

TABLES S1-S3

To the article:

Sexual selection drives weak positive selection in protamine genes and high promoter divergence, enhancing sperm competitiveness.

by

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Table S1. Genes used for phylogenetic analysis. GenBank accession numbers of genes from *Mus m. bactrianus* (M ba), *Mus m. castaneus* (M ca), *Mus cookii* (M co), *Mus m. domesticus* (M do), *Mus famulus* (M fa), *Mus macedonicus* (M ma), *Mus m. musculus* (M mu), *Mus pahari* (M pa), *Mus spicilegus* (M spi), *Mus spretus* (M spr) and *Apodemus sylvaticus* (A syl), used for the phylogenetic analysis.

	M ba	M ca	M co	M do	M fa	M ma	M mu	M pa	M spi	M spr	A syl
Interphotoreceptor retinoid binding protein		AB125807	AB125802		AJ698884	AB125805	AB033711	AB096855	AJ698882	AB033708	AB032863
Smc Y protein		AY260482	AY260486	AY260487		AY260490	AY260481	AY260488	AY260483	AY260485	
Smc Y protein		AY260494	AY260498	AY260499		AY260503	AY260493	AY260500	AY260495	AY260497	
CATSPER1		DQ021487	DQ021498	DQ021486		DQ021496	DQ021492	DQ021500	DQ021494	DQ021493	
X-linked zinc finger protein		AY160025	AY160016	AY160021		AY160013	AY160024		AY160014	AY160015	
Autosomal zinc finger protein		AY160012	AY160000	AY160008		AY160003	AY160011		AY160004	AY160002	
Y-linked zinc finger protein		AAO21819	AY159976	AY159986			AY159989		AY159980	AY159978	
Rag 1		AB125832	AB125828	AB125833		AB125829	AY215075	AB125844	AB125835	AB125836	AB164041
Salivary androgen-binding protein alpha sub unit		AF413619	AF413625	AF144714	AF413623	AF413622	AF039064		AF413621	AF413620	AF445762
MHC class II H2-E alpha chain precursor	U13649		U89284	U13648		U89290	U89287		U89291	U89289	
GPR33	AY490678	AY490628		AY490635	AY490634	AY490627	AY490639		AY490632	AY490631	AY490614
S12		AY057792	X85946	AB042432	AJ279442	AY057794	AY057791	X84383	AY057795	AY057796	AJ311126
Sry		U70657	L29549	L29551		L29547	U70654	L29543	L29550	L29544	
Cyt b		AY057805	AY05813	AY057807	AJ698872	AY057808	AY057804	AY057814	AY057809	AY057810	AF159395
Tcp1	X61211	X61219	AY057822	X61214		X61213	X61217	AY057821	X61216	X61215	
B2m	M84364	M84366	L05581	M84363		L05899	AY057800	L05579	L05578	M84362	
Zp3-1		AY057747	AY057755	AY057749		AY057750	AY057746	AY057756	AY057751	AY057752	
Zp3-2		AY057762	AY057770	AY057764		AY057765	AY057761	AY057771	AY057766	AY057767	
Zp3-3		AY057777	AY057785	AY057779		AY057780	AY057776	AY57786	AY057781	AY057782	

Table S2. Analysis of transcription activation elements in the protamine 1 promoter. Position and nucleotide sequence of the most common enhance transcription elements in the protamine 1 promoter sequenced from 10 species of *Mus* genus.

Element	Sequence	Species	Position
TATA box	TATAAGA	all species	-31
Y-box	TCCTCACTGGCCAC	all species	-105
Tet 1	TGACTTCATAA	all species	-64
CAAT box	not found		
CRE	TGACTTCA	all species	-64
CRE half sequence	TGAC	<i>M. cookii</i>	-144, -174, -180, -219
		<i>M. famulus</i>	-174, -180, -219, -223
		<i>M. macedonicus</i>	-174, -180, -223, -861, -962
		<i>M. m. bactrianus</i>	-174, -180, -223, -766
		<i>M. m. castaneus</i>	-174, -180, -223, -766
		<i>M. m. domesticus</i>	-180, -223, -766
		<i>M. m. musculus</i>	-174, -180, -223, -766
		<i>M. pahari</i>	-174, -180, -219, -223, -796
		<i>M. spicilegus</i>	-174, -180, -223, -861, -962
		<i>M. spretus</i>	-174, -180, -223, -767
	TTCA	<i>M. cookii</i>	-296, -317, -322, -565, -602, -707
		<i>M. famulus</i>	-298, -317, -324, -567, -616, -711
		<i>M. macedonicus</i>	-298, -317, -324, -762, -811, -906, -977
		<i>M. m. bactrianus</i>	-298, -317, -324, -615, -710, -781
		<i>M. m. castaneus</i>	-298, -317, -324, -615, -710, -781
		<i>M. m. domesticus</i>	-298, -317, -324, -618, -713, -784
		<i>M. m. musculus</i>	-298, -317, -324, -615, -710, -78
		<i>M. pahari</i>	-298, -324, -567, -646, -743, -814
		<i>M. spicilegus</i>	-298, -324, -811, -906, -977
		<i>M. spretus</i>	-298, -317, -324, -567, -616, -711

Table S3. Analysis of transcription activation elements in the protamine 2 promoter. Position and nucleotide sequence of the most common enhance transcription elements in the protamine 2 promoter sequenced from 10 species.

Element	Sequence	Species	Position
TATA box	TATATA	all species	-36
Y-box	ACAATCAATCAGG	all species	-83
Tet 1	CGCCCTCACAG	<i>M. cookii</i> <i>M. macedonicus</i> <i>M. pahari</i> <i>M. m. bactrianus</i> <i>M. m. castaneus</i> <i>M. m. domesticus</i> <i>M. m. musculus</i> <i>M. spicilegus</i> <i>M. spretus</i>	-115
	TGCCCTCACAG	<i>M. famulus</i>	-115
CAAT box	CAAT	all species	-78
CRE	GGGCTGCA	<i>M. pahari</i>	-184
	ATGCTTCA	<i>M. cookii</i> <i>M. famulus</i>	-184
		<i>M. macedonicus</i> <i>M. m. bactrianus</i> <i>M. m. castaneus</i> <i>M. m. domesticus</i> <i>M. m. musculus</i> <i>M. spicilegus</i> <i>M. spretus</i>	-174
CRE half sequence	ATGC	<i>M. cookii</i> <i>M. famulus</i> <i>M. macedonicus</i> <i>M. m. bactrianus</i> <i>M. m. castaneus</i> <i>M. m. domesticus</i> <i>M. m. musculus</i> <i>M. pahari</i> <i>M. spicilegus</i> <i>M. spretus</i>	-312, -328, -404, -557 -272, -288, -364, -472 -285, -301, -357, -414, -555 -320, -336, -392, -518 -320, -335, -391, -510 -314, -330, -386, -488 -320, -335, -391, -407 -275, -302, -318, -407, -658, -909, -1112, -1113 -320, -335, -488, -560 -320, -335, -391, -550
	TTCA	<i>M. cookii</i> <i>M. famulus</i> <i>M. macedonicus</i> <i>M. m. bactrianus</i> <i>M. m. castaneus</i> <i>M. m. domesticus</i> <i>M. m. musculus</i> <i>M. pahari</i> <i>M. spicilegus</i> <i>M. spretus</i>	-193, -210, -594, -620, -681, -951 -193, -229, -509, -535, -596, -878 -195, -208, -552, -895 -187, -204, -217, -555, -618, -897 -187, -204, -217, -547, -610, -880 -187, -204, -217, -525, -588, -829 -187, -204, -217, -555, -618, -893 -206, -219, -426, -610, -707, -747, -808 -187, -204, -217, -492, -525, -557, -798 -180, -204, -217, -410, -612, -866