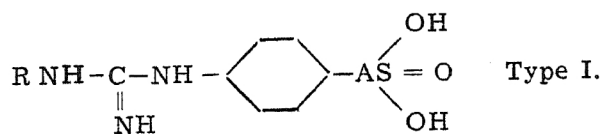


#### SOME GUANIDO-ARSENICALS AS POSSIBLE ANTI-MALARIALS

THE use of organo-arsenical<sup>1,2,3,4</sup> drugs in malaria therapy is well known. In our previous communication<sup>5</sup> several biguanido-arsenicals have been reported. When they were tested against *P. gallinaceum* in chicks, they did not show any appreciable activity.<sup>6</sup> With a view to studying the pharmacological properties of guanido-arsenicals, it was considered to be of interest to prepare new compounds containing guanidine residue as also the arsonic acid in the molecule of Type I. The compounds of this type were prepared by reacting *p*-arsanilic acid with the appropriate cyanamides in pyridine medium. After removal of pyridine by steam distillation the products was crystallised from alcohol and characterised.

The following compounds of type I have been synthesised :



Where R = alkyl, aryl or sulphonamides.

No.	R in compounds type I	M.P. ° C.
1	<i>p</i> -Cl-C <sub>6</sub> H <sub>4</sub> -	.. 180 ( <i>d</i> )
2	<i>p</i> -Br-C <sub>6</sub> H <sub>4</sub> -	.. 125 ( <i>d</i> )
3	C <sub>6</sub> H <sub>5</sub> -	. 135 ( <i>d</i> )
4	CH <sub>3</sub> .C-N        HC  C.NH.SO <sub>2</sub> C <sub>6</sub> H <sub>4</sub> -       HC=N	Turns black above 300° C.
5	NH <sub>2</sub> -C-NH-SO <sub>2</sub> C <sub>6</sub> H <sub>4</sub> -	150 ( <i>d</i> )
6	<i>p</i> -CH <sub>2</sub> C <sub>6</sub> H <sub>4</sub> -	.. 160 ( <i>d</i> )
7	CH <sub>3</sub>   CH-	.. Above 300
8	CH <sub>3</sub>   CH-N        CH  C-NH.SO <sub>2</sub> C <sub>6</sub> H <sub>4</sub> -       S	.. Turns brown at 223°

The sodium salt of the acids were prepared by the usual way. None of these compounds when tested against experimental malaria have shown any activity.

Full details will be published elsewhere.

Dept. of Organic Chemistry, J. R. GUHA.  
Indian Inst. of Science, S. S. GUHA.  
Bangalore-3, A. C. ROY.  
July 11, 1952. P. C. GUHA.

1. Goldman, *Amer. J. Med. Sc.*, 1938, **196**, 502. 2. Sinton, *India: J. Med. Res.*, 1927, **15**, 287. 3. Steward, V. S., *Nat. Med. Bull.*, 1945, **43**, 991. 4. Payal, *et al.*, *cf. Recent Advance in Chemotherapy*, J. and A. Churchill London, 1930, p. 100. 5. Roy and Guha, *J. Sc. and Ind. Res.*, V, 1950, **9B**, No. 10, 242. 6. Roy, *et al.* (*under publication*).