

Research related to the toxins associated with food-borne illness has included the development of *in vitro* tests for the detection of paralytic shellfish poison (41, 42), and hemagglutination and hemagglutination inhibition tests for the detection and identification of the botulin toxins and the enterotoxins produced by *Staphylococcus aureus* (43, 44). Additional work on the enterotoxins has resulted in the development of a method for their detection in foods, other than dairy products, by means of extraction procedures and gel-diffusion techniques (45, 46).

The results of the above research activities have been applied to the development of a series of methods for the examination of foods for purposes of surveillance and quality control, as well as for investigation of foods implicated in disease outbreaks. These methods have been incorporated into the training course manual used for food protection training and into the PHS publication No. 1142 on "Examination of Foods for Enteropathogenic and Indicator Bacteria" (47).

Another highly gratifying aspect of the work of the Food Microbiology Unit is the cooperative activities with others in this country and abroad who have similar interests and problems. These activities include correspondence and sharing of ideas as well as actual laboratory studies. For example, during the past year more than 200 cultures of *S. aureus* have been received for enterotoxin determinations from State health departments and from foreign countries such as the Netherlands, Italy, Israel, and Greece. Our contributions to methodology have also been used extensively by the American Public Health Association, the Association of Food and Drug Officials of the United States, the Association of Official Analytical Chemists, the International Committee on Microbiological Specifications for Foods, and the International Atomic Energy Agency in selecting procedures for microbiological examination of foods. We are, therefore, encouraged to think that food protection research has served and will continue to serve the immediate interests of both the Public Health Service and of the scientific community at large.

REFERENCES

1. Donnelly, C. B.; Black, L. A.; and Lewis, K. H. Occurrence of Coagulase-Positive Staphylococci in Cheddar Cheese. *Appl. Microbiol.* 12:311-315, 1964.
2. Donnelly, C. B.; Leslie, J. E.; Black, L. A.; and Lewis, K. H. Serological Identification of Enterotoxigenic Staphylococci from Cheese. *Appl. Microbiol.* In press.
3. Donnelly, C. B.; Leslie, J. E.; and Black, L. A. Production of Enterotoxin A in Milk. *Bacteriol. Proc.*, p. 13, 1966.
4. Read, R. B., Jr.; Bradshaw, J.; Pritchard, W. L.; and Black, L. A. Assay of Staphylococcal Enterotoxin from Cheese. *J. Dairy Sci.* 48:420-424, 1965.
5. Read, R. B., Jr.; Pritchard, W. L.; Bradshaw, J.; and Black, L. A. *In vitro* Assay of Staphylococcal Enterotoxin A and B from Milk. *J. Dairy Sci.* 48:411-419, 1965.
6. Read, R. B., Jr., and Pritchard, W. I. Lysogeny Among the Enterotoxigenic Staphylococci. *Can. J. Microbiol.* 9:879-889, 1963.
7. Read, R. B., Jr., and Bradshaw, J. G. Staphylococcal Enterotoxin B Thermal Inactivation in Milk. Technical Notes, in *J. Dairy Sci.* 49:202-203, 1966.
8. Read, R. B., Jr., and Bradshaw, J. G. Gamma Irradiation of Staphylococcal Enterotoxin B. *Appl. Microbiol.* 15:603-605, 1967.
9. Sullivan, R.; Tierney, J. T.; and Read, R. B., Jr. Thermal Inactivation of Selected Viruses in Milk. *Bacteriol. Proc.*, p. 1, 1967.
10. Read, R. B., Jr. Comments on Some Engineering Aspects of Liquid Egg Pasteurization. USDA Publication ARS 74-37, p. 58, 1966.
11. Black, L. A.; Brazis, A. R.; Donnelly, C. B.; and Peeler, J. T. Evaluation of Milk Laboratories. PHS Publication 999-FP-3, 1965.
12. Black, L. A., and Brazis, A. R. Milk Laboratories Approved by Federal and State Agencies. PHS Publication 999-FP-5, 1967.
13. Donnelly, C. B.; Peeler, J. T.; and Black, L. A. Evaluation of State Central Laboratories by Statistical Analyses of Standard Plate Counts. *J. Milk and Food Technol.* 29:19-24, 1966.
14. Brazis, A. R., and Black, L. A. Some Factors Affecting the Correlation of Methylene Blue Reduction Times and Standard Plate Counts of Raw Milk. *J. Milk and Food Technol.* 29:255-259, 1966.
15. McFarren, E. F.; Schafer, M. L.; Campbell, J. E.; Lewis, K. H.; Jensen, E. T.; and Schantz, E. J. Public Health Significance of Paralytic Shellfish Poison.