



VOL. XXXVIII.

OCTOBER 27th, 1910.

No. 2.

Acquired Immunity.

DR. W. H. PARK.

IT gives me great pleasure to return to you after my visit of last year, and especially since the University has honored me with a degree, for which I am very grateful. I am sure that I would rather obtain the degree in this way, than to be obliged to earn it as you have to, and we who graduated twenty-five or thirty years ago, should rejoice that we did so then when we view the work that has to be gone over in order to receive a degree to-day.

I am to address you on the subject of "Acquired Immunity," and as the students who have only been here a few days have not had a chance to become familiar with the outlines of this subject, the senior students will, I am sure, pardon me if I seem too general in places.

You all know that we have in immunity, Natural Immunity and Acquired Immunity, that we as human beings, and the animals and plants are all fortunate in that only a few of the pathogenic micro-organisms can attack us. There is certainly little danger to human beings in micro-organisms attacking plants, except they might generate a poison in the plant which would later find its way into the human body. In the same way with the fishes and other higher animals, there are only a few parasites that can attack the different species, and which can result in any harm to the human race. We are thus protected from the great mass of organisms which can produce diseases and death. This protection or power of resistance is due to a great many different factors—the germicidal properties of our blood, the protective covering of epithelium on the body, the temperature which our bodies and other organisms develop. However, all these various properties of our bodies are not to be touched upon in this lecture, as we are to discuss acquired immunity.

It has been known ever since intelligent human beings have existed that if we pass through certain diseases, we become no longer susceptible to similar attacks. It has also been known that this immunity had different features for different diseases, being lasting in some diseases, and in others transient. In some, also, it was known to be perfect, while in others it was incomplete.

Immunity then, has been for a long time, a matter of general observation. It was only when Jenner first used cowpox vaccine against smallpox that man was passively inoculated with a disease to procure immunity. This was latent for a long time after Jenner's experiments until Pasteur made its application practical as the result of different methods of experimental work.