was taken up in 3% HCl (10 ml.) and extracted with Et_2O, which was washed with H_2O, dried and evaporated to dryness to furnish a crystalline mass. It was recrystalized from benzene as needles, m.p. 194~196°. Mixed melting point with the starting material (II) showed no depression. The IR spectra were also identical.

The Oxidation Conditions of Tazettine with CrO_3——The yield of the compound (II) in the CrO_3 oxidation of tazettine was examined with respect to the amount of CrO_3 and to the reaction temperature, as shown in Table I.

Summary

Tazettine was oxidized with chromic acid under the controlled conditions to give a neutral compound, oxotazettine, $C_{18}H_{19}O_6N \cdot \frac{1}{2}H_2O$, which was shown to be represented by the formula (II).

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Hideo Sugimoto : Determination of Fragility of Membrane of Tumor Cell in Saline Solution.

(*The Medical Institute of the Sasaki Foundation, Shimofusa Air Base, Maritime Self Defense Force*[*1])

It was reported by Sakurai, *et al.*[1] in 1962 that Yoshida sarcoma cells, grown in the peritoneal cavity of a rat, acquired resistance to nitrogen mustard (HN_2) 2.5 to 5 times that of the original tumor, if the inoculum cells were contacted *in vitro* with the solution of HN_2 at a concentration of 2.5×10^{-4} m*M* at 37° for 30 minutes immediately before inoculation. A repeated application of this procedure induced a resistance as high as 10000 times that of the original Yoshida sarcoma. These resistance indices had been determined by comparing 50% growth-inhibition concentration of HN_2 in tissue culture of the resistant and original tumor lines by the method reported by Moriwaki.[2]

Investigations on the difference in the nature of two lines, sensitive and resistant, are now being carried out from various aspects, and a result of preliminary experiment on the fragility of cell membrane in heterotonic saline solution is herein described.

For this purpose, a method for determination of fragility of platelets reported by Morita[3] was applied, in which the tumor cells (5×10^5) were suspended in 5 ml. of sodium chloride solution, ranging stepwise in concentrations from 0.9 to 0.1%. After each suspension was incubated at 37.5° for 2 hours, it was centrifuged and the supernatant was assayed for its acid phosphatase activity with *p*-nitrophenylphosphate as a substrate by the method of Ohmori[4] and Fujita.[5]

The disrupted cells release the enzyme into the medium and therefore its activity in the supernatant denotes a grade of fragility of cell membrane.

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*1 Shonan-Mura, Higashi Katsushika-Gun, Chiba (杉本英雄).

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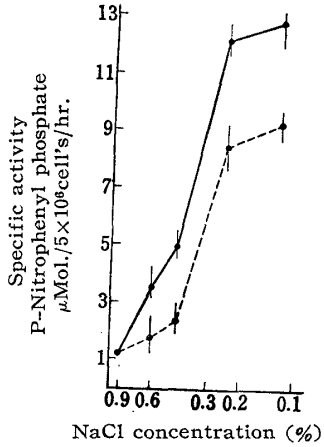

Fig. 1. Fragility of Membrane of Sensitive and Resistant Strains of Yoshida Sarcoma in Heterotonic Saline Solution

•—• : Original susceptible strain
•---• : Resistant strain (average of 5 experiments)

As shown in Fig. 1, the enzyme activity of the supernatant of the original strain is greater than that of the resistant in a concentration below 0.6% of the salt.

Since the activity of acid phosphatase of the homogenates of the two tumor strains has been determined to be quite same each other, cytolysis of the cells of the resistant strain seems to be less advanced than that of the original in this condition of experiment. This result does not demonstrate the difference in permeability of the cell membrane in the natural state but may suggest the presence of difference in chemical or physical construction of the membrane of these two different lines of tumor cells.

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Tyunosin Ukita, Hikoya Hayatsu, and Yutaka Tomita[*1] : A Reinvestigation of the Condensation Reaction of Acetobromoglucose with Chloromercuri-4-ethoxy-2(1*H*)-pyrimidinone to 1-(Tetra-O-acetyl-*β*-D-glucopyranosyl)-4-ethoxy-2(1*H*)-pyrimidinone.

(*Faculty of Pharmaceutical Sciences, University of Tokyo*[*1])

Concerning the synthesis of 1-(tetra-O-acetyl-*β*-D-glucopyranosyl)-4-ethoxy-2(1*H*)-pyrimidinone (II), Fox, *et al.*[1] reported a method which involves the condensation of chloromercuri-4-ethoxy-2(1*H*)-pyrimidinone (I) with acetobromoglucose in xylene.

For the purpose of obtaining the compound (II), the present authors followed their method and found that their procedure was lacking in reproducibility. This report deals with several new observations obtained in further investigation of the above reaction.

*1 Hongo, Tokyo (浮田忠之進, 早津彦哉, 冨田 裕).

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