

# Frederick Griffith

**Frederick Griffith** (born October 3, 1877, Eccleston, Lancashire, England—died 1941, London) was a British bacteriologist whose 1928 experiment with bacterium was the first to reveal the “transforming principle,” which led to the discovery that DNA acts as the carrier of genetic information.

Griffith studied medicine at the University of Liverpool and later worked at the Pathological Laboratory of the Ministry of Health. He developed a reputation for his thorough and methodical research. In 1928 he conducted an experiment involving two strains of the bacterium *Streptococcus pneumoniae*; one strain was lethal to mice (virulent) and the other was harmless (avirulent). Griffith found that mice inoculated with either the heat-killed virulent bacteria or the living avirulent bacteria remained free of infection, but mice inoculated with a mixture of both became infected and died. It seemed as if some chemical “transforming principle” had transferred from the dead virulent cells into the avirulent cells and changed them. Furthermore, the transformation was heritable—i.e., able to be passed on to succeeding generations of bacteria. In 1944 American bacteriologist Oswald Avery and his coworkers found that the transforming substance—the genetic material of the cell—was DNA.

In 1941 Griffith died during a German bombing raid on London.

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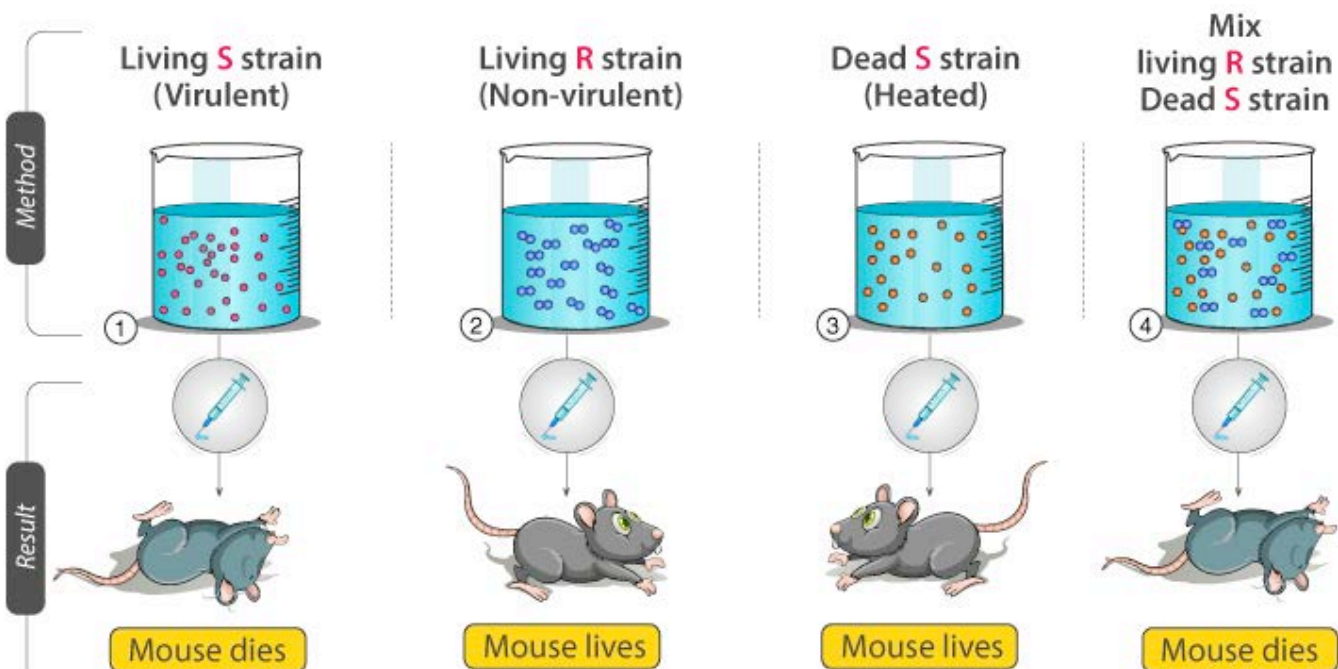
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