

S Y M P O S I U M

NEURO-  
PHYSIOLOGICAL  
BASIS OF  
NORMAL AND  
ABNORMAL  
MOTOR  
ACTIVITIES

*THIRD RESEARCH CONFERENCE OF THE*

*PARKINSON'S DISEASE  
INFORMATION AND  
RESEARCH CENTER*

*COLLEGE OF PHYSICIANS & SURGEONS  
COLUMBIA UNIVERSITY  
NEW YORK CITY*

*NOVEMBER 28TH AND 29TH, 1966*

*ALUMNI AUDITORIUM  
COLLEGE OF PHYSICIANS & SURGEONS  
630 WEST 168TH STREET, NEW YORK CITY*

## *Sponsors*

PARKINSON'S DISEASE FOUNDATION  
710 West 168th Street  
New York, N.Y. 10032

NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS  
National Institutes of Health  
Bethesda, Maryland 20014

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November 28, 1966

## SESSION I—9:00 A.M.

INTRODUCTION—Melvin D. Yahr, *College of Physicians and Surgeons  
Columbia University, New York City*

GREETINGS —H. Houston Merritt, *Dean, College of Physicians and  
Surgeons, Columbia University, New York City*  
Richard L. Masland, *Director, National Institute of  
Neurological Diseases and Blindness*

### REGULATION OF MOTONEURON EXCITABILITY

William M. Landau, *Chairman*

- 1 **The Effects of Stretch Receptors on Motoneurons.**  
*Ragnar Granit, The Nobel Institute for Neurophysiology, Karolinska  
Institutet, Stockholm, Sweden.*
  
- 2 **Changes in Muscle Spindle Morphology and Discharge with Long Term  
Alterations in Muscle Status.**  
*Earl Eldred, Department of Anatomy, University of California, Center  
for the Health Sciences, Los Angeles, California.*
  
- 3 **The Motor Cortex-Pyramidal System: Patterns of Facilitation and In-  
hibition on Motoneurons Innervating Limb Musculature of Cat and  
Baboon and their Possible Adaptive Significance.**  
*James B. Preston, Department of Physiology, College of Medicine,  
State University of New York, Syracuse, New York.*
  
- 4 **Instability of the Proprioceptive Length-Servo: Its Possible Role in  
Tremor Phenomena.**  
*Hans D. Henatsch, Physiologisches Institut der Universität, Göttingen,  
West Germany.*

November 28, 1966

## SESSION II—2:00 P.M.

### CEREBELLAR AND BRAIN STEM MECHANISMS INFLUENCING SPINAL REFLEX ACTIVITIES

Carlton C. Hunt, *Chairman*

**1 Functional Significance of Information Channels from the Spinal Cord to the Cerebellum.**

Olov Oscarsson, *Institute of Physiology, University of Lund, Lund, Sweden.*

**2 Neuronal Circuitry in the Cerebellar Efferent System.**

Masao Ito, *Department of Physiology, School of Medicine, University of Tokyo, Tokyo, Japan.*

**3 Vestibular Actions on Alpha and Gamma Motoneurons and their Control by Cerebellar Mechanisms.**

Carlo A. Terzuolo, *Department of Physiology, School of Medicine, University of Minnesota, Minneapolis, Minnesota.*

**4 Mutual Interactions between Bilateral Vestibular Nuclei and their Significance in Motor Regulation.**

Hiroshi Shimazu, *Section of Neurophysiology, Institute of Brain Research, School of Medicine, University of Tokyo, Japan.*

November 29, 1966

## SESSION III—9:00 A.M.

### APPROACHES TO THE ANALYSIS OF MOTOR SYSTEM ORGANIZATION

Harry Grundfest, *Chairman*

- 1 **Intrinsic Organization and Synaptic Relations of the Corpus Striatum.**  
Dominick P. Purpura, *Departments of Anatomy and Neurology, College of Physicians and Surgeons, Columbia University, New York City.*
  
- 2 **Representation of Movements and Muscles by Pyramidal Tract Neurons of the Precentral Motor Cortex.**  
Edward V. Evarts, *Laboratory of Clinical Science, National Institute of Mental Health, Bethesda, Maryland.*
  
- 3 **Input-Output Relations in Sensorimotor Cortex.**  
Vernon B. Brooks, *Department of Physiology, New York Medical College, New York City.*
  
- 4 **Induced Phasic Motor Responses in the Chronic Monkey.**  
Thomas W. Langfitt, *Department of Neurosurgery, Pennsylvania Hospital, Philadelphia, Pennsylvania.*
  
- 5 **Sensory Inhibition During Motor Activities in Sleep.**  
Ottavio Pompeiano, *Istituto di Fisiologia della Università di Pisa, Pisa, Italy.*

November 29, 1966

## SESSION IV—2:00 P.M.

### PRINCIPLES AND PERSPECTIVES

Dominick P. Purpura, *Chairman*

**1 The Way in Which the Cerebellum Processes Sensory Information from Muscle.**

John C. Eccles, *Institute for Biomedical Research, American Medical Association, Chicago, Illinois.*

**2 Organization of Motor Behavior.**

Derek Denny-Brown, *Neurological Unit, Boston City Hospital, Boston, Massachusetts.*

**3 Cortical-Subcortical Relations in Abnormal Motor Functions.**

Fred Mettler, *Departments of Anatomy and Neurology, College of Physicians and Surgeons, Columbia University, New York City.*

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