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**Transgenic avian as a transgenic bioreactor for production of recombinant proteins.**

To generate genetically manipulated quails having ability to produce recombinant proteins, concentrated retroviral vector was injected into quail embryo. The figure shows the expression of *LacZ* in quail embryos to which viral vector carrying *LacZ* gene were injected at the following various incubation times; top left, 0 h; top right, 24 h; down left, 36 h; down right, 48 h. *LacZ* was expressed in the whole body of embryos injected at 48 h incubation (down right).

The anti-prion scFv-Fc gene was also expressed in serum and egg white of the injected quail embryos. This system exhibits the potential of transgenic quails for the commercial production of recombinant protein.

Related article: Kawabe, Y., Kamihira, M., Ono, K., Kyogoku, K., Nishijima, K., and Iijima, S., "Production of scFv-Fc fusion protein using genetically manipulated quails", *J. Biosci. Bioeng.*, vol. 102, 297-303 (2006).

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