

Supplementary Figure:

Figure S1:

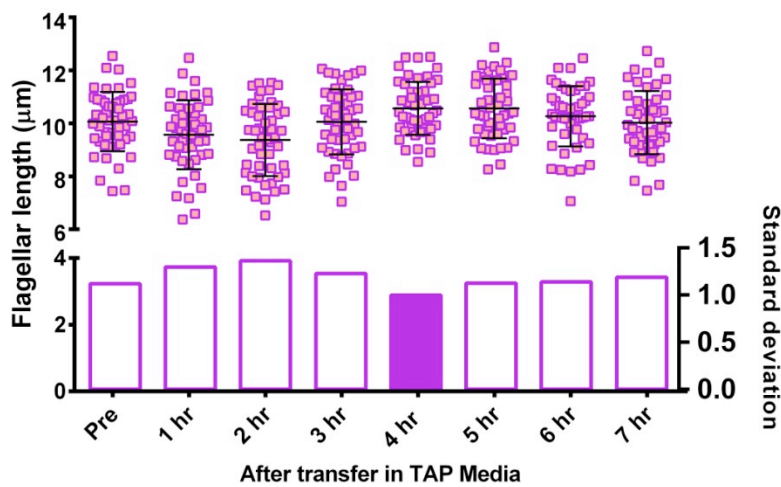


Figure S1: Flagellar length distribution of M-N synchronized cells at various times after transfer to TAP medium. Bars are mean and standard deviation (top half of panel). 4 hours after TAP addition is selected as the M-N synchronization time based on minimal variability (filled bar, lower half of panel). N=50.

Figure S2:

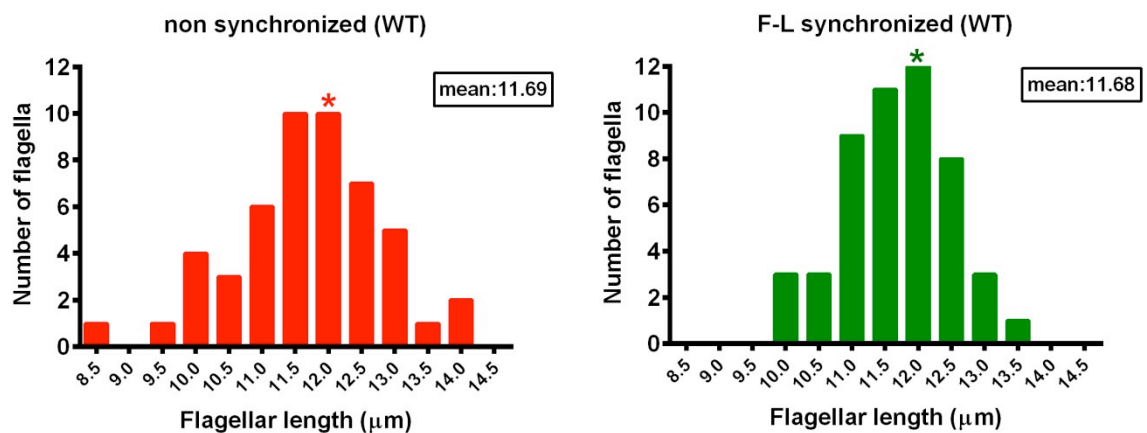


Figure S2: Distribution of flagellar length in wild type cells before and after F-L synchronization. Non-synchronized cells (red) and synchronized cells (green). N=50. Asterisk= mean flagellar length.

Figure S3:

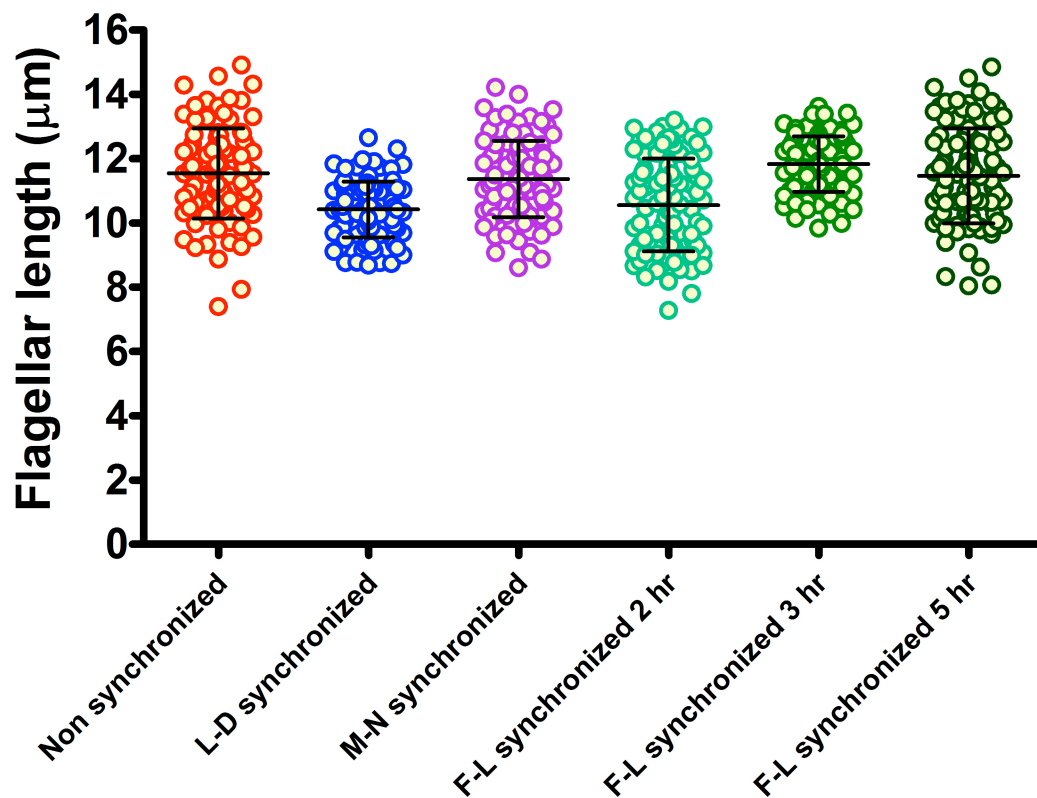


Figure S3: Pre-deflagellation flagellar length distribution before precursor pool determination. These data confirm Fig 1 data showing the narrowest flagellar length distribution for L-D and F-L 3 hour synchronized cells. N=100 flagella. Bars are mean and standard deviation.

Supplementary tables:

Table S1: Flagellar length distribution after different synchronization methods.

	Non-synchronized	L-D synchronized	M-N synchronized	F-L synchronized
Mean	11.43	10.91	11.24	11.98
SD	1.269	1.012	1.061	0.8440

Table S2: Distribution of flagellar length during regeneration following deflagellation.

	Pre	2 hour	2.5 hour	3 hour	3.5 hour	4 hour	5 hour	6 hour
Mean	11.49	10.33	10.52	11.64	11.40	11.09	11.32	11.17
SD	1.160	1.277	1.293	0.8732	1.327	1.342	1.318	1.373

Table S3: Flagellar length distribution after length altering chemical treatment:

Chem-ical		Non-synchronized		L-D synchronized		M-N synchronized		F-L synchronized	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
IBMX	Control	11.03	1.225	10.65	1.029	11.35	0.9315	10.70	1.029
	Treated	7.063	1.103	5.965	1.122	6.657	1.015	5.863	1.015
LatB	Control	12.11	1.052	10.65	1.029	11.31	1.200	11.63	0.8298
	Treated	9.122	1.337	7.965	1.164	9.079	1.155	8.407	0.8109
NaPPI	Control	11.07	1.195	10.42	0.8714	10.89	0.8654	11.94	0.8855
	Treated	7.54	1.165	6.198	1.141	7.244	1.324	6.449	0.8925
LiCl	Control	11.33	1.118	10.42	0.8714	12.10	1.051	12.13	0.8005
	Treated	14.49	2.342	14.68	1.479	15.53	2.487	16.94	1.468

Table S4: Flagellar length distribution of length mutants during regeneration.

		Time After Regeneration									
<i>lf4-7</i>		Pre	2 hr	3 hr	4hr	5 hr	6hr	7 hr	8 hr		
	Mean	20.8	12.07	17.36	19.42	21.51	20.96	22.07	20.16		
	SD	3.64	2.08	2.13	2.55	2.31	1.99	3.19	3.61		
<i>shf1-253</i>		Pre	1 hr	1.5 hr	2hr	2.5 hr	3hr	3.5 hr	4 hr	5 hr	6 hr
	Mean	6.4	5.07	6.24	6.73	6.7	7.13	6.78	6.54	6.77	6.56
	SD	0.92	0.96	0.92	0.81	0.56	0.80	0.98	1.05	0.98	1.21
<i>cnk2-1</i>		Pre	2 hr	2.5 hr	3hr	3.5 hr	4 hr	5 hr	6 hr		
	Mean	12.5	9.61	10.55	11.12	11.20	11.64	12.2	12.41		
	SD	1.05	1.12	1.27	1.05	1.15	0.87	0.71	1.01		

Table S5: Flagellar length distribution prior to and after cycloheximide (cyclo) treatment:

		Non	L-D	M-N	F-L synchronized		
		synchronized	synchronized	synchronized	2 hr	3 hr	5 hr
Pre-cyclo	Mean	11.54	10.42	11.36	10.56	11.83	11.46
	SD	1.401	0.871	1.188	1.444	0.863	1.474
Post-cyclo	Mean	5.600	4.191	4.513	5.409	6.162	6.156
	SD	1.583	0.837	0.917	1.408	1.097	1.54