Related Reading - Coronavirus

The recorded history of viral diseases goes back to before anyone knew what a virus was. Early writings called **hieroglyphs** show that Ancient Egyptians knew about polio. The Persian scholar Rhazes also wrote the first descriptions of smallpox and measles—in the tenth century!

But no one knew what was causing all these illnesses until the end of the nineteenth century. In 1884, French microbiologist **Charles Chamberland** invented a porcelain filter with pores small enough to catch bacteria. Eight years later, Russian biologist **Dimitri Ivanovsky** used this filter to experiment on tobacco leaves infected with a mysterious disease. He used the filter to remove all of the bacteria from the infected leaves. But when he exposed other plants to the bacteria-free leaves, they still got sick! Ivanovsky reasoned that something smaller than bacteria must have been causing the condition.

That “something” was what we now refer to as a **virus**. The term was coined by Dutch microbiologist **Martinus Beijerinck**. He conducted experiments similar to Ivanovsky’s in 1898. As a result, Ivanovsky and Beijerinck are often considered joint discoverers of viruses.

It wasn’t until the invention of powerful **electron microscopes** in 1931 that scientists were able to get an up-close look at an actual virus. Instead of using visible light, these microscopes illuminate objects using beams of **electrons**—negatively charged particles that make up atoms. The devices can magnify objects so that they appear millions of times larger! Viruses were finally revealed in all their glory. Those first images were like a glimpse into an alien world. Before then, scientists had no idea how viruses invade cells—and that knowledge has proven crucial to stopping their spread.