



SUPPORTING INFORMATION

Culturing and patch clamping of Jurkat T cells and neurons on Al₂O₃ coated nanowire arrays of altered morphology

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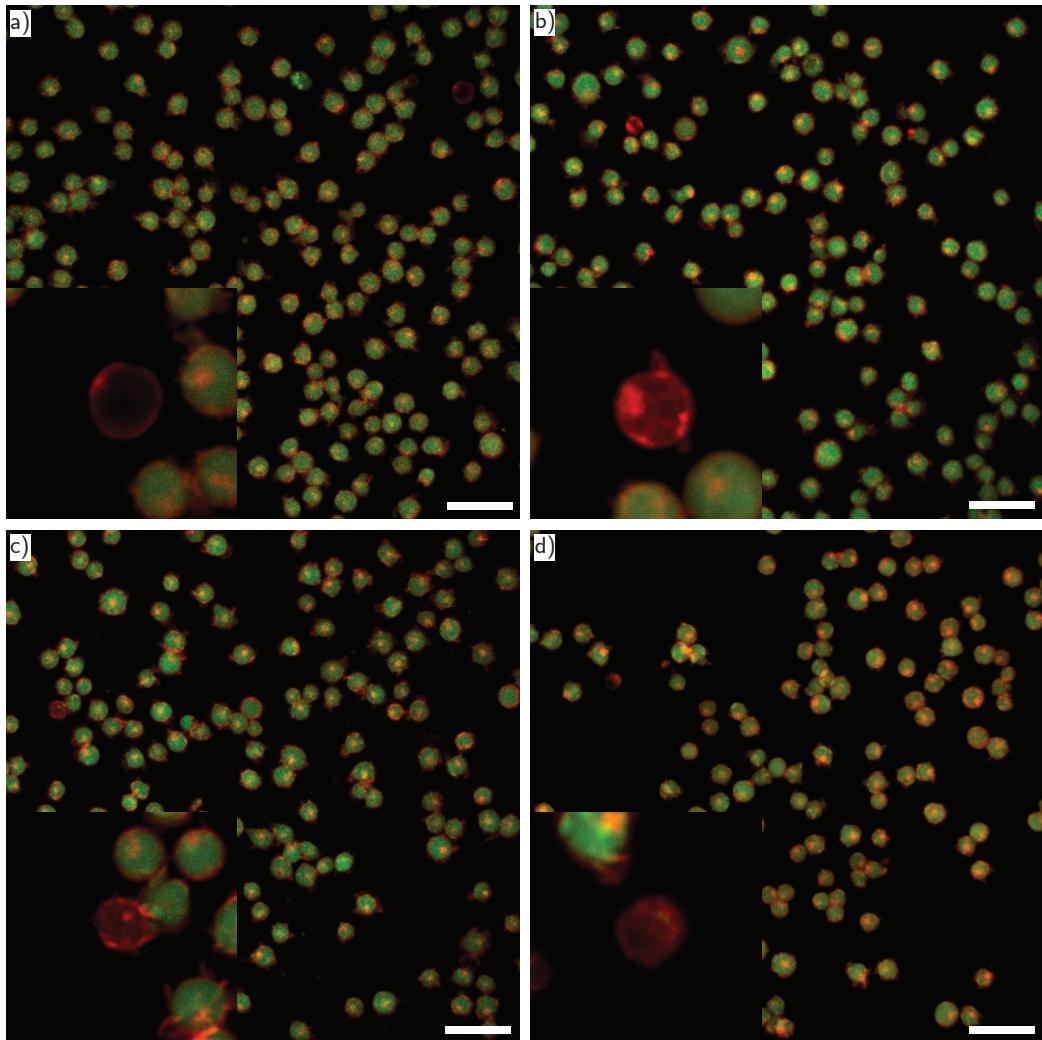


Fig. S1 Exemplary confocal microscope overview images of life/membrane (green/red) stained Jurkatt cells on a) Petri dish, b) planar Al_2O_3 , c) ordered and d) random NWs. The majority of the cells is viable. Insets: close-ups of dead Jurkatt cells. Scale bar: 50 μm .

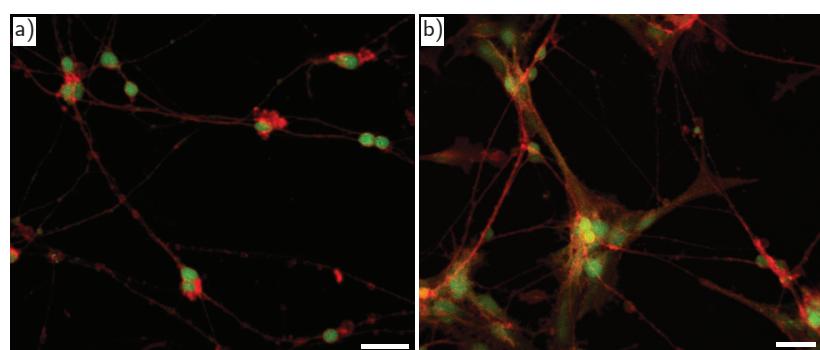


Fig. S2 Exemplary confocal microscope images of life/membrane (green/red) stained neurons on a) Petri dish and b) planar Al_2O_3 . Scale bar: 25 μm .

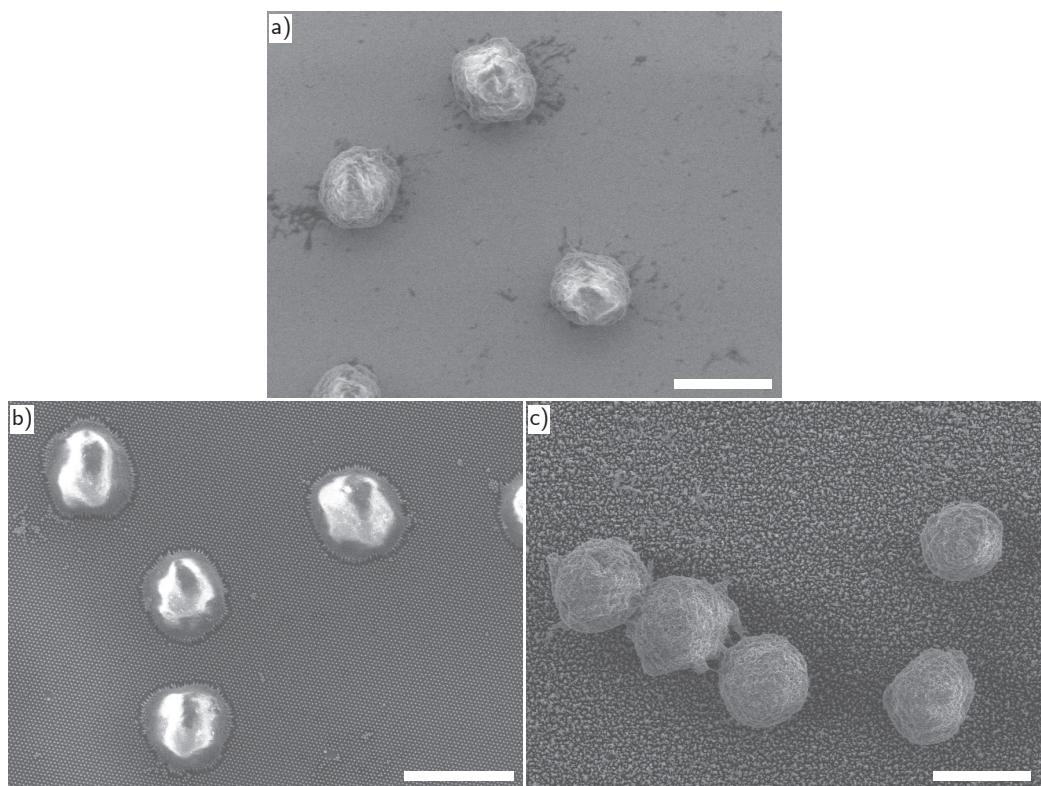


Fig. S3 Exemplary SEM image of Jurkat cells on a) planar Al₂O₃, b) ordered and c) random NWs. Scale bars: 10 μm.

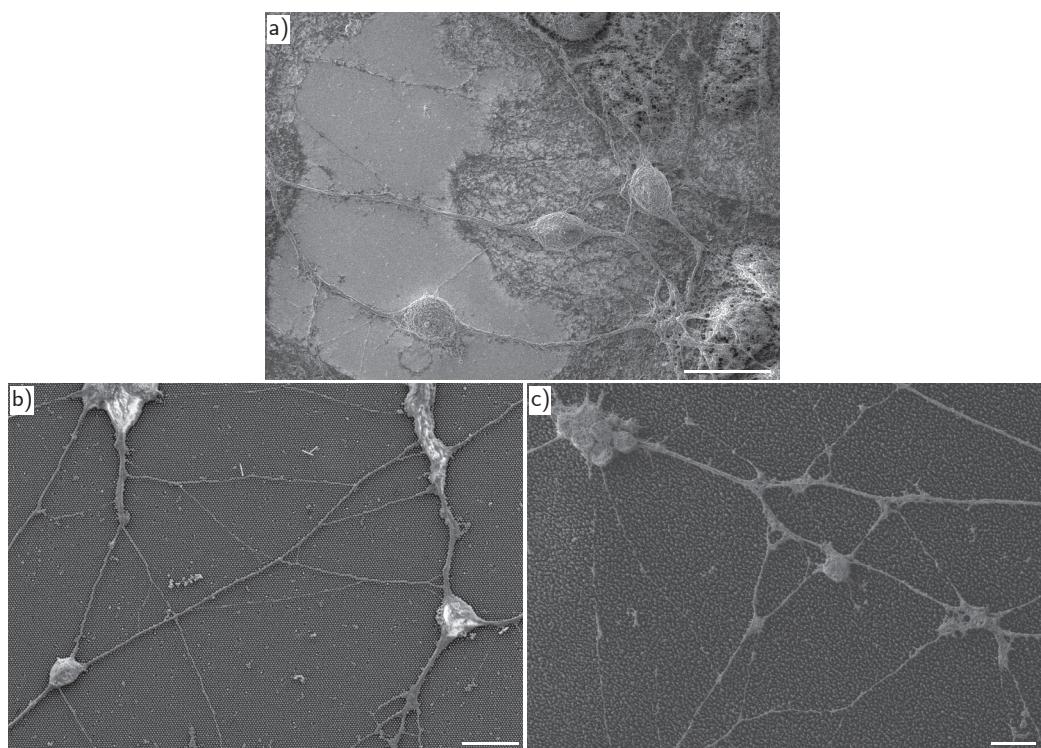


Fig. S4 Exemplary SEM image of neuronal outgrowth on a,b) planar Al₂O₃ c) ordered and d) random NWs. Scale bars: 10 μm.

Table S1 Welch's t-test results regarding electrophysiological properties of Jurkat cells cultured on each substrate with 95% confidence interval (CI).

	NWs/Petri dish				NWs/Planar Al ₂ O ₃				Planar Al ₂ O ₃ /Petri dish	
	Ordered NWs		Random NWs		Ordered NWs		Random NWs		T value	95% CI
	T value	95% CI	T value	95% CI	T value	95% CI	t value	95% CI	T value	95% CI
<i>V</i> _{rest}	0.04	2.45	-1.23	2.36	0.14	2.36	-0.82	2.45	-0.14	2.36
<i>C</i> _{mem}	1.69	2.36	1.92	2.36	-0.37	2.36	0.11	2.45	0.60	2.57
<i>t</i> _{mem}	0.21	2.36	0.36	2.36	-0.15	2.36	-0.03	2.36	0.47	2.31

Table S2 Welch's t-test results regarding electrophysiological properties of Neurons cultured on each substrate with 95% confidence interval (CI).

	NWs/Petri dish				NWs/Planar Al ₂ O ₃				Planar Al ₂ O ₃ /Petri dish	
	Ordered NWs		Random NWs		Ordered NWs		Random NWs		T value	95% CI
	T value	95% CI	T value	95% CI	T value	95% CI	t value	95% CI	T value	95% CI
<i>V</i> _{rest}	-0.65	2.31	-0.35	2.36	0.00	2.31	0.20	2.31	-0.54	2.36
<i>C</i> _{mem}	1.26	2.31	1.10	2.36	1.98	2.31	1.75	2.31	-0.84	2.31
<i>t</i> _{mem}	-1.38	2.31	-1.79	2.57	-0.62	2.45	-1.23	2.31	-0.11	2.57