Bacterial cheaters do not prosper

- 25 February 2012
- Magazine issue 2853. Subscribe and save

CHEATERS never prosper - at least not in the lab. A new finding contradicts the notion that cooperative organisms are vulnerable to freeloaders.

Some bacteria send out signals that help a lab culture as a whole adapt to its environment, so other bugs ought to be able to benefit without wasting any of their own resources on signals.

David Van Dyken at the University of British Columbia in Vancouver, Canada, studied the genetics of bacterial cultures and found this wasn't true.

Surprisingly, no known "cheating" genotype was common enough to suggest that it was an old-timer in the culture. Instead, cheaters are present simply because they arise through mutation faster than natural selection can purge them from the population. Cheating may not be a stable strategy (*American Naturalist*, DOI: 10.1086/664609).