



Can the Effects of REGENERESSEN® Be Measured Biochemically?

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Research on the mode of action of medicaments presents far more difficulties with those produced from biological matter than with chemically defined substances. Because it is not possible to investigate the total effect of REGENERESSEN, presumably a very complex mechanism, it was tried to verify two probable partial effects by biochemical means.

One of the investigations deals with the effect of the REGENERESSEN on the oligo-adenylate-synthetase of human lymphocytes *in vitro* as well as *in vivo*, and the other one with the action of REGENERESSEN as priming substances for the replication of DNA *in vitro*.

It could be shown in 1981 by an animal test on mice, that the intraperitoneal application of REGENERESSEN induced the formation of interferon, though the effect, obtained by a direct interferon measurement, was relative weak. Therefore in the recent experiments human lymphocyte cultures were used, thus avoiding animal tests, and giving the results a higher relevance to the application on man.

The enzyme 2'-5'-oligo-adenylate-synthetase is one of the mediators of the interferon's anti-viral effect. Measuring its activity in lymphocytes allows a sensi-

tive proof of interferon-participation in pathological or curative processes. It could be established, that the REGENERESSEN stimulate the synthesis of interferon in human lymphocyte cultures (*in vitro*) as well as in the lymphocytes of probands (*in vivo*).

Primers are initiating substances needed by the DNA-replicating enzymes, that are synthesized in the cell under normal physiologic conditions. REGENERESSEN contain oligo-nucleotides with chain-lengths of 10 to 15, which could act as such priming substances. In a DNA-synthesizing system (*in vitro*) the priming action of REGENERESSEN could be verified.

The results of both investigations at least give partial scientific explanations for the therapeutical effects of the REGENERESSEN.