

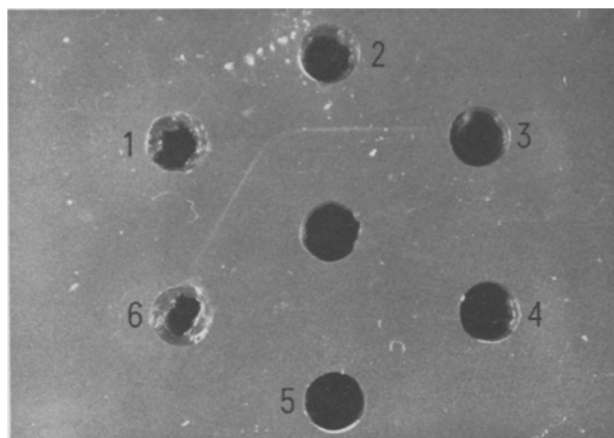


Fig. 2. Immunodiffusion sur plaque d'Ouchterlony. Le puits central contient 5 μ l d'antisérum contre la DBH humaine. En 1 et 2: DBH humaine, en 3: DBH bovine, en 4: DBH bovine dissociée, en 5 et 6: DBH humaine dissociée.

Résultats. La figure 1 montre que les protéines injectées aux lapins sont pures et que la DBH dissociée ne contient plus de protéines natives. Son poids moléculaire, calculé à partir des poids moléculaires des protéines de référence traitées dans les mêmes conditions, est de 79 500.

Sur plaque d'immunodiffusion, chaque antigène en présence de l'antisérum correspondant donne une seule ligne de précipitation, montrant une monospécificité. Aucune réaction croisée n'a été mise en évidence entre les DBH humaine et bovine. Par ailleurs, aucune ligne de précipitation n'est visible entre l'antisérum contre la DBH

native et la DBH dissociée, d'une part, ni entre l'antisérum contre la DBH dissociée et la DBH native d'autre part (figure 2).

Cette absence de réaction croisée entre la DBH native et la DBH dissociée nous permet de mettre au point un radioimmunodosage de cette dernière, à l'aide des anticorps spécifiques, ce qui nous donnera les moyens de déterminer de façon sélective les taux sanguins de l'enzyme et de ses sous-unités.

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Neuromuscular junction blocking agents: An initial screening bioassay¹

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Summary. A simple, rapid and sensitive in vivo bioassay for the initial screening of neuromuscular junction (NMJ) blocking agents has been accomplished. The i.v. retro-orbital plexus (IVROP) mode of injection was utilized, for the first time, in conjunction with the mouse inclined screen bioassay.

An ongoing project at this laboratory is the synthesis of 'rigid' bicyclic and tricyclic compounds with potential NMJ blocking activity. A pharmacological test was required to screen and evaluate these compounds for their curarimimetic effect. Such an effect is characterized by a non-depolarization or a blockage of nerve impulse at the skeletal neuromuscular junction which causes paralysis. Experimentally, a positive curarimimetic effect, utilizing the inclined screen method⁵, was observed when mice were injected with standard solutions of d-tubocurarine chloride (d-tubo) via the IVROP³ mode of injection.

Method. Healthy albino mice were injected (IVROP) with solutions of d-tubo and placed facing downward upon a finely wired screen inclined at 60° from the horizontal. The effective dosage (ED₅₀ 0.050 mg/kg) was established by manipulating molar concentrations of solutions of d-tubo with respect to the animals b.wt. A positive result was recorded when a mouse fell repeatedly from the screen within 2 min of an injection with d-tubo. The average duration of effect was 175 sec. The experiment was concluded when the animal ceased to fall and was able to cling to the screen continuously for 5 min. The data obtained by

alternating injections of saline placebo's and testor compounds in a minimum of 20 animals, were statistically analyzed to determine the effective dosages. This test is rapid and easily reproducible as compared with alternate methods (Vanne⁶, Hoppe⁷, Mallagen⁸, Cheymol⁹, Soine¹⁰⁻¹²). We feel that the bioassay demonstrated here can serve to eliminate any inactive NMJ blocking agents at an early preclinical stage, obviating the need to perform elaborate and tedious experimentation⁶⁻¹². It also allows for the pharmacological evaluation of synthesized drugs at undergraduate institutions, chemical laboratories and smaller facilities not equipped to do extensive biological testing. This bioassay is possibly the most effective rapid initial screening test for NMJ blocking agents available in the literature to date.

- 1 Taken in part from the Senior thesis of A.S., SUNY at Purchase, Purchase, N.Y. 10577.
- 2 To whom inquiries should be directed.
- 3 A detailed description of the experimental procedure is available upon request.

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CORRIGENDUM

K. Fuji, E. Fujita, Y. Takaishi, T. Fujita, I. Arita, M. Komatsu and N. Hiratsuka: *New antibiotics, trycho-polys A and B: Isolation and biological activity*, Experientia 34, 237 (1978). In the footnote in figure 1, page 238, it should read **12.5 µg/ml** instead of 25 µg/ml, **25 µg/ml** instead of 12.5 µg/ml, **3.13 µg/ml** instead of 6.25 µg/ml and **6.25 µg/ml** instead of 3.13 µg/ml.

CONGRESSUS

Belgium

Satellite symposium of the 7th international congress of pharmacology

in Brussels, 24 July 1978

Topic of the symposium: The inflammatory process. For information contact: Dr J.P. Famaey, Service de Rhumatologie et Physiothérapie, Hop. Univ. Saint-Pierre, 322, rue Haute, B-1000 Bruxelles.

Italy

International symposium on pituitary microadenomas

Milano, 12-14 October 1978

The program will include invited lectures and open discussion on 'problems in pathogenesis of pituitary microadenomas' and 'problems in treatment of pituitary microadenomas'. Further information by: Secretariat, Clinica Neurochirurgica dell'Università, Ospedale Policlinico, Pad. Beretta, via F. Sforza 35, I-20122 Milano, Italy.

France

Satellite symposium of the 7th international congress of pharmacology

in Paris, 22 July 1978

Topic of the symposium: Antiinflammatory and antirheumatic drugs. For information contact Prof. J.P. Giroud, Department of Pharmacology, 27, rue du Faubourg Saint-Jacques, C. H. U. Cochin, Paris XIV, France.

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