

Supplementary Figure 1. Photomicrographs of liquid-preserved boar sperm. (E-H) Images obtained under phase contrast microscope and were the same images as (A-D), respectively. (A) Image obtained by SYBR-14/PI. White arrow indicates membrane integrity, which was only stained with SYBR-14; blue arrow indicates membrane damaged, which was just stained with PI; yellow arrow indicates a slightly broken membrane, which was stained with SYBR-14 and PI. (B) Image obtained by FITC-PNA. White arrow indicates intact acrosome, sperm with intensely bright fluorescence of the acrosomal cap was represented by an intact outer acrosomal membrane; blue arrow indicates partially damaged acrosome, sperm with disrupted fluorescence of the acrosomal cap was represented by partial disruption of the acrosomal membrane. (C, D) Images obtained by fluorescence probe JC-1. Sperm with high mitochondrial membrane potentials (C) and low mitochondrial membrane potentials (D). Scale bars represent 15 μm.