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Branstrom et al.

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(54) **BACTERIAL DELIVERY SYSTEM**

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(58) **Field of Classification Search** **435/252.1, 435/245, 252.3; 424/93.2, 93.21, 93.4**
See application file for complete search history.

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(57) **ABSTRACT**

We describe a bacterial delivery system for the delivery of DNA and antigens into cells. We constructed an attenuated bacterial vector which enters mammalian cells and ruptures delivering functional plasmid DNA and antigens into the cell cytoplasm. This *Shigella* vector was designed to deliver DNA to colonic surfaces, thus opening the possibility of oral and other mucosal DNA immunization and gene therapy strategies. The attenuated *Shigella* is also useful as a vaccine for reducing disease symptoms caused by *Shigella*.

4 Claims, 7 Drawing Sheets

