Pathogenic microbiology investigators have a responsibility to consider the public health implications of their research, including the experimental introduction of antibiotic resistance markers that could influence the treatment of infectious diseases. Furthermore, the reviewers for *Infection and Immunity* as well as other scientific journals are asked to evaluate submitted manuscripts for the occurrence of “misuses of microbiology or of information derived from microbiology” (1). But the importance of resistance to multiple antibiotics conferred by single marker genes is not always recognized. A case in point is the bacterial *aadA1* gene in the omega fragment, originally from plasmid R100.1 (6). The use of this marker has recently been reported for gene disruption in *Brucella suis* with selection for resistance against spectinomycin, an antibiotic not used in the treatment of brucellosis (5). However, this marker also confers resistance to streptomycin, a frontline antibiotic frequently included in therapeutic protocols for brucellosis (2). This point may be particularly important for this organism due to its status as a relatively frequent cause of laboratory-acquired infection and its classification as a risk group 3 pathogen, a CDC select agent, and a USDA high-consequence livestock pathogen (3, 4, 7). There may be implications for other investigators considering the use of the same marker or interested in obtaining the recombinant streptomycin-resistant *Brucella* strains reported in reference 5. Alternative markers not conferring resistance to streptomycin should be used or developed to avoid these problems associated with *aadA1* in *Brucella* spp.

**REFERENCES**


**Author’s Reply**

I agree that cassettes that do not provide cross-resistance to streptomycin, or, alternatively, unmarked deletion mutations, are more appropriate options for the inactivation of genes in *Brucella* spp. We are now avoiding the use of the spectinomycin cassette and have replaced it with an unmarked deletion mutation or another cassette.

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