

Table 1. IUI Case trials done in Libya May 2018 by Dr. Salem Shalaweh (PhD) & Dr.Chalia Milad (M.D. Obs & Gynae)

	PRE NP TREATMENT COUNT	Pre NP Total Motile Ratio	Pre NP Progressive Motility	Pre NP Normal Forms (Verified by staining)	After Dilution & NP Treatment Count	After NP Treatment Total Motile Count	After NP Progressive Motility	After NP Normal Forms (Verified by staining)	Infection Post IUI Procedure	Pregnancy Outcome
Case 1	150	70	0	10	4	95	60	30	No	+ve
Case 2	40	75	0	10	5	100	70	20	No	-ve
Case 3	40	20	0	5	4	80	15	10	No	-ve
Case 4	60	70	0	5	5	80	5	7	No	+ve
Case 5	35	70	5	3	4	95	35	15	No	-ve
Case 6	50	75	10	2	5	85	15	20	No	-ve

Table 3. Study of Effectiveness of Nano Particles on Pregnancy Rate–80 Participants (refer to Table 2 below.)

	Sperm Processing Method			
	Clemente Nano Particles (n=80) %	Contr Density Gradient (n=80) %	Odds Ratio (95% CI)	P value
Fertilization rate 2PN oocytes injected Mill oocytes (%)	452/683 (66%)	492/724 (68%)	0.92 (0.74 - 1.15)	0.48
Cleavage rate Cleaved Embryos/ fertilized oocytes (%)	449/452 (99%)	478/492 (97%)	4.38 (1.25 - 15.36)	0.0118
Top Quality Day 3 Embryos/fertilized oocytes (%)	391/452 (87%)	347/492 (97%)	2.68 (1.92 - 3.73)	< 0.0001
Compaction rate Compacted Day 3 Embryos/fertilized oocytes (%)	287/452 (63%)	117/492 (28%)	5.58 (4.20 - 7.39)	< 0.0001
Blastocyst formation rate Blastocysts/ fertilized oocytes (%)	352/452 (78%)	322/492 (65%)	1.88 (1.41 - 2.52)	< 0.0001
High quality blastocysts from fertilized Embryos (%)	319/452 (71%)	138/492 (28%)	6.15 (4.64 - 8.16)	< 0.0001
Cryopreservation rate: Vitrified blastocysts / fertilized Embryos (%)	290 / 452 (64%)	245 / 492 (50%)	1.80 (1.39 - 2.34)	< 0.0001
DNA Fragmentation method of testing	DNA Fragmentation tested by Halo Technology	DNA Fragmentation tested by Halo Technology		
DFI mean / processing method	6.982 ± 2.05	15.69 ± 3.07		< .0001

Table 2. Patient Demographics for Nano Particle Study of 80 Participants (refer to Table 3 above.)

Age (years)	28.55 ± 0.74
BMI (kg/m2)	28.7 ± 0.86
Duration of infertility (years)	5.82 ± 0.37
Basal FSH (IU/L)	5.80 ± 0.19
Antral Follicle count	10.2 ± 0.47
Total FSH / HMG	2321 ± 56
PCOS: n (%)	23 (29%)
Male factor: n (%)	35 (44%)
Tubal factor: n (%)	22 (27%)
No. Oocytes collected	19.82 ± 0.54
No. Mature oocytes: (mean)	17.60 ± 0.34