

# Review of: "Darwin, Gödel, Luria, Delbrück: Biomedical, Mathematical, and Metamathematical Perspectives on Attributes and Consequences of Random Somatic Mutations Subject to Selection"

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Review the paper Neil S. Greenspan, Owen Han

Darwin, Gödel, Luria, Delbrück: Biomedical, Mathematical and Metamathematical Perspectives on Attributes and Consequences of Random Somatic Mutations Subject to Selection

The manuscript addresses the extremely important question of the probability of somatic mutations and the possible alteration of the human phenotype by these random changes.

An overview of microbiological and genetic mechanisms of somatic mutations is presented. The authors presented ideas of modern mathematical logic based on a system of strict axioms, which can serve as an analogy between a failure in the transmission of genetic information or somatic mutations and a change in one of the axioms in a set of logical statements. This idea seems quite plausible.

At the same time, in the reviewer's opinion, the paradigm of modern research on random somatic changes is based on probability theory. It is a science that does not take into account the time parameter. It is likely that the next mathematical studies in genetics will utilize the current advances in random process theory. Random processes are best suited to describe "memory" in cases of developmental effects on complex systems.

The manuscript may be of interest to mathematicians working in mathematical logic and probability theory.

The manuscript is recommended for publication.