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The two chromosomes of cholera

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In the 3 August [Nature](#), [The Institute for Genomic Research](#) (TIGR) has unveiled its twentieth completed bacterial sequence (Heidelberg *et al.*, *Nature* 2000, **406**:477-484). The complete sequence of the cholera-causing bacterium *Vibrio cholerae* consists of the 2.96 Mbp chromosome 1 and the 1.07 Mbp chromosome 2. Chromosome 1 contains a standard bacterial origin of replication and the vast majority of the bacterium's essential genes, whereas chromosome 2 has an origin of replication and various genes that are usually associated with plasmids, and thus may have started life as a megaplasmid. The two chromosome have, however, coexisted for a long time based on their almost identical G+C content. Moreover, chromosome 2 now has several essential genes, and a number of regulatory proteins control genes on both chromosomes. The bacterium's strategies for coordinating replication and segregation of the two chromosomes remain to be established.

References

1. Nature magazine, [<http://www.nature.com/nature/>]
2. The Institute for Genomic Research, [<http://www.tigr.org>]