

chlorides, some being crystallisable from organic solvents; others being uncrystallisable could only be purified by removing the starting materials with suitable solvents. The compounds are amphoteric in nature. All the sulpha-biguanides (*vide* Table) excepting compound No. 4, get decomposed while melting.

No.	R in compounds Type I	M.P., °C.
1	H-	240-41
2	C ₆ H ₅ -	264
3	<i>p</i> -Cl-C ₆ H ₄ -	215-16
4	<i>m</i> -Cl-C ₆ H ₄ -	239
5	<i>p</i> -Br-C ₆ H ₄ -	266-68
6	<i>p</i> -I-C ₆ H ₄ -	230-32
7	<i>p</i> -CH ₃ O-C ₆ H ₄ -	213-14
8	<i>p</i> -CH ₃ -C ₆ H ₄ -	225-26

Full details will be published elsewhere.

We are indebted to the Indian Council of Medical Research for the award of a Fellowship to one of us (P. R. Gupta) and also to Messrs. Bengal Immunity Co., Ltd., Calcutta, for the gift of sulphanilyl benzamide.

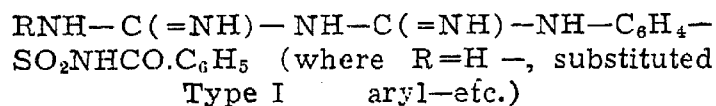
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N⁴-(BIGUANIDYL-SUBSTITUTED)-N¹- BENZOYL SULPHANILAMIDES

CONSIDERING the interesting results in malarial chemotherapy, which have been noticed by Bami, Iyer and Guha¹ working in the field of N⁴-substituted sulpha-biguanides, it was thought worthwhile to extend this field to include the highly active N¹-sulphanilyl-benzamide in view of the observation made by Sen Gupta,² *et al.* and Bose and Ghosh³ that N¹-benzoylsulphanilamide possesses high antibacterial activity against certain strepto- and staphylo-infections *in vitro*, besides possessing high chemotherapeutic activity against Flexner organism and a very low toxicity. Bami, *et al.* have reported that some of the sulpha-biguanides possess suppressive antimalarial activity "when tested at relatively large doses" though not coming upto the standard of either paludrine or quinine.⁴

It was, therefore, considered desirable to study the influence of a substituted biguanide molecule attached to the N⁴-position of N¹-benzoyl-sulphanilamide.

Some N⁴-substituted biguanidyl-N¹-benzoyl-sulphanilamides of type (I) have now been synthesised for studying their effect against malarial and certain coccal infections.



The compounds have been prepared by refluxing N¹-sulphanilyl-benzamide hydrochloride with the appropriate cyanoguanidines in pyridine medium (ethanol unsuccessful) for 3-8 hours. All the sulpha-biguanides have been isolated and characterised as white powdery hydro-

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