ELECTRONIC SUPPLEMENTARY INFORMATION (1)

Table S1: Instrumental settings for measurement of iron isotope ratios using a Thermo Finnigan NEPTUNE MC-ICP-MS.

Parameters	Settings
sample gas flow (l/min)	0.960-1.010
auxiliary gas flow (l/min)	0.70-0.75
cool gas flow (l/min)	15
RF power (W)	1200
sample uptake time (min)	2
acceleration voltage (V)	-10'000
number of cycles per run	20
integration time per cycle (s)	8
entrance slit resolution	medium

ELECTRONIC SUPPLEMENTARY INFORMATION (2)

Table S2: Iron isotopic composition of iron sources and tissue samples.

	IRON ISOTOPE COMPOSITION			
SAMPLE	$\delta(^{56}Fe)$		2 SD	
Iron sources during breeding				
IV ferric dextrane	+0.18	±	0.04	‰
starter diet	-0.08	±	0.18	‰
regular diet	-0.05	±	0.10	‰
Organs of the systemic iron cycle				
blood	-1.75	±	0.06	‰
liver	-0.38	±	0.04	‰
red bone marrow	-0.61	±	0.12	‰
spleen	-0.35	±	0.06	‰
Muscles				
Skeletal muscles, average	-1.51	±	0.10	‰
abdominal muscle	-1.55	±	0.08	‰
extensor (front leg)	-1.46	±	0.10	‰
fillet	-1.55	±	0.06	‰
triceps (front leg)	-1.45	±	0.06	‰
quadriceps (hind leg)	-1.56	±	0.08	‰
Smooth muscles, average	-1.61	±	0.16	‰
diaphragm	-1.68	±	0.04	‰
esophageal muscle	-1.53	±	0.08	‰
gastric muscle	-1.61	±	0.02	‰
Cardiac muscle	-1.65	±	0.08	‰
Brain				
Total brain, weighted mean	-1.52	±	0.02	‰
cerebellum	-1.50	±	0.04*	‰
brainstem part of hindbrain	-1.41	±	0.10	‰
mesencephalon	-1.44	±	0.06*	‰
neopallium	-1.52	±	0.08	‰
paleopallium&archipallium	-1.58	±	0.02*	‰
spinal cord (sample)	-1.44	±	0.02*	‰
Endocrine organs				
adrenal gland	-0.74	±	0.08	‰
ovaries	-0.98	±	0.13	‰
pancreas	-0.97	±	0.09	‰
parotid gland	-0.78	±	0.06	‰
thalamus/hypothalamus	-1.44	±	0.05	‰
thymus	-1.48	±	0.04	‰
thyroid	-1.20	±	0.07	‰
Other organs				
kidneys	-1.25	±	0.07	‰
lungs	-1.54	±	0.07	‰
lymph nodes (jejunal)	-1.30	±	0.12*	‰
salivary gland	-0.98	±	0.05	‰
urinary bladder	-1.38	±	0.20	‰
uteral mucosa	-1.18	±	0.10	‰

* 1 chemical replicate only