

# Francesco Redi

*A forward thinker who challenged a long held world view...*



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**F**or two thousand years, it was widely accepted that living organisms could emerge from inanimate matter. This theory, known as spontaneous generation, was introduced by Aristotle and persisted across millennia. It was not until the 17<sup>th</sup> century that spontaneous generation received pushback from Italian physician and biologist Francesco Redi.(1)

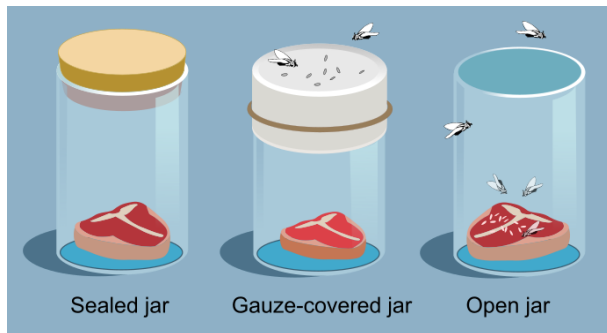


**Figure 1: Portrait of Francesco Redi.**

Redi was born in Arezzo, Italy, to Gregorio Redi and Cecillia de Ghinci. Redi's father, Gregorio Redi, was a prominent physician who served the famous Medici family. For his early education, Redi attended a Jesuit school in Florence that emphasized teachings on theology and Jesuit accepted literature.

Unbeknownst to Redi, Galileo Galilei lived mere miles away from his school and was facing heavy prosecution from the Church for his scientific work. The Jesuits were the harshest critics of Galileo, refusing to allow his avocation for the Copernican system.(2)

At 15, Redi enrolled in the University of Pisa where he received his doctorate in both philosophy and medicine. At only 22, Redi registered at *Colegio Medico* in Florence where he served as the physician for the Grand Duke of Tuscany, Ferdinand II.(2) As Ferdinand was a member of the Medici family, it is possible that Redi's father used his connections to get Redi the high-level position. While serving as physician to the Medici Court, Redi performed much of his iconic research.(3)



**Figure 2: Image demonstrating Redi's famous experiment. Maggots appeared on meat in the open jar, but not on the others.**

Redi's greatest experiment was his challenge to the theory of spontaneous generation. Redi placed meat into two groups of jars, leaving one group uncovered, and placing fine gauze on the lid of the other. After some time, Redi observed maggots within the open jars, but none in the covered jars. In another experiment, Redi separated the maggots and observed them metamorphose into flies. He also found that maggots would not appear in a

sealed jar of meat if he introduced dead maggots or flies. However, if he used live flies, maggots would appear. These findings directly contradicted the theory of spontaneous generation. Despite his findings, Redi was careful not to invoke the wrath of the church as he had witnessed the fate of Galileo Galilei. In order to tread lightly, Redi based his interpretations on biblical passages.(1)

Though the theory of spontaneous generation continued to persist for many years after Redi, he laid the groundwork for future scientists such as Louis Pasteur, who once and for all put the theory of spontaneous generation to rest. In a time when forward thinking was frowned upon, Redi bravely sought out scientific truths.



**Figure 3: Monument to Redi at the Uffizi Gallery in Florence, Italy.**



## References

1. [https://en.wikipedia.org/wiki/Spontaneous\\_generation](https://en.wikipedia.org/wiki/Spontaneous_generation)
2. [https://en.wikipedia.org/wiki/Francesco\\_Redi](https://en.wikipedia.org/wiki/Francesco_Redi)
3. <https://www.famousscientists.org/francesco-redi/>