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L'évolution temporelle d'enzymes associées aux transferts d'énergie dans le muscle strié en régénération.

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Translated from French,

The temporal evolution of enzymes associated with the transfer of energy in the striated muscle in regeneration.

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Gastrocnemius muscles of *Rana temporaria* are sliced and replanted *in situ* (Studitsky, 1959). The enzymatic activities of creatine phosphokinase, aldolase, pyruvate-kinase, lactic dehydrogenase, and malate dehydrogenase decreased by 95% or more from the first day after the operation: these enzymes dissolved in the sarcoplasm probably spread out of the injured cells towards the general circulation. The enzymatic activities of fructokinase and isocitric-dehydrogenase (NADP) decrease by only 60% on the first day and then decrease again for 9 to 15 days. This suggests that these two enzymes, believed to play a regulatory role respectively in glycolysis and the Krebs cycle, could be linked to cellular structures that would prevent them from diffusing out of the cells. The ATP-ase activity of myofibrils dependent on Ca^{++} decreased only very slowly after the operation, being still 60% of that of the control 15 days after the operation. The time evolution of these enzymatic activities is comparable to that of total creatine (creatine + phosphorylcreatine) which decreases by 95% from the first day and remains at this level until the fifteenth day. Then the total creatine increases: 60 days after the operation, it is 4 times higher than 15 days after the operation; the enzymatic activities of the other enzymes increase by about two to four times.