

The double helix

[Science](#), [Biology](#)



The double helix Double helix, as used in molecular biology, refers to pairing of dual strands of nucleic acid molecules. Examples of such strands are found in DNA molecules. In this paper, I seek to explore the role of double helix in complementary base pairing in DNA replication and the nature of the pairing.

The role of the double helix in complementary base pairing in DNA replication is to ensure an identical daughter cell in the replication process. The double helix strand consists of two chains, each with similar nucleotides but arranged in an opposite direction. The strands are copied with similar nucleotide information from each of the parent strands. As a result, a replication of the original DNA is achieved with the parent and daughter molecules having exactly the same properties. The double helix in the complementary based pairing therefore ensures that daughter molecules derive exactly the same characteristics as the parent molecules (Teerikorpi, Valtonen, Lehto, Byrd and Chernin, 2008).

The phrase, ' two strands of DNA in the double helix are antiparallel,' means that the strands run in opposite directions. This is because of properties of the different structures of the strands that ensure the opposite directions for bonding in the double helix strands (Strachan, 2003). If the strands were parallel, the ends of the double helix strands would have similar properties. This would result from the strands pairing with both strands aligned in the same direction as opposed to the opposite directional stranding of the ' antiparallel' double helix strands (Behr, 2008).

References

Behr, J. (2008). The lock-and-key principle, the state of the art--100 years On.

<https://assignbuster.com/the-double-helix/>

New York, NY: John Wiley & Sons

Strachan, T. (2003). Human molecular genetics. Derby, UK: Garland Science

Teerikorpi, P., Valtonen, M., Lehto, K., Byrd, G. and Chernin, A. (2008). The evolving universe and the origin of life: the search for our cosmic roots. New York, NY: Springer