

Supporting Information

Galis et al. 10.1073/pnas.1401392111

SI Materials and Methods

We analyzed skeletons of 765 wild-born and 9 captive-born individuals of 90 species of 14 different mammal families held in collections of 9 European natural history museums: Naturalis Biodiversity Center, Leiden (Naturalis); The Natural History Museum, London (NNM); the Royal Museum for Central Africa, Tervuren (RMCA); the Royal Belgian Institute of Natural Sciences, Brussels (RBINS); the Natural History Museum of Denmark, Copenhagen (ZMUC); Naturhistorisches Museum Wien, Vienna (NHMW); the Swedish Museum of Natural History, Stockholm (NRM); Museum für Naturkunde, Berlin (ZMB); and the National Museum for Natural History, Paris (MNHN). To avoid the potentially confounding effects of inbreeding, we excluded mammals that were born in zoos, except for nine cheetahs (*Acinonyx jubatus*) that were included for additional information on this extremely fast species. Furthermore, we excluded individuals with major skeletal abnormalities, to exclude as much as possible individuals with marginal chances of reproduction, given that

these are not relevant for the evolution of different presacral vertebral counts. Transitional vertebrae (see below) are considered to be minor and not major skeletal abnormalities, (see ref. 1 for more information on minor and major congenital abnormalities).

Artiodactyla. We analyzed 269 skeletons of Artiodactyla including 3 Antilocapridae, 165 Bovidae, 21 Cervidae, 13 Hippopotamidae, 33 Suidae, and 34 Tragulidae ([Dataset S1](#)).

Carnivora. We analyzed 423 skeletons of Carnivora including 84 Canidae, 187 Felidae, 134 Mustelidae, and 18 Procyonidae ([Dataset S2](#)).

Afrotheria. We analyzed 49 skeletons of Afrotheria including 21 Tubulidentata and 28 Elephantidae ([Dataset S4](#)).

Monotremata. We analyzed skeletons of 33 Tachyglossidae of the Order Monotremata ([Dataset S5](#)).

1. Galis F, et al. (2006) Extreme selection in humans against homeotic transformations of cervical vertebrae. *Evolution* 60(12):2643–2654.

Other Supporting Information Files

[Dataset S1 \(XLS\)](#)

[Dataset S2 \(XLS\)](#)

[Dataset S3 \(XLS\)](#)

[Dataset S4 \(XLS\)](#)

[Dataset S5 \(XLS\)](#)