

Le résultat était établi *in vitro*; il appelait une vérification *in vivo*. Cette vérification a été faite avec le concours de CH. CHAMPY. Nous avons montré que les corps cancérogènes placés à la surface d'un organe riche en nerfs histaminiques font disparaître la réaction microchimique de l'histamine sur une certaine profondeur en 48 h¹². Nous étudions aujourd'hui l'action comparée d'un Tw et d'un PEG sur cette même réaction.

L'expérience est faite sur la sous-maxillaire de rat comme précédemment en appliquant à droite B mêlé au Tw₈₀, à gauche B mêlé au poly-éthylène-glycol₄₀₀, toutes proportions égales. A droite, on observe la disparition des nerfs: B a bien fixé l'histamine. A gauche, les nerfs sont parfaitement colorés, leurs plus fines terminaisons et les plus superficielles apparaissent: le PEG a bien protégé l'histamine contre l'action d'une substance active.

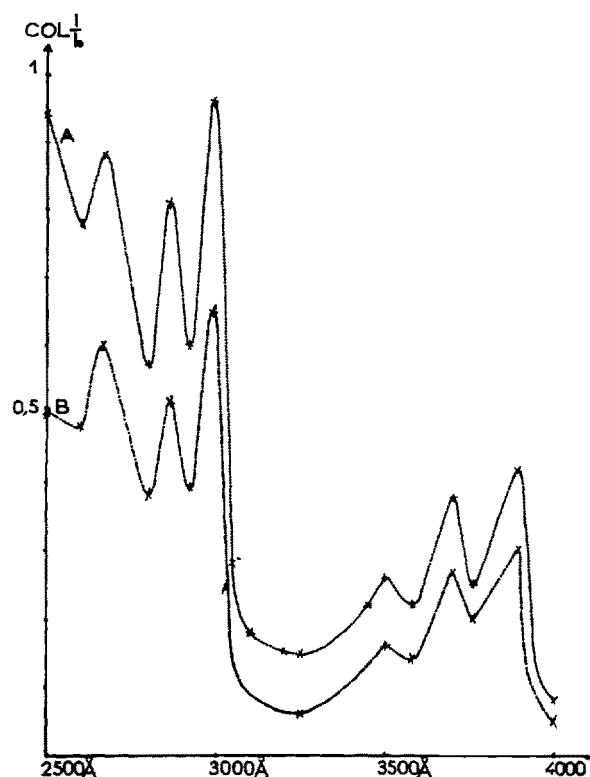


Fig. 2. Densité optique observée sous 0,01 mm d'épaisseur, par rapport au milieu contenant B

Courbe A. B (0,05%), Tw₈₀ (8%), Hi (1,5M) – 8 jours de contact
 Courbe B. B (0,05%), Tw₈₀ (8%), H₂O – 41 jours de contact

Ce lien entre l'action particulière des solvants sur l'incidence tumorale et la réaction de l'histamine semble confirmer que la captation de l'amine par les substances actives est un élément essentiel de la cancérisation et le solvant se révèle ainsi non seulement un véhicule mais encore un médiateur dont l'action atteint le mécanisme profond de la cancérisation.

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Summary

A relationship is observed between the action of certain solvents on cancerogenesis and the affinity of histamine for cancerproducing substances. Tw-type solvents, which increase the tumoral incidence brought about by a chemical substance, intensify the reaction of histamine with this substance; while PEG-type solvents, which retard tumorogenesis, inhibit the reaction.

Behavioral Effects of 5-Hydroxytryptophan¹

Many investigators²⁻⁹ have suggested that 5-hydroxytryptamine (serotonin) may have a role in brain function. In studies where animals were given 5-hydroxytryptophan (5-HTP), the brain serotonin levels were elevated¹⁰⁻¹³. 5-HTP is capable crossing the blood-brain barrier and there be converted into serotonin. The animals exhibit central disturbances characterized by tremors, signs of sympathetic stimulation, and behavioral changes^{12,13}. Characterization of the latter have been anecdotal. In order to objectively assess the behavioral changes resulting from increased serotonin levels, the behavioral effects of injecting the serotonin precursor, 5-HTP, was studied by measuring the pecking response of the pigeon in a Skinner box^{14,15}. In this way, the change in the behavior of the bird, which was being quantitatively as well as continuously measured, could be correlated to the dose of the injected 5-HTP. Ultimately, birds in such an experiment will be sacrificed and changes in their brain serotonin levels compared to changes in their behavioral performance.

A red and white color was alternately present on the key which the bird pecked. When the key was red, the 50th peck operated the food magazine (fixed-ratio) giving the hungry bird 3-5 s access to grain. When the key was white (or not colored) the first response after 10 min operated the magazine (fixed-interval). The patterns of responding conformed to the respective reinforcement conditions, and provided a baseline with two repeated patterns, occurring continuously during a 5-hour experimental session^{14,15}.

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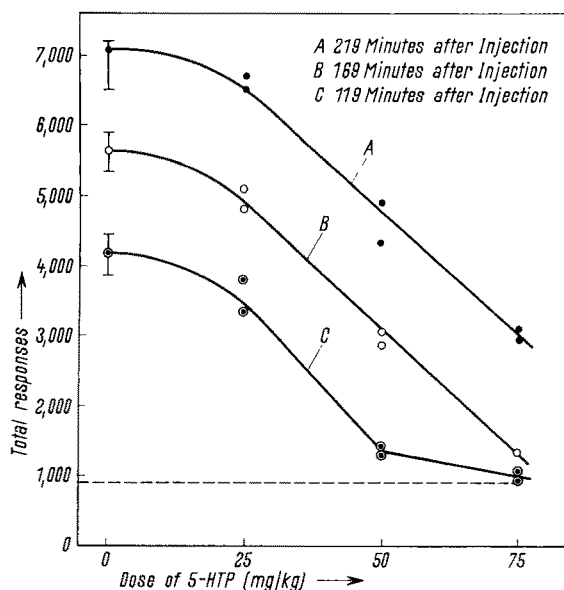
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Relationship of dose of 5-hydroxytryptophan and amount of responding in one pigeon. Each curve presents the number of responses made in the indicated times after injection. Values are adjusted in terms of the pre-injection levels of responding. Each point represents a single dose, except, in the case of the control and saline values where the median and inter-quartile range are given for 6 sessions. Control sessions were taken from the days preceding each 5-HTP injection

Two groups of pigeons were used; one, in which the 5-HTP was administered orally ($n = 4$) and the other, a group in which the compound was injected intramuscularly ($n = 4$). The results of a typical experiment on a single pigeon in the latter group are shown in the Figure, where the abscissa axis represents the dose of 5-HTP administered (mg/kg) and the ordinate axis the total number of responses made by the bird in a specific interval after injection. The control data was calculated by determining the median and quarter percentile values of data obtained on days when saline or no 5-HTP was administered. Single doses of 25, 50, and 75 mg/kg of 5-HTP were injected into the breast muscle over a period of several months with each dose given at least twice. The

When the 5-HTP was administered orally, the same type of relationship was obtained except that higher doses of 5-HTP were required to produce a decrease in pecking. The appearance of the behavioral effect of the 5-HTP injection occurred later than when administered intramuscularly.

Studies are now under way in which serotonin, 5-hydroxytryptophan plus Marsilid, and serotonin antimetabolites are being administered to pigeons under similar conditions in an attempt to determine if the behavioral effects observed are central, peripheral, or both.

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Zusammenfassung

Bestimmung der Verhaltensänderung bei Tauben, durch Injektion von 5-Hydroxytryptophan, der Vorstufe von Serotonin hervorgerufen. Mit steigender Dosis von 5-Hydroxytryptophan wird eine entsprechende Frequenzverminderung des Pick-Verhaltens ausgelöst.

Autoradiographic Study of Cartilage Differentiation in Organ Culture

Recent work has shown that radio-sulphate is taken up specifically by cells and tissues known to contain large amounts of sulphomucopolysaccharides¹. Studies on young embryos have not only demonstrated a high activity in embryonic cartilage, but have suggested a specificity of precartilaginous cells in high incorporation of the isotype². The present note describes the situation in explanted embryonic somites differentiating in the conditions of organ culture.

Materials and Methods. Most of the experiments used chick embryos of 4½ days incubation (stage 24–25³), but some 11-day mouse embryos were also employed. Clean isolation of the somitic material was assisted by trypsin treatment⁴. The liquid culture medium was composed of

