

PUBLIC HEALTH

Smoking-Cancer Link Weak

The controversy over whether or not smoking causes lung cancer still wages, with a British scientist maintaining that there is no conclusive evidence showing a causal relationship.

► THE PRESENT evidence linking smoking with lung cancer is "inconclusive," Sir Ronald Fisher, Arthur Balfour professor of genetics at Cambridge University, England, and a visiting professor at Michigan State University, has reported.

The British researcher told an American Association for the Advancement of Science meeting in Indianapolis, Ind., that "association is not causation."

"The evidence standing by itself is inconclusive, as it is apparently impossible to carry out properly controlled experiments with human material."

Facts about inhaling, he said, are what is needed and cited an English research study that showed the "paradoxical fact" that inhaling was less common among cancer patients than among non-cancer patients. He also called for research to determine whether or not there are genetic differences among pipe smokers, cigar smokers, cigarette smokers and non-smokers.

Additional research on the problem, Sir Ronald charged, has been delayed by "over-confidence in the belief that the solution has already been found."

Three scientists from Indiana University reported on different aspects of fluorine and the addition of fluoride to water to combat dental caries at a symposium on the physiology and pharmacology of fluorine.

Dr. Joseph C. Muhler, associate professor of basic sciences, said that fluorine was an essential dietary element. In addition to its proven effect on resistance to dental caries, it may be shown in future research that it is essential to other parts of the body, including the heart and the kidney.

Only recently, Dr. Muhler said, fluorine has been found in the soft tissues of the body such as the heart and the kidney. Although its function in these tissues is still a mystery, the finding has upset the long standing belief that fluorine is deposited only within the skeleton and teeth.

The use of fluoride, even at relatively high levels, Wolfgang Buttner, director of medical dentistry, reported, has not been shown to cause changes in the cholesterol metabolism in the rat.

Whether added fluoride to a given water supply is as effective as the naturally occurring fluoride remains to be seen, Martin J. Wagner of the department of chemistry told the symposium.

Consideration of the entire mineral content of a fluoride-deficient water as well as the effect of dietary milk and mineral supplements may be necessary before it can be expected that the addition of fluoride will produce the same long-term results in all areas as a natural fluoride water, he warned.

In another paper delivered to a meeting of the AAAS, it was reported that the same ion exchange resins used in some specialized industrial water softening and metal refining processes are being used in the laboratory to create new fuels. David W. Young and Eileen Pare, Sinclair Research Laboratories, Inc., Harvey, Ill., said traces of the resins promote a low-cost, room temperature reaction between formic acid and petroleum products. What results is a high yield of experimental fuels currently undergoing tests.

Science News Letter, January 4, 1958

are two branches. One branch is formed with the green algae and higher plants and the other with the yellow algae and red and brown seaweeds.

With this background, Dr. Dillon said it is possible to trace "rather exactly" the evolution of animals, from the above point of origin "with some striking results."

"For example," he said, "the removal of the sponges from the present group is shown to be mandatory, their correct relationships being with that of certain peculiar yellow algae. As to the vertebrates, their previously suspected common ancestry with the starfish is clearly corroborated by a study of the possible origin of one of our most characteristic structures—the nervous system."

Science News Letter, January 4, 1958

SCIENCE NEWS LETTER

VOL. 73 JANUARY 4, 1958 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.

Change of address: Three weeks notice is required. When ordering a change please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

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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, 1897. 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 mimeograph form March 13, 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.



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BIOLOGY

Man Is a Modified Plant

► Man is a type of highly modified plant. He, and all other animals, share a common ancestry with the brown seaweeds, dating back some billion years.

This is the conclusion of Dr. Lawrence S. Dillon, associate professor of biology at Texas A & M College, College Station, Texas, who reported his "new approach to the development of life," to the American Association for the Advancement of Science meeting in Indianapolis, Ind.

Dr. Dillon and his associates decided to go one step past the 100-year-old concepts of evolution and biological classification, stemming in large part from Darwin, and study the internal cellular structures of plants and animals as a clue to the evolution of life.

Using this approach and corroborating

it as far as present-day knowledge permits, Dr. Dillon said, forced the scientists to conclude "that all life belongs to only one kingdom, which in all honesty must be recognized as the Kingdom of Plants.

"Hence, all animals, including man, are in reality a type of highly modified plant life, derived a billion years or so ago from a common ancestry with the brown seaweeds."

Tracing the evolution and development of the nucleus, which in fact, Dr. Dillon noted, was absent in the earliest forms of life, led to a tree-like picture of evolution.

At the very bottom are the blue-green algae, the simplest living things. (Viruses may be simpler but their inner structure is still a mystery.) Next come the bacteria, followed by the yeasts, etc. At the top there