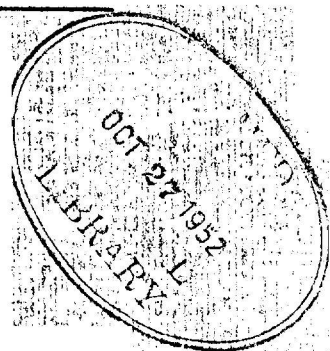


RECORDS

of the

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Tschermak on the occasion of his 80th birthday, November 15, 1951. The importance of your contributions in establishing the science of genetics has not diminished over the years, and your friendliness to younger genetics colleagues has continued to increase our personal regard. We hope you may continue to stimulate genetics meetings with your presence for many years to come.

The resolution was adopted unanimously.

For the report of the Public Education and Scientific Freedom Committee, the chairman asked the president-elect John W. Gowen to take the chair since the president is also chairman of the P.E.S.F. committee. The following report was then presented by M. R. Irwin. The points presented had the unanimous approval of the P.E.S.F. committee. These points elaborate the functions and methods of procedure of the committee.

1. A standing Committee on Public Education and Scientific Freedom should be established by the Society (this was approved last year).
 - A. This Committee should have power to take action on all public matters of concern to the Society. It should have the right and responsibility to publish or to make statements for publication, but with the requirement that it speak and publish solely as a Committee of the Society and not in the name of the Society as a whole. Any statement made by the Committee should represent the unanimous opinion of the members of the Committee, or should have been approved by the members of the Society.
 - B. The Committee should include within its scope not only freedom of science and anti-genetics propaganda, but should foster the understanding of the contributions and applications of genetic knowledge.
 - C. The Committee should consider the planning and execution of a long range policy of public education in the methods, principles and applications of genetics.

Each section of the Committee report was voted upon separately. Each section A, B and C was approved unanimously.

A motion was then made by P. C. Mangelsdorf expressing our thanks to the local committee, Sheldon C. Reed and Charles R. Burnham, also to the staff of the A.I.B.S. and to the University of Minnesota for excellent meeting places and for detailed planning that contributes so much to a successful meeting. The motion was seconded and carried by acclamation.

Meeting adjourned at 2:17 P.M.

W. R. Singleton
Secretary

the sub-family Cricetinae, or "Dwarf and True Hamsters," are characterized cytologically by large sex bivalents. Attempts to induce autosomal and sex-linked mutations among the 11 genetic linkage groups are now in progress. The very late pachytene chromosomes are easily stained in squash preparations which should facilitate detecting induced chromosomal aberrations. At this stage, the sex bivalent is a heterochromatic mass measuring 5 x 8 microns, and the autosomes vary from 10 to 33 microns in length. The spherical nucleolus, attached to the sex bivalent, has a diameter of 5 microns. The nucleolar organizer is heterochromatic and in the shape of a half-sphere having a diameter of 3 microns. A brief review of the problems encountered while breeding the animals, and planning the diet will be presented. The possibility of inducing tumors by treatment with methylcholanthrene and 9,10-dimethyl-1,2-benzanthracene is also being investigated. If the above trials are successful, histocompatibility tests between genetically different ascites tumor cells and hosts will be initiated. In addition to this, cytological observations involving the 11 pairs of morphologically different chromosomes in ascites tumor cells will be possible. H3.

ZINDER, N. D. and J. LEDERBERG, University of Wisconsin, Madison, Wisconsin. Gene transfer in Salmonella. — A new mechanism of factor transfer has been found in the bacterium, Salmonella typhimurium. This mechanism is fundamentally different from sexual recombination as found in the bacterium, Escherichia coli and it shares some aspects with the "type transformations" of the pneumococcus and Hemophilus. We have called this process transduction, which is defined as genetically unilateral transfer to stand in contrast with the union of equivalent elements in fertilization. — When S. typhimurium is attacked by "lysogenic" phages, it releases a filtrable agent (FA) which can transfer individual genetic traits from one bacterium to another. In detailed experiments wherein the FA-donor and the FA-recipient differed in a number of different characters, each character is subject to transduction but each independently of the others. — Such characters as nutrition, fermentation, drug resistance and antigens have been transduced. The character transduced is stable both after vegetative reproduction and iterated transduction. — It is tempting to identify the active material as bacterial genes, at best small chromosomal fragments which undergo a kind of crossing-over with the host's chromosomes. — FA can be identified with a heat stable chloroform resistant particle about one-tenth micron in diameter. It is stable to deoxyribonuclease and so differs at least superficially from the transforming principles of pneumococcus and Hemophilus. However, much evidence has been accumulated implicating the bacteriophages, once thought of as genes themselves, as passive carriers of the genetically active material. — Salmonellae having somatic antigen XII adsorb S. typhimurium FA and some inter-type transfers have been accomplished. These latter include some antigenic hybrids indicating that transduction might play a role in the evolution of new serotypes in this antigenically complex group. I6.