

No. 11,914 of NDV was employed throughout. Twenty-two mumps patients were studied, along with 23 control patients, 17 from the outbreak of mild meningo-encephalitis, and 6 having a clinical diagnosis of nonparalytic poliomyelitis. Thirteen of the mumps patients developed neutralization indices over 250, ten having indices of 1,000 and above, whereas only three of the sera from control patients showed neutralization indices over 250 and none went over 800. Antihemagglutination tests with mumps sera against NDV likewise demonstrated serologic relationships. Seven of 20 pairs of heat-inactivated mumps sera showed 4-to-64-fold rise of titer between the acute and convalescent phases. Four others showed titers of 1:64-1:256 in convalescent phase sera, titers well above those encountered in 20 pairs of sera from the control group of patients, none of which showed a rise of antihemagglutinating capacity against NDV.

The diagnosis of mumps in the patients studied has been considered elsewhere (6, 9). In addition to confirmatory epidemiologic and clinical findings, all of the patients showed evidence of recent mumps infection by complement fixation or by antihemagglutination tests, using the Enders strain of mumps virus. Mumps virus was isolated from the saliva or spinal fluid of 11 patients.

The positive results obtained in two types of serological tests against NDV in the sera of patients experiencing infection with mumps virus suggests that a diagnosis of Newcastle disease in humans should be made with caution, especially in the absence of virus isolation. Only five cases of human infection with NDV (1, 2, 5), all having

mild conjunctivitis, have been known to be so confirmed. The presence of neutralizing and antihemagglutinating factors against NDV in convalescent phase mumps sera is difficult to interpret. The reactions may be due to non-specific serum factors arising as result of infection rather than to specific antibodies. If the factors are actually antibodies, their presence would support the hypothesis that NDV and mumps virus are closely related. Burnet (3) first presented evidence for this in his work on receptor gradients. Kilham (7) has recently shown that NDV has a hemolytic activity closely resembling that demonstrated by Morgan, Enders, and Wagley (8) for the mumps virus. A more complete presentation of the data in this paper is in course of preparation. Further studies are needed to elucidate the full meaning of serologic and other relationships which appear to exist between NDV and mumps virus.

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Comments and Communications

Method for Isolation of *Actinomyces israeli* from Dento-Bacterial Plaque¹

The dento-bacterial plaque is a minute mass of salivary debris and bacterial cells firmly attached to inaccessible tooth surfaces. The association of the plaque with the initial lesion of dental caries has been firmly established (Dietz, F. H. *J. D. Res.*, 1943, **22**, 423; Stephan, R. M. *J.A.D.A.*, 1940, **27**, 218). A microsectional study (Ennever, J., Robinson, H. B. G., and Kitchin, P. C. *J. D. Res.*, 1948, **27**, 599) of the bacterial plaque has shown that bizarre, elongated, apparently branched, Gram-positive rods make up a large portion of the plaque stroma. As a result of this morphologic suggestion, a study was undertaken to determine whether *Actinomyces israeli* is a consistent component of the plaque flora.

After repeated trials it became apparent that uniform

recovery of *A. israeli* from plaque material was not possible by the method of Rosebury, Epps, and Clark (*J. Int. Dis.*, 1944, **34**, 131), even though their method affords an excellent means of cultivating the organisms from gingival scrapings, actinomycotic pus and other contaminated sources. It was felt that the sporadic isolations of *A. israeli* from the plaque centered about the physical difficulty of inoculating the culture medium. The following modifications of the Rosebury, Epps, and Clark method were instituted and have given consistently successful isolation of *A. israeli* from the dento-bacterial plaque.

The plaque mass, grown in the mouth on a tooth-bearing removable appliance, was removed with a sterile, hooked blade and placed in a micromortar containing 0.05 ml of autoclaved saline with Triton A-20 at 1:200. A coarse suspension was prepared by trituration with a small, sterile glass pestle for several minutes. One visible granule was transferred by means of a capillary pipette to brain-heart infusion agar, streaked, and the preparation incubated anaerobically in an atmosphere of 5% CO₂ for six days.

Fifteen attempts to isolate *A. israeli* from this source have been uniformly successful. Care, however, must be exercised in seeding the visible granule. It is imperative that only a small quantity of the saline diluent accompany the granule. If too much liquid is introduced on the

¹ This study from the Ohio State University, College of Dentistry, and Research Foundation, Columbus, Ohio, was supported by a grant from the Proctor and Gamble Company, Cincinnati, Ohio.

culture medium, the easily emulsified portions of the plaque flora, present in the liquid, outgrow and obscure the *A. israeli*.

Studies of the occurrence of *Actinomyces israeli* in a large series of dento-bacterial plaques are in progress.

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Statement on Visa Action

Seventy-nine scientists attending the Fourteenth Cold Spring Harbor Symposium on Quantitative Biology in June signed the following statement:

"We, the undersigned scientists, in attendance at a Symposium on Amino Acids and Proteins at the Biological Laboratory, Cold Spring Harbor, June 8 to 16, 1949, desire to protest the action of the United States authorities in refusing a visa to our British colleague, Dr. R. L. M. Synge. A presumptive political affiliation has been given as a reason for the refusal to allow Dr. Synge to attend this scientific conference, which has no political implications. This regrettable action has deprived the symposium of the scientific judgment of an exceedingly able worker, and thus has done disservice to the progress of science in this country. Furthermore, we sincerely

believe that it is in the national interest to permit scientists such as Dr. Synge to visit the United States.

Resolved, That this statement be sent to the President of the United States, and copies to the Secretary of State, the Attorney General, the Chairmen of the House and Senate Committees on Foreign Relations, the President of the National Academy of Sciences, the National Research Council, and *Science*."

Scientists attending the symposium were shocked by the refusal of the Department of State to grant a visa to Dr. Synge, since he is not a communist, but a man of liberal views and not active in politics. They were also disturbed by the discourteous treatment shown this prominent British colleague by American officials. Dr. Synge applied for a visa in March, at the American consulate in Edinburgh; and even though he was assured that a prompt answer to his application would be forthcoming, he never received an official notification of the decision to refuse it. After repeated requests for a decision, the director of the Biological Laboratory was informed by the Visa Division of the Department of State of the refusal to grant a visa only seven days before the beginning of the symposium.

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NEWS and Notes

Max S. Dunn, professor of chemistry at the University of California at Los Angeles, has been named faculty research lecturer for 1949-50. Dr. Dunn was selected in recognition of his contribution to the development and application of microbiological methods for the quantitative estimation of amino acids.

L. G. M. Baas Becking, deputy chairman of the South Pacific Commission Research Council, has been named chairman of the Committee on Botanical Stations of the International Union of Biological Sciences.

Gordon Ferrie Hull, Jr., professor of physics at Dartmouth College, has received a leave of absence to study European developments in physics for the Office of Naval Research. Dr. Hull will also deliver lectures on research which he has been conducting at Dartmouth. He will have his

headquarters at the U. S. Embassy in London.

Louis N. Katz, director of cardiovascular research at the Michael Reese Hospital, Chicago, will deliver the 12th Annual Louis Gross Memorial Lecture, October 26 at the Jewish General Hospital in Montreal, Canada. Dr. Katz' subject will be "Clinical Electrocardiography—Its Present Position and Possible Potentialities."

David G. Mandelbaum, professor of anthropology at the University of California, has begun a series of studies of the Kotas, inhabitants of the Nilgiri hills of South India. Dr. Mandelbaum will visit Delhi, Bombay, Madras, and Calcutta. His work will be made possible by a Guggenheim fellowship and grants from the Social Science Research Council and the university's Rockefeller Committee on Far Eastern Studies.

Gordon R. Willey, acting director of the Institute of Social Anthropology of the Smithsonian Institution, has been appointed Bowditch Professor of Central American and Mexican Archaeology and Ethnology of the Peabody Museum, Harvard University, effective July 1, 1950. Profes-

sor Willey is the first holder of the Bowditch professorship.

Richard W. Cook, who has been acting manager of the Atomic Energy Commission's operations at Oak Ridge, has been appointed manager. Mr. Cook succeeds **J. C. Franklin**, who resigned in June.

John L. Brooks, assistant professor of zoology at Yale University, has just returned from Burma. While serving as visiting professor of zoology at Rangoon University during the academic year 1948-49, Dr. Brooks organized a research program in freshwater biology.

Lynn S. Beedle, research engineer for the Department of Civil Engineering at Lehigh University, will spend three months at Cambridge University coordinating liaison on studies being made at the two universities on the strength of welded steel frames and their components. The trip is sponsored by the Welding Research Council and the Office of Naval Research, in cooperation with the American Institute of Steel Construction, the American Iron and Steel Institute, and the Lehigh University Institute of Research.