

## **ARTIFICIAL LIFE THROUGH POSTPONED AGING**

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A recent editorial in Time magazine (March 1st, p. 50) claims that in the age of cyberspace, artificial life has become attractive also in the sense of artificial life extension. The current biomedical consensus is that in the long run, the genome project will show the way toward effectively interfering with the genetic switching events that according to the Hayflick hypothesis underlie aging in all somatic cells. In the meantime, it appears that a simpler approach can be tried — the "melatonin short-cut." The latter comes in 3 clinical varieties.

1) The Russian school of Dilman and Anisimov, who since 1979 reduced old-age cancer and senility and increased life span by 25 percent in rats by means of a pineal extract that stimulates nightly melatonin production, has used the same extract since 1989 also on patients.

2) At the Health Sciences University in Portland, Oregon, patients with old-age insomnia are treated with melatonin as a natural sleeping pill, since 1992.

3) The monks of Mount Athos in Greece who allegedly reach a mean age of over 100 years go to bed at dusk and rise for prayer at 3 a.m. throughout the year. It will be important to verify by means of melatonin profiles that under such a life style, the product of sleeping time and melatonin concentration is maximized (as it is in cases 1 and 2). This product has been conjectured to control the irreversible cellular switching events that underlie somatic aging. Since this question can presumably be answered soon using cell cultures, an easy way to delay aging may turn out to be available. Would such a medical break-through be desirable? It is perhaps a good idea to ask this question before the situation has actually arisen.

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