

From the Pages of History

Great Discoveries – Rabies Vaccination

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Many times' discoveries are accidents. Louis Pasteur was not an exception: he was indeed an average student, skilled at drawing and painting, earned his Bachelor of Arts degree (1840), Bachelor of Science degree (1842) and a doctorate (1847) at the École Normale in Paris, but a careful observer. As most of our researchers learn by trial and error, Louis Pasteur, returning from summer vacation in 1879 to his laboratory in University of Lille, started working on chicken cholera bacilli culture, he had left on the table. The inoculums surprisingly did not produce the disease in the chicken. Something had happened to the culture – presumably the higher summer temperature and drying up of the culture has caused some modification in the bacteria, Pasteur thought. He took another culture from the cellar and that produced the disease in a new bird, but failed to produce the disease in the chicken that was already inoculated with the table left culture – the era of 'attenuation' was born: by growing bacteria in adverse conditions caused 'attenuation'. He reproduced this principle in veterinary anthrax, this time incubating a shallow culture in 42-43 degree celcius, and demonstrated these in a public experiment at Pouilly-le Fort, south of Paris, in the spring of 1881. He used 24 sheep, 1 goat and 6 cattles; vaccinated animal were all protected against a dose of virulent anthrax bacilli which killed most of the control animals in a few days. This lead to the most dramatic demonstration of all vaccinations, attenuation of Rabies virus by air drying spinal cord of infected rabbits. He was waiting for a chance to test it.

On July 6, 1885, a boy called Joseph Meister bitten by rabid dog was brought to him: Pasteur decided to test his vaccine on this boy. He administered the vaccine and spent sleepless night counting the days: The boy did not develop any classical symptoms of rabies for a month and survived. This success of vaccine brought him immediate fame. An international fund raising campaign to build the Pasteur Institute in Paris was initiated and the Institute was inaugurated on November 14, 1888. Joseph Meister lived the rest of his life, serving as gate keeper at Pasteur Institute Paris.

During my first visit to this great institute, I stood spellbound, emotional to see Joseph Meister's statue, on entering the gate of Pasteur Institute. Though I had taught this history of great discovery for over three decades, every time I travel back in history, admiring these great discoverers and benefactors of Mankind: that is the great power of science that shapes, serves the Mankind and its future.

References

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