BIOLOGY

Nerve Cell Regeneration

➤ NERVE CELLS supposedly incapable of regeneration have been observed to divide.

"In the long view," Dr. Warren Andrew of Indiana University said, "this has a definite relationship to the restoration of nervous function in human beings."

In experiments conducted with mice there was a definite tendency for the nuclei in nerve cells and even the cell bodies to undergo division, Dr. Andrew said. He reported these findings at the American Association for the Advancement of Science meeting in Washington.

The left facial nerve, a typical motor nerve, was crushed in 20 mice whose ages were known to the day. The mice were divided into five groups of four animals each and then sacrificed at time intervals of one day, two days, 72 hours, one week and two weeks. In each case the nerve cells on the operated side were compared with the right or normal side.

Changes were slight in young animals, Dr. Andrew reported. However, in the one-week and two-week specimens from mice past middle age changes were more numerous.

As had been previously observed in nerve cells in very old animals, including human beings, there was a tendency for the nuclei and cell bodies to divide. This is in contrast to the long-held belief that nerve cells, with their extremely high degree of differentiation and specialization, are incapable of division after birth. The number of these cells was also supposed to remain constant except for the possible loss of some as a consequence of old age.

Very clear-cut figures of cells with two nuclei were seen on the operated side, with evidence of "double cells" connected only by a process similar to a dendrite, Dr. Andrew said.

Such "double cells," he believes, may well be a stage in actual new cell formation. While it is "difficult to arrive at an absolute conclusion" that there are two cells where there had been one, the experimental evidence points to this, Dr. Andrew said.

He showed scientists at the meeting slides in which a single cell with two nuclei could be seen, as well as slides of cells in the process of dividing and cells so close together that apparently they resulted from the division of one cell.

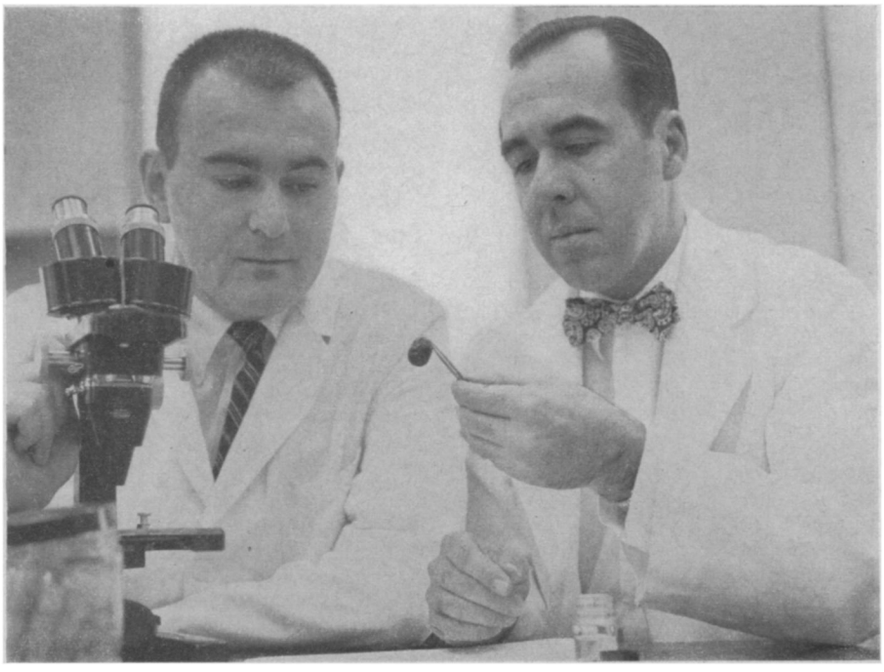
Dr. Andrew, who is chairman of the department of anatomy at Indiana's School of Medicine, explained that he has also observed the binucleated nerve cell in persons with some rare nervous diseases and in extreme old age.

Theobald Smith Award

➤ DR. ALBERT SJOERDSMA, head of the experimental therapeutics section of the National Heart Institute, Bethesda, Md., has been awarded the Theobald Smith Award presented at the AAAS meeting.

His research has been upon amine substances that influence blood vessels, the development of a test for a malignant tumor through its overproduction of serotonin, and enzyme-inhibiting compounds that open a new approach to the treatment of hypertension.

The Theobald Smith award, given by Eli Lilly and Company, is for scientists under 35 and it carries a bronze medal and $1,000.



BIG TICK—Dr. George Anastos (right), professor of zoology at the University of Maryland, holds the largest known engorged tick, **Amlyomma testudinarium,** *as Dr. Carleton M. Clifford, research associate, looks on. The scientists are studying ticks and tick-borne diseases.*

Procter Science Prize

➤ DR. GUY SUITS, director of research at General Electric Company, was named recipient of the William Procter Prize for Scientific Achievement, awarded annually by the Scientific Research Society of America.

Presentation of the $1,000 prize was made in Washington on Dec. 29 during the AAAS meeting.

Dr. Suits had done significant work in the fields of non-linear electric circuits and high-temperature electric discharges. He holds more than 70 patents.

The prize honors the memory of the late Dr. Procter, who was instrumental in establishing the Society as a national organization. It goes to "a scientist or engineer in recognition of notable accomplishment in scientific research or in the administration of such research."

Science News Letter, January 3, 1959

MEDICINE

Tranquilizers Substituted For Hospitals in Haiti

➤ TRANQUILIZERS are often a superior alternative to hospitalization for the mentally ill.

Drug therapy is particularly advisable in those countries that economically cannot supply adequate mental hospital facilities, Dr. Nathan S. Kline, research director at Rockland State Hospital, Orangeburg, N.Y., told SCIENCE SERVICE.

Currently, Dr. Kline has been working with the Government of Haiti to establish the Haiti Psychiatric Institute at Port-au-Prince. This hospital, which will begin operations in February, 1959, will offer primarily drug therapy for the estimated 6,000 to 9,000 mentally ill of Haiti. It is believed to be the world's first hospital to offer such treatment.

This means that by administering drugs, the mentally ill may be kept out of mental hospitals. The patient himself will feel that he is still an active member of his community instead of being shut off in a mental institution.

Economically, this type of therapy will offer a less expensive helping hand in those countries that cannot afford hospitals. Presently, a 1,000-bed hospital, plus services, costs $15,000,000, Dr. Kline pointed out.

The present program in Haiti is an attempt to establish whether tranquilizers can replace hospitalization of the mentally ill. Schering Corporation, Hoffmann-La-Roche, Inc., and Wyeth International, leading pharmaceutical companies, have donated the money for the clinic and are supplying the drugs, Dr. Kline reported.

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