Supplementary data

**Table S1: Body weight, weight of reproductive organs, anogenital distance and testosterone level from animals at PND 29 treated during childhood.**

|  |  |  |
| --- | --- | --- |
| Parameters | CTRc [10] | TOPc [10] |
| Body weight (g) | 61.90± 1.07 | 62.14 ± 1.11 |
| Testis (g) | 0.25 ± 0.01 | 0.23 ± 0.01 |
| Epididymis (mg) | 34.60 ± 2.20 | 32.70 ± 2.25 |
| Prostate | 33.40 ± 2.10 | 31.70± 3.10 |
| AGD (mm/g1/3) | 15.70 ± 0.39 | 15.59 ± 0.45 |
| Testosterone (ng/dl) | 4.66 ± 1.19 | 3.01 ± 0.46 |

The data were analyzed by Student’s t-test and are means ± SEM (p > 0.05). Numbers in brackets represent the number of animals/group. CTRc: Received water, by gavage during childhood. TOPc: Received TOP 41 mg/kg/day during childhood.

**Table S2: Morphology, motility and sperm count in the vas deferens of animals at PND 120 treated during childhood.**

|  |  |  |
| --- | --- | --- |
| Parameters | CTRc [9] | TOPc [9] |
| Abnormal head morphology sperm (%) | 8.02 ± 0.55 | 10.52 ± 1.70 |
| Abnormal tail morphology sperm (%) | 0.65 ± 0.23 | 0.77 ± 0.36 |
| Mobile sperm (%) | 68.20 ± 17.02 | 68.90 ± 20.64 |
| Vas deferens count(106/ml) | 61.70 ± 29.19 | 69.70 ± 37.22 |

The data of vas deferens count was analyzed by Student’s t-test and are means ± SEM (p > 0.05). The other data were analyzed by Fisher's test and are presented as a percentage. Numbers in brackets represent the number of animals/group. CTRc: Received water, by gavage during childhood. TOPc: Received TOP 41 mg/kg/Day during childhood.

**Table S3: Sperm count in the testis and epididymis of the animals at PND 120 treated during childhood.**

|  |  |  |
| --- | --- | --- |
| Parameters | CTRc [9] | TOPc [9] |
| N◦ of spermatids (106/testis) | 176.27 ± 19.44 | 199.50 ± 15.14 |
| N◦ of spermatids (106/g/testis) | 143.21 ± 16.63 | 150.30 ± 9.36 |
| Daily Sperm Production (million) | 28.89 ± 3.18 | 32.70 ± 2.48 |
| N◦ of spermatozoa x 106/caput + corpus of epididymis | 95.70 ± 9.03 | 116.12 ± 9.83 |
| N◦ of spermatozoa x106/g/caput + corpus of epididymis | 364.25 ± 29.78 | 440.44 ± 45.94 |
| N◦ of spermatozoa x 106/cauda of epididymis | 178.63 ± 16.86 | 222.80 ± 23.10 |
| N◦ of spermatozoa x 106/g/cauda of epididymis | 925.23 ± 86.61 | 980.23 ± 101.89 |
| Sperm transit time (days) through caput/corpus of epididymis | 3.77 ± 0.61 | 3.71 ± 0.44 |
| Sperm transit time through cauda of epididymis (days) | 6.73 ± 0.89 | 6.88 ± 0.64 |

The data were analyzed by Student’ t-test and are means ± SEM (p > 0.05). Numbers in brackets represent the number of animals/group. CTRc: Received water, by gavage during childhood. TOPc Received TOP 41 mg/kg/day during childhood.

**Table S4: Bodyweight, reproductive organs weight, anogenital distance, and testosterone level from animals at PND 51 treated during adolescence.**

|  |  |  |
| --- | --- | --- |
| Parameters | CTRa [10] | TOPa [10] |
| Body weight (g) | 222.21± 4.43 | 208.59 ± 5.21 |
| Testis (g) | 1.12 ± 0.03 | 1.17± 0.04 |
| Epididymis (mg) | 160.00 ± 5.00 | 178.00 ± 9.00 |
| Prostate (mg) | 114.00 ± 5.00 | 115.00 ± 8.00 |
| AGD (mm/g1/3) | 21.17 ± 0.44 | 21.38 ± 0.31 |
| Testosterone (ng/dl) | 122.44 (31.53 – 195.99) | 224.05 (32.76 – 679.70) |

The data were analyzed by Student’s t-test and are means ± SEM (p > 0.05). Testosterone was analyzed by Mann-Whitney and the data are median (1st–3rd quartile). Numbers in brackets represent the number of animals/group. CTRa: Received water, by gavage during adolescence. TOPa: Received TOP 41 mg/kg/Day, by gavage, during adolescence.

**Table S5: Body weight and reproductive organs weight from animals at PND 120 treated during adolescence.**

|  |  |  |
| --- | --- | --- |
| Parameters | CTRa [10] | TOPa [10] |
| Body weight (g) | 383.05 ± 10.63 | 363.80 ± 9.90 |
| Testis (g) | 1.66 ± 0.03 | 1.62 ± 0.04 |
| Epididymis (mg) | 0.60 ± 0.01 | 0.62 ± 0.01 |
| Prostate (g) | 0.41 ± 0.04 | 0.40 ± 0.02 |
| Seminal vesicles (g) | 1.46 ± 0.04 | 1.43 ± 0.07 |
| AGD (mm/g1/3) | 32.72 ± 2.62 | 30.78 ± 2.82 |
| Testosterone (ng/dl) | 350.95 ± 82.06 | 342.01 ± 78.67 |

The data were analyzed by Student’s t-test and are means ± SEM (p > 0.05). Numbers in brackets represent the number of animals/group. CTRa: Received water, by gavage during adolescence. TOPa: Received TOP 41 mg/kg/Day, by gavage, during adolescence.

**Table S6: Morphology, motility and sperm count in the vas deferens of animals at PND 120 treated during adolescence.**

|  |  |  |
| --- | --- | --- |
| Parameters | CTRa [9] | TOPa [9] |
| Abnormal head morphology sperm (%) | 17.44 ± 1.95  | 16.97 ± 1.82  |
| Abnormal tail morphology sperm (%) | 2.15 ± 0.41  | 2.31 ± 0.37  |
| Mobile sperm (%) | 79.50 ± 3.79  | 74.28 ± 3.07  |
| Vas deferens count (106/ml) | 19.37 ± 2.98  | 17.62 ± 1.94  |

The data of vas deferens count was analyzed by Student’s t-test and are means ± SEM (p > 0.05). The other data were analyzed by Fisher's test and are presented as a percentage. Numbers in brackets represent the number of animals/group. CTRa: Received water, by gavage during adolescence. TOPa: Received TOP 41 mg/kg/Day during adolescence.

**Table S7: Number of spermatids and daily sperm production per testis, sperm number and transit time in the epididymis of adult male rats at PND 120 treated during adolescence.**

|  |  |  |
| --- | --- | --- |
| Parameters | CTRa [9] | TOPa [9] |
| N◦ of spermatids (106/testis) | 119.22 ± 15.03 | 108.99 ± 17.00 |
| N◦ of spermatids (106/g/testis) | 92.73 ± 12.25 | 89.38 ± 14.56 |
| Daily Sperm Production (million) | 19.54 ± 2.46 | 17.86 ± 2.79 |
| N◦ of spermatozoa x 106/caput + corpus of epididymis | 78.49 ± 9.14 | 77.86 ± 10.21 |
| N◦ of spermatozoa x106/g/caput + corpus of epididymis | 311.17 ± 37.39 | 303.58 ± 36.04 |
| N◦ of spermatozoa x 106/cauda of epididymis | 188.75 ± 25.65 | 173.70 ± 27.69 |
| N◦ of spermatozoa x 106/g/cauda of epididymis | 870.85 ± 106.76 | 821.40 ± 125.73 |
| Sperm transit time (days) through caput/corpus of epididymis | 3.71 ± 0.48 | 4.29 ± 0.70 |
| Sperm transit time through cauda of epididymis (days) | 8.95 ± 1.38 | 9.63 ± 1.64 |

The data were analyzed by Student’s t-test and are means ± SEM (p > 0.05). Numbers in brackets represent the number of animals/group. CTRa: Received water. by gavage during adolescence. TOPa: Received TOP 41 mg/kg/Day during adolescence.