

Supplementary Material

Assessment of avian sperm DNA fragmentation using the sperm chromatin dispersion assay

Stephen D. Johnston^{A,E}, Carmen López-Fernández^B, Eloise Pappin^A, Alexandra Hampe^C, Robert Doneley^D, Michael Lierz^C and Jaime Gosálvez^B

^ASchool of Agriculture and Food Sciences, The University of Queensland, Gatton, Qld 4343, Australia.

^BGenetics Unit, Department of Biology, Autonomous University of Madrid, 28049, Cantoblanco
Madrid, Spain.

^CDepartment of Veterinary Medicine, Justus Liebig University, Giessen, 35392, Germany.

^DSchool of Veterinary Science, The University of Queensland, Gatton, Qld 4343, Australia.

^ECorresponding author. Email: s.johnston1@uq.edu.au

Table S1. Post-thaw SDF (%) for 6X rooster ejaculates at 0, 2, 5 and 24 h, incubation at 37°C analysed with the sperm chromatin dispersion test

| Rooster DNA dynamics after SCDt | T0 | T2 | T5 | T24 |
|--|-----------------|----------------|----------------|-------------|
| RK | 74.7 | 100 | 100 | 100 |
| RL | 37 | 65.6 | 81.7 | 100 |
| RH1 | 69.8 | 100 | 100 | 100 |
| RH2 | 62.3 | 87 | 100 | 100 |
| RB1 | 22 | 44.7 | 87.7 | 100 |
| RB2 | 9.7 | 88.3 | 100 | 100 |
| Mean \pm s.e.m. | 45.9 \pm 11.0 | 80.9 \pm 8.9 | 94.9 \pm 3.3 | 100 \pm 0 |

Table S2. Post-thaw SDF (%) for 6X turkey ejaculates at 0, 2, 5 and 24 h, incubation at 37°C analysed with the sperm chromatin dispersion test

| Turkey DNA dynamics after SCDt | T0 | T2 | T5 | T24 |
|---------------------------------------|---------------|-----------------|-----------------|-------------|
| T1 | 5.3 | 78.3 | 100 | 100 |
| T2 | 24.3 | 30.6 | 66.7 | 100 |
| T3 | 4.7 | 17.3 | 37 | 100 |
| T4 | 3 | 7 | 85.3 | 100 |
| T5 | 0.3 | 3.3 | 32 | 100 |
| T6 | 2 | 7.3 | 34.7 | 100 |
| Mean \pm s.e.m. | 6.6 \pm 3.6 | 24.0 \pm 11.6 | 59.3 \pm 11.9 | 100 \pm 0 |

Table S3. Post-thaw SDF (%) for 2 pooled samples of cockatiel ejaculates at 0, 2, 5, and 24 h, incubation at 37°C analysed with the sperm chromatin dispersion test

| Cockatiel DNA dynamics after SCDt | T0 | T2 | T5 | T24 |
|--|--------------|--------------|----------------|-------------|
| C1 | 9 | 15 | 49 | 100 |
| C2 | 27 | 31 | 39.3 | 100 |
| Mean \pm s.e.m. | 18 \pm 5.2 | 23 \pm 4.6 | 44.2 \pm 2.8 | 100 \pm 0 |