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Biophysics of aging and therapeutic interventions by entropy-variation systems.

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The cell is thermodynamically an open system and aging is characterized by an increasingly higher structural disorder (increase of entropy) and functional loss. If a variation of negative entropy is introduced by an external source, an anti-clockwise effect leading to regenerative processes and/or increase of the functional reserve supporting regenerative tissue changes is theoretically expected. The achievement of a negative variation of entropy is the main principle of a new technology which implies an exogenous delivery of energy with higher performance than the physiological production. Promising clinical experiences in liver cirrhosis and in long-standing scarring lesions seem to confirm the clinical applicability of the theoretical model.

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