Several deductions may be made from the general responses to antihistamine of drugs of the inbred strains and their hybrids. First, the unresponsiveness of the CBA strain and the responsiveness of the hybrids and C57BR/cd strain indicate that this reaction is controlled by an incompletely dominant trait. Non-response, as it is confined to one parent and does not appear in the progeny, may be controlled by a recessive gene in the same way as non-anaphylactoid reaction (Harris and West, 1961). Second, the same pattern of response occurs in all species; those animals easily sensitised to histamine are well protected by antihistamine. Finally, the differentiation between antihistamines by the homozygous C57BR/cd strain may point to a relation between homozygosity and specificity, suggesting that at some point in this particular reaction a single gene may be involved.

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Gamma Irradiation of *Bacillus subtilis* Spores

SIR,—When aqueous suspensions of *Bacillus subtilis* spores were exposed to gamma irradiation from a Cobalt-60 source and subsequently stored at 0° and 20° more survived at 20° than at 0°.

Also the slopes of the lines relating dose to numbers of survivors were not parallel, but converged at approximately total survival at no dose of radiation. Thus spores subsequently stored at 20° survived larger doses of gamma radiation than the spores subsequently stored at 0°.

These results are summarised in Table I.

TABLE I

DIFFERENCE IN SLOPES OF LOG PER CENT SURVIVOR/DOSE REGRESSIONS AFTER STORAGE FOR ONE MONTH AT 0–4° AND 20–26°

Temperature	Correlation coefficient	Regression coefficient (rad. 10^{-5}	'D' value (rad. 10^5)
0–4°	−0·9841	−0·5425	1·83
20–26°	−0·9950	−0·4493	2·23

('D' value = decimal reduction factor)
Calculated 'd' (Bailey, 1959) = 2·284
Tabulated 't' (P = 0·05) = 2·228
There is therefore a significant difference in slope.

When an aqueous suspension of *B. subtilis* spores is heated at 60° for 3 min., or 60° for 15 min., or 90° for 5 min., there is a progressive increase in the number of spores which produce colonies on agar plates. But if a second sample of the spore suspension was first irradiated and then heated in the same way, there was a decrease in the number of spores producing colonies on agar plates (Table II.)

It is well-known that heating at sub-lethal temperatures causes dormant spores to germinate with a resultant increase in viable count (Desrosier and Heiligman, 1956; Curran and Evans, 1945 and 1947). This response varies

with the temperature and duration of heating (Halvorson and Church, 1957; Murrell, 1961).

TABLE II

VARIATION IN RECOVERY OF *B. subtilis* AFTER POST-IRRADIATION HEAT-SHOCK

Dose (rad.)	Percentage increase over unheated recovery		
	3 min./60°	15 min./60°	5 min./90°
0	59	64	82
4×10^5	37	27	-25
6×10^5	13	17	-34

The results indicate that pre-irradiation sensitises *B. subtilis* spores to heating normally sub-lethal and used to activate dormant spore suspensions.

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The Antibacterial Action of Glycine

SIR,—It is known that some D-amino-acids exert an inhibitory effect on certain Gram-negative bacteria, and that in the presence of sucrose as a stabilising agent, morphological variants can be preserved (Jeynes, 1957; Welsch, 1958; Lark and Lark, 1959; 1961).

The term "spheroplasts" has been suggested for these variants which might retain at least a portion of the original cell wall (Brenner and others, 1958) and which have also been induced by treating *Escherichia coli* with various penicillins (Russell 1962; Turner and Russell 1962).

In the present preliminary report, an investigation has been made into the quantitive aspects of the effect of glycine on *E. coli* in a nutrient medium in the presence or absence of sucrose and Mg^{++} ions. These ions have previously been found to be essential in stabilising penicillin-induced spheroplasts (Lederberg 1956; Hugo and Russell 1960).

In our experiments 0·1 ml. of an overnight 37° broth culture of the organism was added to 10 ml. tubes of nutrient broth containing 0·33 M sucrose and 0·25 per cent w/v $MgSO_4 \cdot 7H_2O$, and varying concentrations of glycine. After incubation of all tubes at 37° for 4 hr., three samples were examined.

(1) 1 ml. was added to 9 ml. of sterile water to lyse any spheroplasts present. Further serial dilutions were made if necessary, 1 ml. samples being finally plated into 10 ml. of nutrient agar.