Table S1. Sperm motility before treatment with swim-up (Before SU) and after sperm selection by swim-up method with different protein supplementation: 1 mg/mL BSA (1BSA), 1% v/v pOF (1pOF), 1 mg/mL BSA + 1% v/v pOF (1BSA-1pOF) and 5 mg/mL BSA (5BSA). Samples were measured by computer assisted semen analysis (CASA) and expressed as mean ± SEM. Curvilinear velocity (VCL, mm/s), straight-line velocity (VSL, mm/s), average path velocity (VAP, mm/s), linearity of the curvilinear trajectory (LIN, ratio of VSL/ VCL, %), straightness (STR, ratio of VSL/VAP, %), wobble of the curvilinear trajectory (WOB, ratio of VAP/VCL, %), amplitude of lateral head displacement (ALH, mm) and beat cross-frequency (BCF, Hz).

Group	N	Progressive motility (%)	VCL (μm s^{-1})	VSL (μm s^{-1})	VAP (μm s^{-1})	LIN (%)	STR (%)	WOB (%)	ALH (μm)	BCF (Hz)
Before SU	18	49.89 ±4.41 [a]	67.91 ± 2.99 [ab]	21.58 ± 1.51 [a]	38.80 ± 1.89 [a]	33.51 ± 1.86 [a]	55.51 ± 1.75 [a]	56.88 ± 1.38 [a]	2.81 ± 0.10 [ab]	6.57 ± 0.23 [ab]
1BSA	18	51.22 ±3.23 [a]	75.53 ± 3.63 [ac]	44.88 ± 3.47 [b]	53.44 ± 3.19 [b]	54.64 ± 2.93 [b]	75.00 ± 2.16 [b]	69.22 ± 2.10 [b]	2.92 ± 0.12 [ab]	6.47 ± 0.24 [ab]
1pOF	18	34.96 ±4.76 [b]	59.28 ± 5.40 [b]	32.71 ± 2.50 [a]	39.18 ± 3.09 [a]	54.66 ± 2.60 [b]	77.49 ± 1.76 [b]	67.05 ± 1.91 [b]	2.54 ± 0.21 [a]	5.86 ± 0.22 [a]
1BSA-pOF	18	55.50 ± 2.84 [ac]	75.34 ± 3.13 [ac]	44.86 ± 2.50 [b]	53.86 ± 2.30 [b]	55.18 ± 2.84 [b]	74.04 ± 2.43 [b]	69.88 ± 1.62 [b]	2.93 ± 0.14 [ab]	6.47 ± 0.14 [ab]
5BSA	18	66.39 ± 1.94 [c]	87.79 ± 3.08 [c]	54.62 ± 3.44 [b]	65.95 ± 3.21 [c]	56.98 ± 2.42 [b]	74.28 ± 2.00 [b]	72.98 ± 1.61 [b]	3.13 ± 0.09 [b]	7.18 ± 0.18 [b]
P-value		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01

[a–c] Values in the same column with different superscripts are significantly different (*p* < 0.05). N, number of samples.

Table S2. Summary of sperm motility parameters derived from cluster analysis motility of spermatozoa selected by swim-up method with different protein supplementation: 1 mg/mL BSA (1BSA), 1% v/v pOF (1pOF), 1 mg/mL BSA + 1% v/v pOF (1BSA-1pOF) and 5 mg/mL BSA (5BSA). Cluster assay is based in VAP, VSL, BCF and ALH valued obtained by computer assisted semen analysis and expressed as mean ± SEM. Curvilinear velocity (VCL, mm/s), straight-line velocity (VSL, mm/s), average path velocity (VAP, mm/s), linearity of the curvilinear trajectory (LIN, ratio of VSL/ VCL, %), straightness (STR, ratio of VSL/VAP, %), wobble of the curvilinear trajectory (WOB, ratio of VAP/VCL, %), amplitude of lateral head displacement (ALH, mm) and beat cross-frequency (BCF, Hz).

Group	N	VCL (μm s^{-1})	VSL (μm s^{-1})	VAP (μm s^{-1})	LIN (%)	STR (%)	WOB (%)	ALH (μm)	BCF (Hz)
Slow no progressive	2601	43.12 ± 0.43 [a]	11.12 ± 0.14 [a]	22.33 ± 0.17 [a]	29.60 ± 0.41 [a]	50.56 ± 0.54 [a]	55.98 ± 0.34 [a]	2.17 ± 0.02 [a]	4.90 ± 0.04 [a]
Medium no progressive	2006	81.04 ± 0.67 [b]	33.75 ± 0.26 [b]	51.06 ± 0.27 [b]	47.83 ± 0.52 [b]	68.99 ± 0.57 [b]	67.38 ± 0.35 [b]	3.34 ± 0.03 [b]	7.31 ± 0.05 [b]
Medium progressive	1439	103.09 ± 0.62 [c]	66.12 ± 0.31 [c]	74.42 ± 0.29 [c]	67.18 ± 0.46 [c]	88.88 ± 0.36 [c]	74.38 ± 0.34 [c]	3.79 ± 0.03 [c]	8.37 ± 0.07 [c]
Fast progressive	699	130.18 ± 0.68 [d]	106.73 ± 0.58 [d]	107.63 ± 0.51 [d]	82.49 ± 0.39 [d]	97.09 ± 0.18 [d]	83.25 ± 0.31 [d]	3.94 ± 0.04 [d]	9.20 ± 0.09 [d]
P-value		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

[a–d] Values in the same column with different superscripts are significantly different (*p* < 0.05). N, number of spermatozoa analyzed per group.