Review of: "Quantum Evolution and Genetic Mutations"

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Potential competing interests: No potential competing interests to declare.

In this review article by Hossien Hossieni, the author discusses the possible main role of quantum tunneling in the occurrence of, as it seems, point mutations in DNA. However, the statement that quantum tunneling has a main role in the occurrence of mutations is not based on evidence. Moreover, the evidence that quantum tunneling is relevant to mutagenesis in vitro and in vivo is not presented. I suggest revising this statement and being more specific about the types of mutations.

There are different types of point mutations that arise by different but known mechanisms which are not discussed in detail in the article, nor are the types of mutations presented thoroughly. Hence, it is not clear what the potential relationship is between quantum tunneling, specific types of point mutations, and the frequencies of those mutations. The potential relationship between environmental mutagens and quantum tunneling is not discussed.

Also, practical recommendations about possible experimental designs on how exactly transitions and/or transversions that might possibly occur in the cell due to quantum tunneling can be distinguished from other mechanisms could be useful.

In addition, it is not clear what the novelty or importance of this review is.

I suggest that, instead of a huge historic discourse about discoveries regarding DNA structure, the author discuss more the mechanisms of occurrence of point mutations and demonstrate the possible relationship between quantum tunneling and those mutations.