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## Questions

**BIOLOGY**—Why are there so few fish in the Sargasso Sea? p. 218.

**GEOPHYSICS**—What is the world's lowest recorded temperature? p. 216.

**PHYSICS**—Why is lithium-6 lighter than lithium-7? p. 212.

Photographs: Cover, American Optical Company; p. 211, The Rauland Corporation; p. 213, Chrysler Corporation; p. 215, Indiana University; p. 218, Bermuda News Bureau; p. 224, Sta-Dri Products Co.

### BIOLOGY

## Regenerating Nerve Cell's Protein Fluctuates

STUDIES of regenerating nerve cells, tracing the ups and downs of the cell's use of protein, are reported by a team of Swedish researchers.

First, the scientists report in *Nature* (Sept. 20), there is a "latent period" when a small part of the nerve close to the spot where the cells were crushed degenerates. The amount of protein in each cell dropped by 30% to 40% at this stage.

At the same time, the incorporation of lysine, one of the most biologically important amino acids, into regenerating cells exceeded the control cells' uptake by 70%.

During the "outgrowth period," when the regenerating nerve cells were rapidly growing, there was a 100% increase in the proteins per cell. The incorporation of lysine into the cells was found to increase by 200%.

Changes in the protein used by the regenerating cells' ribonucleic acid (RNA) followed a different pattern. When chromatolysis—the solution and breaking up of chromatin, the protein compounds believed to be the physical basis of heredity—occurred, protein incorporation increased by 100%. This took place on the eighth day after the cells were crushed.

The researchers used carbon-14 as tracer material to follow the regenerating cells' use of the lysine and orotic acid. Orotic acid, a protein isolated from milk, was studied in the transformation of RNA from a less active to a more active form.

S.O. Brattgard, H. Hyden and J. Sjostrand of the University of Goteborg's department of histology reported the research.

Science News Letter, October 4, 1958

## Do You Know?

The *nervous system* plays an important role in maintaining the body's blood pressure, not only through its influence on the pumping heart, but through its part in causing blood vessel walls to contract or expand.

Lipizzaners, Austria's famous white performing horses, are born dark; they acquire their white coats between three and seven years old.

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