

## Conclusions of the SKEPP-discussion of DNA mutation protection

The article "The Evolutionary Dynamics of Digital and Nucleotide Codes: a Mutation Protection Perspective" (Open Evolution Journal, Vol. 5, p.1-4, Feb. 2011) at <http://www.benthamscience.com/open/toevolj/articles/V005/1TOEVOLJ.pdf> mentions several basic biological mechanisms that adapt the DNA to changing circumstance and several other mechanisms that protect it against natural decay. These mechanisms are unknown to many, or are ignored, but cannot be doubted as they are mentioned in a peer-reviewed journal. In April 2011, the article has been put in discussion at the science forum of SKEPP (= society of skeptics; unfortunately in Dutch) <http://forum.skepp.be/viewtopic.php?f=7&t=2603> ). In that discussion, the following conclusions were drawn from the biological facts and the equivalence between digital and nucleotide codes ( <http://www.youtube.com/watch?v=dzh6Ct5cg1o> )

1. Living nature continuously adapts to changing circumstance by random change of the DNA of organisms and selection of advantageous changes.
2. Evolutionary theory throws all random changes of the DNA on one heap, without distinguishing the underlying mechanism that causes the change, and simply contends that small changes accumulate to ever bigger changes; because the shape of the beaks of finches can change, bacteria could ultimately transform into humans.
3. The article mentioned above distinguishes two types of DNA adaptation mechanisms:
  - a. mechanisms that work within the boundaries of the mutation protection of the DNA, and do not expand the length of the DNA; in particular: gene regulation and the recombination and selection of gene variations ('alleles');
  - b. mechanisms that work beyond the boundaries of the mutation protection, and expand the length of the DNA; in particular: the mechanism of accumulation of non-reparable, code-expanding, inheritable, advantageous mutations of the DNA.
4. Change of the beaks of finches is caused by the mechanism of recombination and selection of alleles. Because this mechanism does not expand the length of the DNA, it cannot transform bacteria into humans. As a consequence, changes in the beaks of finches cannot be put forward as proof that bacteria can change into humans when waiting long enough.
5. The change of bacteria into humans requires the accumulation of non-reparable, code-expanding, inheritable, advantageous mutations of the DNA. This mechanism can only function if the normal mutation protection of the DNA dysfunctions. The article mentions that dysfunctioning mutation protection is the cause of cancer and hereditary diseases (COSMIC, Catalogue of Somatic Mutations in Cancer op <http://www.sanger.ac.uk/genetics/CGP/cosmic/> )
6. The article above mentions (p.2, 2<sup>nd</sup> column, end of 1<sup>rst</sup> section) that when producing sex cells, the alleles of the father of the organism are compared with that of the mother; if they are not of exactly the same length, the production is aborted. Sexual reproduction thus prohibits the inheriting of code-expanding mutations, unless the mutation protection dysfunctions, resulting in Syndrome of Down-like aberrations, and high selective disadvantage. Therefore, apes cannot change into humans, even when waiting a very long time.
7. Cancer and hereditary diseases handicap an organism in the struggle for food, shelter, and a partner. Therefore, organisms with dysfunctioning mutation protection will lose from organisms that have well-functioning mutation protection. A mutation that might

be advantageous after many generations in combination with other inherited mutations, will not help an organism with cancer and hereditary diseases in the daily competition with organisms without cancer and hereditary diseases. Populations of organisms with dysfunctioning mutation protection lose the competition for food, protection, and a partner, with populations that have well-functioning mutation protection.

8. In any branch of science, a theory is divided in sub-theories when fundamentally different mechanisms play a role. Therefore, evolutionary theory will inevitably be divided in (1) a micro-evolutionary theory that focuses on the mechanisms for random change of the DNA within the boundaries of mutation protection, whereby the length of the DNA does not expand; and (2) a macro-evolutionary theory that focuses on the mechanisms for random change of the DNA beyond the boundaries of mutation protection, whereby the length of the DNA expands. The micro-evolutionary theory can be grounded on a very large basis of empirical evidence. The macro-evolutionary theory misses a basis of empirical evidence, and needs a testable answer to the question how a mechanism that causes cancer and hereditary diseases can transform bacteria into humans.
9. As long as no answer has been found to that question, the answer "We do not know (yet)" will be sufficient. This position is completely normal in any branch of science, and is the driving force for scientific progress.