

GENERAL SCIENCE

Atomic Energy Information

Anything in the papers is "almost certain to be misleading," Dr. Conant declares. Statements believed based on secret facts differing from newspaper accounts.

► HARVARD PRESIDENT James Conant has stated that "the general public might just as well stop reading anything in the papers about atomic energy or atomic bombs. By the nature of the case it is almost certain to be misleading."

Dr. Conant said in a lecture at New York's Columbia University that the future of atomic energy has become a matter of pride for politicians and that the public is largely informed about atomic energy by politicians only partially aware of their own distortion of the facts and unconscious of the degree of uncertainty of the facts.

Dr. Conant's statement is believed by informed sources to be the result of certain disagreements between the Harvard president and some other members of the General Advisory Committee of the Atomic Energy Commission. He is known not to have favored the attempt to build the hydrogen bomb or the recent large expansion of the whole atomic energy program.

Dr. Conant in his lecture also said: "At times half truths and necessarily ambiguous reports by responsible officials 'leak' into newspaper columns—these are the methods by which the public is informed of the progress of applied nuclear physics. I can underline what I have been saying by making one bold statement based on 12 years of experience behind the veil of secrecy: It is impossible today or in the foreseeable

future to have a frank, rational, searching discussion of the industrial uses of atomic energy."

He followed this with the statement that newspaper accounts of atomic energy are almost certain to be misleading.

Several months ago, Dr. Kenneth Pitzer, formerly connected with the Atomic Energy Commission, took Dr. Conant to task for what he considered to be Dr. Conant's unduly pessimistic statements about the prospects for use of atomic energy in industry. Also atomic scientist Dr. Harold Urey has publicly disagreed with the Harvard president's statement that the great hope for the future is solar energy, not atomic energy.

It is believed in Washington, although no one will be quoted as saying so, that Dr. Conant's statement is his way of saying to his critics: I base my position on facts which are held secret, therefore I cannot answer you publicly. Those facts are quite different from what appears in the newspapers.

The American Society of Newspaper Editors' subcommittee on atomic energy has expressed "great concern" that atomic information "leaks out" from military officials and Congressmen instead of coming from the Atomic Energy Commission. The implication, said the group, is that there is a large stockpile of hoarded information which could be released by the A.E.C. with more beneficial than harmful results.

Science News Letter, April 26, 1952

BIOPHYSICS

Radiated Blood "Chunky"

► THE FLOW of blood through the body becomes "chunky" a day or two before death from atomic radiation, Dr. Brenton R. Lutz of Boston University reported at the Federation of American Societies for Experimental Biology meeting in New York.

This finding was made in hamsters. Some of these animals got lethal doses of X-rays like the gamma rays from an atom bomb and some had hot beads planted in their cheek pouches. The beads, made of glass and about three-eighths of an inch in diameter, were hot from the beta rays given off by the radioactive strontium and yttrium incorporated into them.

With radiation strong enough to kill in eight or ten days, Dr. Lutz and associates found, the blood pressure drops a day or

two before death and the red blood cells clump into loose groups called rafts. These move along in the larger arteries but break up in the tiny capillaries which feed the blood's oxygen to the cells of the body. On the blood's return trip to the lungs to get more oxygen, the red cells clump again in the veins.

The scientists call this blood flow "chunky" and are trying to learn what it means in terms of death or chances for rescuing the victim.

Rays that are not strong enough to kill change the blood vessels and blood flow within 72 hours. The small blood vessels are twisted and puffed out and small clots float freely in the blood but may at any time clog the blood vessel. The smallest blood veinlets become increasingly fragile,

resulting in many pinpoint areas of spontaneous bleeding.

Single cells of muscles twitch. The tissue around the radioactive beads is killed and the white, dead tissue sloughs off. Blood flowing past the beta-emitting beads carries the effects to other parts of the body. This causes greater fragility of other blood vessels and the blood itself will not clot. This allows for easier infection and difficulty in stopping bleeding.

Working with Dr. Lutz on this project for the Atomic Energy Commission are Dr. George P. Fulton, Dr. David L. Jofte, Frederick W. Maynard and Miss Roma Kagan.

Science News Letter, April 26, 1952

ENGINEERING

Build Electric Circuits on Paper Before Construction

► SCIENTISTS AND engineers are building their electric circuits first on paper and then in the laboratory to get what they want without so much trial-and-error.

Known as circuit synthesis, the process is the exact opposite of circuit analysis which takes an existing circuit and determines how it acts under different conditions.

Circuit synthesis, by means of a complicated mathematical process, is used to find the proper circuit elements, their values and the way to connect them together to obtain a desired circuit which will work properly under the conditions it will have to operate.

The highly complex circuits required by modern communication equipment, radar and computing machines create many of the problems which circuit synthesis attempts to solve. Some machines may require fast-acting circuits, others may require slow-acting ones.

Circuit synthesis was discussed at a conference in New York sponsored jointly by the Polytechnic Institute of Brooklyn and the Office of Naval Research in Washington.

Science News Letter, April 26, 1952

BIOCHEMISTRY

Epilepsy Drug with Fewer Side Effects

► A NEW drug for treating epilepsy was announced by Dr. B. K. Harned of Lederle Laboratories at the meeting of the Federation of American Societies for Experimental Biology in New York.

The drug is called Hibicon chloroethylphenamide. The chemical nucleus is different from any previously used for epilepsy. It can be taken by mouth and tests with patients show that it is as effective as dilantin but side reactions, especially lack of appetite and muscular stiffness, are less.

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