

BIOPHYSICS

Microscopic Wires Record Brain Processes

► INSERTED into the brain, microscopic bits of wire are recording details of how networks of brain cells process incoming information from eyes, ears and other sensory parts of the body.

The research is under the direction of Dr. Marcel Verzeano, neurobiophysicist at the University of California, Los Angeles, and pioneer in techniques of simultaneous probing of the activity of several brain cells.

When flashes of light are presented to the eye, electrical discharges from individual cells in the top part of the brain (cortex) occur in the same sequence in response to light flashes at a particular frequency.

When the frequency is changed, the sequence of cell discharges changes. This appears to be a way the brain has of coding information received from our senses.

It was also found that in the networks of cells of the cortex as well as of brain structures below, there is a continual flow of electrical impulses.

This flow is modified by the sudden bursts of brain cell discharges which occur in response to light flashes. This may be a means by which coded sensory information is transmitted from one network of cells to another.

Dr. Verzeano has just received a \$128,324 grant from the National Institutes of Health to continue the investigation.

• Science News Letter, 82:343 November 24, 1962

MEDICINE

Heart Patients Warned Of New Drug for Shock

► CAUTION in the use of a newly marketed and approved drug, angiotensin II (trade name Hypertensin), considered life-saving in cases of shock, has been sounded by two University of Cincinnati doctors after animal experiments.

Dr. John C. Holmes told SCIENCE SERVICE that, as far as he knows, he and Dr. Noble O. Fowler are the first to study the effects of angiotensin on heart muscle (myocardium) and coronary circulation.

They plan to do postmortem studies on human coronary arteries of recently dead heart patients who have had angiotensin injected. They also plan to inject dye into the aorta of living normal patients and take angiocardiograms to see what happens to coronary arteries when angiotensin is injected.

Dr. Richard H. Roberts of the Ciba Pharmaceutical Company, producers of Hypertensin, said that leading cardiologists are using angiotensin II in cases of myocardial shock because it is a lifesaving drug. In a matter of seconds, harmful effects are reversed, he stated.

Drs. Fowler and Holmes found in their animal experiments that angiotensin has significant constricting effect on the coronary arteries, impairing the flow of blood to the heart.

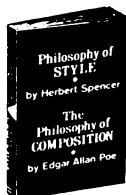
They contend that since one condition

that produces shock is blockage of coronary blood flow, use of angiotensin might intensify the problem with heart patients. If the heart already has an area of dead muscle or is on the verge of this, lessening the supply of blood to that muscle through use of angiotensin might cause death.

The Food and Drug Administration received a new drug application from the Ciba Company some time ago and approved Hypertensin on May 21, 1962.

The Journal of the American Medical Association printed an article on Dec. 9, 1961, praising angiotensin II as a powerful agent causing a rise in blood pressure in patients with severe shock from barbiturate poisoning and intracranial bleeding following operations. Drs. Francesco del Greco and David C. Johnson of Northwestern University Medical School said angiotensin was also used without harmful effect in treating ten patients in whom low blood pressure appeared while an artificial kidney was being used.

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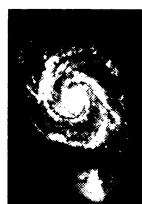
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