STUDIES ON LOCAL ANAESTHETICS
Part II

To study the effect of replacement of the amino-group of novocaine by groups like urea, thiourea, cyanamide, guanidine and amino-guanidine, etc., the following compounds as shown in Table I have been prepared.

The urea derivative (I) is prepared by the action of potassium cyanate on novocaine in excess of dilute acetic acid. The thio-carbamido derivatives (II—VIII) are prepared by condensing the corresponing isothiocyanates with novocaine in a suitable organic solvent. The acetyl and benzoyl thio-carbimides obtained by boiling the acid chlorides with lead thiocyanate in anhydrous benzene, reacting with anhydrous novocaine furnish the corresponding acetyl and benzoyl thioureas (IX and X).

TABLE I

No. of compound	Formula of the compound R = $-C_6H_4-COOCH_2CH_2-NEt_2$	M.P. °C.
I	$NH_2-CO-NH-R$	84°
II	$PhNH-CS-NH-R$	152°
III	*p*-Cl. $C_6H_4-NH-CS-NH-R$	132°
IV	*p*-Br. $C_6H_4-NH-CS-NH-R$	138 (decomp.)
V	*p*-I·$C_6H_4-NH-CS-NH-R$	178 (decomp.)
VI	*p*-Me. $C_6H_4-NH-CS-NH-R$	119
VII	*o*-Me. $C_6H_4-NH-CS-NH-R$	109
VIII	*m*-Me. $C_6H_4-NH-CS-NH-R$	103
IX	$CH_3CO-NH-CS-NH-R$	132
X	$PhCO-NH-CS-NH-R$	152

The compounds are under pharmacological investigation.

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April 10, 1950.