ists to lose sight of its peculiar advantages for certain kinds of work. The lower angular aperture obtainable with water contact as compared with cedar oil, is compensated for in several ways: first, it gives a longer working distance, due to the necessarily narrower angle of illumination,—a very important thing in high magnification. Second, it gives correspondingly better penetration of the object examined. Third, there is the ease with which both the slide (*i. e.*, the object) and the objective are cleaned. A bit of blotting-paper touched to the objective and the slide is all that is necessary and the mount is ready for further examination with lower magnification. But with an oil-immersion the oil must be first removed before a clear image can be had with lower powers, and this takes time and skill. In fact, if the mount is a temporary one and the cover-glass not held in place by a cement ring or hardened balsam, the cleaning is no job for a careless man. Fourth, where the mount is in water the water-immersion objective is free from the annoying habit of dragging the cover-glass over the specimen when the slide is moved,—a fault of the oil-immersion due to the greater viscosity of the oil connecting objective and cover-glass over that of the water connecting cover-glass and slide. In freshly studied marine mounts this is a big item. Finally the lower cost of the water-immersion objective is a factor well worth consideration.

It should be added, where oil contact between substage condenser and slide is omittted, a very frequent oversight with microscopists, the superiority of resolution of an oil-immersion objective, due to its greater N. A., is lost and the difference between it and a water-immersion disappears.

The only excuse for any immersion objective is that very high magnification and resolution are impracticable with dry objectives because of the working distance and the angle of illumination involved. For this reason it seems to me there is little excuse for immersion objectives below the one twelfth inch English scale or the 2 to 1.8 mm. standard scale.

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QUOTATIONS

HEALTH ORGANIZATION OF THE LEAGUE OF NATIONS

AN important branch of the work of the League of Nations is that of its health organization. The International Health Conference which was held in London in April, 1920, declared that the epidemic situation was menacing to all Europe, and that the task of fighting epidemics was beyond the strength of voluntary associations. The conference urged, therefore, that the task should be entrusted to the League of Nations as the only official international organization with sufficient authority and power to undertake the work. In accordance with this recommendation an Epidemics Commission was set up by the Council of the League, and since the end of 1920 this commission has cooperated with the Polish health authorities in their campaign against epidemics. The commission, at the head of which was Dr. Norman White, formerly sanitary commissioner with the government of India, had complete autonomy, but was responsible to the Council of the League. The funds placed at its disposal by the governments which are members of the league were not large enough to make possible an anti-epidemic campaign on the scale originally planned, so the commission began its work in Poland, and delivered to the Polish health authorities the motor transport, soap, clothing, medical stores, etc., most needed at the outset of the campaign; it also provided funds for the repair and equipment of bathing and disinfecting establishments, quarantine stations, and hospitals, and gave fifty complete fifty-bed hospital units. The work of this commission was the first experiment in international sanitary cooperation on a large scale, and it has been a success. Last autumn, however, the epidemic situation in Russia, and the consequent danger to her western neighbors, became greatly aggravated on account of the famine, and more drastic measures were found necessary to deal with the situation. An all-European anti-epidemic conference was therefore convened by Poland at Warsaw, with the approval of the Council of the League of Nations, and twenty-seven different nations took part. It was notable as being the first general

European conference in which Soviet Russia and Soviet Ukraine were represented. The conference drew up a general report of the situation, and the lines were laid down for a series of sanitary conventions, which are now being negotiated between the states of central and eastern Europe as a first defence against epidemics. Finally, the conference prepared a detailed plan for an anti-epidemic campaign in Russia and in the border states, and recommended that the conduct of this campaign should be entrusted to the League of Nations health organization and the epidemics commission. The conference requested the Council of the League to transmit its recommendations to the Genoa conference, on the ground that the latter was to deal with the economic reconstruction of Europe, and because an epidemic campaign in eastern Europe was in its opinion the indispensable preliminary to the work of economic reconstruction. It is hoped that the Genoa conference will decide upon the measures to be taken with reference to the anti-epidemic campaign, and whether they shall be carried out by the health organization of the League of Nations. This health organization consists of, first, a committee appointed by the Council of the League, which acts as the executive body of the organization; second, the Office National d'Hygiène Publique in Paris, a body in existence before the war, which, though not a League organization, acts in close cooperation with the latter, and in practice serves as its general committee, drawing up draft conventions and laying down general lines of policy; third, a secretariat, which forms the health section of the Secretariat-general of the League. The epidemics commission—originally, as has been said, an independent body—is now also attached to the health section, and is therefore really a part of the health organization. An epidemiological intelligence service has been organized to keep the health authorities of all nations informed as to the incidence of epidemic diseases, and a monthly bulletin is being issued containing statistics and charts of the incidence all over the world of cholera, typhus, dysentery, small-pox, and other infectious diseases. Another branch of the work of the health organization was the conference held in London in December, 1921, on the standardization of serums and serological tests, when, as reported at the time, a program of inquiry and research was elaborated, to be carried out by the various laboratories and centralized in the Copenhagen Institute. The results will be examined at a forthcoming conference to be held at the Pasteur Institute in Paris.—*The British Medical Journal.*

SPECIAL ARTICLES

THE DOMESTIC FOWL AS A SOURCE OF IMMUNE HEMOLYTIC SERA

DURING the last three years we have obtained abundant evidence which refutes Citron's[1] claim that the chicken is one of the best adapted animals for the production of hemolytic sera. Citron gave no evidence to justify the inclusion of the domestic fowl among the species best adapted to produce hemolytic sera and so far as known to me, none exists. In point of fact, we find this animal one of the poorest hemolysin producers that has come within our experience.

It was known to Bordet[2], Sachs[3], Metchnikoff[4], and P. Müller[5] long before the appearance of Citron's book, that a difficulty was involved in demonstrating the sensitizer or amboceptor content of the serum of this animal[6], and Citron's unsupported claim should have been regarded with suspicion. In spite of this fact, the statement from Citron is still taken at its face value. Thus, Guyer and Smith[7] have recently made

[1] Citron, J., 1912, *Immunity.* Translation by A. L. Garbat.

[2] Bordet, J., 1899, "Agglutination et dissolution des globules rouges," *Ann. de l'Inst. Pasteur,* 13: 273.

[3] Sachs, Hans, 1902, *Berl. klin Wochen,* Nos. 9 and 10.

[4] Metchnikoff, E., 1907, *Immunity in infective Diseases,* Cambridge Press.

[5] Müller, P., 1901, *Über Anti-hämolysine Centralbl. f. Bakt. u. Parasitenkunde,* 29: 175.

[6] Hyde, R. R., 1921, "The reactivation of the natural hemolytic antibody in chicken serum," *Am. J. Hygiene,* 1: 358-362.

[7] Guyer, M. F., and Smith, E. A., 1918, "Some prenatal effects of lens antibodies," *J. Exper. Zool.,* 26: 65-82.—1920, "Transmission of induced eye defects," *Ibid.,* 171-215.