With the growing support of science by the people goes hand in hand an increasing responsibility of science to the public. The people have a right to be informed of the facts of science, of the progress that is being made, and of what science means to them. Science can no longer stand aloof. At the present time one of the very greatest scientific needs is closer contact with the world at large—a better understanding between the scientific workers and those by whom most of them are supported.

For the Nashville meeting of the American Association and Associated Societies there has been arranged as a general session, a symposium on the broad subject of publicity for science; that is, the broad problem of furnishing to the people the information that they wish and to which they are entitled. Those taking part in the symposium, which will probably occupy both forenoon and afternoon of Wednesday, December 28, are to discuss the subject from the points of view of: (1) the worker in pure science, (2) the publisher of standard scientific books, (3) the publisher of popular scientific books, (4) the editor of popular scientific magazines, (5) the editor of a commercial scientific journal, (6) the newspaper syndicate, (7) the feature writer, (8) the local newspaper, and (9) Science Service.

Another general session at the approaching Nashville meeting will be devoted to an address on "Science and the Newspapers," to be given by Dr. William E. Ritter, organizer and till recently director of the Scripps Institution of Oceanography at La Jolla, California. Dr. Ritter is well known to zoologists and to biologists generally. He will discuss some fundamental aspects of the question of newspaper diffusion of scientific knowledge.

AUSTIN H. CLARK,
*News Manager for the Nashville Meeting*

## THE THOUSAND-DOLLAR PRIZE TO BE AWARDED AT NASHVILLE

AN interesting feature of the annual meetings of the American Association and Associated Societies is the award of the American Association Prize. This award attracts the attention of the intelligent public generally as well as of professional science workers and other people specially interested in the advancement of knowledge. If not quite peculiar, it is at least unusual, for eligibility to consideration consists solely in presenting a noteworthy contribution at the annual meeting in convocation week and there are no restrictions as to subject. The prize is surely a very valuable thing in American science. The funds by which it is made possible have been given to the American Association by a very generous member who does not wish his name made public. Its concrete purpose is to help toward further scientific accomplishment some research workers who have already made a really noteworthy contribution. It is hoped that this financial help may make it possible for prize winners to continue their work on a high plane of scientific scholarship. Four annual awards have been made: Cincinnati, 1923–24; Washington, 1924–25; Kansas City, 1925–26; Philadelphia, 1926–27. The fifth award will be made at the close of the approaching Nashville meeting.

The following rules for the award of the prize have developed from the experience of four years. They have been approved by the executive committee of the association and are in effect for the Nashville award.

1. To be considered by the Committee on Prize Award a paper must have been read at a session of one of the several sections or at a session of one of the organizations meeting with the association at the annual meeting at which the award is made.

2. Any paper is to be considered only on the basis of work already accomplished, as represented by a finished manuscript, but it may be in part or in whole a summary of work that has been recently published elsewhere.

3. Secretaries of sections and secretaries of organizations meeting with the association are asked to send in to the Committee on Award, as early in the meeting as possible, nominations or suggestions as to what paper or papers of their respective programs should be considered by the committee. These suggestions are to be in writing and are to be sent in to the registration office, from which they are to be immediately transmitted to the committee.

4. A paper may have the recommendation of a section committee, or of a special committee organized by a section, for the consideration of worthy papers.

5. The prize-winning paper should represent a noteworthy contribution to the advancement of science. The Committee on Award is not to make any special attempt to select the *best* paper presented at the meeting.

6. Authors of papers considered need not be members of the American Association for the Advancement of Science, nor members of any associated organizations.

7. It is generally undesirable that the prize go to the same field of science, or to closely related fields, in two consecutive years.

8. Younger workers are to be generally considered before workers who are already well known for scientific research.

9. Under no circumstances is the prize to be divided; it is a single prize of $1,000.

10. The Committee on Award is to report the award to the permanent secretary either on the evening of the next to the last day of the meeting period or on the last day. (Usually there are very few sessions held on the last day, which is often Saturday.) The report is to be in writing, signed by the chairman of the Committee on Award. Under no circumstances is the award to be reported to the permanent secretary later than the last day

of the meeting period, which is to be Saturday for the second Nashville meeting.

11. During the deliberations of the Committee on Award, and until public announcement is made by the permanent secretary, the utmost secrecy is to be maintained. Even slight hints regarding possible prize winners are not to be released in any way before the award is announced. Announcement is made to all news agencies at once, by the permanent secretary through the news manager for the meeting.

The Committee on the Award of the Nashville prize consists of the members named below:

William H. Roever, *chairman;* professor of mathematics, Washington University, St. Louis, Mo.

Roger Adams, professor of chemistry, University of Illinois, Urbana, Ill.

William Duane, professor of biophysics, Harvard University, Cambridge, Mass.

Charles Schuchert, professor of paleontology, Yale University, New Haven, Conn.

Robert J. Terry, professor of anatomy, Washington University, St. Louis, Mo.

BURTON E. LIVINGSTON,
*Permanent Secretary*

## SCIENTIFIC APPARATUS AND LABORATORY METHODS

### AN AGAR MEDIUM FOR PLATING L. ACIDOPHILUS AND L. BULGARICUS

EXPERIENCE has demonstrated that *L. acidophilus* grows poorly in ordinary peptone sugar agar and that many strains of typical *L. bulgaricus* will not develop at all in this medium. Rettger and Cheplin[1] (1921) employed whey agar in their experiments. The addition of galactose to this medium has been found[2] (1922) to increase its value. The author[3] (1924) developed a casein-digest, milk powder-digest, galactose agar which proved to be quite satisfactory for colony study.

Further investigation has indicated that some strains of *L. acidophilus* and *L. bulgaricus* attain the best colony development in whey-galactose agar, while others reach their optimum growth in digest-galactose medium. As a rule, *L. bulgaricus* grows best in digest galactose agar. In order to insure satisfactory results, it has been necessary to employ both kinds of media in the study of *L. bulgaricus* colonies.

From the standpoint of the dairy laboratory, or of any laboratory, where occasional platings of these species are carried out, some objection has been raised to both the whey and the digest media because their preparation is rather difficult. A more simple medium and one which is easily prepared has appeared quite desirable.

While studying the effect of tomato juice upon the growth of different bacterial species, the author found that the addition of tomato extract to whey-galactose agar brought about a marked increase in the size of *L. acidophilus* colonies grown on the medium, and that it accentuated the x type colony characteristic. Further investigation showed that a medium containing tomato juice, peptone and agar fostered the development of as good colony growth as the more complicated media.

Experiments were carried out with the object of determining what proportions of peptone and tomato juice were necessary for optimum colony development.

The tomato juice was secured by filtering the liquid portion of canned tomatoes through filter-paper. Media were prepared containing 0.5 per cent. and 1 per cent. peptone and varying proportions of tomato juice.

The agar was prepared in the following manner:

*Formula*:
Difco peptone
Tomato juice
Water to make 1,000 cc.
Adjustment to pH 7.0
Agar—10 grams

Autoclave to dissolve agar; filter through a thin layer of absorbent cotton; distribute in desired containers, and sterilize by autoclaving at 15 lbs. steam pressure for 15 minutes. The reaction of the finished product is about pH 6.5.

Comparative platings were made, employing 24 hour-old milk cultures of 12 strains of *L. acidophilus* and 8 strains of *L. bulgaricus*. All agar platings were incubated in an atmosphere containing approximately 10 per cent. $CO_2$[4] (Kulp, 1926) for 48 hours. Whey-galactose and the digest-galactose agar platings of the same species were carried along under the same conditions as controls.

The results of this experiment and several others of like nature indicate the following:

1. Agar plating of *L. acidophilus* and *L. bulgaricus* made with an agar containing the proper concentra-

[1] Rettger, L. F., and Cheplin, H. A., 1921, "The Transformation of the Intestinal Flora, with special reference to the Implantation of Bacillus Acidophilus," Yale University Press.

[2] Rettger, L. F., and Kulp, Walter L., 1922, "A Note on the Choice of Culture Media for the Study of Lactobacillus, with special reference to the Carbohydrates employed," *Abstracts of Bacteriology,* Vol. 6, p. 24.

[3] Kulp, W. L., and Rettger, L. F., 1924, "A Comparative Study of *L. acidophilus* and *L. bulgaricus,*" *Jour. Bact.* 9, 357–394.

[4] Kulp, W. L., 1926, "The Determination of Viable Lactobacillus Acidophilus," SCIENCE, Vol. 64, pp. 304–306.