The Tubercle Bacillus is of very slow growth on artificial media, and yet it will live and thrive in the dust and dirt of an infected room longer than most germs. It takes nearly three weeks to grow artificially in the incubator. It is what is known as an "acid fast bacillus," that means that, after being stained with fuchsin, it is dipped into a bath of 25 per cent. Sulphuric Acid and yet will not lose its red stain from the fuchsin. The reason that the Tubercle Bacillus is so resistant to acid, and to exposure, is that it is encased in a fatty capsule which protects it.

The next common organism, after Tubercle, is the Diphtheria or Klebs Loeffler Bacillus, which very readily attacks children. In order to see more clearly the characteristics of this bacillus it is cultured direct from a fresh swab (taken from nose, throat, ear or eye) on sheep's blood serum; the culture is examined after 12—18 hours incubation. In such a young culture the chief characteristics are more clearly revealed when stained with a special blue stain called Tolindene Blue. This stain shows very clearly the "polar staining" or the granules which are situated at each end of the bacillus and are unique to the Diphtheria organism. In the case of the Typhoid Group of organisms the process of identification is different and much more complicated, because this group is such a large one and there are so many varieties, all with the same staining reactions, but some are motiles and some are not. Here the sugar reactions are relied upon.

Dealing with the subject of vaccines, Miss Robinson said that a vaccine is a standardised culture of dead pathogenic organisms in saline, and is used to protect against certain diseases. It seems strange that the infection having been diagnosed and the organism identified and isolated in the culture, the next step often is to reinject the germ into the patient by a vaccine. This is done when, owing to the number of bacteria and the amount of toxins secreted, the leucocytes are insufficient in number to defeat the invasion; then some *artificial immunity* must be produced. This can be done by various methods and the two chief ones are (*a*) the injection of the dead organism—vaccine. (*b*) the injection of the toxin product prepared from filtered broth cultures of organisms and known as anti-toxin.

Vaccines may be administered in anticipation of exposure to the specific infection, and are then termed *prophylactic*. When, however, infection of a case has already taken place and the particular organism has been isolated a vaccine may be prepared specially from it, and it is termed an *autogenous* vaccine. To prepare an autogenous vaccine the responsible organism is identified by microscopical examination of material obtained, this being supplemented by cultural and agglutination experiments. It is isolated on appropriate media, three or four tubes of media being used for the purpose. About 1 c.c. of sterile saline solution is poured into each tube and the growth scraped off by means of a sterile platinum wire, making an emulsion of the growth. The masses of bacteria in the growth have to be thoroughly broken up and the bacterial content ascertained. A small definite volume of the emulsion is mixed with a definite volume of blood, and smears of this mixture on a slide are fixed and stained by means of one of the bloodstains. Then the relative numbers of red cells and bacteria are determined. Human blood contains five million red cells per c.cm. A calculation therefore gives the number of bacteria per c.c. The emulsion is diluted to a strength suitable for administration with sterile normal saline containing 0.5 per cent. carbolic acid and sterilised for 1—1½ hours in a water bath at 56—60° C. Before use, a subculture must be made from the diluted vaccine to prove its sterility and in some cases a dose is given to a guinea-pig as a final test.

Miss Robinson had brought with her a fine microscope, along with cultures, germs in various stages of cultivation and many slides, so that we had an excellent practical demonstration of the work she had described in its various stages; the microscope introduced us to the invisible and hostile legions that lie all around us; and yet, under the microscope, we could only admire their varied and curious forms and the delicate staining which made them visible. We owe sincere thanks to Miss Robinson for an exceedingly interesting and very able scientific lecture.

NOTICE TO MEMBERS.

The Executive Committee are shortly to draw up the list of nominations for election to the General Council at the forthcoming Annual Meeting. Will Members of the Association kindly send up the names of those Members whom they wish to nominate for election, before April 15th.

INVITATION.

Miss Cutler is giving a dance at 194, Queen's Gate, on Saturday, 16th April, from 8 to 12 p.m., and she asks us to issue, to all Members of the Association who care for dancing, her invitation to this. We regret the invitation must be restricted to those who dance, as otherwise the rooms become overcrowded. Will those who intend to be present please write to Miss Cutler at 194, Queen's Gate.

OTHER FIXTURES.

We are arranging a Ramble to Hatfield for April 21st, and the Charabanc is due to leave Queen's Gate at 11 a.m. The Marchioness of Salisbury has been so kind as to say that she will arrange for the nurses to go over Hatfield House and it will be a real delight to see all its beautiful and historic treasures. We are also to visit Hatfield Church, which is one of the loveliest and most interesting of the old churches within reach of London. For further particulars please apply to the Secretary.

On April 28th at 5.30 p.m., Mr. Eeles will give a Lantern Lecture on "The Beauty of the English Country-side."

UNFAIR COMPETITION.

We received recently a communication from a private nurse, describing the difficulties which she found in providing for the proper care of her patient in circumstances which, alas, are all too common at the present time.

Our correspondent is nursing a serious case in the country, and when it was necessary to have a nurse on day duty, as well as during the night, a second one was procured; it soon became evident to our correspondent that she was by no means particularly efficient. Ultimately it transpired that she had received what training she had in a small infectious hospital in an out-lying district of Scotland. The nurse first in charge of the case felt it to be her duty to inform her patient's wife of the position, and, after consideration, the lady decided that the patient must not be told of the circumstances "as it might upset him." The arrangements supervening on this decision placed a great surplus of responsibility on the first nurse. The fee charged for the second was £3 13s. 6d. weekly and of this sum £2 3s. 6d. was retained by the institution for which she worked, while she received remuneration at the rate of 30s. per week.

There is great need for organised and active propaganda, if we are to protect professional standards, and individual members can do a great deal by educating the public as to what the term Registered Nurse implies.

194, Queen's Gate,
London, S.W.7

Isabel Macdonald,
Secretary to the Corporation.

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