

**Table 5.1** Comparison of diffusion coefficients and spot displacements of DNA loci and the rate of cell elongation in different bacteria

DNA or bacterial strain	Diffusion coefficient ( $\mu\text{m}^2/\text{s}$ )	$\Delta$ Spot position/time <sup>a</sup> ( $\mu\text{m}/\text{min}$ )	Rate of cell elongation ( $\mu\text{m}/\text{min}$ )	Reference
<i>E. coli</i>		$\sim 10\times$ Elongation rate		Gordon and Wright 2000
<i>B. subtilis</i>		0.17–0.27	0.02	Webb et al. 1998
<i>E. coli</i>	$4.3 \times 10^{-5}$ (stepsize 110 nm)		0.07	Elmore et al. 2005
Long axis				
Short axis	$3 \times 10^{-5}$			
<i>C. crescentus</i>		0.1–0.4	0.006	Viollier et al. 2004
		0.3		Toro et al. 2008
<i>V. cholerae</i>	$2\text{--}4 \times 10^{-4}$ (stepsize 250 nm)	0.06	0.02	Fiebig et al. 2006
Long axis				
Short axis	$1\text{--}3 \times 10^{-4}$			
<i>E. coli</i>	$5 \times 10^{-4}$ (stepsize 100 nm)	0.4		Reyes-Lamothe et al. 2008a
Replisome				
DNA spot L3	$5 \times 10^{-5}$			
<i>E. coli</i>		0.2	0.015	Wang et al. 2005
<i>ter</i> -marker				

<sup>a</sup>Often expressed as rate or speed of movement. However, speed in  $\mu\text{m}/\text{min}$  is not well defined in the case of random, Brownian diffusion (see Berg 1993).