

# Friedrich Miescher

- Discovered “nuclein” now known as DNA in white blood cells
- Died before the precise role of DNA was discovered

Friedrich Miescher was born in Basel, Switzerland, on August 13, 1844, into a family of scientists. His father and uncle were anatomy professors at Basel University. Miescher began studying medicine at Basel as well. However, he was partially deaf and feared this handicap would limit his ability to be a successful physician. As a result, he changed his major to chemistry and went on to become a professor of chemistry at Basel University.

As a chemist, Miescher analyzed the puss on bandages removed from wounds, and he made his most celebrated discovery as a result of these studies. He discovered a previously unknown substance within the puss's white blood cells. The new substance was unique because it contained phosphorus. All other known organic cells were made from carbon, oxygen, nitrogen, and hydrogen. Miescher named the newly found substance “nuclein,” since it came from a cell's nucleus. Six years before Miescher died, a former student of his, Richard Altmann, renamed nuclein “nucleic acid” because he had observed that it was made up of protein and an acid molecule. The substance is now known as deoxyribonucleic acid (DNA).



Miescher later extracted DNA from many other cells. He was later able to extract the first pure sample of DNA from salmon sperm. Miescher did not publish his discovery until 1871 because his mentor, Felix Hoppe-Seyler, wanted to confirm the discovery first.

Miescher died long before James Watson and Francis Crick announced the precise role DNA played in cells in 1953.

## Resources

<http://www.laskerfoundation.org/rprimers/gnn/timeline/1869a.html>

<http://www.whonamedit.com/doctor.cfm/1754.html>