

A

HP138 vs HP137		HP138 vs HP136		HP137 vs HP136	
Z	-0.92686	Z	-1.61062	Z	-0.90874
P (0.05) =	0.35238	P (0.05) =	0.1074	P (0.05) =	0.36282
U	308.5	U	273.5	U	897.5

SAG 34-1h vs SAG 49.94		SAG 34-1h vs NIES144		SAG 34-1h vs SAG 34-1c		SAG 34-1h vs HP136		SAG 34-1h vs HP137	
Z	-3.30984	Z	0.66611	Z	-2.63436	Z	0.48655	Z	1.4957
P (0.05) =	0.00094	P (0.05) =	0.50286	P (0.05) =	0.00854	P (0.05) =	0.62414	P (0.05) =	0.13362
U	452	U	450	U	522	U	815	U	640

SAG 34-1c vs SAG 49.94		SAG 34-1c vs NIES144		SAG 34-1c vs HP136		SAG 34-1c vs HP137	
Z	1.08394	Z	-1.53835	Z	4.16001	Z	-4.44373
P (0.05) =	0.28014	P (0.05) =	0.12356	P (0.05) <	0.00001	P (0.05) <	0.00001
U	798.5	U	452.5	U	495	U	409.5

NIES144 vs SAG 49.94		NIES144 vs HP136		NIES144 vs HP137	
Z	-2.81729	Z	2.03801	Z	2.60012
P (0.05) <	0.00480	P (0.05) =	0.04136	P (0.05) =	0.00932
U	346.5	U	452.5	U	364.5

SAG 49.94 vs HP136		SAG 49.94 vs HP137	
Z	5.58168	Z	-5.59245
P (0.05) <	0.00001	P (0.05) <	0.00001
U	319	U	276.5

B

HP138 vs HP137		HP138 vs HP136		HP137 vs HP136	
Z	-1.20574	Z	-1.24645	Z	0.07674
P (0.05) =	0.22628	P (0.05) =	0.2113	P (0.05) =	0.93624
U	291.5	U	317	U	1000.5

SAG 34-1h vs SAG 49.94		SAG 34-1h vs NIES144		SAG 34-1h vs SAG 34-1c		SAG 34-1h vs HP136		SAG 34-1h vs HP137	
Z	4.60772	Z	-4.77154	Z	4.65115	Z	5.29346	Z	5.38935
P (0.05) <	0.00001	P (0.05) <	0.00001	P (0.05) <	0.00001	P (0.05) <	0.00001	P (0.05) <	0.00001
U	317.5	U	148	U	313	U	281.5	U	236.5

SAG 34-1c vs SAG 49.94		SAG 34-1c vs NIES144		SAG 34-1c vs HP136		SAG 34-1c vs HP137	
Z	-0.5139	Z	-1.21862	Z	1.02183	Z	-1.04076
P (0.05) =	0.61006	P (0.05) =	0.22246	P (0.05) =	0.30772	P (0.05) =	0.29834
U	864.5	U	479	U	883.5	U	803.5

NIES144 vs SAG 49.94		NIES144 vs HP136		NIES144 vs HP137	
Z	-0.68773	Z	-0.2751	Z	-0.60931
P (0.05) =	0.49020	P (0.05) =	0.77948	P (0.05) =	0.54186
U	523	U	609.5	U	529.5

SAG 49.94 vs HP136		SAG 49.94 vs HP137	
Z	0.60583	Z	-0.36275
P (0.05) =	0.54186	P (0.05) =	0.71884
U	935	U	882

Supplementary Fig. S3. Mann-Whitney U test: comparison of mean protoplast length (A) and width (B) (motile cells). Between isolate comparisons involving *Haematococcus pruvus* isolates are highlighted in yellow. p-values for statistically significant differences (p < 0.05) are presented in red; non-significant p-values for differences are presented in green.