Supplementary materials

Table S1 Summary of sequencing statistics in six female Rongchang pigs

Individuals	PE length/bp	Raw base/Gb	High-quality Ratio/%	Mapping ratio/%	Depth (×)	Coverage at least 1 ×/%	Coverage at least 4 ×/%
1	100	23.16	82.36	75.81	5.22	80.36	64.56
2	100	27.23	91.44	75.27	6.78	80.86	72.65
3	100	25.14	84.86	72.79	5.71	80.78	68.39
4	100	30.20	86.60	74.01	6.86	80.77	72.47
5	100	31.61	86.11	73.45	7.35	81.48	74.14
6	100	32.19	78.36	74.24	6.77	81.01	71.82

Table S2 Summary of sequencing statistics of the downloaded pig genome data

Population	Pig name	Land of origin	Individual	High-quality base/Gb	Mapping ratio/%	Depth (×)	Coverage at least 1 ×/%	Coverage at least 4 ×/%
Domestic pig (Chinese)	Penzhou	Luzhou city, Sichuan Province, China	1	11.83	79.94	3.6	78.51	48.55
			2	11.83	79.75	3.59	76.79	46.45
			3	14.07	78.48	4.15	79.86	55.76
	Wujin	Liangshan Yi autonomous prefecture, Sichuan Province, China	1	15.88	77.72	4.55	79.4	58.24
			2	14.22	79.4	4.16	78.13	54.04
			3	12.01	79.56	3.58	78.24	47.92
	Ya'nan	Chengdu city, Sichuan Province, China	1	12.11	78.55	3.56	77.93	46.82
			2	11.09	78.62	3.35	78.25	45.33
			3	13.08	79.72	4	79.09	53.94
	Neijiang	Neijiang city, Sichuan Province, China	1	15.73	78.54	4.13	78.38	53.34
			2	17.27	77.94	4.89	78.92	57.6
			3	11.42	79.19	3.46	77.06	45.46
	Jinhua	Jinhua city, Zhejiang Province, China	1	11.6	79.8	3.57	78.63	48.76
			2	12.39	79.75	3.75	77.79	48.77
			3	10.6	78.99	3.17	77.31	40.98
	Meishan	Jiangsu Province, China	1	18.03	95.3	6.35	76.87	67.23
			2	17.92	95.29	6.23	76.56	65.37
			3	17.17	95.04	5.64	74.98	60.66
			4	19.76	95.3	7.22	76.03	64.86
	Jiangquhai	Jiangsu Province, China	1	20.5	95.27	7.49	76.08	65.69
Domestic pig (European)	Duroc	Denmark, North American	1	21.01	95.3	5.53	76.64	63.42
			2	22.69	95.23	6.46	76.22	64.63
			3	11.74	95.31	4.24	75.25	54.54
			4	14.76	95.4	5.37	75.69	59.6
	Hampshire	England, North American	1	22.51	95.31	6.28	76.69	65.98
			2	19.72	95.44	5.68	76.25	61.3
	Landrace	Denmark	1	18.34	95.3	6.69	76.18	64.29
			2	27.01	95.41	7.43	76.84	68.87
			3	17.56	95.37	4.95	75.67	58.53
			4	14.48	95.4	5.25	76.03	61.61
			5	14.87	95.32	5.45	76.09	63.07
	Large White	England	1	10.89	94.77	4.02	71.52	47.93
			2	19.98	95.43	7.02	77.34	69.11
			3	19.98	95.42	7.04	77.15	69
			4	19.96	95.43	7.14	77.32	69.21

			5	18.47	95.37	6.57	77.21	68.1
			6	22.72	95.33	6.1	76.41	65.33
			7	18.57	95.19	6.68	76.53	63.88
			8	18.99	95.13	4.32	73.9	53.38
			9	19.44	95.39	7.03	77.31	69.25
			10	16.65	95.49	5.62	76.6	64.64
			11	17.38	95.56	5.73	76.63	64.94
			12	18.52	95.56	6.25	76.73	66.35
			13	13.59	95.43	4.58	75.83	58.47
			14	17.02	95.49	5.76	76.68	65.23
	Pietrain	Belgium	1	20.68	95.35	4.59	75.73	59.28
			2	20.91	95.24	7.61	76.71	68.03
			3	16.45	94.93	5.78	74.25	57.41
			4	10.88	94.6	3.98	70.66	46.18
			5	21.44	95.27	4.55	75.16	56.1
Wild boar (European)	Wild boar (European)	France	1	17.64	95.16	6.8	76.16	65.29
		Switzerland	1	28.39	95.27	5.84	76.55	65.11
		Veluwe, the Netherlands	1	18.18	95.32	6.66	76.45	66.27
			2	22.56	95.22	6.81	76.79	67.21
		Meinweg, the Netherlands	1	10.56	94.75	3.89	71.13	47.03
			2	15.7	95.44	5.67	76.2	63.44
Wild boar (Asian)	Wild boar (Asian)	Japan	1	21.55	95.39	7.84	75.9	65.72
		North China	1	9.31	94.59	3.4	66.93	37.81
			2	19.29	95.2	7.01	76	64.85
		South China	1	9.83	94.49	3.62	69.23	42.69
			2	19.83	95.21	7.2	76.28	66.56
		Southwest China	1	12	76.43	3.41	77.81	45.07
			2	16.3	78.63	4.71	80.16	61.8
			3	16.28	79.43	4.65	80.04	60.08
		Sumatra, Indonesia	1	21.56	95.17	7.72	75.29	65.23
			2	20.98	95.12	7.68	75.39	64.41
Tibetan pig	Tibetan pig	Ganzi Tibetan autonomous prefecture, Sichuan Province, China	1	12	78.53	3.59	78.37	48.3
			2	12.15	78.29	3.6	79.35	48.9
			3	10.64	78.6	3.16	77.79	41.71
			4	14.29	78.82	4.26	80.03	57.49
			5	14.23	78.42	4.22	80.33	56.96
		Diqing Tibetan autonomous prefecture, Yunnan Province, China	1	16.05	78.84	4.71	80.49	61.01
			2	12.19	78.24	3.62	79.56	49.5

			3	11.78	78.49	3.51	78.98	47.44
			4	17.61	79.31	5.32	80.92	64.98
			5	11.64	79.36	3.54	78.86	47.04
		Nyingchi prefecture, Tibetan autonomous region, China	1	9.78	78.62	2.63	74.27	31.97
			2	19.04	78.71	5.66	81.34	67.32
			3	13.4	78.68	3.95	79.04	51.7
			4	12.15	78.8	3.59	78.26	47.27
			5	17.87	79.19	5.33	80.21	63.14
		Shigatse prefecture, Tibetan autonomous region, China	1	14.7	78.85	4.37	78.55	54.33
			2	11.49	78.69	3.43	76.96	44.35
			3	15.05	78.82	4.42	79.07	54.93
			4	12.41	79.21	3.74	78.62	49.32
			5	14.87	79.19	4.43	79.28	55.61
		Gannan Tibetan autonomous prefecture, Gansu Province, China	1	15.56	78.94	4.65	79.71	58.49
			2	12.04	79.39	3.59	77.11	47.2
			3	12.94	78.81	3.81	77.4	48.28
			4	12.49	78.45	3.73	79.19	50.9
			5	11.68	78.7	3.48	77.95	46.52
		A'ba Tibetan autonomous prefecture, Sichuan Province, China	1	11.47	78.97	3.4	77.69	45.76
			2	18.58	79.52	5.56	80.62	65.71
			3	14.46	78.99	4.3	79.23	55.96
			4	18.52	79.05	5.18	79.54	62.13
			5	15.09	79.06	4.35	78.56	55.05
Wild genus *Sus* and warthog	*Sus barbatus*	Sumatra, Indonesia	1	12.73	94.99	4.59	72.16	51.51
	Sus cebifrons	Philippines	1	19.05	95.12	6.89	74.96	65.09
	Sus celebensis	Sulawesi, Indonesia	1	46.06	95.01	16.57	76.76	71.85
	Sus verrucosus	Java, Indonesia	1	24.04	94.89	8.79	75.48	66.32
	Phacochoerus africanus	Tanzania	1	23.13	94.48	7.79	72.64	61.3

Note: The criteria used for sequence read filtering are slightly different between our sequenced data and the downloaded genome data (phred quality ≤ 20).

Table S3 Summary of population-scale SNP calling

Category	Domestic pig	Tibetan pigs, wild boars, warthog and species in the genus *sus*	Total
Sample Size	*n* = 56	*n* = 51	*n* = 107
Number of total SNPs	6738068	7755191	10133278
Number of shared SNPs		4359981	

Table S4 Summary of SNPs in Rongchang pigs

Category		Number of SNPs
Total		6503711
Upstream		49986
Exonic	Missense	15540
	Stop gain	102
	Stop loss	20
	Synonymous	31543
Intronic		1495732
Splicing		206
Downstream		46684
Upstream/Downstream		530
Intergenic		4863368

Note: The package ANNOVAR was used to identify whether SNPs cause protein coding changes and the amino acids that are affected. 'Upstream' refers to a variant that overlaps with the 1 kb region upstream of the gene start site. 'Stop gain' means that a nsSNP leads to the creation of a stop codon at the variant site. 'Stop loss' means that a nsSNP leads to the elimination of a stop codon at the variant site. 'Splicing' means that a variant is within 2 bp of a splice junction. 'Downstream' means that a variant overlaps with the 1 kb region downstream of the gene end site. 'Upstream/Downstream' means that a variant is located in downstream and upstream regions (possibly for two different genes)

Table S5 Tracy–Widom statistics for the first 10 eigenvalues

Number	Eigenvalue	TW	*P* value
1	27.34	41.17	1.85×10^{-78}
2	12.85	52.04	1.11×10^{-110}
3	5.93	22.85	1.54×10^{-33}
4	5.18	19.16	3.60×10^{-26}
5	4.40	11.98	7.48×10^{-14}
6	4.16	11.02	1.98×10^{-12}
7	4.02	11.49	4.00×10^{-13}
8	3.74	9.30	4.91×10^{-10}
9	3.52	7.45	3.88×10^{-8}
10	3.16	2.03	9.98×10^{-3}

Table S6 Summary of SNP calling in Rongchang pigs and Asian wild boars

Category	Rongchang	Asian wild boar	Total
Sample Size	*n* = 6	*n* = 10	*n* = 16
Number of total SNPs	6503711	4253128	8323089
Number of shared SNPs		2433750	

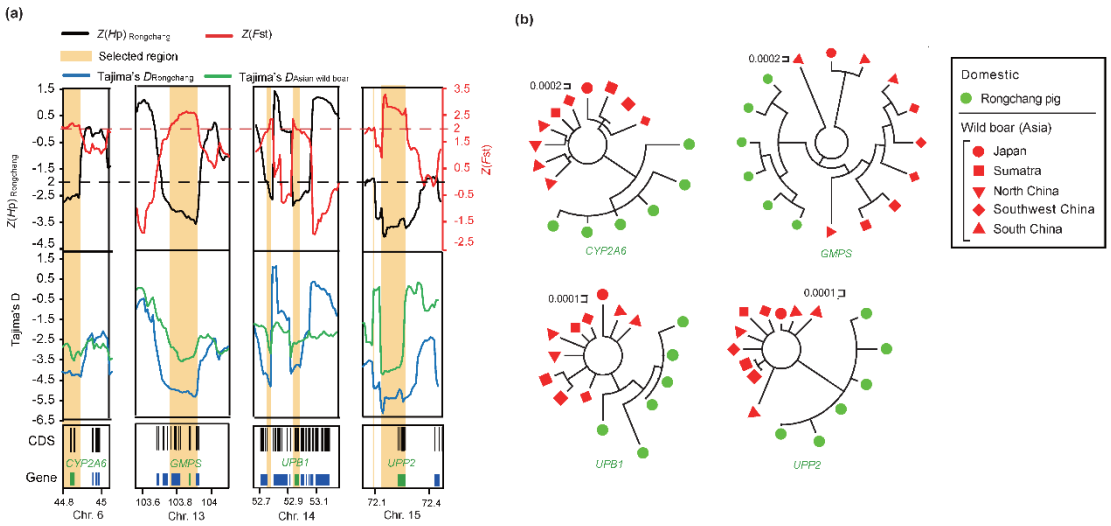

Fig. S1 Genes related to 'drug metabolism' showed selective sweep signatures in Rongchang pigs. (a) $Z(Hp)$, $Z(F_{ST})$ and Tajima's D values are plotted using a 10 kb sliding window. Genomic regions located above the upper horizontal dashed red line (where $Z(F_{ST}) = 2$) and below the lower horizontal dashed black line (where $Z(Hp) = -2$) were termed as regions with strong selective sweep signals for domestic Rongchang pigs (beige regions). Genome annotations are shown at the bottom (black bar: coding sequences, blue bar: genes). The boundary of genes related to 'drug metabolism' are marked in red; (b) The gene trees for four genes related to 'drug metabolism' of 10 Asian wild boars and 6 Rongchang pigs.