

shadowed by mystery, and as the question is receiving at present the attention of one of Germany's most noted pathologists, some new and valuable light is being anxiously looked for.

The Pfeiffer bacillus is now accepted as the actual cause of influenza, and it might here be interesting to note some of the facts connected with the life history of this important organism. It is most difficult to cultivate, will grow only on blood agar, and will not affect any of the lower animals. It grows only between 23° and 42° C. It will not live in a moist state out of the body; it is killed by drying; it has no spores, consequently it cannot be preserved or propagated outside the human body at ordinary atmospheric temperatures. It affects the respiratory tract only—is never found in the blood, consequently the only source of infection possible is from the respiratory tract. One attack of the disease renders immunity only for a limited time, and this explains with apparent clearness the reason this disease spreads so rapidly, and consequently as rapidly ceases, and in a certain time again reappears.

The germ source of many skin affections has been firmly established, consequently the more recent remedies in dermatology have been in the line of antisepticism. Dr. James Harrison, in his address before the Dermatological Section of the British Medical Association, said: "Bacteriology will not account for, will not explain all phenomena, but look how much light it has thrown upon some forms of eczema, porrigo-contagiosa, boils, carbuncles, acne, lupus and other skin manifestations. Thus, certain skin diseases, hitherto considered incurable, are now relieved and prevented by the treatment so revealed.

It is in diphtheria that the most recent discovery has been made, which is of vital importance, more especially as it is expected not only to reduce greatly the high mortality already existing, but also to prevent the spread of the disease by a system of inoculation producing immunity.

This new remedy consists of an anti-toxin, prepared from the diphtheria bacillus by a special process discovered by Koch, by which an animal is rendered immune to the disease by being inoculated with the diphtheria bacilli. He found that the serum of the blood containing the anti-toxin possessed the power of not only destroy-

ing the organisms when injected in others suffering from the disease, but rendered those not suffering immune to an attack.

A case reported in the *British Medical Journal*, page 326, is one of many exemplifying the wonderful action of the antitoxin. The case is pronounced by two eminent physicians of a very severe type; Klebs-Loeffler bacilli were found in the throat; 8 m. of anti-toxin were injected in the muscles of the thigh; in twenty-four hours the membranes were looser, with undermined edges, and in forty-eight hours the membranes had almost all come away, the nasal discharge had ceased, and convalescence had practically begun. Many cases are reported as satisfactory as this, and before our next issue we hope to be able to report some cases treated in this way in this city.

Those of our readers who take an interest in the practical application of bacteriology, will at once perceive that the day for this science, which Lord Salisbury describes as "The most sober, most absolute and most positive science of medicine," is just dawning, and ere the sun has well risen the present system of treating infectious diseases, both medicinally and preventatively, will have been revolutionized.

THE UNCERTAINTY OF WATER ANALYSIS.

It is now generally admitted that impurities of organic origin are alone the dangerous element in drinking water, and by far the greatest risk to the health of the community is incurred by using water containing certain living organisms which are capable of producing specific effects when introduced into the alimentary tract.

The presence of organic matter can be most certainly demonstrated by chemical analysis, but by this means it is impossible to demonstrate whether the organic matter contains living organisms, as all organic matter does not contain them, so that a chemical analysis of water alone is very misleading. They can most certainly and accurately determine the chlorides, nitrates, phosphates and ammonia of organic matter, and of the amount of oxygen consumed, all of which is of great importance as an index of the purity or impurity, and as to the degree of pollution of the sample