

RADIOLOGY

Nuclear Particles Used For Cushing's Disease

► SUCCESSFUL TREATMENT of Cushing's disease, characterized by moon-shaped face and a peculiar obesity, has been accomplished using an atom smasher at the University of California Lawrence Radiation Laboratory at Berkeley.

Scientists used alpha particles with energies of 900 million electron volts to irradiate the pituitary gland. Alpha particles are the cores of helium atoms.

Up to 8,500 rads and even larger amounts can be given the pituitary with the big cyclotron—about three times as much as is possible with X-ray or gamma rays. Surgery of the pituitary and adrenal glands has been used previously as treatment but is considered risky.

An excessive output of adrenocorticotrophic hormone (ACTH) occurs in Cushing's disease because of overactivity of the pituitary, which stimulates the adrenal glands to produce large amounts of cortisone and other steroid hormones. This excessive output brings about a general physiological collapse and ultimate death unless the disease can be treated.

Dr. John H. Lawrence, director of the Donner Laboratory, who worked with the late Harvey Cushing, after whom the disease was named, was one of the team reporting success in the present research, which was supported in part by the U.S. Atomic Energy Commission. Drs. John A. Linfoot, James L. Born and Cornelius A. Tobias collaborated in the research.

• Science News Letter, 84:271 Oct. 26, 1963

Nature Note

► A LIGHT TOUCH of frost on an autumn morning releases feasts of persimmons for the enjoyment of small boys throughout persimmon range, through the south and northward into the Ohio valley, and in favored spots, at least, as far as the Great Lakes.

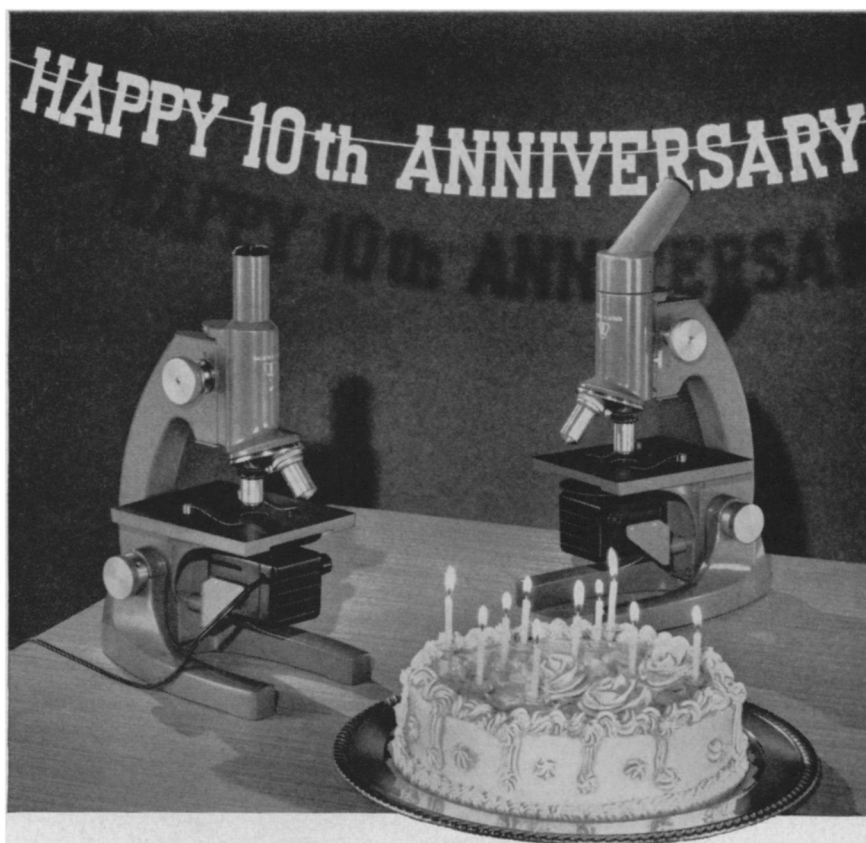
The first persimmons have been associated with frost for generations. However, it is not the frost that really removes the puckerness. The fruit becomes mellow and edible when fully ripe, even below the frost line. As with all autumn fruits, nature uses a touch of frost to speed up the ripening process.

The "pucker" of the persimmon is due to a tannin, such as is found in tea, called leucoanthocyanin. When the persimmon ripens and becomes soft, the tannin breaks down and the fruit becomes sweet.

Man has his own ways of hastening the ripening process. One method is to store the persimmons in a closed container filled with alcohol vapors, which remove the astringency. Another popular method, more closely related to nature's way, is to put the persimmons in a deep freeze unit for several days to a month.

When ready for use, the persimmons should be removed at least an hour to soften them, then eaten while chilled.

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