SUMMARY & CONCLUSION
The results of the present study can be summarised as follows:

1. Desensitization to both catecholamine as well as non-catecholamine beta adrenoceptor agonists could be produced in the guinea-pig tracheal smooth muscle in vitro as well as in vivo.

2. In vitro, desensitization was maximum with catecholamine isoproterenol while in vivo, it was most with the non-catecholamine, salbutamol. Desensitization produced by terbutaline was the least, both in vitro and in vivo. This may have a clinical bearing in selection of drugs in the treatment of patients of bronchial asthma.

3. The sequence of events during desensitization to the non-catecholamines salbutamol and terbutaline may differ from that occurring with the catecholamine isoproterenol.

4. Of the three drugs employed for pretreatment, hydrocortisone seemed to be generally, the most effective in preventing the development of desensitization as compared to indomethacin and theophylline.

5. Each of the three drugs used for pretreatment, that is hydrocortisone, indomethacin and theophylline had different effects on the desensitization produced by the three beta agonists studied.

It is suggested, that the process of desensitization may differ with different beta agonists used. This may be due to the difference in their chemical structure and site of action in the cascade of signal transduction at the beta receptor.