

Prof. Massey spent two months in Australia discussing Australia's part in space travel experiments with the Upper Atmosphere Research Committee of the Australian Academy of Science.

He said that Britain and Australia have a combined program to investigate the upper atmosphere with rockets.

"We want to insure there will be no overlapping."

America had a nine-year lead over Britain on space-rocket experiments. But Britain planned to send up its first space rockets in two years, which showed how Britain was advancing with space experiments, he pointed out.

Prof. Massey said that ground work had

begun in Australia on rockets to investigate space. He did not know how far the work had gone.

Biggest problem in future space travel, he indicated, would be space medicine. Space medicine could make it possible for humans to get into space despite tremendous acceleration.

Navigation in space travel would have to be extremely accurate and was another major problem, he said.

Practical work for the rocket research program is being conducted in a top secret atmosphere at the Long Range Weapons Establishment at Woomera, South Australia.

Science News Letter, January 7, 1956

MEDICINE

Ammoniated Cigarettes

Next thing that may be tried by smokers who want to go on smoking without fear of lung cancer. Ammonia fumes reduce the tar in cigarette paper.

➤ AMMONIATED cigarettes may be the next thing tried by smokers who want to go on smoking without fear of getting lung cancer.

This is suggested by reports from S. Z. Cardon and E. T. Alvord, research chemists with the Rand Development Corporation, Cleveland, to the American Association for the Advancement of Science meeting in Atlanta.

Treating cigarette paper with chemicals which give off ammonia when heated reduces the benzpyrene found in the tar from the paper, they reported. Benzpyrene causes cancer in laboratory animals. The ammonia treatment also reduced the amount of the chemical in the tar of the whole cigarette.

Whether this chemical exists in large enough amounts in cigarette paper to be responsible for the statistical association between cigarette smoking and lung cancer is a question scientists have not yet agreed on.

Discovery of the chemical in cigarette paper tar was announced by Mr. Cardon, Mr. Alvord and Donald V. Lefemine of the Cancer Institute, Miami, Fla., a year ago, (*SNL* Oct. 30, 1954).

Now Mr. Cardon and Mr. Alvord report repeating the original experiments in a way to determine the amount of benzpyrene in cigarette paper as it is burned when wrapped around a cigarette and the whole thing "smoked" in a machine designed by the research laboratory of the American Tobacco Company.

They found an average quantity of 2.5 micrograms of benzpyrene per package of cigarettes. No significant difference was found among several popular brands.

Seeking a way to check the formation of benzpyrene in burning cigarettes and their paper, the scientists tested several hun-

dred compounds. Best seems to be ammonium sulfamate.

Cigarette paper treated with as little as five percent of this ammonia compound by weight reduced the amount of benzpyrene in the tar from the burning cigarette paper by 95%. A 60% reduction in benzpyrene was obtained in tar from cigarettes made with this treated paper. Apparently the ammonia reduced benzpyrene formation from the tobacco as well as from the paper.

Science News Letter, January 7, 1956

MEDICINE

See Aspirin Effect Due To Dual Action on Glands

➤ THE RELIEF ASPIRIN gives to arthritis patients seems to come from a dual effect of the drug on two glands of the human body.

Studies suggesting this were reported by Dr. Alan K. Done of Salt Lake City, Utah, to the American Rheumatism Association meeting held at the National Institutes of Health, Bethesda, Md.

The two glands are the pituitary gland in the head and the adrenal glands, producers of anti-arthritis cortisone. The pituitary influence these glands through one of its hormones, ACTH.

Aspirin, Dr. Done reported, stimulates the pituitary and, as a result, there is an increase in production of adrenal gland hormones known collectively as steroids.

Second effect of aspirin is to increase the rate at which these steroids are removed from the circulating blood by means other than excretion through the kidneys. This implies that aspirin also influences hydrocortisone after its release from the adrenal glands.

Science News Letter, January 7, 1956

● RADIO

Saturday, Jan. 14, 1956, 2:05-2:15 p.m. EST
"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

Dr. Francis O'Neill, director of the Central Islip State Mental Hospital, on Long Island, N. Y., will discuss "Drugs Against Mental Illness."

The availability of many kinds of human cancer growing routinely outside the human body is widely regarded as a development that may accelerate cancer research throughout the world.

SCIENCE NEWS LETTER

VOL. 69 JANUARY 7, 1956 NO. 1

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N. St., N. W., Washington 6, D. C., NORTH 7-2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

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Printed in U. S. A. Entered as second class matter at the post office at Washington, D. C., under the act of March 3, 1879. Acceptance for mailing at the special rate of postage provided for by Sec. 34.40, P. L. and R., 1948 Edition, paragraph (d) (act of February 28, 1925; 39 U. S. Code 283) authorized February 28, 1950. Established in mimeographed form March 19, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Reader's Guide to Periodical Literature, Abridged Guide, and the Engineering Index.



Member Audit Bureau of Circulation, Advertising Representatives: Howland and Howland, Inc., 1 E. 54th St., New York 22, Eldorado 5-5666, and 435 N. Michigan Ave., Chicago 11, Superior 7-6048.

SCIENCE SERVICE

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