**Supplementary Table SI** Data from the published literature on five different species (representing two distinct spermatogonial stem cell systems) used to calculate species-specific spermatogenic turnover rates per generation.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Species** | **Number of animal/ human subjects analyzed** | **Type A Spermatogonia**  (million/testis) | **Type B Spermatogonia**  (million/testis) | **Pre-leptotene Zygotene**  (million/testis) | **Pachytene Spermatocytes**  (million/testis) | **References** |
| **Rat**  *(Rattus rattus)* | 7 | 10 | 45 | 29 | 98 | *Meachem et al. 1998* |
| **Djungarian**  **hamster**  *(Phodopus sungoru)s* | 10 | 3.8 | 13.5 | 6.5 | 55.4 | *Meachem et al. 2005* |
| **Marmoset**  (*Callithrix jacchus*) | 5 | 3.5 | 8.3 | 27.2 | 48 | *Weinbauer et al. 2001* |
| **Macaque**  (*Macaca fascicularis*) | 4 | 310 | 300 | 1100 | 1800 | *Zhengwei et al. 1998* |
| 6 | 261 | 242 | 815 | 1702 | *Zhengwei et al. 1997* |
| 9 | 334 | 192.4 | 888.6 | 3316.8 | *O’Donnell et al. 2001* |
| 19 | **301.6** | **244.8** | **934.5** | **2271.9** | **-** |
| **Human**  (*Homo sapiens)* | 5 | 656 | 123 | 470 | 1126 | *Zhengwei et al. 1998* |
| 10 | 420\* | 76.5\* | 121.5\* | 808.5\* | *Raleigh et al. 2004* |
| 5 | 431.4\*\* | 6.9\*\* | 171.8\*\* | 502.2\*\* | *Matthiesson et al. 2006* |
| 20 | **502.4** | **68.8** | **254.4** | **812** | **-** |

\* represents the transformed values from million per gram testis to million per testis, calculated using the following conversion formula: million per gram testis x average testis weight of adult human (i.e. 15 gram).

\*\* represents transformed values from million per Sertoli cell to million per testis, calculated using the following conversion formula: million per Sertoli cell x average number of Sertoli cells per testis (i.e. 407 million per testis, Ref. *Peterson et al, 2015*).

Average numbers of type A spermatogonia, type B spermatogonia, pre-leptotene-zygotene and pachytene spermatocytes obtained using the Optical Dissector approach are listed in the table. Data are from a single study (rats, Djungarian hamsters and marmosets) or multiple studies (macaques and humans): mean values for the latter are in bold text.