Supplementary Figure 1. Schematic illustration of the experimental design. The sperm of the eight males were incubated (+37°C) in the follicular fluid of 10 women (n = 80 independent male-female combinations) for five hours. Each of these male-female combinations consisted two replicate samples (A+B: orange boxes) and within both of these replicates we measured motility, acrosome reaction and viability of sperm in two independent sub-samples (1+2: blue boxes). Sperm motility was measured in four different time points (0.5, 1.5, 3 and 5 hours after the initiation of the follicular fluid treatment). Sperm acrosome reaction and viability were measured after the 5 h follicular fluid incubation. Red arrows show the order of the sperm measurements.

Table S1. Linear mixed model statistics for the effect of male, female and male-female interaction on sperm swimming velocity (VCL) in four different time points (30-300 min after the initiation of follicular fluid treatment).

Effects	30 min				90 min				180 min				300 min			
Random	χ^2	d.f.	*P*-value	% var	χ^2	d.f.	*P*-value	% var	χ^2	d.f.	*P*-value	% var	χ^2	d.f.	*P*-value	% var
Male	197.2	1	**< 0.001**	80.81	160.3	1	**< 0.001**	79.06	48.2	1	**< 0.001**	38.51	46.9	1	**< 0.001**	29.28
Female	37.8	1	**< 0.001**	3.83	11.4	1	**< 0.001**	2.24	2.80	1	0.09	3.38	0.84	1	0.36	1.29
M × F	0.03	1	0.87	0.1	1.57	1	0.21	1.21	37.4	1	**< 0.001**	15.75	23.3	1	**< 0.001**	11.14
Residual				11.50				17.48				30.68				30.74
Fixed	*t*	d.f.	*P*-value	% var	*t*	d.f.	*P*-value	% var	*t*	d.f	*P*-value	% var	*t*	d.f.	*P*-value	% var
Intercept	20.52	7.581	**< 0.001**		25.66	7.39	**< 0.001**		31.48	8.14	**< 0.001**		24.80	7.775	**< 0.001**	
Replicate	10.30	239.0	**< 0.001**	3.8	-0.33	239.0	0.75	< 0.1	-11.01	-11.01	**< 0.001**	11.7	-16.91	239.0	**< 0.001**	27.6

Table S2. Linear mixed model statistics for the effect of male, female and male-female interaction on sperm hyperactivation in four different time points (30-300 min after the initiation of follicular fluid treatment).

Effects	30 min				90 min				180 min				300 min			
Random	χ^2	d.f.	*P*-value	% var	χ^2	d.f.	*P*-value	% var	χ^2	d.f	*P*-value	% var	χ^2	d.f.	*P*-value	% var
Male	161.9	1	**< 0.001**	70.66	98.7	1	**< 0.001**	56.83	27.9	1	**< 0.001**	24.16	42.6	1	**< 0.001**	24.90
Female	32.2	1	**< 0.001**	4.88	4.90	1	**0.03**	2.46	1.83	1	0.18	3.05	6.39	1	**0.01**	4.52
M × F	0.00	1	1.0	0.0	1.24	1	0.27	2.28	38.2	1	**< 0.001**	18.80	13.8	1	**< 0.001**	8.88
Residual				20.25				37.43				35.99				35.11
Fixed	*t*	d.f.	*P*-value	% var	*t*	d.f.	*P*-value	% var	*t*	d.f.	*P*-value	% var	*t*	d.f.	*P*-value	% var
Intercept	10.33	7.87	**< 0.001**		15.85	7.70	**< 0.001**		14.83	8.58	**< 0.001**		7.80	9.26	**< 0.001**	
Replicate	8.15	302.0	**< 0.001**	4.2	-2.92	239.0	**0.004**	1.0	-12.63	239.0	**< 0.001**	18.0	-15.54	239.0	**< 0.001**	26.6