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Antibiotic Resistance in *Mycoplasma* Isolates from Tissue Cultures

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During the past few years there have been a number of reports of problems encountered in controlling *Mycoplasma* infections in tissue cultures. The usefulness of a number of antibiotics has been reported (T. R. Carski and C. C. Shepard, J. Bacteriol. **81**:626, 1961; P. Balduzzi and R. J. Charbonneau, Experientia **20**:651, 1964; D. Perlman, S. B. Rahman, and J. B. Semar, Appl. Microbiol. **15**:82, 1967), and some investigators have advocated routine use of kanamycin, tylosin, or tetracyclines to control chance contaminations. We examined the antibiotic susceptibility patterns of *Mycoplasma* isolated from six tissue cultures and found that only two of the group were susceptible to these antibiotics.

These *Mycoplasma* strains were isolated from the tissue cultures by an adaptation of Pollock's (*personal communication*) method, by use of soypeptone-agar containing agamma human serum. Agar blocks containing the typical *Mycoplasma* colonies were transferred to tubes of soypeptone broth (containing the agamma human serum), and the tubes were incubated at 37 C in a 5% CO_2-95% air atmosphere for 3 or 4 days. These suspension cultures were used as inoculum source for antibiotic susceptibility tests.

The antibody susceptibility was determined by streaking the *Mycoplasma* suspensions on soypeptone agar (with agamma human serum) containing the test antibiotics. The plates were incubated for 5 to 7 days at 37 C in the CO_2-air incubator, and growth was noted by microscopic inspection.

Only two of the six isolates were inhibited by tylosin, kanamycin, and tetracycline (each at 20 ppm). Lincomycin and spiramycin (each at 20 ppm) inhibited the four isolates resistant to tylosin, kanamycin (200 ppm), and tetracycline; several of these isolates were also susceptible to paromomycin (200 ppm) and to gentamicin. An antiserum to one strain, prepared by the method of Pollock (Proc. Soc. Exptl. Biol. Med. **112**:176, 1963), did not react with one of two *Mycoplasma* isolates tested, and thus had limited use in our program.

These results lead us to conclude that *Mycoplasma* isolates from contaminated tissue cultures may vary widely in their antibiotic susceptibility patterns, and it is likely that no one antibiotic is available which will inhibit all *Mycoplasma* strains. Our previous study (D. Perlman et al., Appl. Microbiol. **15**:82, 1967) showed that antibiotic resistance can be rather easily induced in *Mycoplasma*, and we cautioned against indiscriminate use or continued use of a variety of antibiotics in tissue culture media as a prophylactic measure. Such practice might result in development of *Mycoplasma* strains which would have resistance to all of the noncytotoxic antibiotics, and then there might be no easy way to control them.

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ERRATUM

Spore Production by *Bacillus stearothermophilus*

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Volume 14, no. 4, page 690, first column, 4 lines from bottom of page: Change "The medium used for preparation of the inoculum contained Tryptone, 1%; yeast extract (Difco), 0.5%; K_2HPO_4, 0.2%; and was adjusted to *p*H 7.2 before being sterilized by autoclaving." to "The medium used for preparation of the inoculum contained Tryptone, 1%; yeast extract (Difco), 0.5%; glucose 0.5%; K_2HPO_4, 0.2%; and was adjusted to *p*H 7.2 before being sterilized by autoclaving."