday Afternoon, September 6, Room 501: National Education Center

CONDITIONED REFLEX AND BEHAVIOR II

G. L. Vepkhvadze (U.S.S.R.). New data on isolated action of the cerebral

hemisphere: Investigations of unilateral salivary conditioned reflex by an original method.

G. V. Khvedelidze (U.S.S.R.). The influence of deep hypothermia-hybernation on conditioned reflexes.

M. Saragea (Rumania). Thermolytic respiratory conditioned reflexes and respiratory neurosis in the dog.

L. G. Voronin, B. I. Kotlyar and L. V. Kalyuzhny (U.S.S.R.). EEG, behavioural and conditioned reactions in rabbits.

L. Pickenhain and F. Klingberg (Germany). Appearance of induced waves type A and type B in the olfactory bulb indicating the behavioral state of animal during conditioning.

M. E. Olds (U.S.A.). Brain probe studies of delayed response in monkeys.

R. Floru and M. Sterescu-Volanschi (Rumania). Electrophysiological correlates of conditioned self-facilitation.

N. V. Golikov (U.S.S.R.). Dependence of local and spreading excitation of neurons on the level of their polarization and lability.

S. Sugimoto (Japan). Behavior and cortical evoked potentials in the process of avoidance conditioning.

K. Okada (Japan). Changes of cortical excitability in the defensive conditioned reflex.

Monday Afternoon, September 6, Room 704: Nissei Kaikan

VISION II : ELECTROPHYSIOLOGY OF VERTEBRATE RETINAS

I. Hanawa and K. Kuge (Japan) Effects of some common ions on the transretinal d.c. potential and the ERG of the frog.

M. Murakami and A. Kaneko (Japan). Analysis of PIII in cold-blooded vertebrates.

T. Tamura, I. Hanyu and H. Niwa (Japan). Spectral sensitivity of S-potential in various fish.

G. Mitarai, I. Watanabe and K. Niimi (Japan). Further study on the origin of S-potentials and the function of glia cells in the retina.

B. D. Drujan, J. M. Díaz-Borges and N. E. Alvarez Cabrera (Venezuela). The possible participation of catecholamines in the retinal inhibitory mechanism.

K. Watanabe and Y. Hashimoto (Japan). S-potential in light and dark adaptation of the live carp.

G. Svaetichin and K. Negishi (Venezuela). Color vision based on Young's three receptor input and Hering's opponent color processes.

K. Negishi, G. Svaetichin and B. D. Drujan (Venezuela). Direct coupling of the non-neuronal (Glial) membrane potential to the respiratory chain function.

A. L. Byzov (U.S.S.R.). Electrical activity of single cells of different layers of retina in frog, Amphioxus and turtle.

M. L. Wolbarsht and H. G. Wagner (U.S.A.). Scattered light in relation to photopigment bleaching and the neuronal component of light adaptation.

P. Witkovsky (U.S.A.). Spectral sensitivity of single cells in the carp retina.

T. S. Aiba and M. Alpern (U.S.A.). ERG responses from human foveal cones.

Tuesday Morning, September 7, Room 201: National Education Center

AUTONOMIC NERVOUS SYSTEM I

M. Fujiwara, C. Tanaka, T. Honjo and K. Shimamoto (Japan). Cellular localization of monoamines and monoamine oxidase in the rat salivary glands.

M. Beauvallet and M. Solier (France). The effect of forced exercise on the toxicity of amphetamine and on the level of epinephrine and norepinephrine in tissues.

G. G. Nahas, L. Triner, H. S. Smalland A. St. J. Lee (U.S.A.). Sympathoadrenal stimulation and oxygen uptake.

E. D. Hendley (U.S.A.). Potentiation of catecholamine action on aqueous humor dynamics by guanethidine.

J. G. Hilton and M. Steinberg (U.S.A.). The effects of ganglionic blockade upon the pressor response elicited by elevation of the cerebral spinal fluid pressure.

S. N. Pradhan, M. M. Vohra and Patnaik (India). Some effects of Hayatin derivatives and d-tubocurarine on autonomic ganglia.

C. Takeshige (U.S.A.). The effects of calcium and barium on sympathetic ganglia.

G. Kato, H. Itow and S. Sakada (Japan). Isolation of the single adrenergic and the single cholinergic fibers in the cardiac vagus nerve, and also in the cardiac sympathetic nerve.

T. Funasaka, K. Nakamura, A. Suzuki and H. Matsumoto (Japan). Mode of action of tyramine, nicotine and acetylcholine on the rabbit's aorta strip.

F. E. Shideman and A. M. Goldberg (U.S.A.). Use of tritiated choline to label acetylcholine stores in the heart.

H. Kobayashi (Japan). The action of some cholinergic and adrenergic drugs on the electrical and mechanical activity of the atrial muscle fiber of the Japanese toad.

Tuesday Morning, September 7, Room 401: National Education Center

AUTONOMIC NERVOUS SYSTEM III

R. Greenberg and I. M. Rosenthal (U.S.A.). Rate of release of catecholamines from sedimentable structures of human tumor tissues.

B. G. Zimmerman (U.S.A.). Increased vascular response to sympathetic nerve stimulation in presence of angiotensin.

B. Bhagat, K. Shein and J. Gilliam, Jr. (U.S.A.). Norepinephrine stores and response to carotid artery occlusion.

J. S. Gillespie and S. M. Kirpekar (U.K.). Localisation of infused noradrenaline in the spleen and its release by nerve stimulation.

H. Thoenen, A. Hürlimann and W. Haefely (Switzerland). Rate dependent transmitter release from sympathetic nerve endings.

J. A. Bevan and M. A. Verity (U.S.A.). Mechanism of sympathetic transmission in vascular muscle.

C. C. Chang, C. Y. Su and J. C. Chang (Taiwan). On the mechanism of prevention by bretylium of drug-induced noradrenaline depletion.

B. K. B. Lum and M. A. Gaunt (U.S.A.). The effects of cold storage and adrenergic blocking agents on the response of the isolated rabbit intestine to sympathomimetic amines.

A. Wollenberger and L. Shahab (Germany). Release by anoxia of noradrenaline from the isolated perfused heart.

Tuesday Morning, September 7, Room 502: National Education Center

NEUROPHARMACOLOGY I

S. A. Corson, J. S. Fleming, E. O'L. Corson, S. Vanecko and E. Rapoport (U.S.A.). Comparative effects of d-amphetamine and ephedrine on reserpine-induced sedation and antidiuresis.

B N. Dhawan, K. N. Dhawan and G. P. Gupta (India). Tryptamine receptors of central vasomotor locii.

R. Koster (U.S.A.). Anti-emetic action of oral or intravenous lactic acid and intravenous acetate.

A. Lehmann and R.-G. Busnel (France). Influences de drogues psychotropes sur des crises repetees d'epilepsie acoustique.

A. Shulman and G. M. Laycock (Australia). Action of selected CNS stimulant and depressant drugs in the intact animal.

M. L. Belenky, M. Vitolinya, E. Baumanis and R. Vitolinya (U.S.S.R.). On the effect of apomorphine on adrenergic processes.

C. L. Gemmill, K. M. Browning and W. P. Kanto, Jr. (U.S.A.). Sodium pentobarbital on temperature and heart rate of rats subjected to cold.

H. Nakajima and J. Thuillier (France). Brain hypothermia induced by neuroleptic drugs in rabbits.

G. Chen (U.S.A.). The neuropharmacology of 2-(O-chlorophenyl)-2-methylaminocyclohexanone·HCl (C1-581).

E. F. Domino (U.S.A.). Some actions of small doses of nicotine on the central nervous system.

Tuesday Morning, September 7, Grand Hall: Nissei Kaikan

CARDIOVASCULAR REFLEX II

K. Ishii, K. Honda and K. Ishii (Japan). A study of carotid labyrinth.

C. Heymans, D. Atanackovic, A. De Schaepdryver and G. De Vleeschhouwer (Belgium). Quaternary tyramine and dopamine derivatives and carotid body chemoreceptors.

N. Mei and M. Dussardier (France). Mise en evidence d'un reflexe cardioaccelerateur a point de depart pericardique.

S. Saitoh, M. Miura and N. Doba (Japan). Influences of carotid sinus wall tonus on carotid baroceptor discharge.

A. M. Brown (U.S.A.). Afferent innervation of the coronary arteries.

A. Arieff and F. Grodins (U.S.A.). Mesenteric receptors and arterial blood pressure.

S. L. Samueloff (Israel). Use of the limb with arrested circulation for study of venomotor reactions in man.

M. Gerova and J. Gero (Czechoslovakia). The range of sympathetic control of the conduit artery.

T. Azuma and A. Binia (U.S.A.). The significance of epinephrine in the frog heart.

Tuesday Morning, September 7, Room 704: Nissei Kaikan

VISION III : VISUAL PATHWAY AND CORTEX

Y. Fukada, K. Tasaki, A. C. Norton and K. Motokawa (Japan). Functional significance of conduction velocity in the transfer of flicker information in the cat optic nerve.

O. Sager, V. Florea-Ciocoiu and V. Nestianu (Rumania). Etudes sur certaines fibres centrifugales de la voie optique.

M. Meulders, J. Colle, N. Boisacq-Schepens, J. M. Godfraind and M. Cordier (Belgium). Macro and microelectrode studies of somatic responses in the lateral geniculate body.

A. Penchev and S. Belcheva (Bulgaria). ERG and evoked potentials in the visual system to stimuli with varying relative intensity.

M. Glickstein, J. Miller and R. King (U.S.A.). Cortical projections of lateral geniculate body in the cat.

F. Ervin, Y. Saito and C. E. Brown (U.S.A.). Field organization of units in cat visual cortex.

G. Horn and J. S. Griffith (U.K.). An analysis of spontaneous activity of single cells in the visual cortex of unrestrained cats.

V. G. Samsonova (U.S.S.R.). Reaction of spontaneously active and silent cells of the frog visual centre to vestibular and photic stimuli.

K. Murata and H. Cramer (Germany). Convergence of different peripheral stimuli to neurons in the visual cortex.

N. Spinelli and K. H. Pribram (U.S.A.). Effect of continuous stimulation of the posterior "association" cortex of monkeys on visually evoked responses.

N. K. Mello and D. J. Ingle (U.S.A.). Interocular transfer of mirror image forms following posterior commissure lesions.

Tuesday Afternoon, September 7, Room 201: National Education Center

AUTONOMIC NERVOUS SYSTEM II

M. Kikuno, J. Inomata and T. Nakazawa (Japan). Changes in the activity of acetylating enzymes related to nerve function.

S. Markee and S. C. Wang (U.S.A.). Effects of norepinephrine, epinephrine, acetylcholine, and isoproterenol on the sympathectomized peripheral vascular bed of the dog.

C. Alvarez Ugarte and A. Houssay (Argentina). Role of the lingual nerve and of the superior cervical ganglia in the submandibular hypertrophy by incisor amputation in the rat.

A. Sato (Japan). Studies on reflex potentials of the lumbar sympathetic trunk in cats.

R. Carrasco-Formiguera (Venezuela). Sympathomimetic effects of reserpine.

S. Y. Botelho, M. Hisada and N. Fuenmayor (U.S.A.). Role of sympathetic nerve impulses in activating lacrimal gland.

J. D. Kohli and I. R. Innes (Canada). Receptors for the sympathomimetic amines producing contraction of the guinea pig non-terminal ileum.

E. T. Angelakos, M. King, P. M. Glassman and R. Millard (U.S.A.). Sympathetic neurohumors in the heart.

L. P. McCarty and M. B. Chenoweth (U.S.A.). The pharmacological actions of vinylcholine ether.

M. D. Gedevanishvili (U.S.S.R.). New data on the role of autonomous system in secretion of mucous glands: Role of this secrete in supporting the tone of nervous centres.

V. A. Govyrin (U.S.S.R.). Sympathetic innervation and the catechol amines of vertebrate tissues.

W. W. Douglas and A. M. Poisner (U.S.A.). Efflux of adenine nucleotides and their derivatives and of protein from adrenal glands during stimulation of the splanchnic nerve or exposure to acetylcholine.

R. P. Ahlquist and J. H. R. Sutherland (U.S.A.). A comparative study of beta adrenergic blocking agents.

Tuesday Afternoon, September 7, Room 401: National Education Center

STRUCTURE-ACTIVITY RELATIONSHIP

P. C. Dandiya (India). The role of trimethoxy benzene structure in C.N.S. depressants.

Tuesday Afternoon, September 7, Room 502: National Education Center

NEUROPHARMACOLOGY II

A. E. Takemori (U.S.A.). The enhancement of glucose utilization of cerebral homogenates of rats by morphine.

T. Kakunaga and H. Kaneto (Japan). Significance of calcium ion in the mechanism of morphine analgesia.

S. Inderjit Singh and C. L. Malhotra (India). Effect of chlorpromazine on the free amino acid content of monkey brain.

S. Saito, U. Tokunaga and Y. Mochizuki (Japan). The mechanism of effect of increased GABA level due to hydradine and its convulsant action.

A. Shimizu (Japan). Neurophysiological studies on monoamine oxidase inhibitor.

R. S. Piha (Finland). The effect of psychotropic drugs on amino acid and protein metabolism of the central nervous system.

M. T. Peng and W. P. Pi (Taiwan). The emesis in the anaphylactic shock in dogs.

Tuesday Afternoon, September 7, Room 602: National Education Center

EXCITABLE MEMBRANE I

W.-D. Dettbarn (U.S.A.). The acetylcholine (ACh) system in invertebrate nerve fibers.

T. R. Shanthaveerappa and G. H. Bourne (U.S.A.). The perineural epithelium in primates and other animals.

H. Müller-Mohnssen and O. Balk (Germany). Über eine quantitative Beziehung zwischen Aktionspotential und stationärer Kennlinie des Ranvierknotens.

V. Rascanu and C. Solomon (Rumania). La correlation de la conductibilite de l'influx nerveux et de la resistivite electrique des nerfs peripheriques dans l'etat normal; les variations determinees par l'alteration reversible de leur structure.

V. Vasilesco, R. Zaciu, E. Trutia, I. Savopol and E. Ghidus (Rumania). Donnèes expèrimentales concernant la fluorescence de la fibre nerveuse et l'action du champ magnètique continuel sur les paramètres de l'excitabilitè.

G. I. Eidelman (U.S.S.R.). Model: Distribution of electrotonic and perielectrotonic currents in nerve conductors.

R. D. Keynes, J. M. Ritchie and J. V. Howarth (U.K.). The thermodynamics of the nerve impulse.

B. Bromm and H. Lullies (Germany). The mechanism of "middle frequency" excitation of nervous membranes.

M. Luxoro, M. Cannessa and F. Vargas (Chile). Physiological properties of the giant axon from Dosidicus gigas.

D. L. Gilbert and G. Ehrenstein (U.S.A.). Effect of calcium and magnesium on voltage-clamped squid axons immersed in isosmotic potassium chloride.

R. E. Taylor (U.S.A.). Interpretations of cell membrane dielectric measurements.

J. W. Moore, M. Takata, J. Y. Lettvin and W. Pickard (U.S.A.). Lanthanum simulates high calcium and reduced conductance changes in nerve membranes.

F. D. G. Hoskin and P. Rosenberg (U.S.A.). Penetration of sugars, steroids, amino acids and other organic compounds into the interior of the squid giant axon.

Wednesday Morning, September 8, Room 201: National Education Center

SLEEP AND WAKEFULNESS

N. I. Kasatkin and A. N. Shepovalnikov (U.S.S.R.). Age changes of brain reactivity on sleeping children.

S. P. Narikashvili, S. M. Butkhuzi and E. S. Moniava (U.S.S.R.). Influence of lower and upper brain stem stimulation on evoked sinchronized activity of the cerebral cortex.

C. D. Clemente, M. B. Sterman and W. Wyrwicka (U.S.A.). The induction of sleep and conditioned EEG synchronization by basal forebrain stimulation.

M. Monnier and L. Hösli (Switzerland). Hemodialysis of a sleep humor during stimulation of the hypnogenic thalamic area.

Gr. Benetato, I. Haulica, V. Nestianu, V. Niculescu and E. Daneliuc (Rumania). On the role of the hypophysis in the arousal phenomenon.

W. Baust, H. Heinemann and H. Schaefer (Germany). The role of blood pressure and blood pressure-induced nervous afferents in sleep regulation.

K. Omura and K. Asahina (Japan). Dissociation between physiological functions during barbiturate narcosis.

W. Schallek, J. Thomas and F. Zabransky (U.S.A.). Effects of Mogadon on EEG activation, amygdala and hypothalamus of cat.

H. L. Kaplan, R. B. Forney, F. W. Hughes and A. B. Richards (U.S.A.). Comparative effects of hypnotics on mental and physical performance.

L. Gyermek, G. Genther and N. Fleming (U.S.A.). Some effects of Progesterone and related pregnane derivatives on the central nervous system.

S. Takaori, Y. Nakai and K. Shimamoto (Japan). Central depressants and cortical acoustic responses with special reference to awakening state.

Wednesday Morning, September 8, Room 401: National Education Center

SPINAL REFLEXES

J. Pallard (France). Valeur de la comparaison du reflexe de Hoffmann et du reflexe myotatique pour l'etude des activites fusimotrices chez l'homme.

M. N. Adal, D. Barker and M. C. Ip (U.K.). The motor innervation of the mammalian muscle spindle.

E. Eldred, C. F. Bridgman and H. Yellin (U.S.A.). Effects on mammalian spindle morphology of changes in gross muscle status.

B. Fujimori, S. Mori and C. Nagai (Japan). Studies on the mechanisms of spasticity following spinal cord hemisection in cats.

M. Shimamura and T. Yamauchi (Japan). Effects of spino-bulbo-spinal reflex on extensor metoneurons in cats.

G. Somjen, D. Carpenter and E. Henneman (U.S.A.). Responses of motor neurons of different sizes to graded stimulation of supraspinal centers of the brain.

S. Murayama (Japan). Effects of chlorpromazine on spinal reflex activity in the cat exhibiting rigidity induced by spinal cord ischemia.

A. Hugelin, S. Dumont-Tyc and J. Verroust (France). Inhibitory effects of mesencephalic reticular stimulation on a monosynaptic reflex.

K. Takano and H. D. Henatsch (Germany). Supraspinal influences upon pasic, tonic and static components of stretch reflex tension.

S. Gelfan (U.S.A.). The genesis of post-ischemic autorhythmicity in alpha motoneurons.

H. Brust-Carmona, H. Levitan and E. L. Gasteiger (U.S.A.) On the origin of the spinal electrogram (SEG).

Wednesday Morning, September 8, Room 501: National Education Center

CONDITIONED REFLEX AND BEHAVIOR III

A. K. Clark, J. Dobbing, D. Joyce and A. Summerfield (U.K.). The effect of early nutrition on conditioned behaviour.

D. Lester (U.S.A.). The regulation of polydipsic water intake by feeding in the rat.

T. Watanabe (Japan). Studies on the mental activities in the process of dance composition and appreciation.

B. M. Wenzel (U.S.A.). Bihavioral effects of immunological sympathectomy in mice.

D. M. Gedevani (U.S.S.R.). An electronic model of the orienting reflex: Its value for simulation of the conditioned reflex.

Y. Hori (Japan). Studies on dominant focus of motor cortex including unitary analysis.

J. S. Buchwald, E. S. Halas and S. Schramm (U.S.A.). A comparison of EEG and unit activity recorded simultaneously through the same electrode during behavioral conditioning.

P. K. Anokhin (U.S.S.R.). Hypothesis of convergent coupling of conditioned reflex.

D. A. Biriukov (U.S.S.R.). On ecological physiology of nervous activity.

V. Bakalska, A. Angelov, A. Vassilev and V. Stomonyakov (U.S.S.R.). Effects of stimulus probability on reaction time.

Wednesday Morning, September 8, Room 504: National Education Center

TRANSMITTERS IN CENTRAL NERVOUS SYSTEM I

P. S. Timiras, G. J. Maletta and D. E. Woolley (U.S.A.). Abnormalities of cholinergic systems in the developing brain.

K. Lissák and E. Endroczi (Hungary). Regional differences of biological active materials in the central nervous tissue.

M. Kuno and P. Rodomin (Mexico). Acetylcholine release in the cat spinal cord by antidromic motor nerve stimulation.

P. W. Ramwell (U.S.A.). The spontaneous and evoked release of a prostanoic acid from the somatosensory cortex of anaesthetized cats.

M. H. Aprison and R. Werman (U.S.A.). Glutamic acid distribution in cat spinal cord and roots.

P. Simhadri (India). Effect of photic stimulation on glutamic acid in the monkey lateral geniculate body.

C. Giurgea, F. Moyersoons and A. Van Der Auwera (Belgium). Local effect of chemical transmitters on the diencephalic nystagmogenic area.

J. E. Shaw (U.S.A.). Pharmacologically active substances in frog spinal cord perfusates.

H. Takahashi, T. Shiraishi and T. Ohbori (Japan). Further investigation in the pharmaco-physiological activities of γ-aminobutyric acid (GABA), γ-aminobutyrylcholine and their related compounds.

K. Obata (Japan). Pharmacological study on postsynaptic inhibition of Deiters' neurones.

Wednesday Morning, September 8, Room 601: National Education Center

EXCITABLE MEMBRANE II

R. R. Walsh (U.S.A.). The effect of changes of the hydrogen, calcium, and potassium environment upon the rubidium loss from frog sartorius muscles.

W. McD. Armstrong and K. M. Fariduddin (U.S.A.). Stimulation by external sodium of K^{42} uptake in frog stomach muscle.

C. Crone (Denmark). A possible link between glucose transport and sodium transport in mammalian muscle cells.

R. H. Adrian (U.K.). Pumped movements of Na and Rb in frog sartorius muscle.

O. Schanne and E. Ceretti (U.S.A.). Simultaneous changes of membrane resistance and of the resistivity of the myoplasm in frog sartorius muscle.

P. B. Hollander and J. L. Webb (U.S.A.). Transmembrane potential changes recorded during aconitine-induced atrial arrhythmias.

P. R. Schloerb, G. L. Blackburn and J. J. Grantham (U.S.A.). Intracellular pH and tissue buffering in respiratory acidosis.

G. Mainwood (Canada). The effects of CO_2 on ion movements in frog sartorius muscle.

C. P. Kraatz, W. Schlosser, H. Hartman and V. K. Kuriakose (U.S.A.). Phosphate ion and depolarization of muscle by drugs.

A. R. McIntyre, M. Hendrickson and K. C. Wong (U.S.A.). The cardiotropic action of Rhodochlorin upon the hypodynamic heart.

Y. Oomura, H. Ooyama, M. Sawada and S. Ozaki (Japan). A study on the bullfrog slow muscle fibers.

P. B. Mansfield and A. D. Cole (U.S.A.). Macroelectrode stimulation processes in the myocardium.

Wednesday Morning, September 8, Room 602: National Education Center

NERVOUS CONDUCTION IN CNS I

H. J. Waller and S. M. Feldman (U.S.A.). Effects of stimulation of midbrain on single neuron activity in contralateral somatosensory thalamus and cortex.

S. Watanabe (Japan). Recovery of the thalamic discharges in relation to somatic projection.

T. Hotta (Japan). Cortical influence on somatovisual interaction in lateral thalamus of cat.

D. P. Purpura, J. G. McMurtry, T. Scarff and K. Maekawa (U.S.A.). Intracellular synaptic events in reticular activation of specific and nonspecific thalamic neurons.

K. Kamikawa, H. Noda and D. Jinnai (Japan). A connection of bilateral lenticular nuclei through the mid-line nuclei of the thalamus and massa intermedia.

I. H. Wagman, D. A. Prince and R. H. de Jong (U.S.A.). Effects of i.v. Lidocaine on CNS evoked potentials.

K. Koizumi, T. Ishikawa and C. McC. Brooks (U.S.A.). Unitary activity of paraventricular nucleus neurons and its control.

P. Andersen and T. Lømo (Norway). Evidence for exclusive dendritic location of excitatory synapses on hippocampal pyramidal cells.

J. Liebeskind, Y. Lamarre and D. Albe-fessard (France). Studies on somatic projections to macaque motor cortex.

K. Krnjević and M. Randić (Canada). Cortical inhibition and spreading depression.

Wednesday Morning, September 8, Room 704: Nissei Kaikan

VISION IV: HUMAN

K. Tsukeda (Japan). On the relation between after-image and successive contrast.

A. Benetato, R. Vrinceanu, A. Ciplea, E. Daneliuc and M. Popescu (Rumania). Study of the occipital evoked potential (EP) in normal and hemodynamic diseases.

E. Marg and G. Dierssen (U.S.A.). Reported visual percepts from stimulation of the human brain with microelectrodes during therapeutic surgery.

L. B. Speck and B. Dim (U.S.A.). Visual evoked response studies in psychiatric patients.

N. Stefanova (Bulgaria). On the invariantness of visual patterns.

M. Clynes (U.S.A.). The electrical chromaticity waves in the brain in color vision and their relation to the basic biologic function of unidirectional rate sensitivity.

E. von Skramlik (Germany). Selfobservations and "illusions" of lunatics.

C. Popp (Germany). On an entropy relation of the normal color sense deducible from the spectrum disc.

Wednesday Afternoon, September 8, Room 201: National Education Center

EEG AND CORTICAL EVOKED POTENTIAL I

M. Blozovski and D. Blozovski (France). Structure, global and unitary bioelectrical activity of the developing brain.

A. I. Karamyan, N. P. Veselkin and M. G. Belekhova (U.S.S.R.). The development of integrative activity of the central nervous system of vertebrates.

E. T. Segura and A. de Juan (Argentina). Periodical changes in the electrical activity of the C.N.S. of the toad.

T. Ookawa (Japan). Rhythmic, domic and spiky after-discharges in EEG of chicks.

J. Magnes, C. Allweis and M. Abeles (Israel). EEG and metabolism of the perfused cat brain.

C. Ohye, N. Mano and Y. Nakamura (Japan). Effect of polarizing current upon experimentally produced delta wave in the cat's neocortex.

O.C.J. Lippold ann C. Shagass (U.S.A.). Effects of brain polarisation on the evoked somatosensory cortical potentials in man.

S. Larson and A. Sances, Jr. (U.S.A.). Evoked primary and after potentials in the dyskinesias.

A. L. Towe (U.S.A.). The currents that flow during the evoked primary response and their relation to the neuron population response.

Wednesday Afternoon, September 8, Room 601: National Education Center

EXCITABLE MEMBRANE III

D. E. Goldman (U.S.A.). Computation of axon behavior from molecular structure of the membrane.

A. M. Monnier, A. Monnier, H. Goudeau and A. M. Reynier-Rebuffel (France). Electrical excitation of artificial lipidic membranes.

H. Grundfest, M. Ozeki and R. A. Freeman (U.S.A.). Structural differentiatian between electrogenic components of gradedly responsive and spike generating membrane.

Y. Nakamura and H. Grundfest (U.S.A.). Different effects of K and Rb on electrically excitable membrane of eel electroplaques.

T. Narahashi (U.S.A.). Dependence of excitability of giant axon membranes on divalent cations.

J. A. Cerf and K. Koketsu (U.S.A.). Effects of cold on membrane potentials of a neuron soma in calcium-free solutions.

S. Hagiwara and S. Nakajima (U.S.A.). The initiation of excitation and contraction of barnacle muscle as determined by the intracellular calcium ion concentration.

N. Toida and T. Osa (Japan). Spike generating mechanism of smooth muscle cell membrane.

J. P. Reuben (U.S.A. and Switzerland). Transient depolarization of crayfish muscle fibers induced by reducing the calcium concentration.

M. Okamoto (U.S.A.). Effects of adenine nucleotides on peripheral nerve.

R. Eckert (U.S.A.). Spontaneous potentials and tentacle movements in the dinoflagellate Noctiluca.

Wednesday Afternoon, September 8, Room 602: National Education Center

NERVOUS CONDUCTION IN CNS II

E.J.A. Carregal (U.S.A.). Cyclic fluctuations of excitability of spinal motoneurons.

W. Willis, R. Ashworth and G. Tate (U.S.A.). Monosynaptic excitatory connections of cervical motoneurons.

T. Araki and Y. Fukami (Japan). The action of metabolic inhibitors on the electrical activities of the spinal motoneuron.

C. Guzman-Flores, P. Pacheco, M. Salas and M. Alcaraz (Mexico). Heterosynaptic post-tetanic potentiation in spinal motoneurones.

X. Machne, S. D. Stoney and J.M.D. Nadell (U.S.A.). The relation between temperature and electrical activity of frog spinal ganglion cells.

H. Takahira and A.C. Nacimiento (Japan, U.S.A. and Germany). Properties of the burst response of cerebellar Purkinje cells.

R. Llinas and K. Sasaki (Australia). Antidromic activation of Purkinje cells in the cat.

T. Oshima and K. Takahashi (Japan). Microelectrode studies on two types of pyramidal tract cells in the cat.

M. Yoshida, K. Yajima and H. Akimoto (Japan). Inhibseory pathway to the pyramidal tract neurones from the VL.

Y. Okada and H. Koike (Japan). Accommodation in ppramidal tract cells of the cat.

S. Watanabe and O. Creutzfeldt (Germany). Analysis of spontaneous postsynaptic potentials of cortical neurons.

R. G. Grenell and L. O'Neill (U.S.A.). Ion alterations and superficial cerebral cortical responses.

Wednesday Afternoon, September 8, Room 704: Nissei Kaikan

ELECTRORECEPTION, TACTILE, PAIN, AND THERMAL SENSATION

T. Szabo and A. Fessard (France). Rhythmic potentials obtained from fish skin.

M. Sato and M. Ozeki (Japan). Response of the non-myelinated nerve terminal in Pacinian corpuscles to maintained compression.

O. B. Ilynski (U.S.S.R.). Physiology of isolated mechanoreceptors (Pacinian corpuscles).

P. Dorward, A. K. McIntyre and U. Proske (Australia). Vibration detection by receptors in vertebrate skeletal tissues.

R.K.S. Lim (U.S.A.). The nature of the receptors for pain.

A. J. Plummer, H. Chernov, P. Bernard and D. Wilson (U.S.A.). Analgesic activity in a quinazoline.

M. Yamada (Japan). Excitation mechanisms of toothache due to thermal stimulation.

D. J. Anderson and B. Mathews (U.K.). Sensation in dentine.

D. Kenshalo (U.S.A.). Behavioral and neural responses of cats to thermal stimuli.

J. Kwak (Korea). Somatic neurons and mechanical inner stimulus.

Thursday Morning, September 9, Room 201: National Education Center

EEG AND CORTICAL EVOKED POTENTIAL II

T. Oikawa (Japan). Synchronism of cortical neuron discharges in relation to brain waves.

S. S. Fox and J. H. O'Brien (U.S.A.). Duplication of evoked potential wave form by probability of spike firing.

J. E. Swett, S. Inoue and Y. Fujita (U.S.A.). Cerebellar evoked responses to low threshold muscle afferents.

H. Kawamura and C. H. Swayer (U.S.A.). Cerebral D. C. potential changes in the rabbit during eating and drinking.

H. Negoro and M. Kawakami (Japan). Influence of cold exposure upon brain activity in the rabbit.

T. Ozaki and K. Fuziwara (Japan). Cerebral s ow potential changes during sensory stimulation.

K. Sato, K. Mimura, H. Kitajima, N. Hirota, Y. Yagawa and N. Ochi (Japan). Some observations on the cerebral evoked potentials in relation to EEG.

K. Suhara, Y. Maki, H. Suzuki and A. Katada (Japan). Cortico-subcortical relationships in the animal EEG-A frequency analytical study.

K. Mimura, K. Sato and K. Tomonaga (Japan). The specific and nonspecific components in the cortical potential evoked by sensory stimulation and its relationship with the orgin of spontaneous EEG.

Thursday Morning, September 9, Room 501: National Education Center

CONDITIONED REFLEX AND BEHAVIOR IV

H. Moskowitz and H. Asato (U.S.A.). The effect of alcohol upon responses with positive and negative reinforcers.

S. K. Germane and A. A. Kimenis (U.S.S.R.). On the mechanism of the influence of aminoindandions on conditioned reflexes and the behaviour of animals.

M. Russek and S. Pina (Mexico). The influence of food palatability on adrenalin-induced-anorexia and its conditioning.

S. P. Grossman (U.S.A.). Reticular formation influences on the acquisition and performance of conditioned responses.

K. F. Killam and A. J. Hance (U.S.A.). Analysis of electrographic correlates of conditional responses to positive reinforcement: I. Correlates of acquisition and performance.

E. K. Killam, R. S. Carpenter, J. Koenig, D. F. Lindsley and L. S. Seiden (U.S.A.). Analysis of electrographic of conditional responses to positive reinforcement: II. Alterations induced by pharmacological agents.

G. Ungal (U.S.A.). Passive transfer of habituation and discrimination in mammals.

W. B. Essman (U.S.A.). Facilitation of memory consolidation by chemically induced acceleration of RNA synthesis.

G. Ling (Canada). Behavioral responses to cholinergic stimulation of caudate nucleus and thalamus.

A.N. Estein, S. Lee and A. Ku (U.S.A.). Identical blood sugar response to insulin in normal and recovered lateral rats.

Y. Tsukada and T. Noguchi (Japan). Metabolic disorder of phenylalanine and behavioral changes on experimental phenylketonuric animals.

Thursday Morning, September 9, Room 504: National Education Center

TRANSMITTERS IN CENTRAL NERVOUS SYSTEM II

L. Hertz (Denmark). A possible role of neuroglia: A potassium-mediated neuronal-neuroglial-neuronal impulse transmission system.

T. J. Haley and A. M. Flesher (U.S.A.). Reserpine, tetrabenazine and iproniazid effects on self-stimulation.

K. Kataoka (Japan). Some physiological properties of satellite polypeptides produced from crude brain Substance P with carbon tetrachloride treatment.

E. Eidelberg (U.S.A.). Drug effects on amygdaloid electrical activity.

P. B. Bradley, J. H. Wolstencroft and G. L. Avanzino (U.K.). Responses of brain-stem neurones to iontophoretically applied drugs.

J. H. Welsh, M. Mirolli and G. A. Cottrell (U.S.A.). 5-hydroxytryptamine and the action of reserpine in molluscs.

A. Heller, L. S. Seiden and R. Y. Moore (U.S.A.). Regional effects of lateral hypothalamic lesions on brain 5-hydroxytryptophan decarboxylase in the cat.

I. Yanagisawa, T. Asada, K. Makino and H. Yoshikawa (Japan). Convulsion and bromine content in human cerebrospinal fluid.

J. M. Parker and B. K. Wasson (Canada). Central sympatholytic properties of 2[β-(N-morpholino)-ethylaminomethyl] 1'4-benzodioxan dihydrochloride.

K. P. Bhargava and R. K. Srivastava (India). Central somatic effects of neuromuscular blocking agents.

Thursday Morning, September 9, Room 505: National Education Center

CELL PHYSIOLOGY AND SUBCELLULAR STRUCTURES

A. B. Kogan (U.S.S.R.). The dynamics of certain subcellular structures during inhibition and excitation.

S. Ochs (U.S.A.). Axoplasmic flow of labelled protein in fluid compartment of nerve fibers.

A. Van Harreveld (U.S.A.) The sulfate space in central nervous tissue.

Thursday Morning, September 9, Room 602: National Education Center

NERVOUS CONDUCTION IN CNS III

C. M. Smith, E. X. Albuquerque and B. Whitsel (U.S.A.). Differential spectrums of action of cholinergic agents on muscle spindle afferents.

L. Stark (U.S.A.). Noise and information in the central nervous system.

W. Rall and G. M. Shepherd (U.S.A.). Theoretical reconstruction of olfactory bulb potentials.

R. Ochi (Japan). Occurrence of postsynaptic potentials in the inferior olive neurones associated with their antidromic excitation.

G. Pilar and J. Fex (Australia). Synaptic mechanisms in the anterior portion of the ventral cochlear nucleus of the cat.

R. M. Hill (U.S.A.). Receptive field properties of the superior colliculus in rabbit.

H. Suzuki (Japan). Effect of cortical stimulation on synaptic transmission in lateral geniculate nucleus.

M. Konishi, S. Watanabe and O. Creutzfeldt (Germany). Analysis of postsynaptic potentials (EPSP's and IPSP's) in the visual cortex of the cat.

R. W. MORSE (U.S.A.). Population response characteristics of neurons in the dorsal column nuclei of the monkey.

J. P. Schadè (Netherlands). Differential development in inhibitory and excitatory pathways.

Thursday Morning, September 9, Room 704: Nissei Kaikan

OLFACTION, TASTE, AND VISCERAL SENSATION

J. Boeckh (Germany). Peripheral inhibition as a code in insect olfaction.

S. F. Takagi and G. A. Wyse (U.S.A.). The ionic mechanism of the offactory receptor potentials.

R. Gesteland (U.S.A.). Patterns of olfactory receptor response.

G. Hellekant (Sweden). Electrophysiological investigation of the gustatory effect of ethyl alcohol. II: A single fibre analysis in the cat.

N. Ishiko and M. Amatsu (Japan) Thalamic representation of taste qualities in cat.

M. Ichoka (Japan). Some investigations on the mechanism of the initiation of the electric taste sensation in human subject.

R. M. Pangborn and R. B. Chrisp (U.S.A.). Gustatory responses to optical isomers of selected carbohydrates.

H. Stone (U.S.A.). Gustatory response to L-amino acids in man.

A. Niijima (Japan). The baroceptor in the kidney of the rabbit.

C. Kimura, J. Okino and T. L. Tsai (Japan). Visceral sensation of the liver.

A. Varbanova (Bulgaria). EEG-synchronizing effect of interoceptive impulses.

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MOLECULAR PHYSIOLOGY

C. Di Benedetta and L. A. Cioffi (Italy). Rabbit brain proteins in different physiological conditions.

DEVELOPING BRAIN

(1) Kurokawa, M., Machiyama, Y. & Kato, M., Distribution of acetylcholine in the brain during various states of activity. J. Neurochem. 10: 341-348, 1963

(2) Naruse, H., Kato, M., Kurokawa, M., Haba, R. & Yabe, T., Metabolic defects in a convulsive strain of mouse. J. Neurochem. 5: 359-369, 1960

(3) Yoshida, T., Tada, K., Mizuno, T., Wada, Y., Akabane, J., Ogasawara, J., Minagawa, A., Morikawa, T. & Okamura, T., A sexlinked disorder with mental and physical retardation characterized by cerebrocortical trophy and increase of glutamic acid in the cerebrospinal fluid. Tohoku J. exp. Med. 83: 261-269, 1964

(4) Kurokawa, M., Kato, M. & Machiyama, Y., Choline acetylase activity in a convulsive strain of mouse. Biochim. Biophys. Acta, 50: 385-386, 1961

(5) Kakimoto, Y., Nakajima, T., Takesada, M. & Sano, I., Changes in carbohydrate metabolism of the mouse brain following the administration of 3,4-dihydroxy-L-phenylalanine. J. Neurochem. 11: 431-437, 1964

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NEW BOOKS:

The Developmental Psychology of Jean Piaget, J.H. Flavell (Ed.), D. Van Nostrand Company, Inc., $8.75.

Disorders of the Developing Nervous System, W.S. Fields and M.M. Desmond (Eds.), Charles C. Thomas, $17.00.

Cerebral Function in Infancy and Childhood, A. Peiper (Ed.), Consultants Bureau, $25.30.

Mental Aspects of Mental Retardation, C.H. Carter (Ed.), Charles C. Thomas, $20.00.

Vol. 4, No. 3 June 1965

—編集後記—

毎日蒸暑い雨模様の天気が続いて，うっとうしい気持ですが早く梅雨が終って明るい夏の日ざしが輝く気候になってくれればよいと願っています。

今号には今秋東京で行われる第23回国際生理科学会議のプログラムのうち，神経化学に関連のある演題名のみを収録しました参考になれば幸です。

又神経化学懇話会主催の招待外人講演会の出席者の学者たちと演題をのせました。これ程一流の学者たちが一緒に集まる機会は恐らくめったにないことと思いますので多数御参加下さい。

第8回神経化学懇話会（9月17，18日，東京・全共連ビル）の演題申込みが今続々と集って来ています。今年度も盛会であることを願っています。

7／7／65 Y.N.

編集委員（ＡＢＣ順）

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昭和40年7月23日 印刷
昭和40年7月25日 発行

神経化学　第4巻　第3号

編集者　（代表）塚田　裕三
編集所　東京都大田区大森西5丁目21番地
東邦大学医学部第二生理学教室内　神経化学懇話会
表紙印刷　東京都北区西ヶ原3丁目46番地　杏林舎
印刷及製本　東京都文京区後楽1丁目5番地　(株)中央商会
発行者　緒方秀雄
発行所　東京都文京区曙町11番地　緒方書店

本会員以外の方で本誌の希望者は，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。

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