Student's Name

Professor's Name

Course Name and Number

Assignment Due Date

Descriptive Annotated Bibliography: History of Vaccination

Isaacs, David. *Defeating the Ministers of Death: The Compelling Story of Vaccination, One of Medicine's Greatest Triumphs*. HarperCollins Publishers Limited, 2019.

From David's perspective, vaccination's history is replete with instances of observation and experimentation, sabotage, and success. It contains the agony of lost lives, drama of rivalry and discovery, the accountability for faulty testing, and the achievement of effective, lasting immunity. Nonetheless, with the annihilation of some of humanity's most lethal adversaries in the first world, complacency has crept in certain corners. COVID-19 puts the world once again on the lookout for a vaccination. The narrative of prior successes and disappointments enables us to keep the race and the optimism in perspective. David Issacs delves into the evolution of the knowledge of immunity from the fifth century BC to the current day, thrilling us with the rising success of each of the 14 vaccinations that a kid regularly gets today.

Saleh, Amr, et al. "Vaccine Development throughout History." *Cureus*, vol. 13, no. 7, 26 July 2021, https://doi.org/10.7759/cureus.16635.

In *Vaccine Development Throughout History*, the authors evaluate the work of Edward Jenner, the first scientist who introduced infective organisms into the body of a boy aged eight years who had cowpox lesions. The procedure later granted strong immunity against smallpox. Approximately 80 years later, Louis Pasteur successfully created and introduced an effective vaccine against rabies. The authors assess the scientific efforts by experts such as Koch in

discovering more microorganisms, which led to the introduction of toxoids and eventually the development of the first vaccine generation. They analyze the significant developments that followed the release of the first generation of vaccines, including the discovery of tetanus and influenza vaccines. The authors attribute the creation of yellow fever and influenza vaccines to incorporating certain viruses on chick embryos' chorioallantois membranes. They affirm that the golden age of vaccines was marked by the development of the polio vaccine in 1950, which was enabled by the cell culture evolution.

Tahamtan, Alireza, et al. "An Overview of History, Evolution, and Manufacturing of Various Generations of Vaccines." *Journal of Archives in Military Medicine*, vol. 5, no. 3, 26 Sept. 2017, https://doi.org/10.5812/jamm.12315.

The authors strongly believe that the people of the middle east and China initiated the concept of vaccination in the 17th Century. According to Tahamtan et al., the Chinese used pustule liquid of patients diagnosed with smallpox to protect people from getting infected or reinfected by the virus. Edward Jenner later conducted a scientific study and used the cowpox virus to inject a human body. The authors explain that the discovery of immunization science and the efforts of research scientists including Louis Pasteur, Paul Ehrlich, and Robert Koch marked a new era in vaccine development. They believe that the era led to extensive research in all parts of the world, and numerous vaccines were created against tetanus, rabies, pertussis, tuberculosis, diphtheria, and typhoid. At the onset of World War II, the motivation for mass production of vaccines increased. Moreover, supporting foundations such as research institutes and the World Health Organization began to play a vital role in producing vaccines against influenza, Japanese encephalitis B, and polio. By the second half of the 20th Century, the new generation of vaccines was released, and more vaccines were produced against mumps, rubella, measles, and later

chickenpox. After the 1980s, conjugated vaccines and recombinant vaccines were created. The discovery of DNA vaccines against non-infectious and infectious diseases marked the final phase of vaccine development in 1990.

Works Cited

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