responded to the point of maximal slope (Table I, Section A).

The inflammatory exudates (µl/g) determined at various intervals after the injection of 0.4 µg of 5-HT are reported in Table I, Section B. Significant differences existed among the inflammatory responses occurring at 30, 60, and 90 min, however, there were no differences among the inflammatory responses at the 90, 120, and 150 min intervals. The 60 min interval was selected for this assay.

Loss of activity from the blood takes place slowly following the intravenous injection of RISA. A reduction of radioactivity equivalent to $6.50 \pm 2.19\%$ ($N = 38$) occurred during the time elapsed between collection of the blood sample and removal of the hind limbs. Optimally, the blood should be collected simultaneously with removal of the limbs, 30 min after the injection of 5-HT; in which case the absolute values for plasma exudate would be correspondingly greater. However, based on the % reduction of inflammatory response relative to a control group, the index of protection afforded by antiphlogistic compounds would be unchanged. The parameters described were selected with consideration to the technical aspects of the assay involving large numbers of experimental subjects.

Sodium salicylate was selected as a model antiphlogistic agent to determine the efficacy of this method for the evaluation of non-hormonal anti-inflammatory compounds. Table II indicates the volume of plasma exudate and the % reduction in exudate obtained with 50 to 400 mg/kg of sodium salicylate administered orally, 5 h prior to the injection of 5-HT.

Significant reduction of plasma exudate was obtained with a dose of sodium salicylate as low as 50 mg/kg *per os*. Larger doses resulted in correspondingly greater inhibition of the inflammatory response to 5-HT. Other investigators[1-3] have reported that doses of 500 to 600 mg/kg administered parenterally were required to produce a significant inhibition of 5-HT induced oedema in the rat.

Current investigations of the comparative activity of various types of potential anti-inflammatory compounds will be presented in a subsequent publication[4].

Zusammenfassung. Nach Einspritzung von 5-Hydroxytryptamin in den einen Fuss einer Maus und physiologischer Salzlösung in den anderen, wurde die Radioaktivität beider Füsse verglichen. Mit radioaktivem Jod (I^{131}) behandeltes Serumalbumin wurde dazu benutzt, den Umfang des Plasmaexsudates zu bestimmen. Das Ausmass der Hemmung der durch 5-HT induzierten Entzündung ist von der Dosis der physiologischen NaCl-Lösung abhängig.

E. E. VOGIN, G. V. ROSSI, G. D. CHASE, and A. OSOL

Department of Pharmacology and Department of Radiochemistry, Philadelphia College of Pharmacy and Science, Philadelphia (Penn. USA), October 30, 1961.

[2] G. UNGAR, S. KOBRIN, and B. SEZESNY, Arch. int. Pharmacodyn. *123*, 71 (1959).
[3] R. DOMENJOZ, Ann. N. Y. Acad. Sci. *86*, 263 (1960).
[4] This study was supported in part by a grant from Sunkist Growers, Ontario (California).

Simultaneous Staining of Heinz Bodies and Reticulocytes with New Methylene Blue *N* in the Toad *Bufo marinus* after Iproniazid Treatment

In the dog[1] and the lizard *Uromastix acanthinurus*[2] given Iproniazid ('Marsilid') it was found that the method of BRECHER[3] for counting reticulocytes clearly showed the presence of Heinz bodies[4], which yielded a method for demonstration of both reticulocytes and Heinz bodies in the same preparation. In continuation of this work we performed a corresponding investigation with an amphibian species, the toad *Bufo marinus*. As staining method the BRECHER's technique[3] was used according to the technique of THOMPSON[1]. The erythrocytes appeared to be stained a pale greenish-blue, while the reticulum was sharply outlined and deep blue. The Heinz bodies were pale to deep blue and stood out prominently against the pale-green background of the erythrocyte. As the erythrocytes of the dog[1] and *Uromastix acanthinurus*[2], these bodies were stained at least as well as by the usual methods[4-6]. As these results are in good agreement with those obtained in the dog[1] and *Uromastix acanthinurus*[2], a more general importance should no doubt be attached to it.

Zusammenfassung. Methode für gleichzeitige Koloration von Heinz-Körperchen und Reticulocyten mit Neu-Methylenblau *N* in der Kröte *Bufo marinus*.

A. STOLK

Histological Laboratory, Free University, Amsterdam (The Netherlands), January 17, 1962.

[1] E. C. THOMPSON, Stain Technol. *36*, 38 (1961).
[2] A. STOLK, Nature, in press (1962).
[3] G. BRECHER, Amer. J. clin. Path. *19*, 895 (1949).
[4] R. HEINZ, Berl. klin. Wschr. *27*, 47 (1890).
[5] S. H. WEBSTER, E. J. LILJEGREN, and D. J. ZIMMER, Stain Technol. *23*, 97 (1948); J. Pharmacol. exp. Therap. *95*, 201 (1949).
[6] S. S. SPICER and E. C. THOMPSON, J. industr. Hyg. Tox. *31*, 206 (1949).

STUDIORUM PROGRESSUS

Die Genomsonderung in den Mitosen der Rattenleber*

Es ist allgemein bekannt, dass sich cytologische und morphologische Untersuchungen über Chromosomengestalt und deren Veränderung am günstigsten in sich teilenden Zellen, also während des Mitoseablaufes, durchführen lassen. Als hierfür besonders geeignet erweist sich das Stadium der Metaphase, in dem die Chromosomen besonders stark kontrahiert und dadurch besonders deutlich sichtbar sind. Die Metaphasechromosomen zeichnen sich

* Nach einem Vortrag, gehalten anlässlich des IV. Symposium histologicum internationale Lausanne (Suisse), 5.–8. September 1961.