

medical sciences

More clout for human cancer viruses

Evidence that viruses cause human cancers accumulates. Cells from patients with lip and cervix cancers reacted with antibodies made to antigens in cells infected with herpes simplex virus. Ariel C. Hollinshead of the George Washington University Medical Center and Giulio Tarro of the University of Naples report this finding in the Feb. 16 *SCIENCE*. Since the antigens were presumably part of the herpes simplex virus, and the human cancer cells reacted with antibodies to the antigens, the finding suggests that a herpes simplex virus causes lip and cervical cancer. Normal human cervical and lip cells did not react with the antibodies.

Heavyweight RNA molecules found in human milk contain some lengths of genetic material that are identical to those in known animal RNA cancer viruses, Jeffrey Schlom of Columbia University and his team also report in the Feb. 16 *SCIENCE*.

Preventing hemophilia

Hemophilia is known as bleeder's disease. It causes uncontrollable bleeding if a person is even slightly injured. The disease nearly always afflicts men and is due to an abnormal gene inherited from the mother. In the past physicians have been able to detect female carriers of the hemophilia gene with about 25 percent accuracy. Bruce Bennett and Oscar D. Ratnoff of Case Western Reserve University report in the Feb. 15 *NEW ENGLAND JOURNAL OF MEDICINE* that they now have a means of detecting carriers with about 90 percent accuracy.

Their technique consists of comparing the amounts of antigens to antihemophilic factor with the amounts of blood-clotting chemicals that are present in the blood. People usually have about the same quantities of antigens and of blood-clotting material. Carriers of hemophilia have a lot more antigens.

The Cleveland physicians first used the technique to identify 40 of 42 known carriers (women with one or more afflicted sons). More recently they have used the method to detect 9 carriers out of 18 daughters of known carriers of hemophilia who have not had sons. They have also used the technique to detect 7 carriers out of 10 women with no family history of the disorder, but who had hemophilic sons.

Giving ragweed the shake

Twenty percent of all Americans are allergic to something or other. Yet to diagnose specific allergies physicians have had to rely on rather elaborate skin tests, in which skin cells react or don't react with allergens put in their presence. A diagnostic test for ragweed allergy that promises to be superior to skin tests for ragweed allergy was reported last week at the annual meeting of the American Academy of Allergy by John Santilli of Georgetown University School of Medicine. The test is based upon phagocyte response to ragweed pollen. Phagocytes are a kind of white blood cell, one of the immune responses of the body; they engulf foreign materials.

Santilli and his co-workers put pollen with phagocytes taken from persons who were allergic to ragweed and with phagocytes taken from persons who were not. They found that the phagocytes from the allergic people could not take up the pollen nearly as well as could the phagocytes from the nonallergic individuals. They concluded that ragweed allergy constitutes a defect in phagocytic response. Then they devised a simple blood test to show a defect in phagocyte activity in persons with ragweed allergy.

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behavioral sciences

Sexual prejudice in psychic disorders

Over the years society has constructed many myths that discriminate against women. Some of these superstitions have been debunked but a few seem to be adhered to by the medical profession. K. Jean and R. John Lennane of St. Mary's Medical School Hospital in London describe some of these misconceptions in the Feb. 8 *NEW ENGLAND JOURNAL OF MEDICINE*.

Complaints of painful menstruation, for instance, have been viewed by many (including doctors) as a cop-out by nervous or neurotic females who are seeking a monthly refuge from responsibility and effort. In fact, say the Lennanes, this is not a psychogenic disorder at all but a well-defined clinical entity that occurs in about 50 percent of all women. The condition seldom persists after the age of 25 or after the birth of the first child. The fact that extreme menstrual discomfort can be relieved by estrogen treatments (and by some oral contraceptives), they say, indicates that such symptoms are physical, not psychological. Claims of morning sickness and extreme labor pain have also been attributed to fear, anxiety, tension and conflicts about acceptance of the feminine role. Scientific supporting evidence for such psychogenic diagnoses is completely absent, say the Lennanes. Belief that these illnesses are psychological may be convenient for the doctor but, they conclude, it is derogatory and dangerous to the woman.

Reversing retardation

Cretinism is a chronic condition produced by a lack of thyroid secretion. In severe cases it can result in physical and mental retardation. Research by John Davenport and Louis Gonzales of the Regional Primate Research Center at the University of Wisconsin suggests that early education and a variety of experience might reduce the effects of mental retardation in children with underactive thyroid glands.

Thyroid-deficient monkeys and rats were provided with an abundance of sensory and social stimuli and then placed in a variety of learning situations. They did surprisingly well, say the researchers, and performed tasks at which they normally would be expected to fail. This demonstration of trainability, they say, shows that insufficient production of hormones by the thyroid gland need not lead to totally irreversible retardation—a finding the researchers hope can be applied to humans with the same affliction.

Redefining homosexuality's label

In most societies homosexuals have had to fight for the freedom of their feelings or hide for fear of condemnation. A major factor in society's censure of homosexuality has been that sexual desires outside the heterosexual realm are often viewed as mental aberrations. But to most homosexuals these desires are real, no matter what their basis. Accordingly, members of the Gay Activists Alliance have requested that the American Psychological Association remove homosexuality from its official catalogue of mental disorders. The gay activists charged that such labeling (sexual deviation) results in discrimination against homosexuals in business and government. They presented medical findings showing that homosexuals are as well adjusted as most heterosexuals. The APA's manual of mental disorders is not due for revision until 1978, but an APA group intends to draw up a statement disavowing the old classification. They hope to have it ready for formal consideration when the APA meets this May.

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