

Abstract Submitted
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Exact Law of Live Nature MARK AZBEL' — Exact law of mortality dynamics is derived. The law is universal for all species, from single cell yeast to humans. The law includes no characteristics of non-stationary animal- environment interactions (e.g. via metabolism) which are necessary conditions of life. Such law is specific for live systems with their homeostatic self-adjustment to environment. Its universal dynamics for all animals, with their drastically different biology, evolutionary history, and complexity, is also unique for live systems-of thermodynamics of liquids and glasses. The law which is valid for all live, and only live, systems is a life specific law of nature. Mortality is an instrument of natural selection and biological diversity. The law which is preserved in evolution of species from humans to yeast is a conservation law of selection, evolution, and biology. It implies selection of survivors which, in contrast to species specific natural selection, proceeds via universal stepwise evolutionary rungs. It demonstrates that intrinsic mortality and certain aspects of aging are disposable evolutionary byproducts, and directed genetic and/or biological changes may yield healthy and vital Methuselah lifespan. This is consistent with experiments. Yeast may provide a master key to the mechanism of universal mortality, aging, selection, evolution, and regulation of this mechanism, in all animals. Universal mechanism dominates in evolutionary unprecedented protected populations. Well known species specific mechanisms may dominate in the wild.

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