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► **COVER:** 'A curious case' by George Marshall, inspired by the Review on p913.



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A handful of individuals infected with pathogens are, in general, usually responsible for most of the infections in a population, according to analyses of outbreak data. These unusually infectious individuals might be 'super-shedders' that excrete higher numbers of bacteria (or viruses) than other infected individuals. On page 904, Margo Chase-Topping, Mark Woolhouse and colleagues review how super-shedding of *Escherichia coli* O157 by cattle — its main reservoir — could have important consequences for the epidemiology of *E. coli* O157 in herds and for infection of humans.

Infection with enteric pathogens in humans causes gastroenteritis, which is mild to severe diarrhoea that is often accompanied by vomiting. In a Review on page 883, Andreas Baumler and colleagues discuss how different enteric pathogens, including *Salmonella*, *Brucella* and *Yersinia* species, cause an enteric fever that is distinct from the acute gastroenteritis caused by *E. coli*. This article aims to bridge the gap between basic research into the molecular basis of pathogenesis and clinical infectious-disease research.

In common with many other Gram-negative pathogens, enteric pathogens contain outer-membrane water-filled protein channels named porins that allow the passive transport of hydrophilic molecules, including antibiotics, into the cell. In a Review on page 893, Pages and co-workers examine the clinical evidence that underlies the different tactics that many bacteria have developed to reduce antibiotic influx. A reduction in antibiotic influx can contribute to antibiotic resistance of pathogens.

Finally, as this is the last issue of 2008, we thank all of our authors and referees for their contributions throughout the year, and of course you, our readers, for your continued interest. We have several interesting projects planned for the coming year, which we hope you will enjoy — watch this space!

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