

Review of: "Quantum Evolution and Genetic Mutations"

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This author discusses the possible mutations caused by the quantum uncertainty of chemical reactions of DNA. The uncertainty is possible to cause mutations, but the way in which the author claims this is illogical in biology.

Many biological reactions are catalyzed by their specific enzymes, and gene replication is no exception. DNA mutations are generated as non-canonical catalyses by DNA polymerases as well as the failure of various fixing enzymes. The author considers only the quantum structure of DNA, which is merely a substrate of these enzymes. Conventionally, non-canonical reactions are reduced to distortion of enzyme-substrate complexes, which is thermally or non-quantumly generated, although the quantum effect could be significant in exceptional reactions such as photochemistry and photocatalysis rather than DNA replication.

In this review, the essential interaction between DNA and the relevant enzymes is completely ignored. The ignorance might be due to the too large difficulty in obtaining quantitative enough analysis on DNA replication. However, this difficulty should not be an excuse for ignoring essential interactions.