BIOLOGY

Colchicine Used on Rabbits To Double Chromosomes

Same Powerful Chemical Used to Create New Plants Now Used on Mammal but Won't Produce Super Race

THE same powerful chemical that has been used in the creation of new and larger fruits and flowers has been tried on rabbit egg cells.

Colchicine, which doubles the number of heredity-bearing chromosomes in plant cells, allowed the production experimentally in glass vessels of rabbit egg cells with double the normal body number of chromosomes. The research is reported by Drs. Gregory Pincus and C. H. Waddington of England's Cambridge University. (*Journal of Heredity,* December)

Cell division in the experiments did not go beyond the very earliest stages of development. For the present at least, therefore, dreams of colchicine-induced races of giant super-rabbits (and, by inference, of giant super-men) must remain only dreams.

Artificial increase in mammalian chromosome numbers has never been accomplished before, and natural occurrence of higher numbers of these heredity-bearing units in the cell's nucleus has been reported only once or twice, and then not in egg cells but in structures associated with the developing embryo.

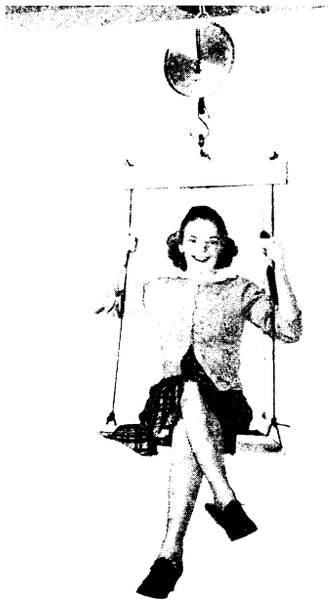
Drs. Pincus and Waddington accomplished their results by treating fertilized rabbit egg cells with colchicine, already well known for its chromosome-multiplying effects in plants. They also used alcohol, ether, and abnormally high temperatures; but colchicine was most effective.

The doubling of chromosome numbers resulted from the slowing down of the cell division process. The first stages of division, in which the chromosomes split and thereby double their number, went through as usual, but the cells then failed to finish the process, leaving the two sets of chromosomes in the undivided cells.

Subsequently a few of these cells did divide, but only at a rate less than normal. In no case did such divisions go beyond the very earliest stages.

Dr. Pincus was formerly connected with Harvard and Clark Universities and the present work was aided by grants from the Josiah Macy, Jr., Foundation and The Milton Fund of Harvard University.

Science News Letter, February 3, 1940



A MAGNET

This 100-pound girl is held suspended by the tiny magnet at the top of her swing. If a 160-pound man could lift 720,000 pounds, he would only be doing the job which the newly developed magnet can do. Invented by G.E. scientists, the new magnet can lift 4,500 times it own weight, tops previous record of 1,500. Made of alnico, alloy of aluminum, nickel, iron and cobalt pressed together as a powder and sintered, the new tiny magnet gets its lift by a new design arrangement of its parts. Alnico itself can lift only 500 times its own weight. Surprising demonstration is to see the minute three-fourths ounce magnet hold up 200 pounds in tests. Uses: For better permanent magnets used in telephones, radio loud speakers and many another electrical device.

DENTISTRY

Abscessed Teeth Treated With Hot Sulfanilamide

One Treatment Reported to Have Cleaned Up Abscess That Had Persisted for Ten Years; May Aid Sinuses

SUCCESS in the treatment of abscessed teeth with the chemical remedy, sulfanilamide, was reported by Dr. Fred R. Adams, of New York, at the Greater Philadelphia Dental Meeting in Philadelphia.

One injection directly into the abscess of a hot sulfanilamide solution killed all the trouble-making germs in every case but two, Dr. Adams reported. One case required two such treatments and another, three. Some of the abscesses that were cleaned up in one treatment had persisted for 10 years. X-ray pictures of these cases showed that after a few months new bone had grown to fill the area formerly occupied by the abscess.

Heating the sulfanilamide solution for treatment is important, Dr. Adams emphasized. A stronger concentration of the drug can be obtained in hot water and the heat reenforces the chemical's action on the germs, he explained.

This method of using a hot sulfanilamide solution for irrigation should, in Dr. Adams' opinion, be useful in treating infections in other parts of the body, such as sinus infections and the bone diseases osteomyelitis and osteitis and in cellulitis involving bone.

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PUBLIC HEALTH

Friendliness May Act To Spread Influenza

SIDELIGHTS on the present influenza outbreak, if we are having one, it being difficult to tell statistically until it is pretty much well underway or over:

South Carolina has had an unusual amount of flu and infantile paralysis, which is puzzling because the population there is generally well fed and health services good. Suggested explanation is that the good roads plus the so-