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1987 GORDON RESEARCH CONFERENCE ON NEURAL PLASTICITY
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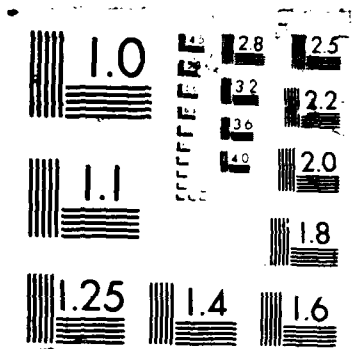
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19 ABSTRACT (Continue on reverse if necessary and identify by block number)

The Gordon Conference on Neural Plasticity was held on July 20-24, 1987 at Brewster Academy in Wolfeboro, New Hampshire, as planned. About 90 persons attended the meeting. The poster session, consisted of more than 20 posters and was well attended. A number of graduate students and postdoctoral researchers were able to present their results in that session. The Conference offered an excellent opportunity for researchers in a wide variety of fields within the neurosciences to exchange ideas and their latest research results in a setting that promoted informal, as well as formal, interactions. There was ample opportunity for detailed discussions that occupied the hours beyond formal meeting times.

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GORDON CONFERENCE ON NEURAL PLASTICITY

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Conference Chairperson: David Wilson
College of Arts and Sciences
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The Gordon Conference on Neural Plasticity was held on July 20-24, 1987 at Brewster Academy in Wolfeboro, New Hampshire, as planned. Attached is a list of the sessions and speakers at the Conference. It differs little from the proposal version. Two speakers were changed because of late withdrawals.

About 90 persons attended the meeting. The poster session, held after the keynote speech by Eric Kandel on Monday, consisted of more than 20 posters and was well attended. A number of graduate students and postdoctoral researchers were able to present their results in that session.

The Conference offered an excellent opportunity for researchers in a wide variety of fields within the neurosciences to exchange ideas and their latest research results in a setting that promoted informal, as well as formal, interactions. There was ample opportunity for detailed discussions that occupied the hours beyond formal meeting times.

In a field such as neural plasticity, the research interests of the group are very diverse. The meeting was an ideal way to remain current in neighboring areas of research. The opportunity for cross-fertilization was great.

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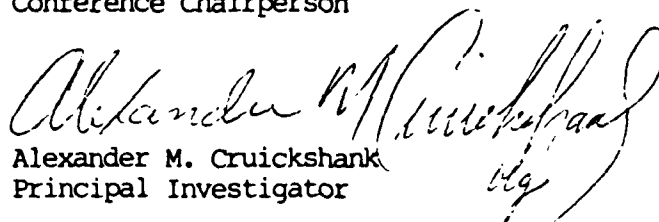
L2 OCT 1987

It is anticipated that another conference on this topic will take place in 1989, as participants expressed great enthusiasm for its continuation.

We are most grateful for your support, which contributed significantly to the success of the 1987 Conference.



David Wilson
Conference Chairperson



Alexander M. Cruickshank
Principal Investigator

8/7/87



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JORDON RESEARCH CONFERENCE ON NEURAL PLASTICITY

Brewster Academy, Wolfeboro, New Hampshire July 20-24, 1987

DAY 9:00 AM Cell-Surface Molecules and Plasticity

Discussion Leader: Monte Westerfield (Inst. of Neuroscience, Univ. of Oregon)

Greg Cole (University of Miami School of Medicine)

Characterization of the heparin-binding domain of NCAM

Urs Rutishauser (Dept. of Developmental Genetics and Anatomy, Case Western Reserve University)

NCAM and the control of cell-cell interactions

John Covault (Biological Science Group, Univ. of Connecticut)

Expression of cell-surface molecules during reinnervation of skeletal muscle

7:30 PM Cell and Molecular Biological Approaches to Short and Long-Term Memory

Keynote Speaker: Eric Kandel (Center for Neurobiology and Behavior, Columbia University)

to be followed by poster session

TUESDAY 9:00 AM Refinement and Alignment of Neural Maps

Discussion Leader: Carla Shatz (Dept. of Neurobiology, Stanford Univ.)

Eric Knudsen (Dept. of Neurobiology, Stanford Univ.)

The role of experience in the development and maintenance of the map of auditory space

Michael Merzenich (Dept. of Otolaryngology and Physiology, Univ. of California, San Francisco)

Reorganization of somatosensory maps in adult mammalian cerebral cortex following peripheral nerve injury

John Schmidt (Dept. of Biological Sciences, SUNY, Albany)

The role of activity in refinement of topographic maps in goldfish retinotectal system

TUESDAY 7:30 PM Regulation of Neurotransmitter Synthesis

- Discussion Leader: Richard Zigmond (Dept. of Pharmacology, Harvard Medical School)
- Ann Rittenhouse (Dept. of Pharmacology, Harvard Medical School)
Long-term and short-term regulation of ganglionic tyrosine hydroxylase activity produced by nerve stimulation
- Jack Waymire (Dept. of Anatomy and Neurobiology, U. of Texas Med. Sch.)
Phosphorylation and activation of tyrosine hydroxylase in chromaffin cell cultures
- Larry Swanson (Salk Institute)
Neural and hormonal regulation of neuropeptide levels in the hypothalamus

WEDNESDAY 9:00 AM Learning and Memory--Hippocampus, etc.

- Discussion Leader: Willem Gispen (Institute of Molecular Biology, University of Utrecht)
- Robert Isaacson (Dept. of Psychology, SUNY, Binghamton)
Methodological issues in evaluating hippocampal contributions to learning and memory
- F.H. Lopes da Silva (University of Amsterdam)
Is long-term potentiation a model for learning and memory?
- Oswald Steward (Dept. of Neurosurgery, U. of Virginia School of Med.)
Protein synthesis at the postsynaptic site; its role in synapse growth and modification
- Paul Gold (Dept. of Psychology, University of Virginia)
Humoral factors and learning and memory

WEDNESDAY 7:30 PM Hormonal (and Neuroactive Substance) Modulation of Circuits

- Discussion Leader: Peter Getting (Dept. of Biophysics, U. of Iowa)
- Eve Marder (Dept. of Biology, Brandeis University)
Peptidergic modulation of a neuronal circuit
- Glenn Hatton (Dept. of Psychology, Michigan State University)
Plasticity in chemical and non-chemical synapses in mammalian peptidergic neurons
- Steven Jones (Dept. of Physiology, Case Western Reserve)
Neurotransmitter modulation of cellular properties

THURSDAY 9:00 AM Cellular and Molecular Analysis of Neuronal Plasticity

- Discussion Leader: Tom Carew (Dept. of Psychology, Yale University)
- Dan Madison (Yale University Medical School)
Neurotransmitter modulation of ionic currents in hippocampal pyramidal cells
- Thomas Brown (Div. of Neurosciences, City of Hope Research Institute)
A cellular analysis of long-term potentiation
- Steven Siegelbaum (Center for Neurobiology, College of Physicians and Surgeons, Columbia University)
Role of channel modulation in synaptic plasticity

THURSDAY 7:30 PM Plasticity of the Vestibulo-ocular Reflex: Behavior, Circuits and Putative Modifiable Synapses in the Behaving Primate

Discussion Leader: Stephen Lisberger (Dept. of Physiology, UCSF)
Fred Miles (Dept. of Biology, City College of CUNY)
The vestibulo-ocular reflex as a model system for investigating brain mechanisms of plasticity in the adult primate
Steven Highstein (Dept. of Otolaryngology, Washington University)
Brainstem and cerebellar circuits underlying the vestibulo-ocular reflex in monkeys
Stephen Lisberger (Dept. of Physiology, UCSF)
Changes in brainstem circuits underlying plasticity of the vestibulo-ocular reflex in monkeys
Yasushi Miyashita (Dept. of Physiology, University of Tokyo)
Plasticity in cerebellar cortex?

FRIDAY 9:00 AM Multiple Kinases

Discussion Leader: Mary Kennedy (Division of Biology, California Institute of Technology)
Irwin Levitan (Dept. of Biochemistry, Brandeis University)
Modulation of ion channels by cAMP-dependent protein kinase
Leonard Kaczmarek (Yale University School of Medicine)
Modulation of ion channels by the C-kinase
Mary Kennedy (Caltech)
Potential roles of calmodulin-dependent protein kinases in the nervous system

Chairperson: David L. Wilson (College of Arts and Sciences, University of Miami)

Vice-Chairperson: Carla Shatz (Dept. of Neurobiology, Stanford Univ.)

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