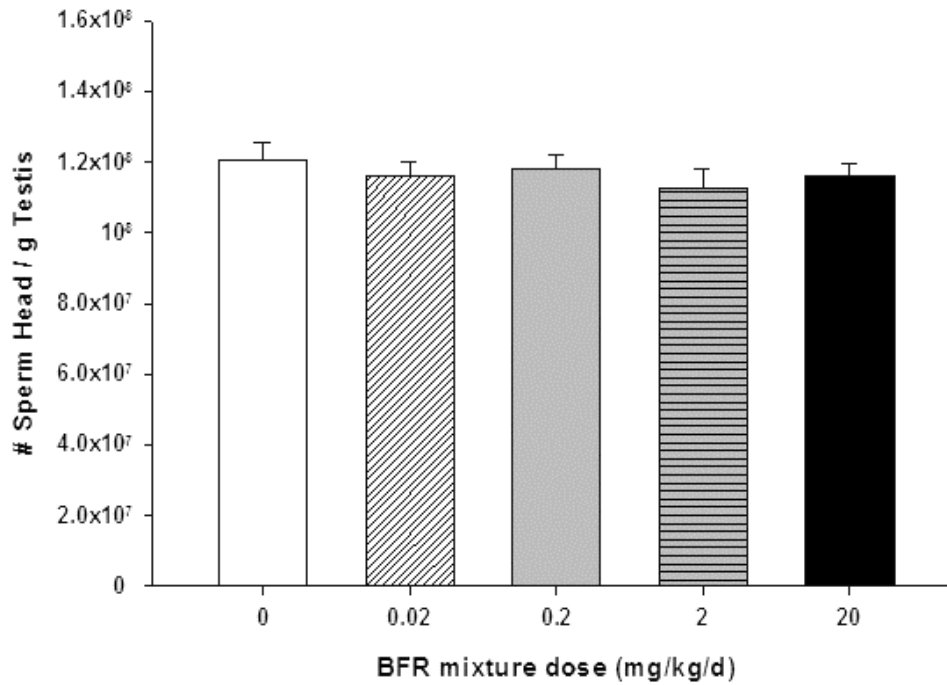


**Supplementary Fig. 1**

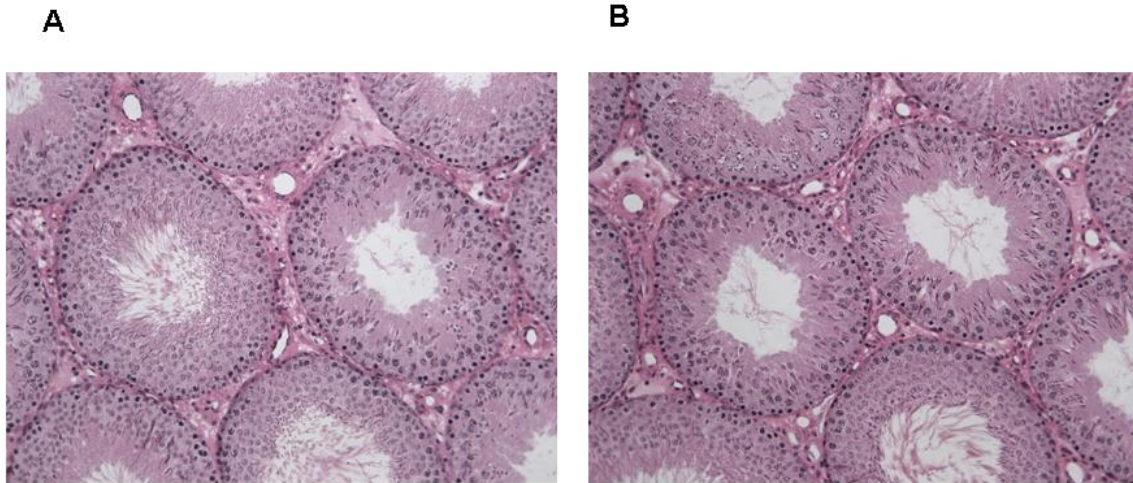
Absolute body weights and weekly food intake of rats fed the control or BFR mixture over the course of a 70-day treatment. During the course of the treatment, (A) rats and (B) food were weighed on a weekly basis. Values are expressed as mean  $\pm$  SEM (n = 14-15/group).



**Supplementary Fig. 2**

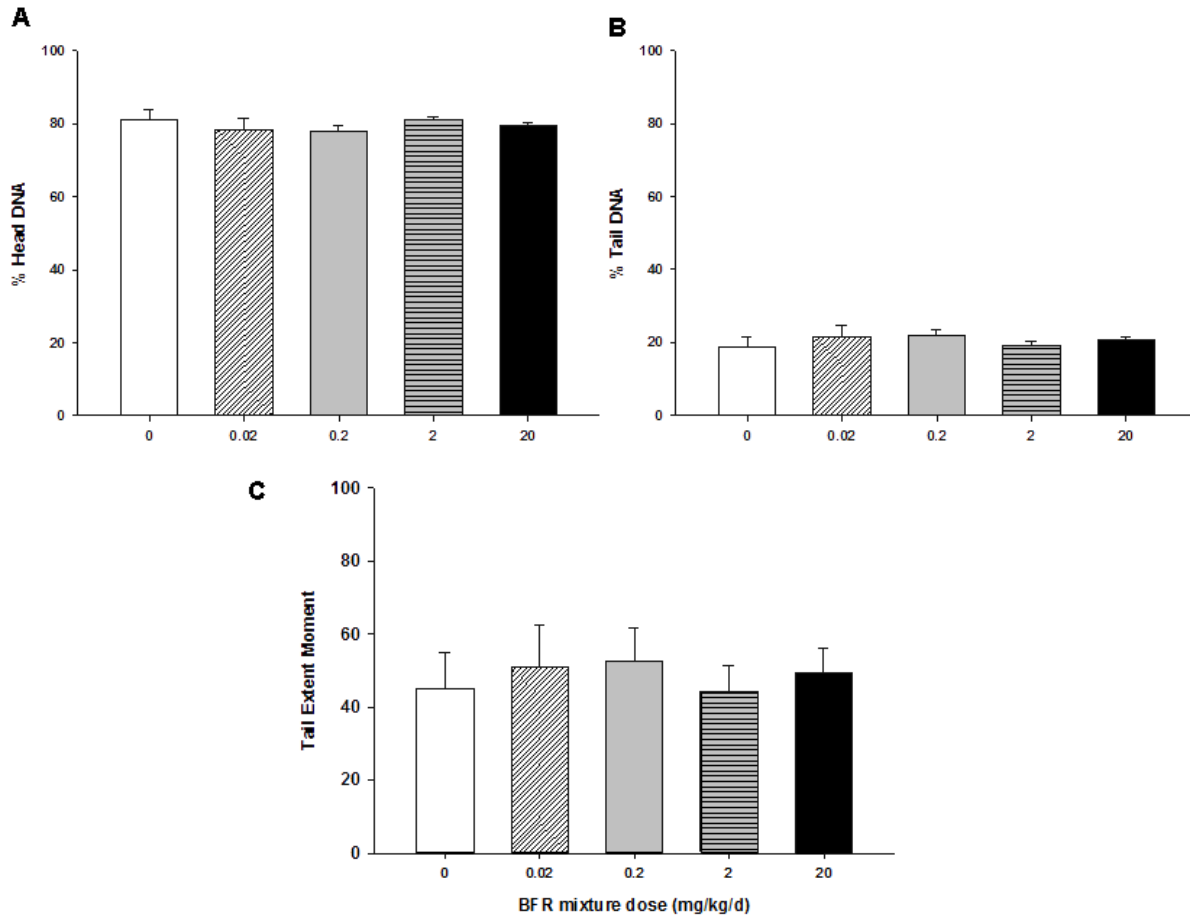
Testicular sperm counts in control and BFR-treated males. A portion of the left testis was thawed, weighed and homogenized. Spermatozoa heads were counted with a hemocytometer.

Values are expressed as mean ± SEM (n = 10/group.)



**Supplementary Fig. 3**

Effects of BFR exposure on testicular morphology. Light micrographs showing sections of testes of BFR-treated rats stained with hematoxylin and eosin. Testis sections from **(A)** control (0) and **(B)** 20 mg/kg/d-treated rats. Original magnification X20.

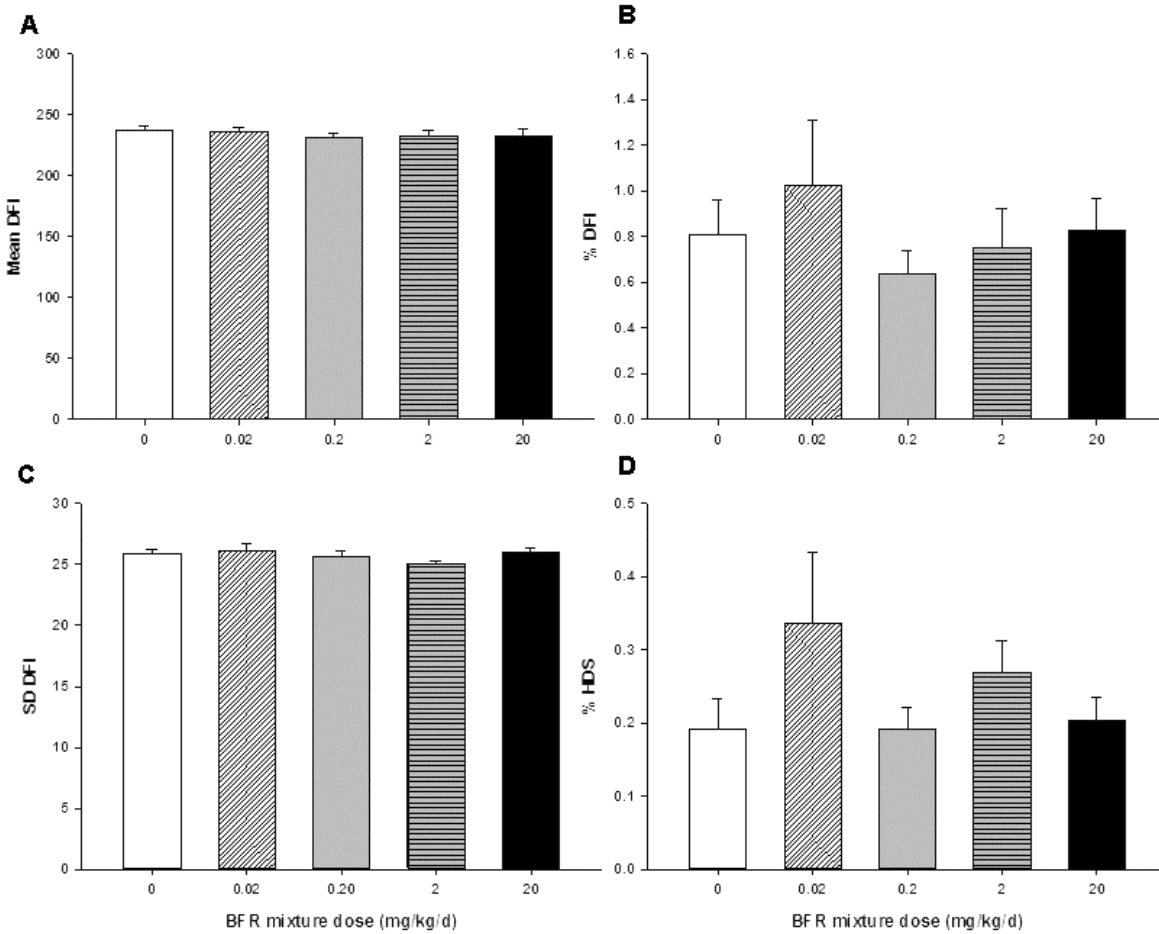


#### Supplementary Fig. 4

Effects of BFR exposure on DNA strand breaks as determined by the COMET assay.

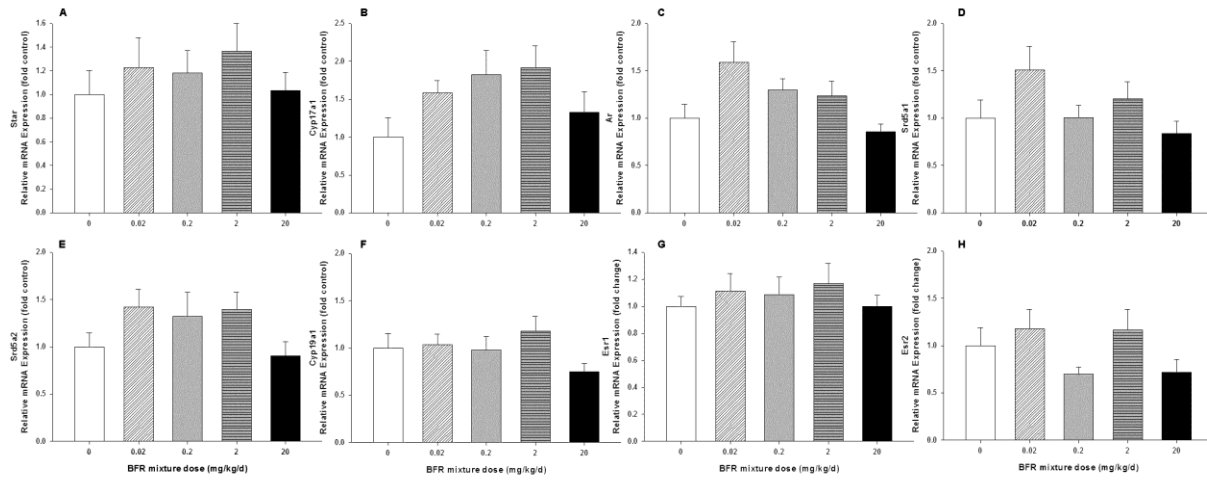
Spermatozoa were collected from the cauda epididymis of control and BFR-treated males.

Values for (A) % tail DNA, (B) tail length and (C) tail extent moment are expressed as mean  $\pm$  SEM (n = 5/group).



### Supplementary Fig. 5

Effects of BFR exposure on chromatin structure in spermatozoa as determined by the AO assay (SCSA<sup>®</sup>). Spermatozoa were collected from the cauda epididymides following of control and BFR-treated males. Values for mean (A) DNA fragmentation index (DFI), which represents the mean fluorescence observed in the population, (B) standard deviation (SD) of DFI, a reflection of the width of the sample population, (C) % DFI and (D) % high DNA staining (HDS) are expressed as mean  $\pm$  SEM (n = 5/group).



### Supplementary Fig. 6

Relative mRNA expression in testes of control and BFR-treated males. (A) Star, (B) Cyp17a1, (C) Ar, (D) Srd5a1, (E) Srd5a2, (F) Cyp19a1, (G) Esr1 and (H) Esr2. Values are expressed as mean  $\pm$  SEM (n = 9-10/group)