

MEDICINE

Malignant Tumors Abound With Fatty Substances

THE MORE severe, malignant tumors of high killing power, such as cancer, contain a much higher percentage of fatty substances than the less malignant tumors, Dr. Morio Yasuda of Tokyo Imperial University and Dr. W. R. Bloor of the University of Rochester School of Medicine and Dentistry, have just reported to the American Society for Clinical Investigation. Their report, published in the current issue of the society's *Journal of Clinical Investigation*, is based on chemical analyses of various kinds of human and mouse tumors made at the University of Rochester.

The tumors analyzed were divided into three groups according to degree of malignancy, as far as this could be estimated. In the first group of less malignant tumors the various fatty substances, such as phospholipids, cholesterol and neutral fat, were present in low percentages. These tumors included the types known as fibrosarcoma, neurofibroma, fibromyoma of the uterus, and colloid adenoma of the thyroid gland.

The two malignant groups, containing a high percentage of fats, included human carcinomas, or cancers, of stomach, pancreas, breast, uterus and colon, and mouse carcinomas. Some of the tissues upon which the human tumors were growing, such as uterus muscle and colon tissue, were also analyzed, and found to have a much lower percentage of fatty substances than the tumors or cancers.

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PHYSICS

Mme. Curie's Daughter Confirms Neutrons

NEW AND DIRECT proof of the existence of the new particle of matter called the neutron has been obtained by Mme. Irene Curie, daughter of the discoverers of radium, and her husband, Dr. F. Joliot of the Institut de Radium, Paris.

The discovery is announced in a communication to the British scientific journal, *Nature*.

Proof of the existence of penetrating radiations which are neither X-rays, such as are emitted from high voltage tubes, gamma rays such as produced from radium, nor electrons was obtained during a bombardment experiment. The two scientists concluded that the rays

must be identified with the neutrons, previous evidence for the existence of which was obtained by Dr. J. Chadwick of Cambridge, England.

The light metal, lithium, was bombarded with alpha particles or charged helium atoms obtained from the radioactive metal polonium. The secondary rays given off from the lithium differed from gamma rays which had the same penetration through lead because they were much more readily absorbed by paraffin.

The penetrating neutron rays obtained by the bombardment of metals like boron and beryllium have the same properties, but there are no known X-rays or gamma rays of the same strength with which to compare them. Dr. Chadwick's assumption of the existence of the neutron depended upon the idea that when neutron rays hit the metal atoms and disrupt them, throwing out bits of inner stuff in the form of alpha particles and protons, these violent collisions follow the same laws of conservation of energy and momentum as the shocks between billiard balls.

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ARCHAEOLOGY

Hundreds of Monte Alban Tombs Yet Unexplored

HUNDREDS of ancient Indian tombs are left in Monte Alban, judging by archaeological evidence, says Alfonso Caso, who discovered treasure in one.

Although graves in the sacred cemetery city were sacked by rival Indian factions even before America was discovered, and by Spaniards later, as well as by treasure hunters in more recent times, Sr. Caso believes that only an insignificant number have been touched.

The burial places are well disguised. Famous "Tomb number seven" in which almost fabulous gold and gems were found, is only a slight lens-shaped protuberance on a hillside, with stumps of house foundations on top. There are almost countless protuberances in similar places in Monte Alban.

The new road the governor of Oaxaca built to Monte Alban, to enable archaeologists to work there, accidentally cut several tombs. In one was alleged to have been found a quantity of fine jade ornaments. Road-building Indian soldiers are said to have kept these for themselves. This was before the

ASTRONOMY

New Comet Probably Twin To Newman Comet

A COMET, presumably new, has been discovered. It is faint and located in the southeastern evening skies just north of the constellation of Sagittarius. It will be known as the Schmitt comet after the astronomer who discovered it late in June. It is of the 13th magnitude and too faint to be seen with the unaided eye.

It is probably a twin to the Newman comet, discovered a few weeks ago by an astronomer at the Lowell Observatory, Flagstaff, Ariz. The Schmitt comet is within half a degree, about equal the full moon's diameter, of the position of Newman's comet, and the motion reported for it is exactly the same as that of the earlier discovery. This makes it seem that the new body is a companion of Newman's comet. Comets in the past have been known to break into two bodies, which then travel for a time side by side.

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beginning of the archaeological working season. The remarkable treasure tomb missed being cut by the road by only several yards.

The treasure tomb is twenty-one feet long, and is divided into two small rooms. A person of medium height can walk upright through the rooms. Niches in the walls were empty when found. Indian workmen say they were for incense burners.

Of the other eight tombs so far opened, several are mere stone-lined trenches without roofs, and others plain stone-lined rectangular underground rooms. One tomb is cruciform. Another has four underground chambers on different levels and differently oriented.

Indian workmen guard the eight tombs so far opened for the absent archaeologists. They take eight hour turns, and are not afraid of ghosts. There are three who call themselves "tumberos," and are proud that their spades first struck the treasure tomb.

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