

**Table S4.** Values of the slopes obtained from the linear regressions and  $R^2$  values for control and nocodazole-treated cases

Control		
Trajectory	Slope ( $\mu\text{m}/\text{second}$ )	$R^2$
1	0.103	0.987
2	0.1	0.962
3	0.063	0.984
4	0.083	0.997
5	0.088	0.957
6	0.062	0.983
7	0.038	0.861
8	0.084	0.93
9	0.082	0.974
10	0.056	0.987
11	0.05	0.976
12	0.113	0.905
13	0.086	0.926
14	0.049	0.991
15	0.106	0.956
Mean	0.078	
s.d.	0.023	

Nocodazole		
Trajectory	Slope ( $\mu\text{m}/\text{second}$ )	$R^2$
1	0.021	0.977
2	0.019	0.996
3	0.031	0.99
4	0.019	0.981
5	0.024	0.992
6	0.02	0.992
7	0.011	0.982
8	0.007	0.962
9	0.012	0.953
10	0.007	0.992
11	0.013	0.987
12	0.013	0.986
13	0.013	0.989
14	0.015	0.916
15	0.01	0.994
Mean	0.016	
s.d.	0.007	

Group	Mean	s.d.	<i>n</i>	df	<i>t</i> *	<i>P</i>
Control	0.078	0.023	15	14	9.928981	<i>P</i> <0.0005
Nocodazole	0.016	0.007	15	14		