

Supplementary information

for

Investigation of the Guinea fowl and domestic fowl hybrids as potential surrogate hosts for avian cryopreservation programmes

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Supplementary figures 1-8.: Allele sizes of hybrid, control domestic fowl and guinea fowl samples

Marker GUJ1 resulted allele 262 bp in domestic fowl (DF) and allele 241 bp; 243 bp in guinea fowl (GF). Hybrid 1 (H1) received one allele from domestic fowl (264 bp) and another from guinea fowl (243 bp). Hybrid 2 (H2) also have one allele from chicken (260 bp) and another from guinea fowl (243 bp). In case of marker GUJ87 there is allele 161 bp in domestic fowl (DF) and allele 153 bp in guinea fowl (DF) in homozygous form. Both hybrids (H1, H2) received both alleles (153 bp and 161 bp).

Figure 1: GUJ1_DF

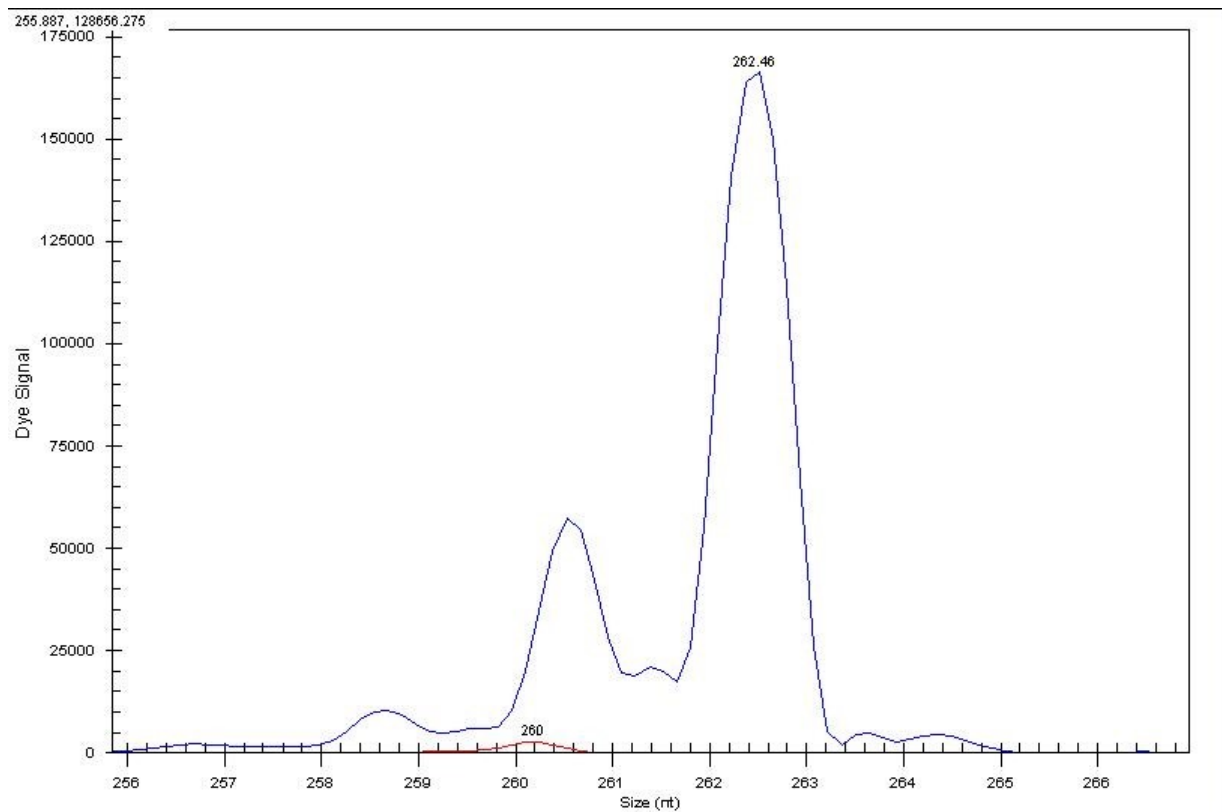


Figure 2: GUJ1_GF

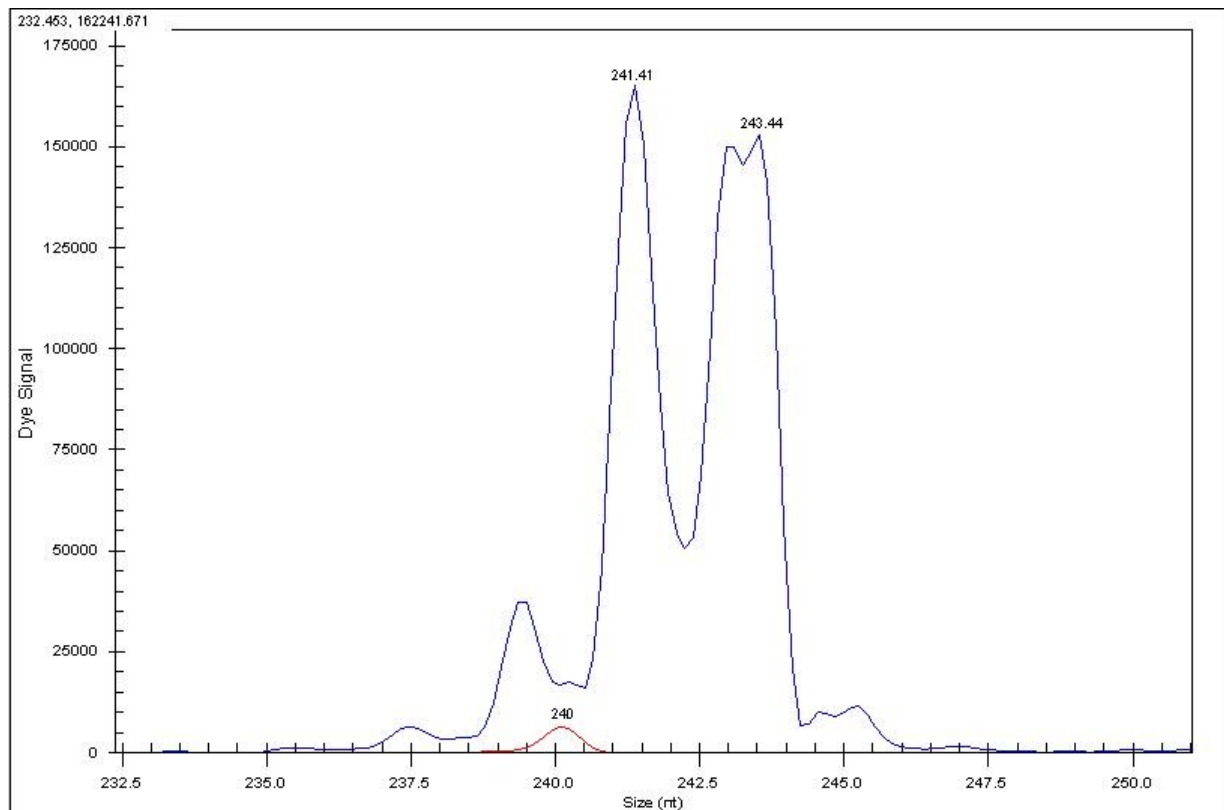


Figure 3: GUJ1_H1

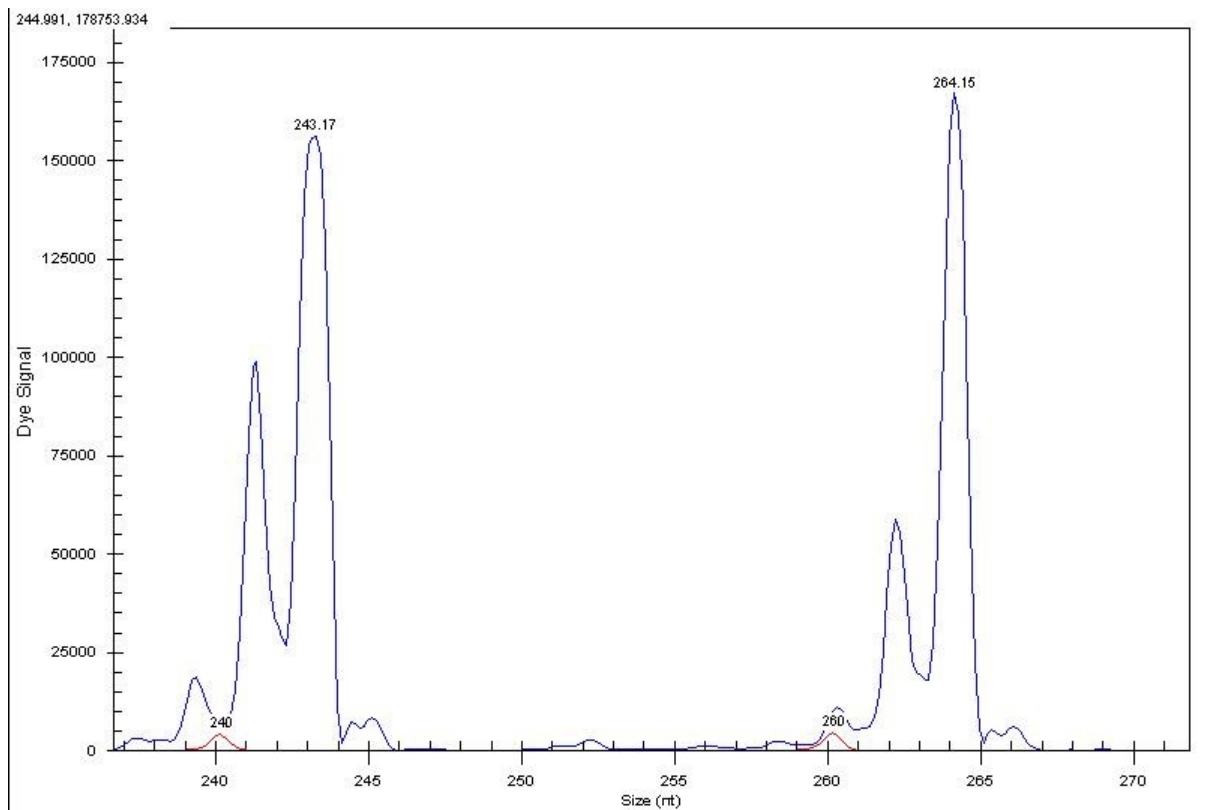


Figure 4: GUJ1_H2

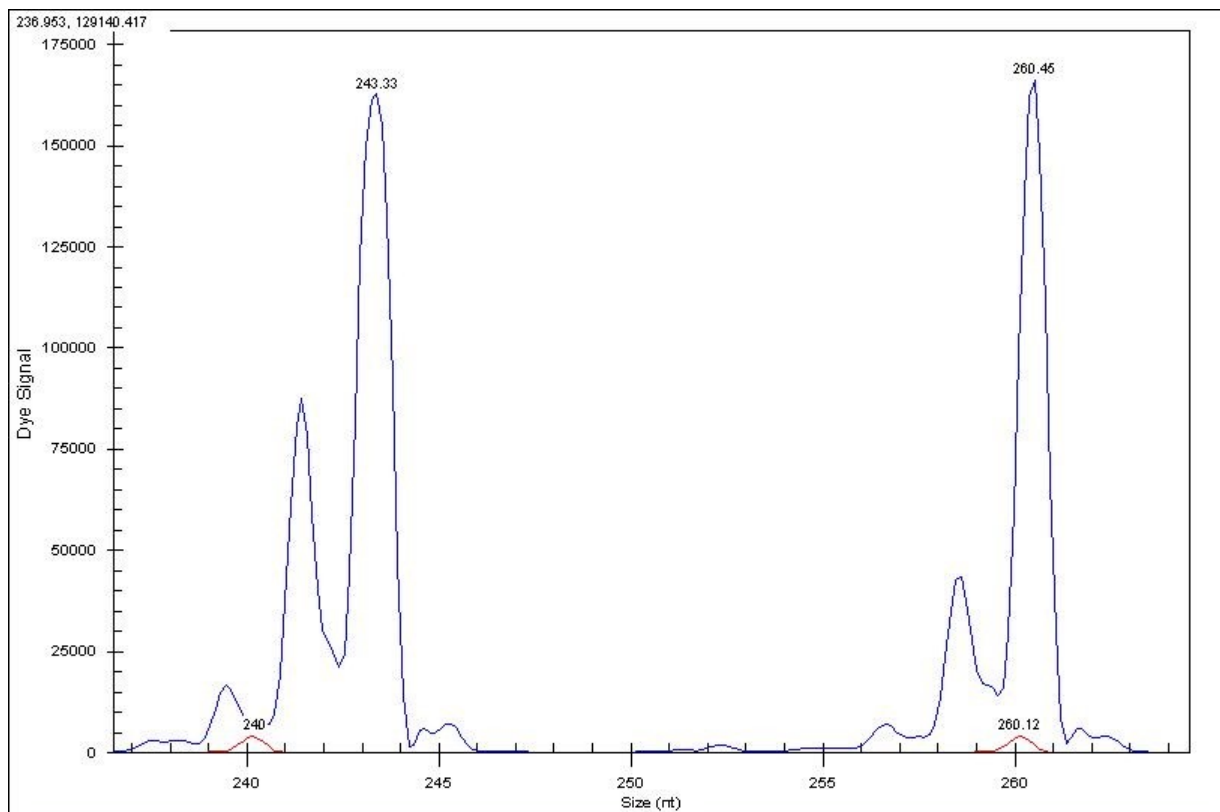


Figure 5: GUJ87_DF

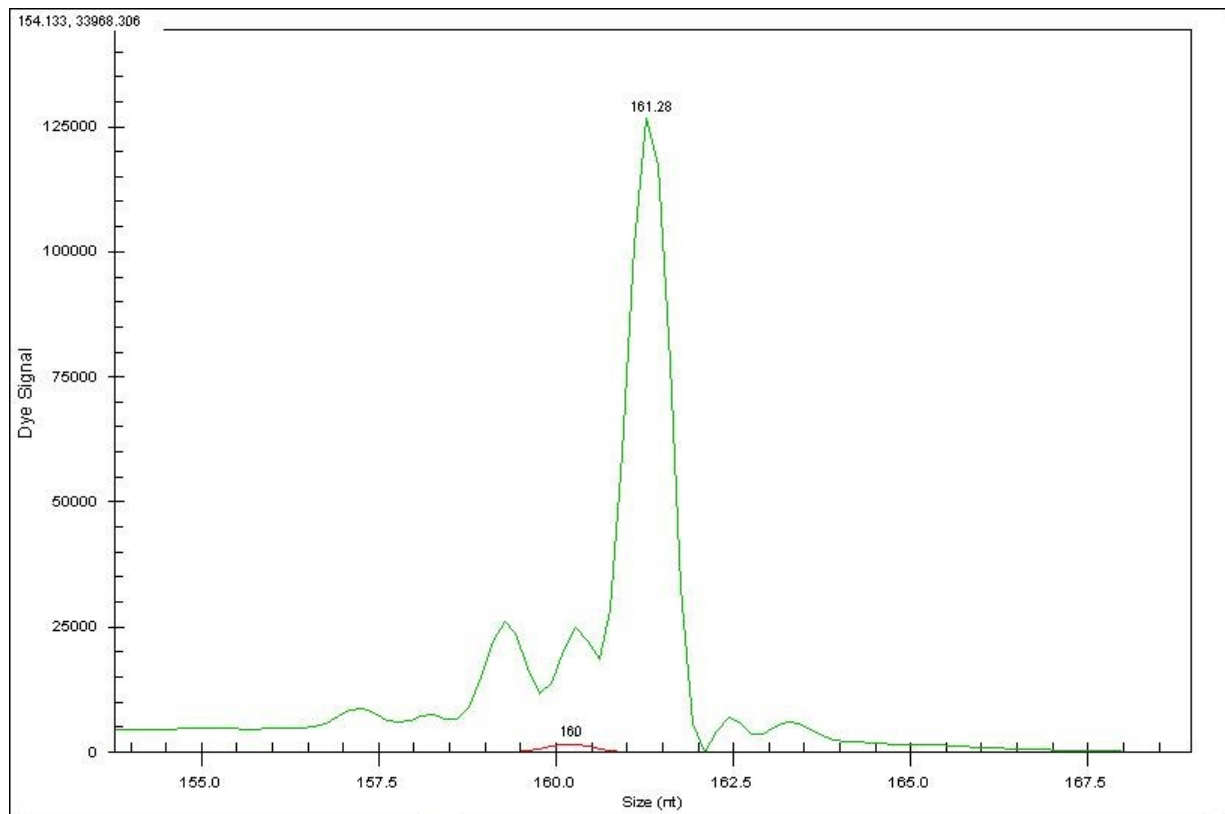


Figure 6: GUJ87_GF

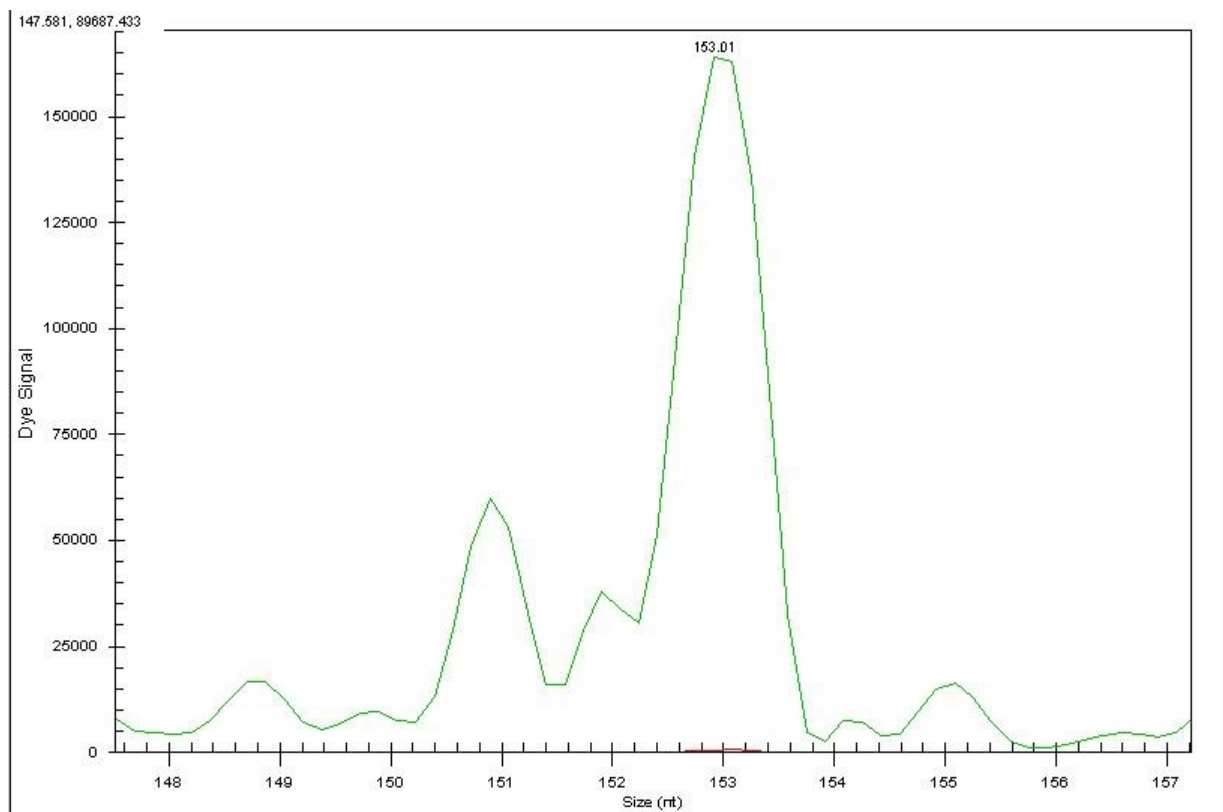


Figure 7: GUJ87_H1

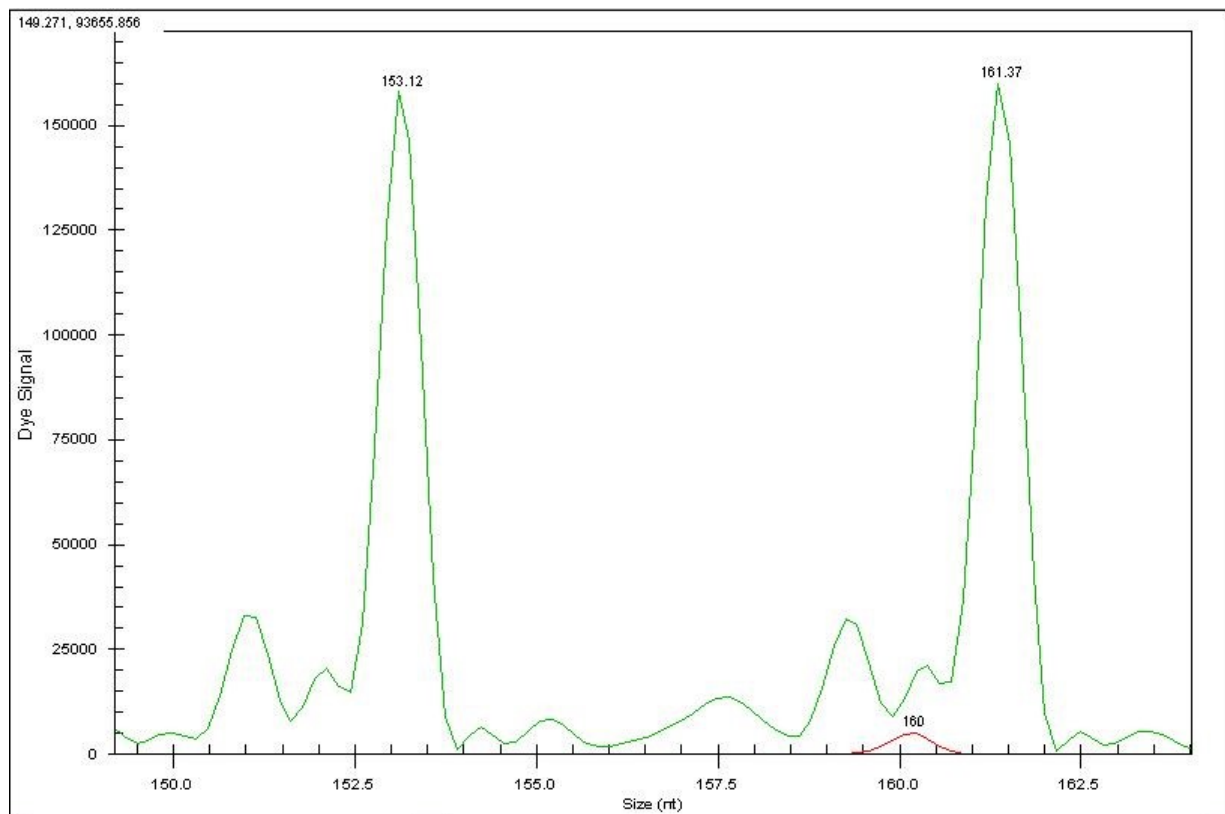


Figure 8: GUJ87_H2

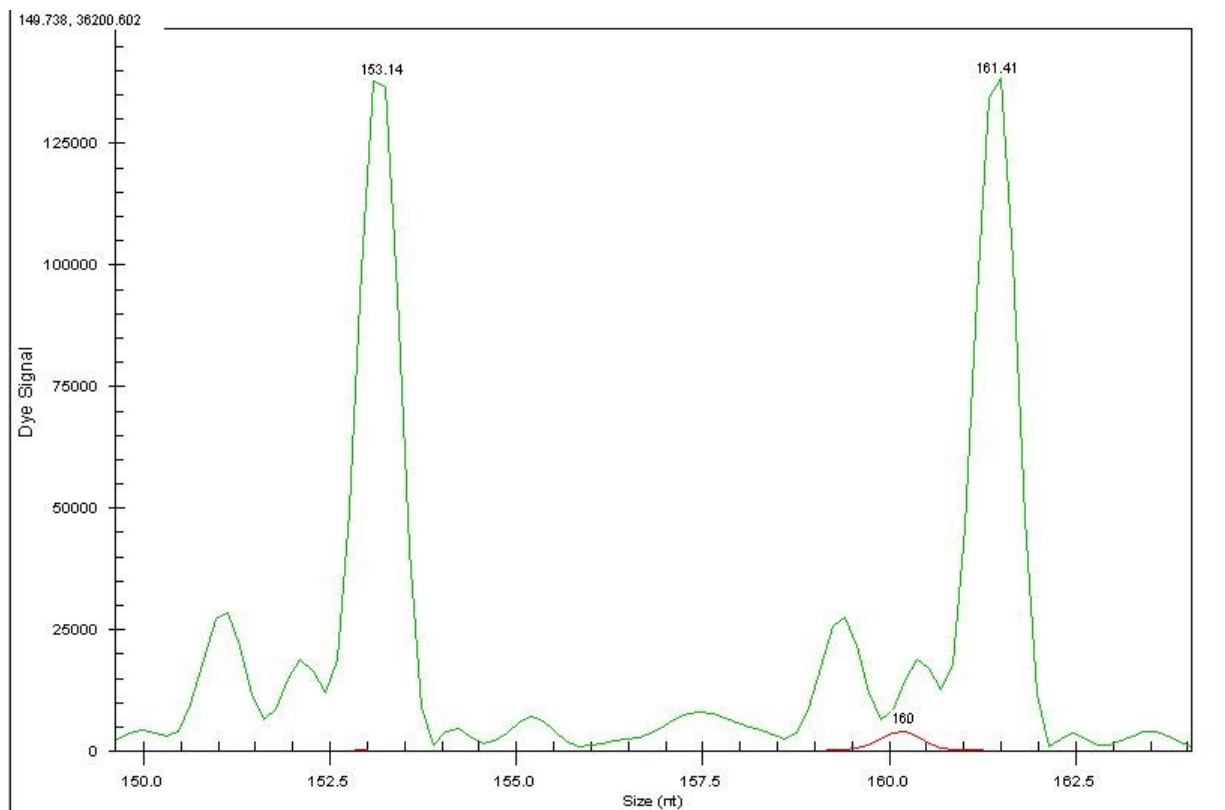
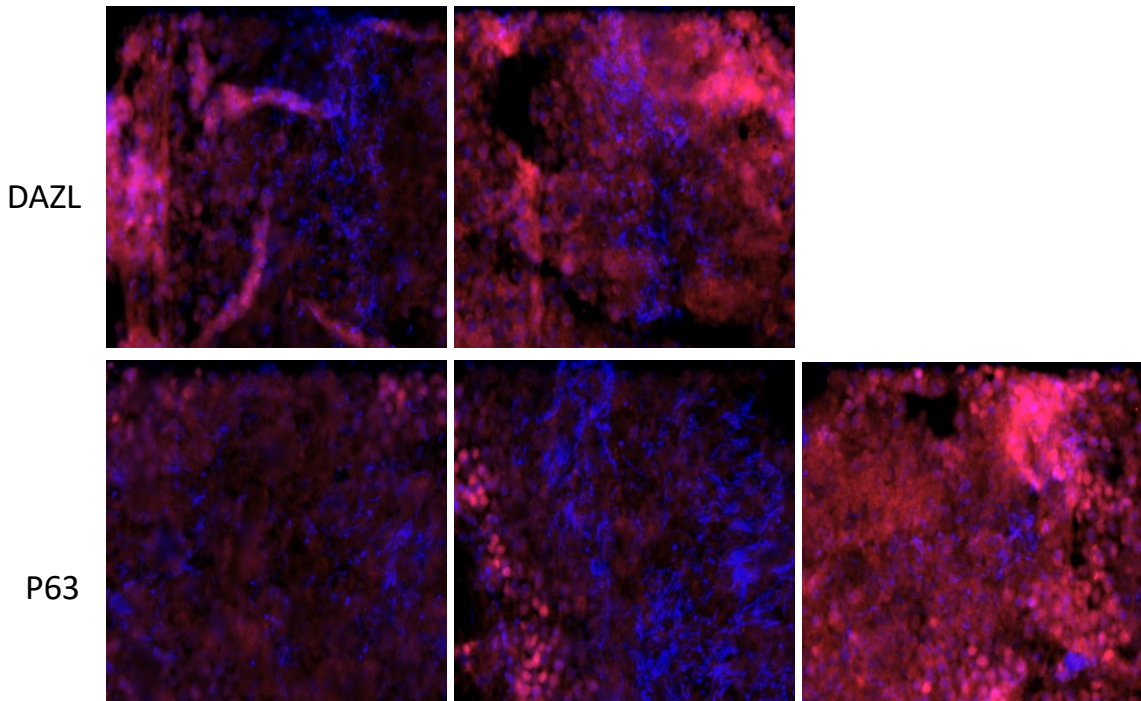
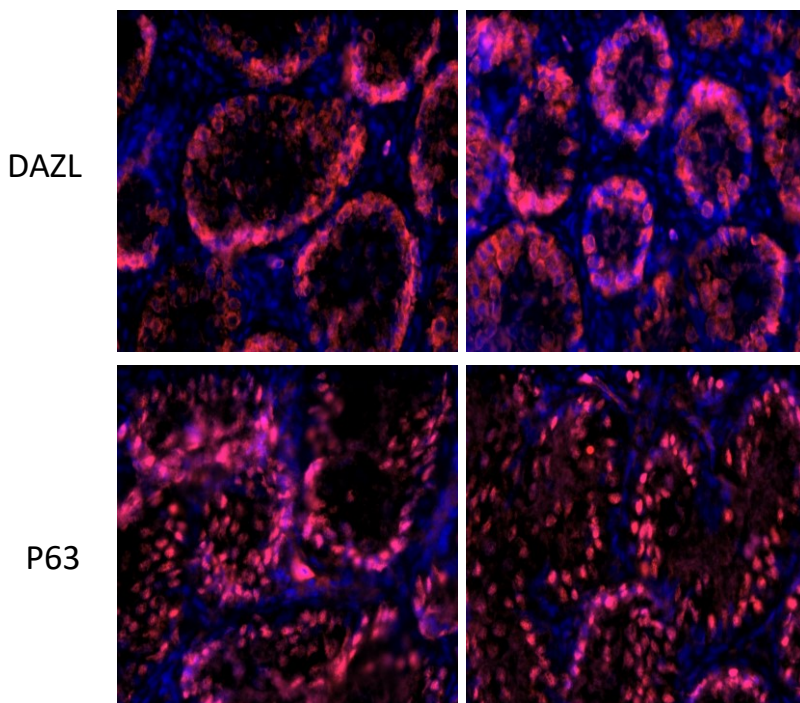


Figure 9: Examination the gonads of an adult hybrid and adult cockerel control : p63 and DAZL immunostaining. Gonad of adult Hungarian yellow cockerel control.



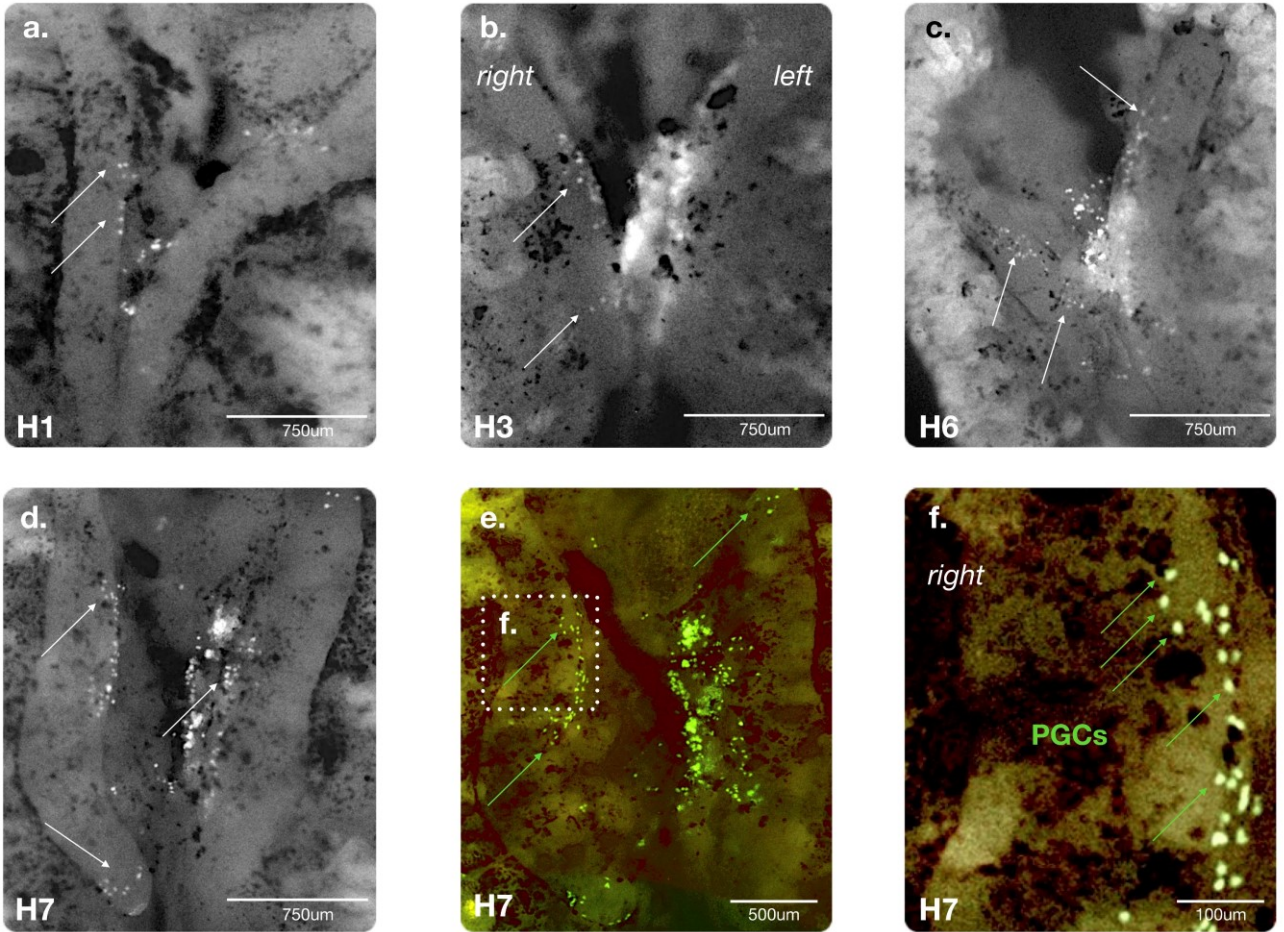
Germ cells and sperm cells are also visible

Figure 10: Examination the gonads of an adult hybrid and adult cockerel control : p63 and DAZL immunostaining. Gonad of an adult hybrid.



Hybrid's gonad looks like the immature testis.

Figure 11: GFP expressing PG cells in the gonad of hybrid recipient embryos injected with 4ZP PGCs.



Gonads of 7.5-day-old hybrid recipient embryos (H1, H3, H6, H7). The GFP expressing PGCs entered and colonized the gonads indicating that the hybrid animals might be suitable universal recipients. Arrows indicate the integrated GFP expressing 4ZP cells in the gonads of hybrid embryos. PG cells are visible in all embryonic gonads both in the right and the left gonads.

a.: Gonads of H1 hybrid (scale bar: 750 μ m); b.: Gonads of H3 hybrid (scale bar: 750 μ m); c.: Gonads of H6 hybrid (scale bar: 750 μ m); d.: Gonads of H7 hybrid (scale bar: 750 μ m); e.: Gonads of H7 hybrid, green arrows indicate the integrated GFP-expressing PGCs into the gonads (scale bar: 500 μ m); f.: Right gonad of the H7 hybrid (scale bar: 100 μ m)

a., b., c., d: bright field images; e., f: fluorescent images