MEDICINE

Russian Monkey Colony

An unusual monkey colony in Georgia, USSR, has been supplying monkeys for the study of cancer, genetics and various diseases since 1927, Faye Marley reports.

➤ OVERLOOKING the Black Sea in the USSR's Georgia is a famous monkey nursery that supplies animals for medical research.

Since 1927, monkeys living in this colony have been used for studying cancer, genetics and various diseases.

The nursery reminds a visitor of a particularly well-managed zoo in one of the world's most beautiful settings. Each cage contains one male with a number of females and newborn monkeys. When fighting breaks out between the females, the male separates them and keeps peace in his family.

The young monkeys show some affection and lack of aggressiveness, but after maturity they are jungle creatures emotionally.

The outdoor cages are mainly for display purposes, as the actual experimentation is in four laboratories maintained by the Institute of Experimental Pathology and Therapy of the USSR's Academy of Medical Sciences. Some of the work is carried on in Moscow in the laboratory of Prof. L. A. Zilber in the field of virology.

One of the laboratories is concerned with tumors, both malignant and benign. But studies of higher nervous activity, of infectious diseases and genetics are also carried on.

The study of healthy, normal animals and their behavior is the greatest contribution of the nursery, its directors say. A large number of the animals imported from India, Central Africa and Indonesia die. It is the healthiest monkeys that succumb to disease soonest—many within two weeks of their arrival.

Only seven malignant tumors and 14 benign tumors have been induced in monkeys at the Sukhumi nursery during its whole period of existence, Dr. B. A. Lapin, director of the nursery, said. Because of the few tumors induced no attempt has been made at curing them. The malignant tumors included cancer of the mammary glands, sexual skin, tongue, bone (osteosarcoma) and brain (gliosarcoma). They have been induced through radiation by way of a silver wire.

The absence of spreading (metastasis) is a peculiarity of monkey cancer, but examples of lung cancer were seen in the Sukhumi laboratories as a result of metastasis from cancer of the bone marrow.

Because imported animals cannot adjust well to the changed environment, an attempt is being made to breed a Sukhumi monkey, adjusted to the conditions there.

Since 1927, when the first few monkeys were brought from India, Central Africa and Indonesia, more than 1,000 have been born in the nursery. The oldest of them, called Granny by the keepers, died last year at the age of 33, but many live to be 30.

So far, the natural birth rate is not high enough to fill the experimental needs, so between 500 and 600 are brought to the nursery each year. Some of the imports, and the healthiest specimens first, die because of emotional and climatic maladjustment.

There are six monkey nurseries now being established in the United States through grants from the National Institutes of Health. Some monkey research has been done for years in universities, but so far, ground has been broken for only one of the six nurseries. This is at Beaverton, Ore., some ten miles from Portland. Dr. Donald Pickering of the University of Oregon Medical School is director.

The other five U.S. monkey nurseries for which NIH grants have been made at Emory University, Atlanta, Ga., Tulane University, New Orleans, La., Madison, Wis., the University of Washington, Seattle, and Harvard University Medical School, Boston. There also is a colony for monkeys at San Juan, Puerto Rico.

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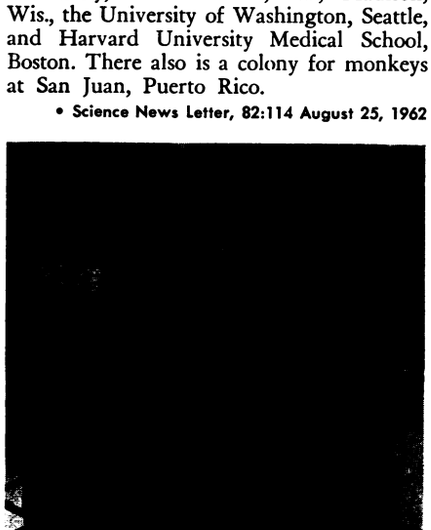

TAMARIN MONKEYS—These Tamarin monkeys will be used in the study of radiation effects to be conducted at the Oak Ridge Institute of Nuclear Research. This species of monkey from South America was selected for the studies because of its small size, low cost and the occurrence of twins. The tamarin may eventually rank with the rhesus monkey as one of the favorites for biological studies but more experiments are needed to prove its value.

MEDICINE

South American Monkey Aids Radiation Study

➤ A SMALL MONKEY from South America called the tamarin may some day play an important role in studies on the effects of radiation on the human immune system.

Dr. N. Gengozian, immunologist, Medical Division, Oak Ridge (Tenn.) Institute of Nuclear Studies (ORINS), told the International Symposium on Bone Marrow Therapy and Chemical Protection in Irradiated Primates at Rijswijk, Netherlands, that the tamarin appears to rank with the popular rhesus monkey as a research animal.

Investigations with primates, he pointed out, "may permit a greater freedom of projecting the findings to humans, not only in bone marrow transplants involving high acute doses of radiation, but also in the long-term effects of low level chronic radiation."

One of the major programs of the Medical Division at Oak Ridge is the study of the effects of total-body radiation on patients in the treatment of leukemia, metastatic lesions and other diseases, Dr. Gengozian explained.

Research developments throughout the world during the last decade have resulted in the possible use of bone marrow transplants for blood changes resulting from therapeutic and accidental radiation. But marrow grafts have not yet been achieved with any regularity in humans.

The Oak Ridge studies with the tamarin are being conducted under a two-year research contract by the U.S. Air Force School of Aerospace Medicine. Assisting in the study are J. S. Batson and T. A. Smith, also of the ORINS Medical Division.

Although the tamarin has not been used extensively as a laboratory research animal, it was selected because of its small size, low cost of procurement and maintenance, and the occurrence of twins.

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RADIOLOGY

Fluorine Isotope for Locating Brain Tumors

➤ A NEW and improved technique for locating brain tumors has been developed by Israel scientists.

The technique uses the fluorine isotope (fluorine-18) to trace the tumor. Previously radioactive arsenic or copper solutions were used as tracers in spotting brain growths, but these solutions contained isotopes that irradiated the patient long after the medical examination was completed.

With the short-lived fluorine tracer, it is possible to repeat the examination on the same patient within a few hours. The fluorine can be taken by mouth. The method was developed by Prof. Michael Anbar of the Weizmann Institute of Science's isotopes department and Dr. Yehuda Laor of the Israel Atomic Energy Establishment.

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