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Les protéines contractiles du gastrocnémien de Grenouille en régénération,

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The gastrocnemii's are cut into fragments of mm3 and replanted in situ. Their myofibrillar fraction is examined 1 to 60 days after implantation, and compared with that of contralateral muscles. The myofibrillar proteins solubilized in sodium dodecyl sulphate are separated by electrophoresis on an acrylamide gel. Their concentration relative to that of myosin is estimated by densitometry. The densitometric profiles of twelve myofibrillar proteins, identified by their molecular weight, remain identical to controls throughout the postoperative course. Of the five unidentified proteins, only the two lighter ones (85,000 and 60,000 daltons) increase by 10 times at 8th day; then they return to normal values at 30 days. The ATP-asic activity of the myofibrils sensitive to Ca^{++} decreases to 70% of the control at 8 days. This decrease is consistent with the normal degradation of actomyosin, given the estimated half-life of this protein at approximately 20 days; it contrasts with the 95% decrease in the activity of most sarcoplasmic proteins from the first postoperative day (G. MARÉCHAL et al., J. Physiol., Paris, 1976, 72, 11A). The resumption of ATP-asic activity is contemporaneous with the formation of myotubes that occurs at the 15th postoperative day. It reaches control values at 30 days.