

Histologically no massive fat infiltration could be observed in the cirrhotic livers. The liver cells showed a distinct hydropic degeneration, while the ultimate picture was in general that of a finely nodular diffuse cirrhosis. The extent of the necrosis varied with the individual resistance of the animal and the dose administered.

As these results are in good agreement with the data obtained by HOLSTI³ in the rabbit, the conclusion is certainly justified that a more general significance should actually be attached to this induction process.

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Zusammenfassung

Es stellte sich heraus, dass tägliche Instillation von 3 ml einer 0,5%igen wässrigen Suspension des Natriumsalzes der 3-Monohydroxycholansäure in den Magen von *Iguana iguana* innerhalb dreier Monate Leberzirrhose hervorrief.

Changes in the Topographical Distribution of Glycogen in the Brain of *Iguana iguana* in Dependence on the Environmental Temperature

Until recently it was assumed that the glycogen of the brain is a rather inert substance, which in the various metabolic processes shows no changes of any importance.

the cerebellum, and the medulla oblongata by the method of KERR⁵, with the exception that the reduction compounds were determined according to NELSON'S method⁶. See in this connection also the publication of JAKOUBEK and SVORAD⁷.

From the results given in the Table, it follows that the drop in environmental temperature results not only in a decrease in concentration of the glycogen in the brain tissue, but even in an increase. Between the values for the male and the female sex, no significant differences were observed. Consequently, in the thermoregulation processes accompanying the decrease in environmental temperature, mainly glycogen quantities of tissue other than that of the brain are used. The drop in environmental temperature appears not to inhibit the synthesis of glycogen in the brain tissue.

In general, these results correspond with those obtained in the rat⁴. Consequently, the possibility is not precluded that the glycogen metabolism of the brain tissue proceeds in essentially the same way as in mammals. Just as in the rat⁴, the topographical determination of the glycogen concentration in the brain tissue points to essential changes of this metabolite in the diencephalon at a decrease in temperature, which under these conditions escapes attention, however, in a rough determination of the glycogen in the whole brain⁸.

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Zusammenfassung

Es wird über experimentelle Untersuchungen der topographischen Verteilung von Glykogen im Gehirn von *Iguana iguana* in Abhängigkeit von der Umgebungstemperatur berichtet.

Parts of the brain	Sex	Glycogen Values		
		ET 19.7 ± 0.3°C	ET 29.6 ± 0.3°C	ET 36.8 ± 0.3°C
C c	M	86.0 ± 6.1	107.1 ± 5.5	85.5 ± 5.2
	F	84.8 ± 7.2	110.6 ± 7.0	87.9 ± 6.5
D	M	98.6 ± 8.6	170.2 ± 9.2	125.1 ± 7.2
	F	97.2 ± 6.0	165.0 ± 7.1	124.6 ± 9.0
M	M	117.5 ± 7.5	126.1 ± 8.4	113.3 ± 6.4
	F	120.7 ± 5.2	129.3 ± 7.5	115.7 ± 5.3
C	M	86.2 ± 5.1	97.8 ± 7.7	82.4 ± 6.9
	F	80.5 ± 8.3	103.7 ± 6.8	79.0 ± 5.1
M o	M	109.9 ± 9.7	140.2 ± 9.7	107.4 ± 7.8
	F	112.3 ± 9.3	143.8 ± 8.0	110.9 ± 10.7

Changes in glycogen concentration in the brain of *Iguana iguana* at various environmental temperature. The glycogen values are given in mg/100 g fresh brain tissue. For the determination of each values 15 animals were used.

M = male, F = female, C c = cortex cerebri, D = diencephalon, M = mesencephalon, C = cerebellum, M o = medulla oblongata, ET = environmental temperature.

Recently it was stated, however, that some functional conditions possess their metabolic analogue in changes in concentration of the glycogen in the brain tissue¹⁻⁴. As the pertaining results were obtained with mammals, we decided to perform corresponding experiments with a lower vertebrate, namely the reptile *Iguana iguana*.

In three groups of *Iguana* males and females, the concentration of the glycogen in the brain tissue was determined in the parts of the brain and that at an environmental temperature of 19.7 ± 0.3°C, 29.6 ± 0.3°C, and 36.8 ± 0.3°C. The animals were killed by decapitation and the concentration of glycogen was determined in the cortex cerebri, the diencephalon, the mesencephalon,

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⁴ D. SVORAD, Science 125, 156 (1957); A. M. A. Arch. Neurol. Psychiat. 77, 533 (1957); Symposium on Hypothermia, Belgrade (1957); Nature (London) 181, 775 (1958); Naturwissenschaften 46, 533 (1959).

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⁶ N. NELSON, J. biol. Chem. 153, 375 (1944).

⁷ B. JAKOUBEK and D. SVORAD, Pflügers Arch. ges. Physiol. 268, 444 (1959).

⁸ V. PAVLOVIĆ, C. R. Soc. Biol., Paris 149, 2216 (1955).