P. S. Brachman (Communicable Disease Center) presented data on exposure of cynomolgus monkeys to naturally produced aerosols containing *Bacillus anthracis*. Anthrax infection was observed in approximately 25 percent of the exposed monkeys. The pathological findings of mediastinal edema and hemorrhagic lymphogenitis and necrosis were similar to those in monkeys exposed to experimental aerosols of *B. anthracis* and also to those in humans who developed fatal inhalation anthrax after industrial or accidental laboratory exposures. With the low dose present in chronic exposure to natural aerosols, the incubation period appeared to range from 5 to 17 days. There was no evidence suggesting the development of a subclinical anthrax infection.

Epidemiology of airborne staphylococcal infection was reviewed by R. E. O. Williams (Wright-Fleming Institute of Microbiology, England) and A. D. Langmuir (Communicable Disease Center). Williams suggested that the chief way staphylococci become airborne is by shedding of particles of skin from permanent or temporary carrier sites. The magnitude and the frequency of such dispersal was discussed, together with factors that may influence it and the manner in which airborne staphylococci travel in hospitals.

Most airborne particles containing staphylococcus range in size from 8 to 18 microns in diameter, and most of them contain one to four viable cocci. The bulk of each particle presumably consists of the epithelial squame. It is difficult to obtain conclusive evidence of the way in which airborne bacteria gain access to the new host or on the relative importance of airborne and "contact" routes of spread. The possibilities of direct airborne infection of wounds in surgical operating rooms, primary acquisition of the nasal carrier state in newborn infants in hospitals, and acquisition of staphylococci in the nose in adult patients in hospitals were discussed. The difficulty in determining the relation between dose and effect and the importance of attempts to do so were stressed. Langmuir discussed in broader terms the epidemiology and the mechanisms of transmission of airborne infection.

H. M. Yamashiroya (IIT Research Institute) described aerosol vaccination with tetanus toxoid. He was able to protect guinea pigs with tetanus toxoid by using the respiratory route of vaccination. Primary aerosol immunization as well as an aerosol booster following either respiratory or subcutaneous vaccination appear to be effective procedures. H. C. Bartlema (Medical Biological Laboratory, Netherlands) achieved similar results in mice by using dead cells of *Bordetella pertussis* as an adjuvant.

Effects of nitrogen dioxide and ozone on resistance to respiratory infection were discussed by R. Ehrlich (IIT Research Institute) and D. L. Coffin (U.S. Public Health Service). The work reported suggests a more sensitive indicator of biological effects of selected air pollutants, as demonstrated by reduction in resistance to infection. A single 2-hour exposure to 3.5 ppm of nitrogen dioxide before or after respiratory challenge with *Klebsiella pneumoniae* significantly increased mortality in mice. Continuous exposure to 0.5 ppm for 3 months produced the same effect. Mortality also increased in mice exposed to less than 0.1 ppm of ozone for 3 hours before challenge with *Streptococcus* sp. Similar reduced resistance was observed after 4 hours of exposure to photochemical automobile smog.

The conference was cosponsored by the U. S. Army Biological Laboratories and the IIT Research Institute, under the chairmanship of E. K Wolfe (U.S. Army Biological Laboratories), Mark Lepper (University of Illinois), and Richard Ehrlich (IIT Research Institute). The proceedings of the conference are scheduled for publication in *Bacteriological Reviews*.

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Forthcoming Events

October

28–29. Society for **Scientific Study of Religion**, annual mtg., Univ. of Chicago, Chicago, Ill. (S. Z. Klausner, The Society, 1200 17th St., NW, Washington, D.C. 20036)

30–3. **Metallurgical** Soc. of AIME, fall mtg., Chicago, Ill (American Inst. of Mining, Metallurgical, and Petroleum Engineers, 345 E. 47th St., New York, N.Y. 10017)

31–3. American Soc. for **Metals**, 48th annual congr. and natl. metal exposition, Chicago, Ill. (The Society, Metals Park, Ohio 44073)

31–4. American **Public Health** Assoc., 94th annual mtg., San Francisco, Calif. (The Association, 1790 Broadway, New York, N.Y. 10019)