

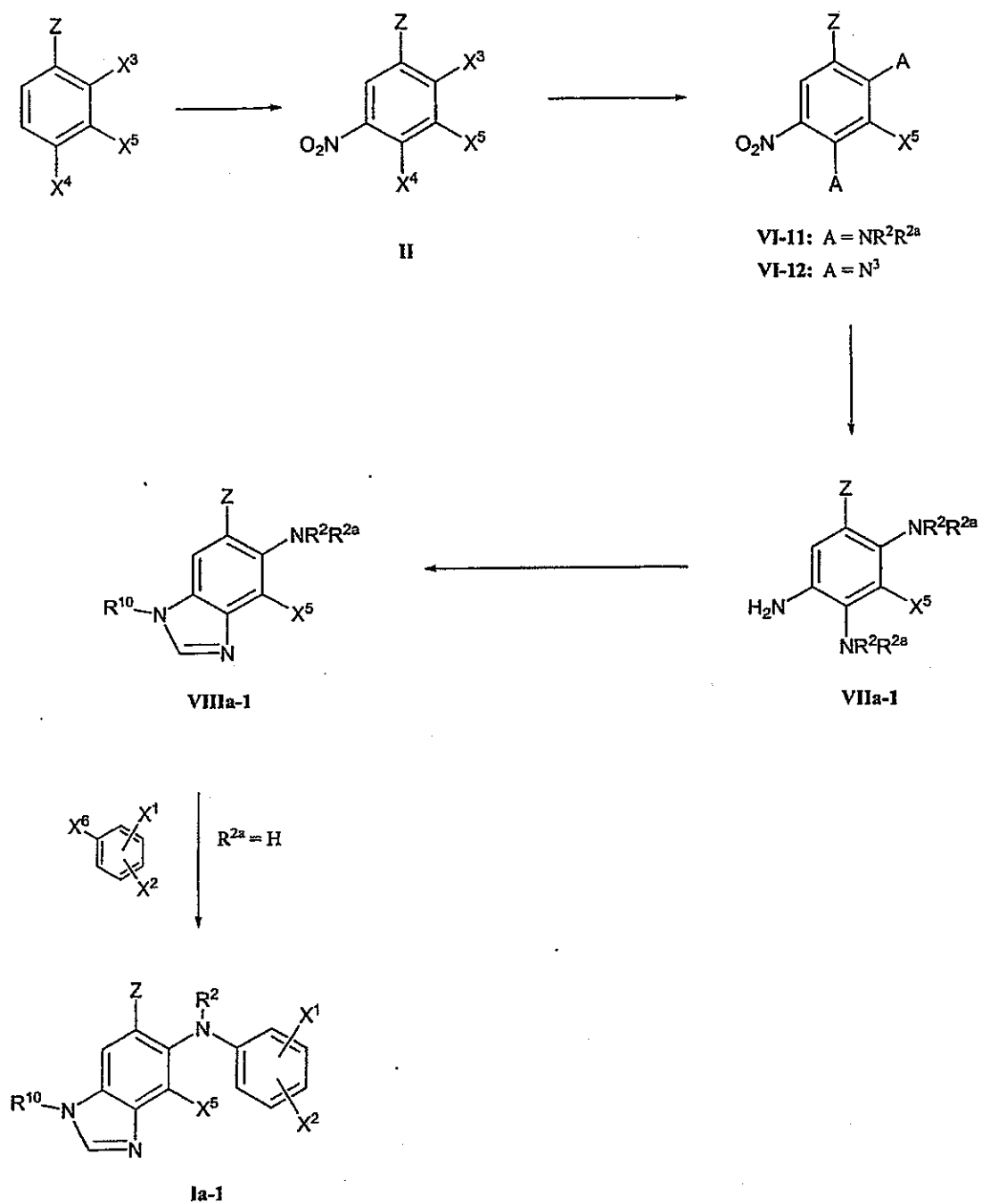


FIG. 1

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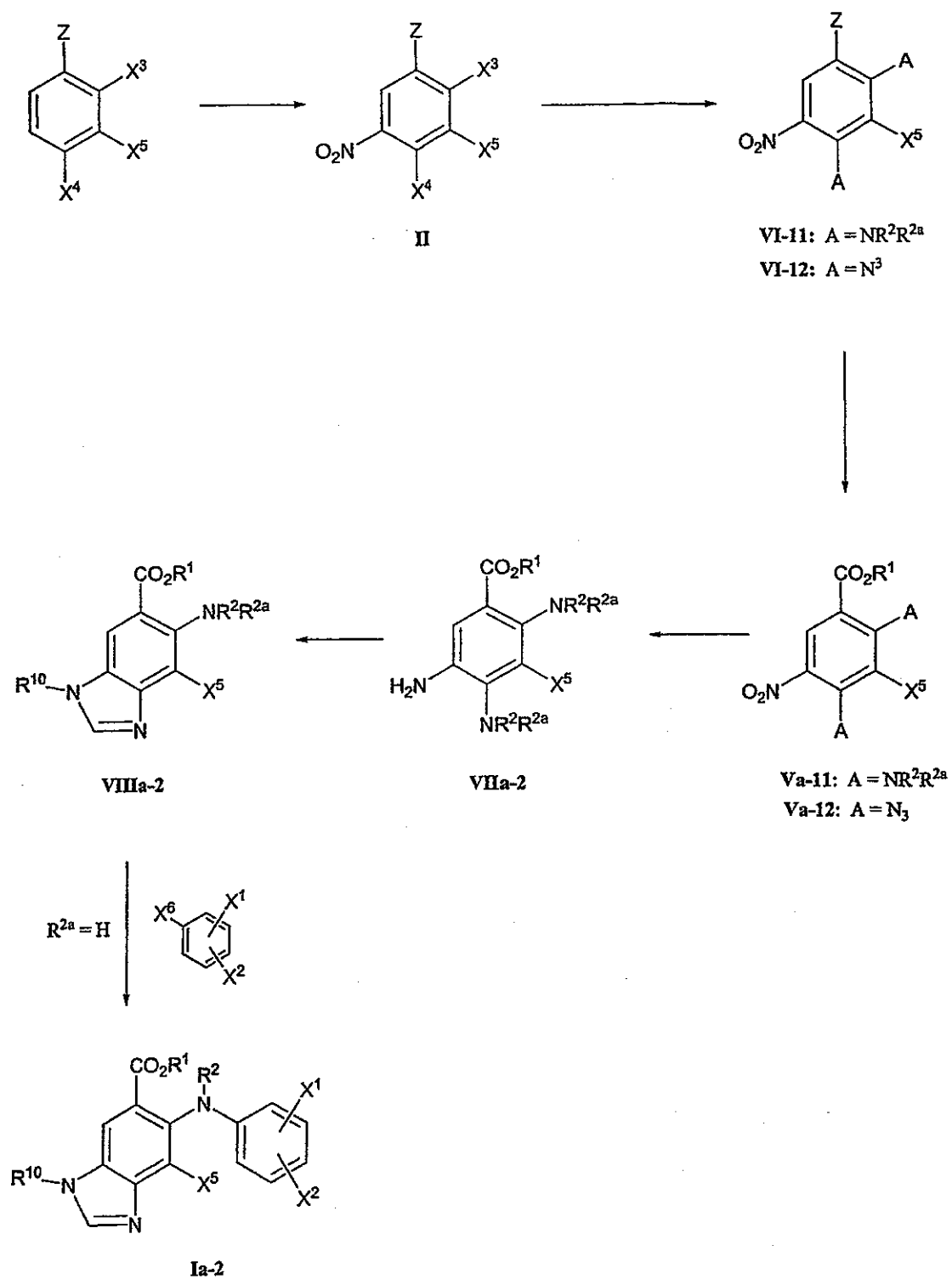


FIG. 2

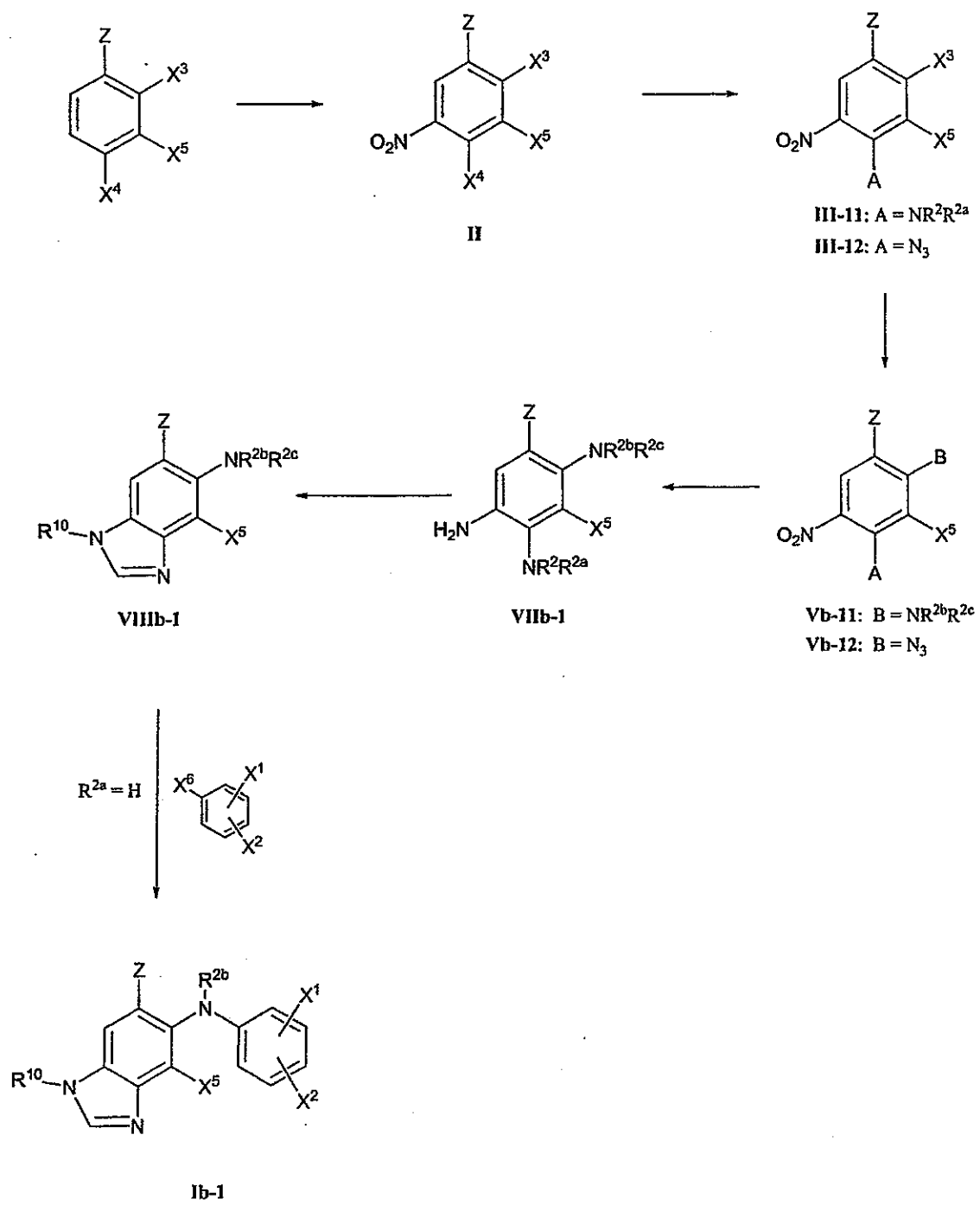


FIG. 3

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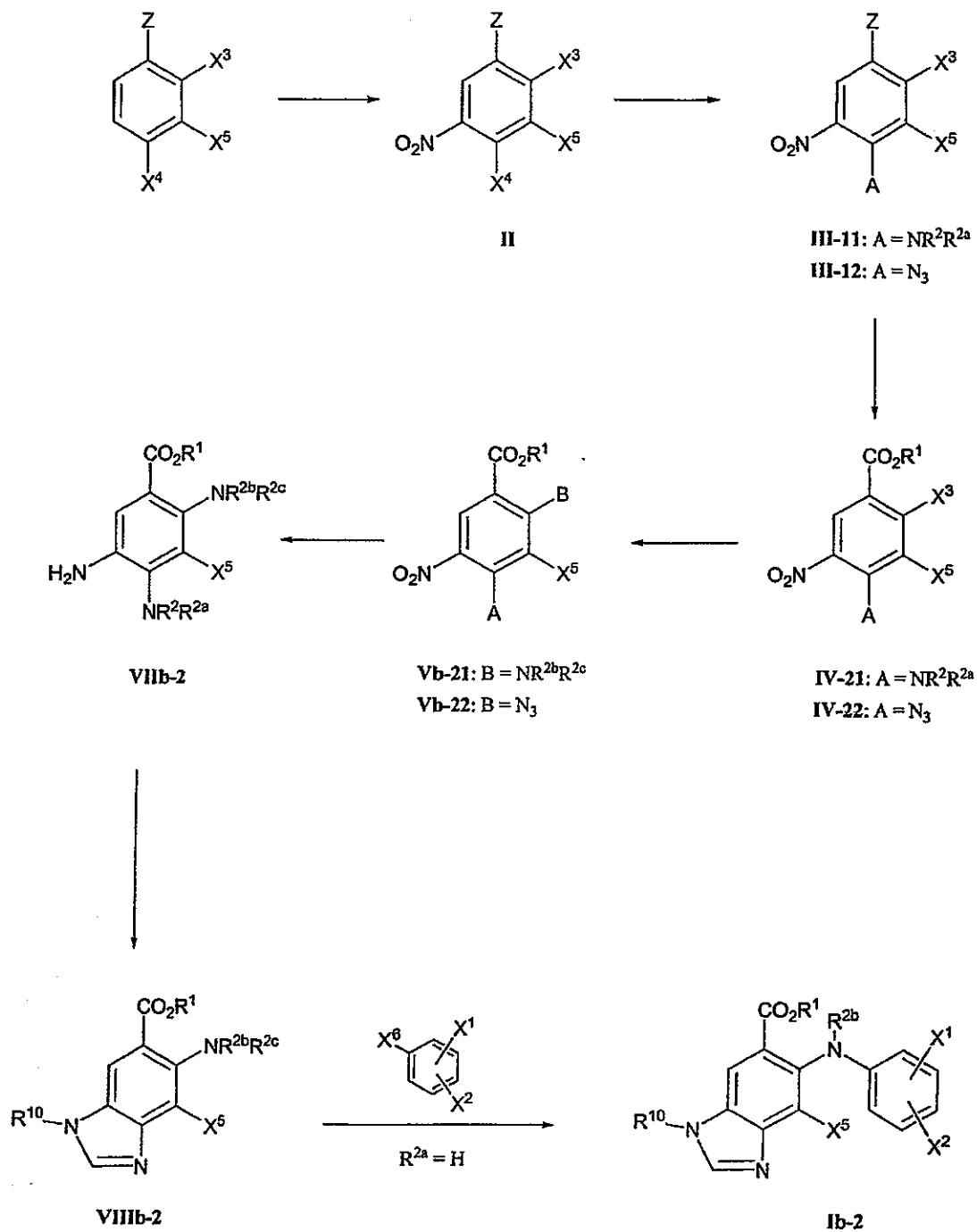
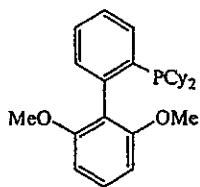
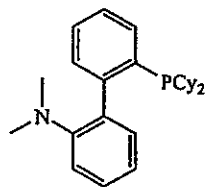


FIG. 4

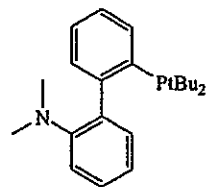
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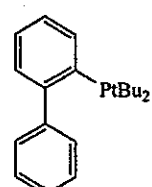
S Phos



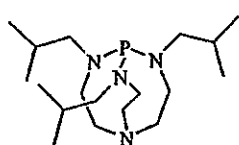
Cycloh_B



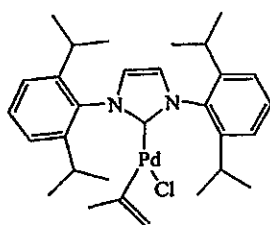
'B_A_B



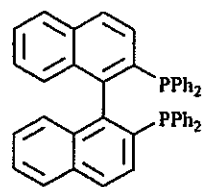
'But_B



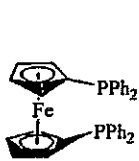
VerK_B



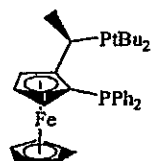
Carbene



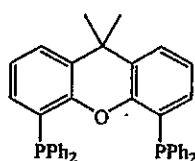
Rac-BINAP



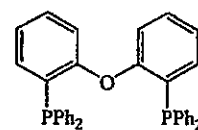
DPPF



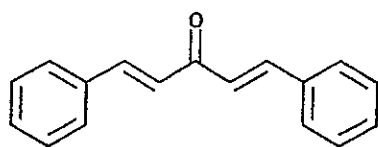
FC_B



XANTPHOS



DPE-PHOS



dba
(dibenzylideneacetone)

Fig. 5

Method A

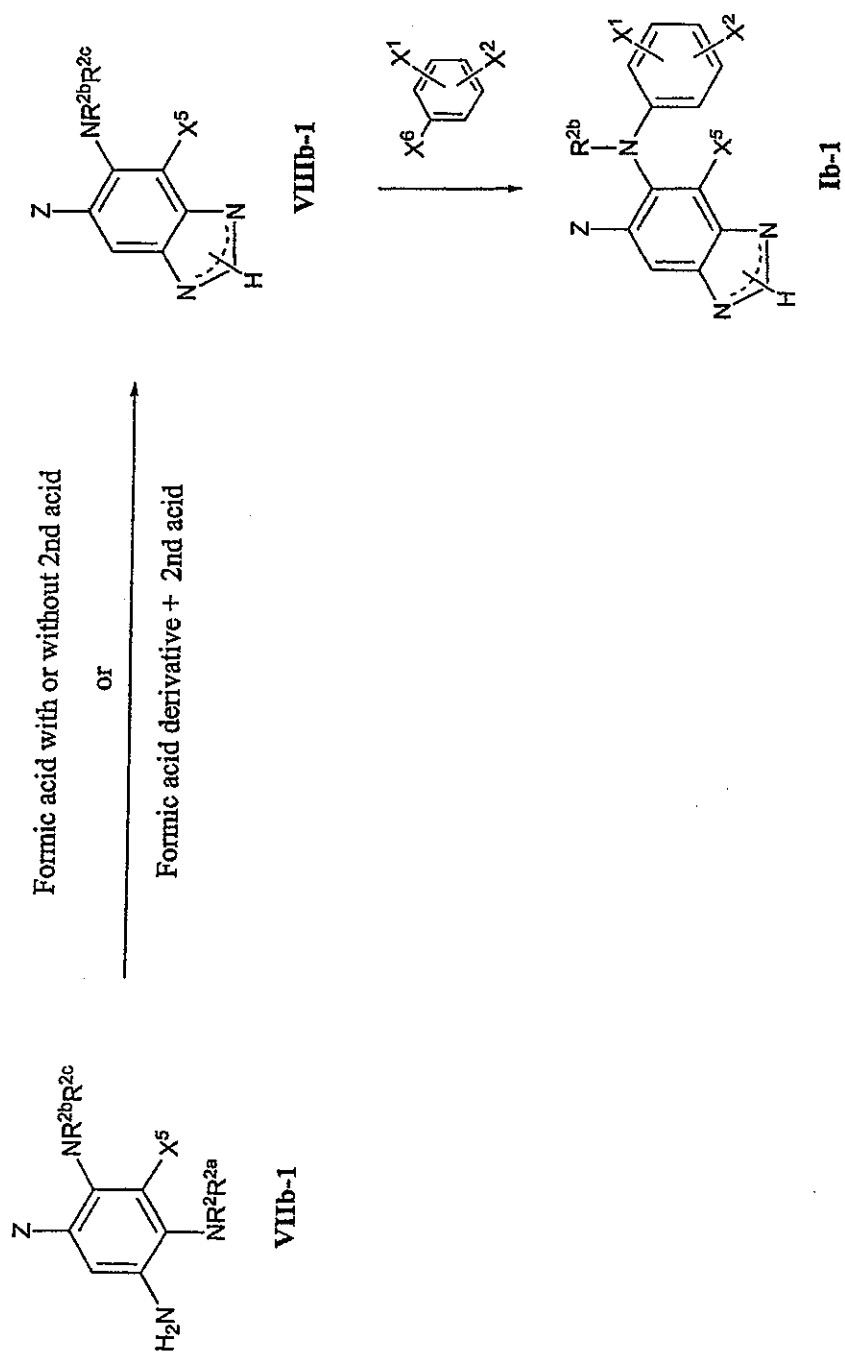
 $R^2, R^{2a} = H$ 

FIG. 6

Method B

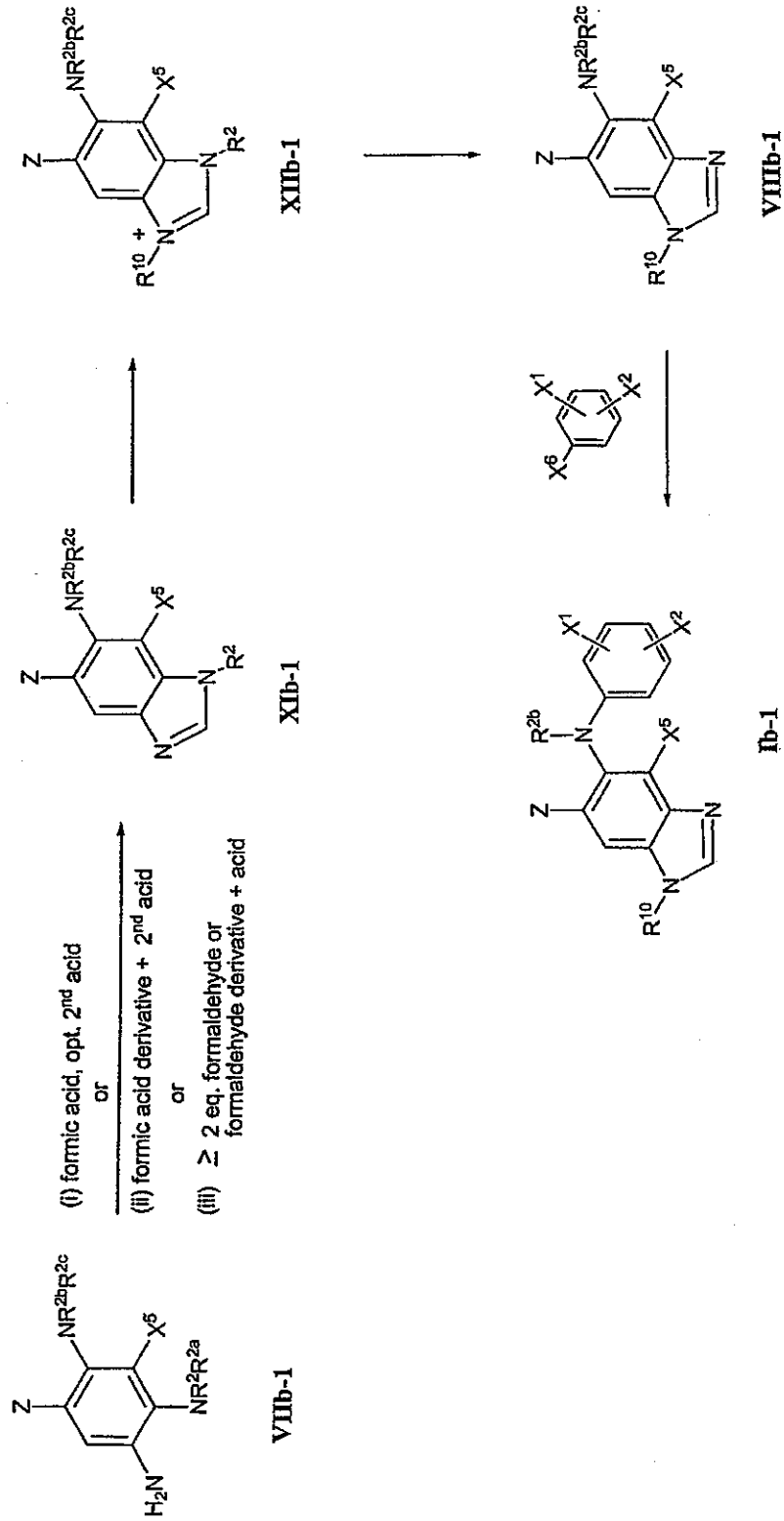
 $R^2 \neq H$ $R^{2a} = H$ 

FIG. 7

Method C
 $R^2, R^{2a} = H$

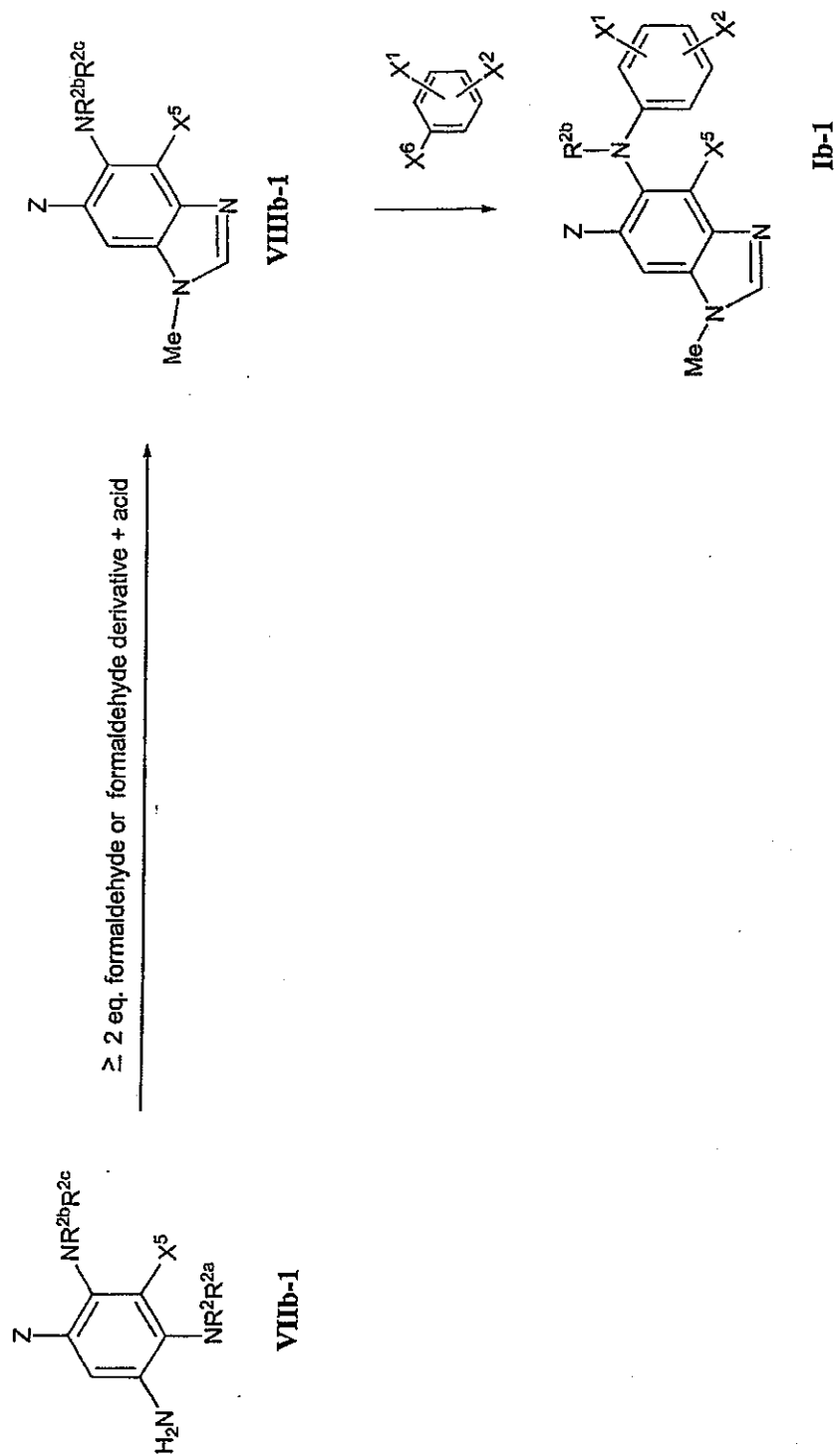


FIG. 8

Method D

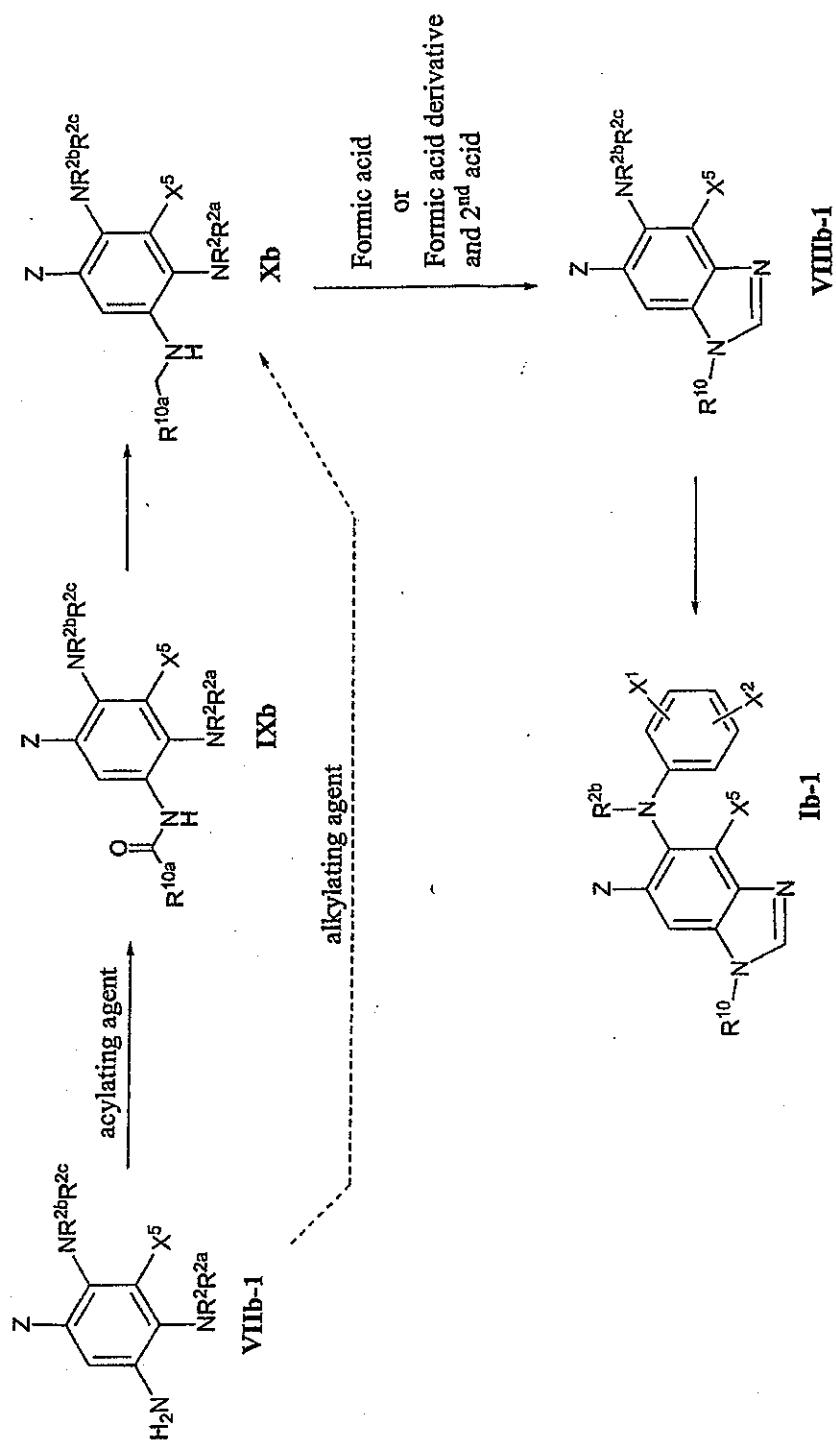
 $R^2, R^{2a} = H$ 

FIG. 9

Method E

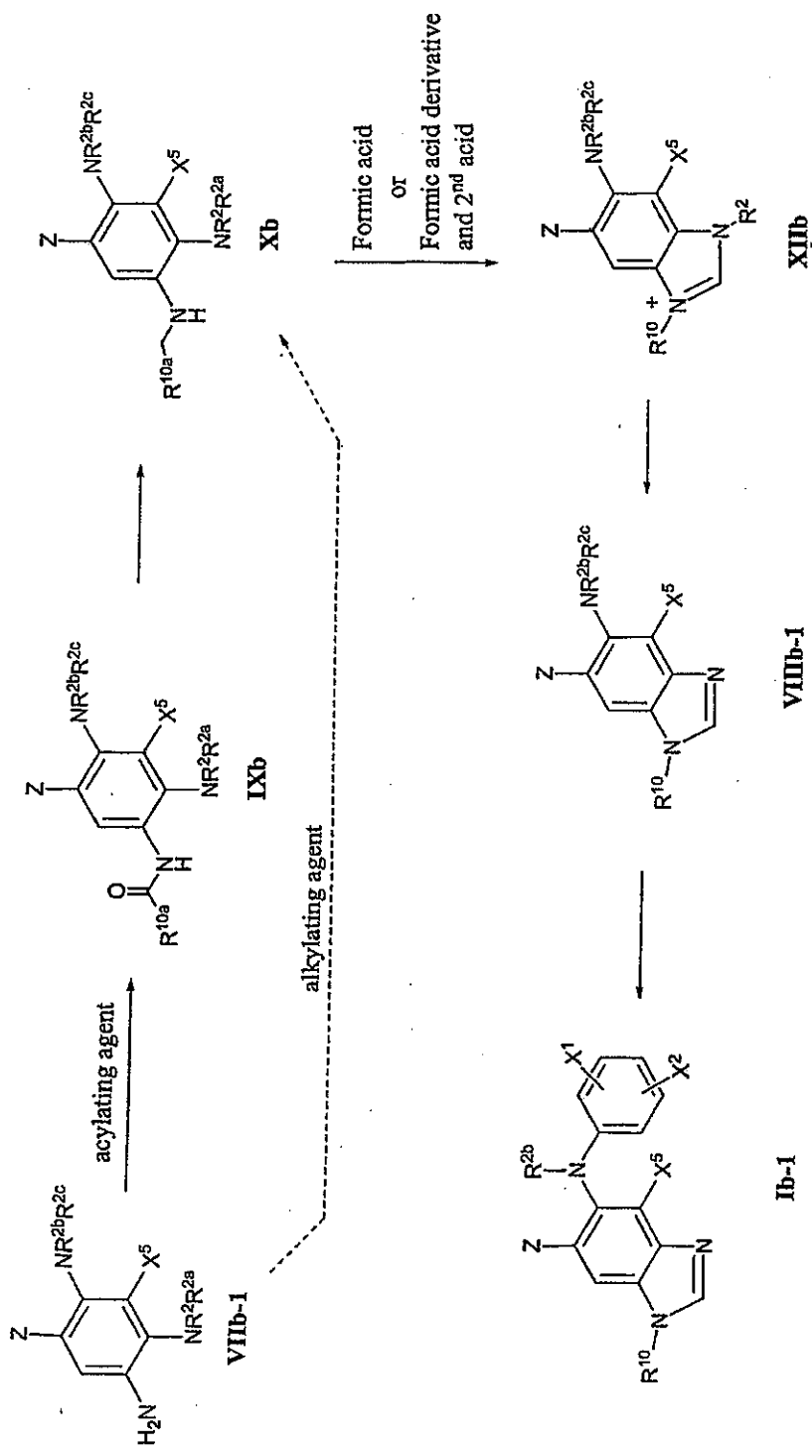
 $R^2 \neq H$ $R^{2a} = H$ 

FIG. 10