Supplementary Table 5: Cell volumes and cell division times used in Figure 4 in the main text. Cell division times are based on observations of maximum growth rates and are standardized to 20°C.

Group	Species	V (μm^3)	t (hours)	References
Bacteria	*Acholeplasma laidlawii*	0.143	2.01	[216–218]
Bacteria	*Bacillus cereus*	3.839	0.76	[219–221]
Bacteria	*Bacillus megaterium*	1.96	3.31	[222, 223]
Bacteria	*Bacillus subtilis*	1.543	1.16	[116, 117, 119, 222, 224]
Bacteria	*Bdellovibrio bacteriovorus*	0.089	3.23	[120, 225, 226]
Bacteria	*Clostridium cellulolyticum*	0.159	12.19	[122, 227]
Bacteria	*Clostridium thermocellum*	0.47	31.66	[124, 125, 228]
Bacteria	*Delftia acidovorans*	0.933	4.95	[229, 230]
Bacteria	*Enterobacter aerogenes*	1.2	0.99	[111, 113, 231, 232]
Bacteria	*Enterobacter cloacae dissolvens*	0.23	4.3	[232]
Bacteria	*Esherichia coli*	0.983	0.5	[129, 130, 222, 231–234]
Bacteria	*Haemophilus influenzae*	0.061	1.89	[235, 236]
Bacteria	*Lactobacillus casei*	1.4	3.75	[131, 231, 237]
Bacteria	*Lactobacillus plantarum*	2.5	2.27	[238, 239]
Bacteria	*Lactococcus lactis cremoris*	0.9	1.24	[127, 128, 240, 241]
Bacteria	*Legionella pneumophila*	0.58	15.4	[242, 243]
Bacteria	*Myxococcus xanthus*	1.08	8.6	[244, 245]
Bacteria	*Paracoccus denitrificans*	0.403	5.92	[246, 247]
Bacteria	*Pseudomonas aeruginosa*	0.589	4.7	[231, 248–250]
Bacteria	*Pseudomonas fluorescens*	1.13	1.33	[231, 251]
Bacteria	*Pseudomonas putida*	0.783	1.73	[141, 252, 253]
Bacteria	*Rhizobium leguminosarum*	0.491	4.87	[254, 255]
Bacteria	*Salmonella typhimurium*	0.797	1	[222, 250, 256]
Bacteria	*Sphingopyxis alaskensis*	0.07	3.39	[242, 257]
Bacteria	*Staphylococcus aureus*	0.292	1.46	[250]
Bacteria	*Staphylococcus epidermidis*	0.194	4.74	[258, 259]
Bacteria	*Streptococcus pyogenes*	0.746	2.62	[127, 128, 145]
Bacteria	*Streptomyces coelicolor*	1.31	3.96	[142, 143, 260]
Bacteria	*Thermoanaerobacterium thermosaccharolyticum*	1.1	34.63	[261]
Bacteria	*Vibrio fischeri*	0.11	0.71	[262]
Bacteria	*Zymomonas mobilis*	4.9	2.61	[146–148, 263, 264]
Amoebozoa	*Acanthamoeba castellanii*	2465	11.07	[265–267]
Apusozoa	*Thecamonas trahens*	100.51	28.681	[268]
Chlorophyta	*Chlamydomonas reinhardtii*	151	9.15	[154–156, 158, 269]
Chlorophyta	*Micromonas pusilla*	5.46	18.48	[270, 271]
Chlorophyta	*Ostreococcus sp.*	22.4	35.29	[271–273]
Ciliates	*Paramecium tetraurelia*	354116.75	12.5	
Ciliates	*Tetrahymena thermophila*	7856	4.41	[177, 178, 274–277]
Diatom	*Phaeodactylum tricornutum*	92.6	8.41	[269, 271, 278–286]
Diatom	*Thalassiosira pseudonana*	167.81	5.42	[279, 283, 287–295]
Eustygmatophyta	*Nannochloropsis gaditana*	8.85	25.88	[271, 296, 297]
Haptophyta	*Emiliania huxleyi*	34.42	10.93	[291, 296, 298–301]
Fungi	*Saccharomyces cerevisiae*	69.07	2.5	[250]
Fungi	*Schizosaccharomyces pombe*	120	4.31	[173, 174, 302]