

Thus, this experiment demonstrates that the in-vitro-resistant strain of *A. quinckeanum* is also resistant in vivo.

It is important to mention the results of our experiments on control animals. 10 guinea-pigs were inoculated in the same way with the same strains, but were not treated with griseofulvin. The griseofulvin non-resistant strain gave stronger lesions than the resistant one in all guinea-pigs.

The results of the above experiments prove that the in vitro resistant strain (less pathogenic than the non-resistant one) is resistant also in vivo (Figure).

Résumé. Avec une souche d'*Achorion quinckeanum*, devenue résistante à la griséofulvine in vitro, on a inoculé

des cobayes et montré que la souche résistante in vitro est aussi résistante in vivo.

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Occurrence of a Physalaemin-Like Polypeptide (Uperolein) and Other Active Polypeptides in the Skin of *Uperoleia rugosa*¹

Crude methanol extracts of the dried skin of *Uperoleia rugosa*, a small Australian amphibian, display potent pharmacological actions on a number of test systems, as shown in the accompanying Table.

Since some of the above effects are abolished by trypsin digestion and all are abolished by chymotrypsin digestion, it may be assumed that they are due to polypeptides.

Parallel biological assay of crude methanol extracts and eluates from alumina columns, paper chromatograms and pherograms, demonstrate that *Uperoleia* skin contains at least two main active peptides, possibly accompanied by minor active constituents.

One of the main polypeptides is characterized by its potent stimulant action on the rat uterus and rat colon. The other has a very poor action on rat uterus and rat colon but possesses a remarkably potent hypotensive action in the dog and rabbit, a powerful stimulant action on the rabbit large intestine, and an intense sialogenous effect in the rat.

The biological effects elicited by the hypotensive polypeptide, for which the name *uperolein* is suggested, are

similar to those elicited by eledoisin^{2,3} and physalaemin⁴. It is likely that work which is in progress on the isolation of uperolein and on its amino acid composition and sequence will also show its chemical similarity to these two tachykinins.

However, it should be stressed that high-voltage paper electrophoresis and paper chromatography enable uperolein to be readily separated and distinguished from either eledoisin or physalaemin.

Uperolein is also present, in variable amounts, in the skin of the closely related species *Uperoleia marmorata*.

Riassunto. Gli estratti metanolici della pelle di *Uperoleia rugosa*, piccolo anfibio australiano, contengono, oltre ad eventuali costituenti attivi minori, due polipeptidi altamente attivi. Il primo è caratterizzato da una intensa azione stimolante sul colon e sull'utero di ratto; il secondo, per il quale viene proposto il nome di *uperoleina*, è dotato di potente azione ipotensiva nel cane e nel coniglio, di potente azione stimolante sul colon di coniglio e di potente azione scialagoga nel ratto. L'*uperoleina* è strettamente vicina da un punto di vista biologico, e presumibilmente anche chimico, alla eledoisina e alla fisalemina.

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Test systems	Activity of extracts of <i>U. rugosa</i> skin expressed in mg physalaemin (Phys) or bradykinin (Br) per g dry tissue			
	Skin sample I		Skin sample II	
	Phys	Br	Phys	Br
Dog blood pressure	0.17-0.23	60-100	0.3	90-150
Rabbit blood pressure	0.15	9	—	—
Rabbit large intestine	0.40-0.45	—	0.67	—
Guinea-pig ileum	0.5	3.8	1.15	8
Rat colon	200	—	360	—
Rat oestrous uterus	1600	0.15	2400	0.25
Rat salivary glands	0.15-0.24	—	0.55	—

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