

The successful attack on polio through the use of Salk vaccine will result in a continued decline in polio incidence.

Continued development and use of tranquilizing and euphoriant drugs will continue to bring hopeful progress to the treatment and control of mental disease. Some of the new drugs for use in mental disorders will be more effective and less complicated by side-effects.

Chemical studies of some forms of schizophrenia may give a basis for understanding that will result in a break-through in the treatment of this disease.

Treatment of human abnormalities will receive clinical and experimental attention through studies of the biochemical aspects of individuality and chemotherapeutic methods.

In research upon the hormones, particularly the pituitary, there should be progress in correlating chemical structure with biological activity.

Look to Russia and Asia for new discoveries of the remains of fossil men. Because of their geographical position, Soviet scientists have the best chance to discover and report new finds that could revise our ideas of the ancestry and area of origin of the human race.

Spurred by accidents during 1956, there will be in 1957 air traffic control at all altitudes, both on and off airways. The Civil Aeronautics Administration contemplates a much wider use of radar in air traffic control.

Due to the increased use of helicopters in ferrying passengers from outlying airfields to convenient locations in the middle of cities, safe standards will be put into effect for heliports in downtown areas.

The national science youth program of science clubs, science fairs and accelerated aid to science teachers will continue to bring results that promise to alleviate the shortage of scientists and engineers.

In more than 150 localities in the United States, science fairs will be held and the top science exhibits from these fairs will be shown at the National Science Fair in Los Angeles in May. Some 200,000 young scientists will participate in this nation-wide activity.

Postmortem on 1956

The science forecast for 1956 made by Watson Davis, director of SCIENCE SERVICE, and issued a year ago was fulfilled in many instances.

The concern over the damage of atomic radiation to those now living and to be born in the future was justified, since there were extensive reports by scientists and debate on atomic bomb testing played a leading role in the presidential campaign.

The beginning of operation of the British 60,000-kilowatt atomic power plant was forecast. Testing of atomic weapons by the United States, Russia and Britain continued as foreseen.

The expectation of the continued exploration of subatomic particles was fulfilled by the discovery of the anti-neu.ron.

The mass use of Salk vaccine for polio did result in a reduction of the incidence of the disease. The application of tranquilizing drugs to mental patients continued with gratifying results.

The application of the image converter to large telescopes to increase their power did not progress as fast as expected, but there were obtained more data about the depths of the universe as expected.

Science News Letter, January 5, 1957

TECHNOLOGY

Use Plastic Bags for Carrying Live Fish

➤ TRANSPORTING TROPICAL FISH in plastic bags, such as those in which refrigerated vegetables are kept, seems to be practical, according to Kenneth Norris and William McFarland, University of California at Los Angeles ichthyologists, and scientists at Marineland, a southern California aquarium.

The plastic bag technique was originally devised with air transport in mind. The heavy metal containers formerly used to ship live fish resulted in high air freight costs.

It was found that tropical fish could be kept safely for a limited time in a sealed plastic bag of water in which the air had been displaced by pure oxygen. When a chemical buffer is added to the water, the fish can remain in the bag for several days without harm.

The buffer helps maintain an acid-alkalinity balance in the water necessary for the fish. It also seems to act on the fish, slowing down their activity and conserving energy.

During transport the bag is placed in a protective cardboard carton.

Science News Letter, January 5, 1957

PHYSIOLOGY

Officer Sets Altitude Record While on Ground

➤ A HIGH ALTITUDE record of 198,770 feet has been reached by a man who never left the ground.

The Air Research and Development Command, Baltimore, Md., reported that Maj. Arnold I. Beck reached the nearly 38-mile altitude in an aero-medical test chamber at its Wright Air Development Center, Dayton, Ohio. Maj. Beck is a college professor, recalled to military service in January, 1954.

Maj. Beck's altitude record is the highest simulated height ever reached by man.

Science News Letter, January 5, 1957

BIOCHEMISTRY

Study Nature of Virus Infection Core

➤ FURTHER LIGHT has been shed on the nature of the infectious core of a virus.

Studies by Drs. William Ginoza and Amos Norman of the Atomic Energy Project at the University of California at Los Angeles indicate that the entire nucleic acid component of the tobacco mosaic virus is essential for infectivity.

Recent research has shown that the nucleic acid core of the virus is by itself infectious. The protein shell surrounding this virus apparently does not enter into the infective process.

The question was then raised whether the entire nucleic acid complement of the virus was essential for infection or whether a fragment might be infective.

The UCLA studies indicate the entire nucleic acid core must act as a unit for infection to occur.

Other aspects of the study suggested that the nucleic acid component of the virus is a highly ordered structure whose length is very close to that of the virus itself.

Science News Letter, January 5, 1957

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