Optimization of the timing for effective gene transduction into the chicken gonads.

To determine the best timing of viral injection for the expression and transduction of a transgene in the gonads, a viral solution was injected into chicken embryos at various stages of development after incubation for 50–60 h (stages 14–17).

The left panel shows embryonic developmental stage at the time of viral injection which was determined by microscopically assessing their size and shape; upper left, stage 14; upper right, stage 15; lower left, stage 16; lower right, stage 17.

The right panel shows the expression of LacZ in gonads isolated from manipulated embryos (just before hatching) after injecting a retroviral vector carrying LacZ gene at stage 15; upper, testis (L); middle, testis (R); lower, ovary.