Comments and Communications

Animal Experimentation in the District of Columbia

On September 15, 1948, the executive committee of the AAAS adopted unanimously a resolution reaffirming its support for animal experimentation, in the interests of man and other species, and stating its belief that animals for research and teaching should be provided by legislation or ordinance where necessary.' Such legislation has been adopted in Michigan and Minnesota, and ordinances of the type supported are in effect in Chicago, Dallas, and many other cities. Similar proposals have been defeated in Pennsylvania and deferred in Maryland, Massachusetts, and elsewhere. The campaign nationally, under the auspices of the National Society for Medical Research, for positive legislation of this sort, is at a stage of rather precarious dynamic equilibrium.

In April bills were introduced in Congress to provide a fraction of the unclaimed impounded animals in the District of Columbia for teaching and research in local institutions inspected and licensed by the Health Department. At present, such animals are slaughtered. Because Congressional action is called for, a good deal of national interest has been aroused, although the bills are District of Columbia measures. The antivivisectionists, at least, realize the wider significance of the measures, and have organized a national telegram-and-letter campaign which, together with display advertising in local newspapers, has resulted in a flood of communications to Congressmen and the District of Columbia Commissioners. Since Senate hearings have ended, it is especially important that letters and telegrams of support be sent the District of Columbia Committees of House and Senate. The AV's have thousands of dollars in their local treasuries for this campaign.

The Committee for Health and Research, composed of local teachers, physicians, scientists and other friends of progress in medicine and related fields, have *no* funds and, since the Committee was organized only recently, few members. We cannot match, therefore, such efforts as the opposition's national mailing to members and friends of the American Humane Association. Through the columns of *Science,* however, we hope to galvanize the silent majority (amounting, according to sampling of the public, to more than 90% of the American people) on our side.

The Committee ask that readers of *Science* (1) write letters or send telegrams to the District of Columbia Commission and to the District of Columbia Committees of House and Senate, supporting H.R. 4349 and S. 1703; and (2) secure similar action by organizations of all types —parent-teacher associations, citizens' groups, unions, faculties of educational institutions, and professional, scientific and industrial bodies—of which readers are members.

The Committee will be glad to furnish copies of the bills and other information upon request. The fate of H.R. 4349 and S. 1703 will affect the supply of animals for teaching, research and consumer testing in every community in the United States. Quick support is essential.

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Interpretation of Lindner's Test for Plant Virus Diseases

In using Lindner's colorimetric test for the presence of plant virus diseases (*Science,* 1948, 107, 17) in a tissue culture of virus tumor discovered and isolated by L. M. Black in 1944, it became apparent that the method described by Lindner for virus presence is a modification of the Benedict test for reducing substances. The components of the reagent are similar to those in Benedict solution—an alkaline solution of copper sulfate. Lindner says, "Copper sulfate seems to catalyze the formation of the red color." Actually the copper sulfate is the reagent, being reduced to cuprous oxide, hence accounting for the red color produced. The blue-green color resulting when normal, virus-free leaves were tested probably came from the reducing substances normally present; and the red color, when virus-infected leaves were tested, from an abnormal accumulation of reducing substances. In Cook's *Viruses and virus diseases of plants,* there are conflicting reports concerning the accumulation of reducing substances in virus-infected plants.

The interfering factor, girdling, can be accounted for, since it is well known that the procedure causes accumulation of carbohydrates and apparently reducing substances above the ringed portion.

Lindner's interpretation of the test—that the virus may cause some disturbance in the phloem—can be extended to include the idea that it also causes accumulation of reducing substances.

The following materials were tested for the presence of virus disease, according to the method outlined by Lindner:

MATERIAL	AMOUNT OF RED COLOR PRODUCED (CUPROUS OXIDE FORMED)
Glucose	+++
Virus tumor	+++
Agar on which tumor was grown	++
Virus-free pea leaves	+

This communication does not decry the usefulness of the test as a detector of virus diseases, but urges that

when it is used, the results be interpreted in terms of reducing substances present.

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Note on the Chemistry of Dramamine

In the treatment of various allergies by the antihistaminic drugs which have appeared so profusely in the last few years, there have been observed undesirable side reactions, such as drowsiness, which detract from their usefulness. Attempts have been made with certain of the antihistamines to offset the drowsiness by chemical combination with the methyl xanthines, selected because of their central nervous stimulating properties. Because of the low ionization constants of the methyl xanthines, however, no stable salts were obtained.

The chemical problem has been solved in the case of β-dimethylaminoethyl benzohydryl ether (Dramamine) by the use of 8-chlorotheophyllin, which has a high enough ionization constant to form a stable salt.

The salt is readily made by dissolving the 8-chlorotheophyllin with a slight excess of the base in any suitable hot organic solvent, such as methyl ethyl ketone or ethanol. On cooling, it precipitates as a nice sandy material in almost quantitative yield based on 8-chlorotheophyllin, mp 101–3° C, empirical formula $C_{24}H_{30}O_3N_5Cl$.

Analysis:	Theory %		Found %	
Chlorine	7.55	7.45	7.46	7.51
Basic N	2.98	2.98	2.98	
8-Chlorotheophyllin	45.67	45.65	45.62	

The use of this compound in preventing motion sickness was reported by Leslie N. Gay and Paul E. Carliner at the meeting of the Johns Hopkins Medical Society, February 14, 1949, and a statement was published in *Science*, April 8, 1949.

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Association Affairs

K. Lark-Horovitz, head of the Department of Physics and director of the Physical Laboratory at Purdue University, has been elected general secretary of the AAAS for the term ending 1952. His election follows a brief period of service to complete the unexpired term of the late Otis W. Caldwell.

Dr. Lark-Horovitz is best known for his researches in the physics of solid state and nucleonics and for his recent experimental investigations and theoretical interpretations of the behavior of electronic semiconductors. He is chairman of the Cooperative Committee on the Teaching of Science for the association and was one of the contributors to Vol. IV of the President's Scientific Research Board Report.

The new secretary will also serve on the Publications Committee.

Affiliated and Associated Societies[1] Meeting with the AAAS New York, December 26–31

Nearly all of the affiliated and associated societies meeting with the American Association for the Advancement of Science at its 116th Annual Meeting in New York City, December 26–31, 1949, have reported the preliminary estimates of their session room requirements. The following list of individual meetings is compiled from the reports of the secretaries of these societies and sections. (The exact dates of each within the six-day period are tentative in only a few instances.)

AAAS.—Presidential Session and Reception of AAAS, evening of Dec. 28; Symposia sponsored by AAAS, afternoon of Dec. 29. (Association headquarters hotel, Statler.)

A—Mathematics.—American Mathematical Society, Dec. 27–29; Institute of Mathematical Statistics;[2] Mathematical Association of America, Dec. 29, 30. (Mathematicians Headquarters hotel, Governor Clinton.)

B—Physics.—Section B, Dec. 29, 30.

C—Chemistry.—Section C, Dec. 29–31. Phi Lambda Upsilon.

D—Astronomy.—Section D.

E—Geology and Geography.—Section E and Geological Society of America, joint meeting; American Geographical Society of New York; Association of American Geographers; National Geographic Society, Annual Lecture, afternoon of Dec. 27.

F—Zoological Sciences.—Section F; American Society of Parasitologists, Dec. 27–29 (including demonstrations at Columbia); American Society of Zoologists, Dec. 28–30; Society of Systematic Zoology, Dec. 29. Zoologists' headquarters hotel, Statler.)

FG—Zoological and Botanical Sciences.—American Microscopical Society, Dec. 27 and 30; American Society of Limnology and Oceanography, Dec. 28–30; American Society of Naturalists, Dec. 30 (Biologists' smoker probably Dec. 29); Beta Beta Beta Biological Fraternity, Dec. 28; Biometric Society, Eastern North American Region; Ecological Society of America, Dec. 27–29; Genetics Society of America, Dec. 28–30 (including demonstrations at Columbia); American Society of Human Genetics; National Association of Biology Teachers, Dec. 27–30; Society for the Study of Evolution, Dec. 27–30, a panel discussion of "Botany in the Service of Mankind."

[1] Notices of the dates and places of the meetings of affiliated and associated societies, *not* meeting with the AAAS, appear in *Science* and *The Scientific Monthly* whenever that information is sent in directly to the editorial offices.

[2] These societies also are participating in the programs of the Allied Social Science Association organizations which are meeting at the same time in the Grand Central Zone of New York City.