Supplementary Information

Characteristics of Long Non-coding RNAs in the Brown Norway Rat and Alterations in the Dahl Salt-Sensitive Rat

Feng Wang[1,2,3,*], Liping Li[5,*], Haiming Xu[5], Yong Liu[2,3], Chun Yang[2], Allen W. Cowley, Jr.[2], Niansong Wang[1], Pengyuan Liu[2,3,4], Mingyu Liang[2,3]

[1]Department of Nephrology and Rheumatology, Shanghai Jiaotong University Affiliated Sixth People's Hospital, Shanghai, China; [2]Department of Physiology, [3]Center of Systems Molecular Medicine, and [4]Cancer Center, Medical College of Wisconsin, Milwaukee, WI, USA; [5]Institute of Bioinformatics, Zhejiang University, Hangzhou, Zhejiang 310029, China

*Equal contribution

Running title: Rat lncRNAs

Correspondence:

Mingyu Liang, mliang@mcw.edu

Pengyuan Liu, pliu@mcw.edu

Niansong Wang, wangniansong2012@163.com

Supplementary Table S1. PCR Primers.

Primers for qPCR verification of lncRNA expression:

Liver-enriched lncRNA transcript_id:TCONS_00048236:

F: 5'CGTGCACTGgGGGATGG3'

R: 5'AATTACCTACCTCGGTTTGAGTTCTC3'

Cardiac left ventricle-enriched lncRNA transcript_id:TCONS_00060042:

F: 5'AGAAAGaGTCAGCGTCACCACA3'

R: 5'TGCAGCCTACAATCCATCCA3'

Renal outer medulla-enriched lncRNA transcript_id:TCONS_00047331:

F: 5'ATGGGGCAAAACTGGAAaAATA3'

R: 5'TGAAGACGATGCAGGGATGAC3'

Renal cortex-enriched lncRNA transcript_id:TCONS_00112095:

F: 5'AAAgGGACAGGAGGACCACAC3'

R: 5'TGCACCACAAGCCCACATT3'

Hypothalamus-enriched lncRNA transcript_id:TCONS_00090635:

F: 5'ATCGAGGGACAAGCAACAAAGA3'

R: 5'CAGGGAAGGACTCAGACTCAAGATA3'

Adrenal gland-enriched lncRNA transcript_id:TCONS_00081178:

F: 5'GCACTGCCAGCGGACATC3'

R: 5'GTCATTGTGGGATCtTGGCTGTA3'

lncRNA identified in SS and SS.13^{BN26}, transcript_id:TCONS_ 00028980:

Primers for transcript_id:TCONS_00028980:

F: 5’GTTTTGGCTTGGCTACACATTCTA3’

R: 5’CCTCCGGCTTTCCATACAGTT3’

lncRNA identified in SS and SS.13^{BN26}, transcript_id:TCONS_00029009:

F: 5’GGAGCGGGTATAGGGAGGAG3’

R: 5’TGGGTCTTTCGGAGCATACAAT3’

Primers for genomic DNA segments pulled out by chromatin immunoprecipitation (ChIP)

Rat GAPDH promotor region:

F: 5'AGCTCCCCTCCCCCTCTC3'

R: 5'GACCCGCCTCGTTTTTGAA3'

Rat myglobin exon 2 region:

F: 5’CTTGGTGGCGTGGGACTG3’

R: 5’AGGGACAACATGCTGCTGAGA3’

Promoter region of liver-enriched lncRNA transcript_id:TCONS_00048236:

F: 5’ATACATGCCTCAGAGAAATCAATCA3’

R: 5’AGGGCGCCAGAGAAAACAC3’

Promoter region of cardiac left ventricle-enriched lncRNA transcript_id:

TCONS_00060042:

F: 5’TGTGAAATGTAATGCAAATAAAAATCTG3’

R: 5’TGTATATGACCTAAGCAAGTGAGTAAGC3’

Promoter region of renal outer medulla-enriched lncRNA transcript_id:

TCONS_00047331:

F: 5’ATTGTTTCATGCTCTTCTCTATTTTTG3’

R: 5’GGTTGCCATCCCACAGTCA3’

Promoter region of renal cortex-enriched lncRNA transcript_id:TCONS_00112095:

F: 5’GTGTCACTCTCCATCCCGTCTT3’

R: 5’CTCGCACCAGCCCTTGTTT3’

Promoter region of hypothalamus-enriched lncRNA transcript_id:TCONS_00090635

F: 5’GAAAAATCATCAGCGACCACAG3’

R: 5’CAGCAAAGAACGAAGGGAGAA3’

Promoter region of adrenal gland-enriched lncRNA transcript_id:TCONS_00081178:

F: 5’CTTCTTTCCCCATCCTTTATTCAG3’

R: 5’CCTTCCCAGCAGAGCACTTG3’

Supplementary Table S2. Yield and quality of RNA-seq. B, hypothalamus; C, renal cortex; G, adrenal gland; Li, liver; LV, cardiac left ventricle; M, renal outer medulla. Each sample was a pool of two Brown Norway rats.

Sample ID	Yield (Mbases)	# Reads	% of >= Q30 Bases (PF)	Mean Quality Score (PF)	% of mapping rate
1B	4,500	47,239,840	95.0	35.7	93.7
2B	4,839	54,386,532	95.6	35.8	88.8
1C	5,060	53,183,108	94.8	35.6	94.0
2C	5,266	58,404,702	95.2	35.5	81.8
1G	4,799	50,706,222	95.0	35.7	93.7
2G	4,851	55,411,088	95.7	35.8	90.2
1Li	7,577	79,940,230	94.2	35.4	89.4
2Li	10,066	113,499,750	93.9	34.8	59.9
1LV	5,257	54,702,446	94.7	35.5	92.5
2LV	4,709	54,427,010	95.7	35.9	90.9
1M	4,885	51,591,834	94.8	35.6	91.5
2M	5,125	57,171,486	95.5	35.6	86.5

Supplementary Table S3. Renal outer medullary lncRNAs differentially expressed between SS and SS.13^{BN26} rats. LS, 0.4% salt; HS, 4% salt for 7 days; L26, SS.13^{BN26}.

SSLS vs. SSHS										
test_id	gene_id	locus	sample_1	sample_2	value_1	value_2	log2(fold_change)	test_stat	p_value	q_value
TCONS_00021556	XLOC_012657	chr11:12488963-12523584	SSLS	SSHS	1.74	0.69	-1.34	-2.44	5.00E-05	1.65E-02
TCONS_00068324	XLOC_042461	chr3:143754260-143770924	SSLS	SSHS	1.02	0.50	-1.04	-2.31	5.00E-05	1.65E-02
TCONS_00091268	XLOC_056809	chr6:23353151-23420140	SSLS	SSHS	0.52	0.10	-2.42	-2.92	5.00E-05	1.65E-02
TCONS_00046332	XLOC_028534	chr17:22805722-22824878	SSLS	SSHS	0.53	0.24	-1.11	-2.19	1.50E-04	3.77E-02
TCONS_00025003	XLOC_015014	chr11:86634046-86641646	SSLS	SSHS	4.80	2.52	-0.93	-2.17	2.00E-04	4.68E-02
L26LS vs. L26HS										
test_id	gene_id	locus	sample_1	sample_2	value_1	value_2	log2(fold_change)	test_stat	p_value	q_value
TCONS_00000103	XLOC_000057	chr1:9790667-9803141	L26LS	L26HS	0.74	0.36	-1.03	-2.83	5.00E-05	2.56E-03
TCONS_00000191	XLOC_000126	chr1:15164486-15175029	L26LS	L26HS	0.72	0.30	-1.26	-3.28	5.00E-05	2.56E-03
TCONS_00006728	XLOC_004029	chr1:283886706-283918702	L26LS	L26HS	0.98	0.49	-1.00	-3.23	5.00E-05	2.56E-03
TCONS_00007550	XLOC_004610	chr1:35676445-35681226	L26LS	L26HS	35.63	75.17	1.08	2.48	5.00E-05	2.56E-03
TCONS_00010104	XLOC_006191	chr1:133025461-133029682	L26LS	L26HS	7.38	14.43	0.97	3.24	5.00E-05	2.56E-03
TCONS_00025003	XLOC_015014	chr11:86634046-86641646	L26LS	L26HS	5.31	9.55	0.85	2.73	5.00E-05	2.56E-03
TCONS_00027222	XLOC_016267	chr12:17287619-17340258	L26LS	L26HS	0.93	0.37	-1.33	-4.44	5.00E-05	2.56E-03
TCONS_00030100	XLOC_017946	chr13:118271149-118366003	L26LS	L26HS	0.88	0.38	-1.19	-3.36	5.00E-05	2.56E-03
TCONS_00036786	XLOC_021971	chr15:62741738-62780849	L26LS	L26HS	0.36	0.66	0.87	2.40	5.00E-05	2.56E-03
TCONS_00040456	XLOC_024455	chr16:32492681-32501908	L26LS	L26HS	3.86	7.27	0.91	2.36	5.00E-05	2.56E-03
TCONS_00046332	XLOC_028534	chr17:22805722-22824878	L26LS	L26HS	0.53	1.05	0.99	2.78	5.00E-05	2.56E-03
TCONS_00048875	XLOC_030172	chr18:59610154-59649291	L26LS	L26HS	1.13	0.53	-1.11	-3.70	5.00E-05	2.56E-03
TCONS_00051794	XLOC_031963	chr19:58051647-58089624	L26LS	L26HS	0.47	0.20	-1.23	-2.94	5.00E-05	2.56E-03
TCONS_00051991	XLOC_032117	chr19:64434724-64444099	L26LS	L26HS	0.50	0.21	-1.28	-3.01	5.00E-05	2.56E-03
TCONS_00053291	XLOC_032840	chr19:62801505-62817661	L26LS	L26HS	7.49	16.10	1.10	2.97	5.00E-05	2.56E-03
TCONS_00062816	XLOC_038870	chr20:16228068-16234127	L26LS	L26HS	15.70	27.96	0.83	2.86	5.00E-05	2.56E-03
TCONS_00065760	XLOC_040637	chr3:50700650-50708907	L26LS	L26HS	0.34	1.06	1.63	3.72	5.00E-05	2.56E-03
TCONS_00073793	XLOC_045721	chr4:14726596-14764487	L26LS	L26HS	2.14	5.45	1.35	2.71	5.00E-05	2.56E-03
TCONS_00094136	XLOC_058460	chr7:35332826-35340356	L26LS	L26HS	0.73	0.36	-1.02	-2.56	5.00E-05	2.56E-03
TCONS_00100576	XLOC_062456	chr8:35959275-35993166	L26LS	L26HS	0.36	0.12	-1.66	-4.54	5.00E-05	2.56E-03
TCONS_00100784	XLOC_062624	chr8:44243236-44266295	L26LS	L26HS	0.41	0.17	-1.27	-3.43	5.00E-05	2.56E-03

TCONS_00108134	XLOC_066813	chr9:113047917-113060881	L26LS	L26HS	1.17	0.57	-1.03	-2.58	5.00E-05	2.56E-03
TCONS_00108810	XLOC_067239	chr9:19284677-19311302	L26LS	L26HS	0.93	2.31	1.32	2.97	5.00E-05	2.56E-03
TCONS_00076160	XLOC_047335	chr4:189552473-189683851	L26LS	L26HS	0.40	0.16	-1.27	-2.52	1.00E-04	4.57E-03
TCONS_00092653	XLOC_057653	chr6:118411767-118423149	L26LS	L26HS	0.90	0.52	-0.79	-2.25	1.00E-04	4.57E-03
TCONS_00105479	XLOC_065326	chr8:112214827-112217010	L26LS	L26HS	1.16	2.59	1.16	2.79	1.00E-04	4.57E-03
TCONS_00105501	XLOC_065342	chr8:113414430-113426589	L26LS	L26HS	0.85	0.49	-0.80	-2.25	1.00E-04	4.57E-03
TCONS_00068324	XLOC_042461	chr3:143754260-143770924	L26LS	L26HS	0.98	1.61	0.71	2.21	1.50E-04	6.49E-03
TCONS_00043125	XLOC_026481	chr16:32458036-32475718	L26LS	L26HS	1.55	3.10	1.00	2.34	2.50E-04	1.00E-02
TCONS_00051115	XLOC_031594	chr19:27667530-27699662	L26LS	L26HS	0.23	0.59	1.36	2.19	3.00E-04	1.15E-02
TCONS_00012156	XLOC_007373	chr1:222799878-222858973	L26LS	L26HS	10.23	4.80	-1.09	-2.09	8.50E-04	2.74E-02
TCONS_00098168	XLOC_061029	chr7:76901927-76904658	L26LS	L26HS	0.34	0.10	-1.69	-2.45	9.50E-04	2.98E-02
TCONS_00007367	XLOC_004492	chr1:23178397-23184459	L26LS	L26HS	0.15	0.35	1.18	2.09	1.05E-03	3.24E-02
TCONS_00026216	XLOC_015694	chr12:39644318-39690870	L26LS	L26HS	0.47	0.22	-1.08	-1.94	1.10E-03	3.37E-02
TCONS_00013936	XLOC_008374	chr1:287949285-287961598	L26LS	L26HS	1.84	1.19	-0.63	-2.04	1.20E-03	3.61E-02
TCONS_00055871	XLOC_034647	chr2:159578464-159587260	L26LS	L26HS	0.48	0.17	-1.52	-2.31	1.35E-03	3.95E-02
TCONS_00012150	XLOC_007373	chr1:222799878-222858973	L26LS	L26HS	8.52	3.23	-1.40	-2.20	1.65E-03	4.61E-02
TCONS_00012154	XLOC_007373	chr1:222799878-222858973	L26LS	L26HS	8.52	3.23	-1.40	-2.23	1.75E-03	4.83E-02
SSHS vs. L26HS										
test_id	gene_id	locus	sample_1	sample_2	value_1	value_2	log2(fold_change)	test_stat	p_value	q_value
TCONS_00006673	XLOC_004007	chr1:281581679-281585476	L26HS	SSHS	4.19	1.13	-1.89	-4.50	5.00E-05	2.94E-03
TCONS_00006675	XLOC_004007	chr1:281581679-281585476	L26HS	SSHS	2.06	0.53	-1.97	-2.96	5.00E-05	2.94E-03
TCONS_00007367	XLOC_004492	chr1:23178397-23184459	L26HS	SSHS	0.35	0.14	-1.35	-2.60	5.00E-05	2.94E-03
TCONS_00007550	XLOC_004610	chr1:35676445-35681226	L26HS	SSHS	75.84	15.73	-2.27	-5.61	5.00E-05	2.94E-03
TCONS_00007551	XLOC_004610	chr1:35676445-35681226	L26HS	SSHS	41.46	8.75	-2.24	-3.37	5.00E-05	2.94E-03
TCONS_00007552	XLOC_004610	chr1:35676445-35681226	L26HS	SSHS	42.22	10.25	-2.04	-3.81	5.00E-05	2.94E-03
TCONS_00007553	XLOC_004610	chr1:35676445-35681226	L26HS	SSHS	31.90	6.20	-2.36	-3.84	5.00E-05	2.94E-03
TCONS_00010104	XLOC_006191	chr1:133025461-133029682	L26HS	SSHS	14.56	3.15	-2.21	-7.25	5.00E-05	2.94E-03
TCONS_00011606	XLOC_007112	chr1:204698363-204727019	L26HS	SSHS	0.37	0.13	-1.49	-2.33	5.00E-05	2.94E-03
TCONS_00013884	XLOC_008339	chr1:285882049-285893782	L26HS	SSHS	0.52	0.11	-2.19	-2.96	5.00E-05	2.94E-03
TCONS_00015341	XLOC_009184	chr10:47440265-47450549	L26HS	SSHS	7.88	1.85	-2.09	-4.37	5.00E-05	2.94E-03
TCONS_00021556	XLOC_012657	chr11:12488963-12523584	L26HS	SSHS	1.40	0.65	-1.10	-2.41	5.00E-05	2.94E-03
TCONS_00025003	XLOC_015014	chr11:86634046-86641646	L26HS	SSHS	9.64	2.39	-2.01	-6.52	5.00E-05	2.94E-03

TCONS_00033476	XLOC_019988	chr14:104441312-104448518	L26HS	SSHS	11.56	4.61	-1.32	-3.00	5.00E-05	2.94E-03
TCONS_00035632	XLOC_021209	chr15:8606550-8618498	L26HS	SSHS	30.24	6.21	-2.28	-5.23	5.00E-05	2.94E-03
TCONS_00036786	XLOC_021971	chr15:62741738-62780849	L26HS	SSHS	0.66	0.23	-1.52	-4.19	5.00E-05	2.94E-03
TCONS_00038754	XLOC_023289	chr15:60270126-60288154	L26HS	SSHS	2.18	4.27	0.97	3.03	5.00E-05	2.94E-03
TCONS_00040456	XLOC_024455	chr16:32492681-32501908	L26HS	SSHS	7.33	2.26	-1.70	-4.63	5.00E-05	2.94E-03
TCONS_00040465	XLOC_024458	chr16:32724543-32762094	L26HS	SSHS	1.88	0.49	-1.94	-3.29	5.00E-05	2.94E-03
TCONS_00043125	XLOC_026481	chr16:32458036-32475718	L26HS	SSHS	3.13	0.76	-2.05	-4.37	5.00E-05	2.94E-03
TCONS_00046332	XLOC_028534	chr17:22805722-22824878	L26HS	SSHS	1.06	0.23	-2.20	-5.88	5.00E-05	2.94E-03
TCONS_00046463	XLOC_028622	chr17:29938091-29941662	L26HS	SSHS	0.61	0.17	-1.87	-3.28	5.00E-05	2.94E-03
TCONS_00048938	XLOC_030213	chr18:61418077-61425000	L26HS	SSHS	2.28	0.72	-1.65	-2.97	5.00E-05	2.94E-03
TCONS_00051115	XLOC_031594	chr19:27667530-27699662	L26HS	SSHS	0.60	0.14	-2.04	-3.46	5.00E-05	2.94E-03
TCONS_00051116	XLOC_031594	chr19:27667530-27699662	L26HS	SSHS	0.54	0.12	-2.12	-2.65	5.00E-05	2.94E-03
TCONS_00053291	XLOC_032840	chr19:62801505-62817661	L26HS	SSHS	16.24	3.62	-2.17	-5.64	5.00E-05	2.94E-03
TCONS_00054445	XLOC_033615	chr2:71196318-71198519	L26HS	SSHS	1.66	3.12	0.92	2.42	5.00E-05	2.94E-03
TCONS_00056106	XLOC_034807	chr2:173290349-173298792	L26HS	SSHS	0.48	0.16	-1.61	-3.83	5.00E-05	2.94E-03
TCONS_00057476	XLOC_035582	chr2:252954503-252963658	L26HS	SSHS	1.09	0.59	-0.89	-2.55	5.00E-05	2.94E-03
TCONS_00062816	XLOC_038870	chr20:16228068-16234127	L26HS	SSHS	28.21	8.51	-1.73	-6.22	5.00E-05	2.94E-03
TCONS_00065760	XLOC_040637	chr3:50700650-50708907	L26HS	SSHS	1.07	0.24	-2.15	-5.00	5.00E-05	2.94E-03
TCONS_00068324	XLOC_042461	chr3:143754260-143770924	L26HS	SSHS	1.62	0.47	-1.78	-5.47	5.00E-05	2.94E-03
TCONS_00073792	XLOC_045721	chr4:14726596-14764487	L26HS	SSHS	5.15	1.67	-1.63	-3.67	5.00E-05	2.94E-03
TCONS_00073793	XLOC_045721	chr4:14726596-14764487	L26HS	SSHS	5.50	1.67	-1.72	-3.97	5.00E-05	2.94E-03
TCONS_00075546	XLOC_046968	chr4:163406842-163411822	L26HS	SSHS	2.23	1.06	-1.08	-3.07	5.00E-05	2.94E-03
TCONS_00083566	XLOC_052045	chr5:156442031-156443235	L26HS	SSHS	7.31	2.07	-1.82	-5.38	5.00E-05	2.94E-03
TCONS_00085669	XLOC_053378	chr5:83527920-83546861	L26HS	SSHS	2.81	0.99	-1.50	-3.74	5.00E-05	2.94E-03
TCONS_00089742	XLOC_055879	chr6:108878529-108885432	L26HS	SSHS	2.45	1.16	-1.08	-2.60	5.00E-05	2.94E-03
TCONS_00089813	XLOC_055926	chr6:111479305-111513963	L26HS	SSHS	4.49	1.05	-2.10	-4.29	5.00E-05	2.94E-03
TCONS_00091268	XLOC_056809	chr6:23353151-23420140	L26HS	SSHS	0.60	0.09	-2.70	-4.18	5.00E-05	2.94E-03
TCONS_00099537	XLOC_061798	chr7:132516468-132531171	L26HS	SSHS	2.60	1.19	-1.12	-2.84	5.00E-05	2.94E-03
TCONS_00099994	XLOC_062058	chr8:13339574-13347392	L26HS	SSHS	1.07	0.28	-1.95	-3.14	5.00E-05	2.94E-03
TCONS_00101316	XLOC_062900	chr8:65987991-65990258	L26HS	SSHS	1.59	0.51	-1.63	-3.80	5.00E-05	2.94E-03
TCONS_00105479	XLOC_065326	chr8:112214827-112217010	L26HS	SSHS	2.61	0.87	-1.58	-4.06	5.00E-05	2.94E-03
TCONS_00108810	XLOC_067239	chr9:19284677-	L26HS	SSHS	2.33	0.79	-1.56	-3.75	5.00E-05	2.94E-03

		19311302								
TCONS_00001918	XLOC_001199	chr1:83571846-83671140	L26HS	SSHS	1.63	0.45	-1.87	-2.87	1.00E-04	5.49E-03
TCONS_00001919	XLOC_001199	chr1:83571846-83671140	L26HS	SSHS	2.45	0.54	-2.18	-2.77	1.00E-04	5.49E-03
TCONS_00028980	XLOC_017208	chr13:75525885-75529130	L26HS	SSHS	0.27	0.63	1.24	2.88	1.00E-04	5.49E-03
TCONS_00047859	XLOC_029533	chr18:13441583-13844199	L26HS	SSHS	0.89	0.28	-1.66	-2.76	1.00E-04	5.49E-03
TCONS_00082829	XLOC_051632	chr5:137228271-137233323	L26HS	SSHS	4.84	3.25	-0.58	-2.04	1.00E-04	5.49E-03
TCONS_00081221	XLOC_050581	chr5:33566015-33576310	L26HS	SSHS	1.62	0.53	-1.61	-3.14	1.50E-04	7.89E-03
TCONS_00016204	XLOC_009625	chr10:71758980-71769416	L26HS	SSHS	12.21	6.16	-0.99	-2.24	2.00E-04	1.01E-02
TCONS_00098082	XLOC_060958	chr7:75314754-75317954	L26HS	SSHS	1.17	0.32	-1.86	-2.86	2.00E-04	1.01E-02
TCONS_00086644	XLOC_054129	chr5:136937546-136943795	L26HS	SSHS	0.26	0.13	-0.98	-2.18	2.50E-04	1.23E-02
TCONS_00111103	XLOC_068571	chrX:45432799-45481633	L26HS	SSHS	0.26	0.11	-1.28	-2.34	2.50E-04	1.23E-02
TCONS_00072874	XLOC_045152	chr3:166109913-166122083	L26HS	SSHS	1.27	0.41	-1.63	-2.43	3.00E-04	1.42E-02
TCONS_00022970	XLOC_013577	chr11:86874388-86890364	L26HS	SSHS	0.61	0.23	-1.39	-2.35	4.00E-04	1.79E-02
TCONS_00075034	XLOC_046565	chr4:146827358-146828994	L26HS	SSHS	19.66	11.47	-0.78	-2.20	4.00E-04	1.79E-02
TCONS_00101263	XLOC_062881	chr8:63622122-63667892	L26HS	SSHS	2.11	0.81	-1.39	-2.93	4.00E-04	1.79E-02
TCONS_00000383	XLOC_000232	chr1:24362624-24367361	L26HS	SSHS	0.61	0.15	-1.97	-2.40	4.50E-04	1.97E-02
TCONS_00098322	XLOC_061115	chr7:90438540-90447890	L26HS	SSHS	3.28	1.20	-1.46	-3.68	4.50E-04	1.97E-02
TCONS_00072876	XLOC_045152	chr3:166109913-166122083	L26HS	SSHS	1.06	0.26	-2.01	-2.44	5.50E-04	2.33E-02
TCONS_00039702	XLOC_023960	chr16:3945547-4391453	L26HS	SSHS	1.75	0.41	-2.09	-2.47	8.00E-04	3.15E-02
TCONS_00040459	XLOC_024455	chr16:32492681-32501908	L26HS	SSHS	1.03	0.36	-1.52	-2.20	8.00E-04	3.15E-02
TCONS_00108812	XLOC_067239	chr9:19284677-19311302	L26HS	SSHS	0.90	0.28	-1.72	-2.24	8.00E-04	3.15E-02
TCONS_00054456	XLOC_033622	chr2:72138009-72170595	L26HS	SSHS	260.33	154.10	-0.76	-2.09	8.50E-04	3.31E-02
TCONS_00080466	XLOC_050015	chr4:241815509-241818400	L26HS	SSHS	0.37	0.11	-1.70	-2.52	8.50E-04	3.31E-02
TCONS_00040325	XLOC_024349	chr16:26367335-26402760	L26HS	SSHS	1.65	0.79	-1.05	-1.98	9.00E-04	3.49E-02
TCONS_00065158	XLOC_040294	chr3:13758694-13768920	L26HS	SSHS	0.33	0.19	-0.81	-1.99	9.00E-04	3.49E-02
TCONS_00065545	XLOC_040497	chr3:35371915-35438852	L26HS	SSHS	0.53	0.17	-1.62	-2.06	9.00E-04	3.49E-02
TCONS_00064652	XLOC_040030	chr20:39661989-39680148	L26HS	SSHS	0.55	0.15	-1.86	-2.19	9.50E-04	3.65E-02
TCONS_00102066	XLOC_063311	chr8:109125740-109129890	L26HS	SSHS	0.35	0.18	-1.00	-1.99	1.00E-03	3.82E-02
TCONS_00029009	XLOC_017230	chr13:76635112-76723739	L26HS	SSHS	2.60	0.04	-5.94	-5.26	1.15E-03	4.28E-02
TCONS_00086628	XLOC_054118	chr5:136191663-136192650	L26HS	SSHS	0.78	0.30	-1.39	-2.59	1.30E-03	4.71E-02

Supplementary Table S4. Sequence variants between the Brown Norway (BN) and SS rat genomes in the genes encoding lncRNAs TCONS_00028980 and TCONS_00029009.

Variants in TCONS_00028980

Chr	Pos	Reference Nucleotide (BN)	SS/JrHsdMcwi (SS)
13	75525614	C	T
13	75526889	A	G
13	75527129	T	C
13	75528235	A	G
13	75528460	C	T
13	75528613	T	C
Upstream			
13	75529241	T	C
13	75529255	A	G
13	75529541	G	A
13	75529736	C	T
13	75530286	C	T
13	75530593	T	C
13	75530684	A	G
13	75530688	G	A
13	75531067	T	C

Variants in TCONS_00029009

Chr	Pos	Reference Nucleotide (BN)	SS/JrHsdMcwi (SS)
13	76636239	C	T
13	76637190	A	C
13	76637813	A	G
13	76637875	G	A
13	76638008	A	G
13	76638058	A	C
13	76638552	T	A
13	76638584	T	G
13	76638730	T	C
13	76638840	G	A
13	76638989	A	G
13	76639150	A	G
13	76639420	G	T
13	76640018	T	C
13	76641010	C	A
13	76641269	A	G

13	76641274	T	C
13	76641301	C	T
13	76641694	C	G
13	76642101	T	C
13	76645230	G	A
13	76645374	A	G
13	76645552	T	C
13	76645894	C	T
13	76646079	G	A
13	76646909	C	T
13	76647739	T	C
13	76647812	A	G
13	76648255	G	A
13	76648939	C	T
13	76650412	T	C
13	76650430	G	A
13	76651707	A	C
13	76651859	T	C
13	76651878	C	G
13	76652329	T	C
13	76652923	T	C
13	76652978	C	T
13	76654621	A	G
13	76655512	G	A
13	76656227	G	A
13	76656271	C	T
13	76656393	C	T
13	76657413	T	C
13	76657754	A	T
13	76658151	T	C
13	76658879	C	T
13	76659028	A	G
13	76659072	A	G
13	76659201	C	T
13	76659418	C	T
13	76659435	G	A
13	76659911	G	T
13	76660077	G	A
13	76660752	A	C
13	76661094	C	T
13	76661172	T	C
13	76661685	T	C
13	76661790	G	A

13	76662030	C	T
13	76662094	C	T
13	76662414	A	T
13	76664418	G	C
13	76664419	A	T
13	76664420	G	C
13	76664422	G	C
13	76666270	G	C
13	76666411	C	T
13	76666713	C	T
13	76668775	C	T
13	76670015	A	C
13	76671551	G	A
13	76673755	G	A
13	76673963	A	G
13	76674077	A	T
13	76674756	T	C
13	76674798	G	A
13	76675009	G	A
13	76675281	G	A
13	76675605	A	C
13	76676296	A	G
13	76676384	A	C
13	76676531	G	A
13	76679433	A	G
13	76679755	C	G
13	76679783	T	C
13	76679813	T	C
13	76679814	A	G
13	76679827	T	G
13	76680444	G	C
13	76680500	T	C
13	76680874	T	C
13	76681751	A	G
13	76682032	A	G
13	76682134	C	T
13	76682196	A	C
13	76682495	C	T
13	76682806	A	T
13	76683694	G	A
13	76683731	T	C
13	76683987	T	C
13	76684300	T	C

13	76684396	T	G
13	76684712	G	A
13	76684789	T	C
13	76684866	C	T
13	76685069	A	C
13	76685315	C	T
13	76686073	T	C
13	76686654	T	C
13	76686964	T	C
13	76687327	C	T
13	76687415	A	G
13	76687949	A	G
13	76688940	G	A
13	76688999	T	A
13	76689569	G	A
13	76690167	C	T
13	76690714	A	G
13	76691007	G	C
13	76691447	T	C
13	76691985	T	A
13	76693015	G	A
13	76693312	C	T
13	76694326	G	A
13	76694340	A	C
13	76694587	A	G
13	76694779	G	A
13	76694997	G	A
13	76694998	G	A
13	76695021	G	A
13	76695165	A	G
13	76695199	C	T
13	76695248	C	T
13	76695349	A	G
13	76695373	T	C
13	76695556	G	T
13	76695561	A	G
13	76695563	T	G
13	76695882	T	C
13	76695918	C	G
13	76695946	A	G
13	76695986	C	T
13	76696041	A	C
13	76696064	A	G

13	76696424	C	A
13	76697003	A	G
13	76697056	A	G
13	76697741	C	T
13	76697951	C	G
13	76698118	C	T
13	76698123	A	G
13	76698694	T	C
13	76698928	A	G
13	76699221	G	A
13	76699315	A	G
13	76700160	A	G
13	76700316	T	C
13	76700441	T	G
13	76700517	T	A
13	76701131	G	C
13	76701721	A	G
13	76701821	T	C
13	76708842	G	A
13	76708911	C	G
13	76708965	C	T
13	76708980	C	G
13	76708992	T	C
13	76709050	G	A
13	76709142	C	T
13	76709579	C	T
13	76709586	T	C
13	76709606	C	G
13	76709737	C	T
13	76709850	T	C
13	76709874	T	G
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13	76710456	T	A
13	76710505	A	G
13	76710877	T	C
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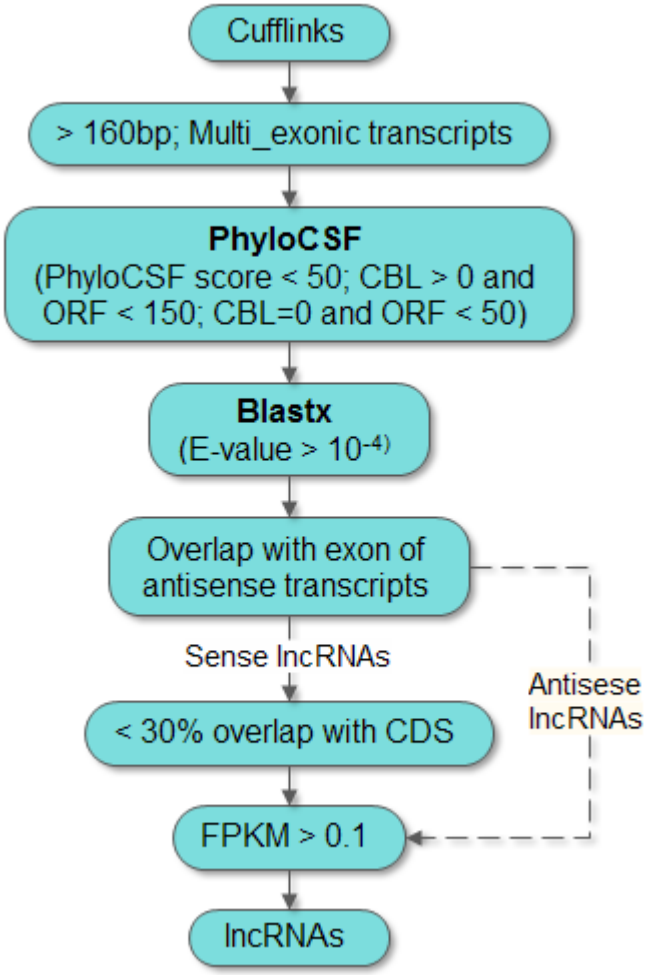
13	76711004	C	T
13	76711174	A	G
13	76711274	T	C
13	76711452	C	T
13	76712078	G	A
13	76712967	G	C

13	76712972	T	C
13	76713517	A	G
13	76713522	C	T
13	76714192	C	T
13	76714349	C	A
13	76714531	T	C
13	76714631	C	T
13	76714677	T	C
13	76714680	C	A
13	76714741	C	T
13	76714745	G	T
13	76714766	A	G
13	76714800	A	G
13	76714813	T	C
13	76715092	C	A
13	76715273	A	T
13	76715372	C	A
13	76716191	A	G
13	76716659	G	A
13	76716680	G	T
13	76717579	G	T
13	76717589	G	A
13	76717599	T	A
13	76717886	C	T
13	76718061	G	A
13	76719192	C	T
13	76719907	G	A
13	76719933	G	A
13	76719945	T	A
13	76720354	T	C
13	76720878	C	A
13	76721192	G	A
13	76721220	G	A
13	76721417	G	A
13	76721515	C	A
13	76721846	C	T
13	76722070	G	C
13	76722357	G	T
13	76722656	A	T
13	76722873	T	C
13	76723058	G	A
13	76723207	C	T
13	76723348	C	T

13	76723368	G	A
Upstream			
13	76723823	A	G
13	76723956	T	G
13	76724038	C	T
13	76724055	C	T
13	76724146	C	T
13	76724398	T	C
13	76725379	A	C
13	76725458	T	A
13	76725476	A	G
13	76725546	T	C
13	76725678	C	T

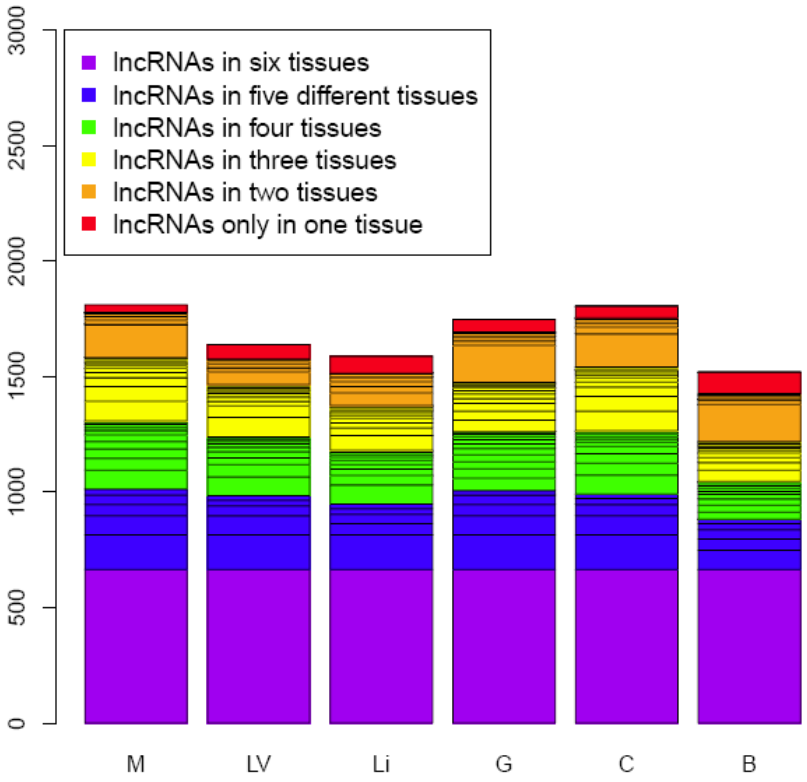
Supplementary Figure S1. Analytical procedures and criteria for identifying lncRNAs in rats. CBL, complete branch length; ORF, open reading frame; CDS, (protein) coding DNA sequence; FPKM, Fragments Per Kilobase of gene model per Million fragments mapped.



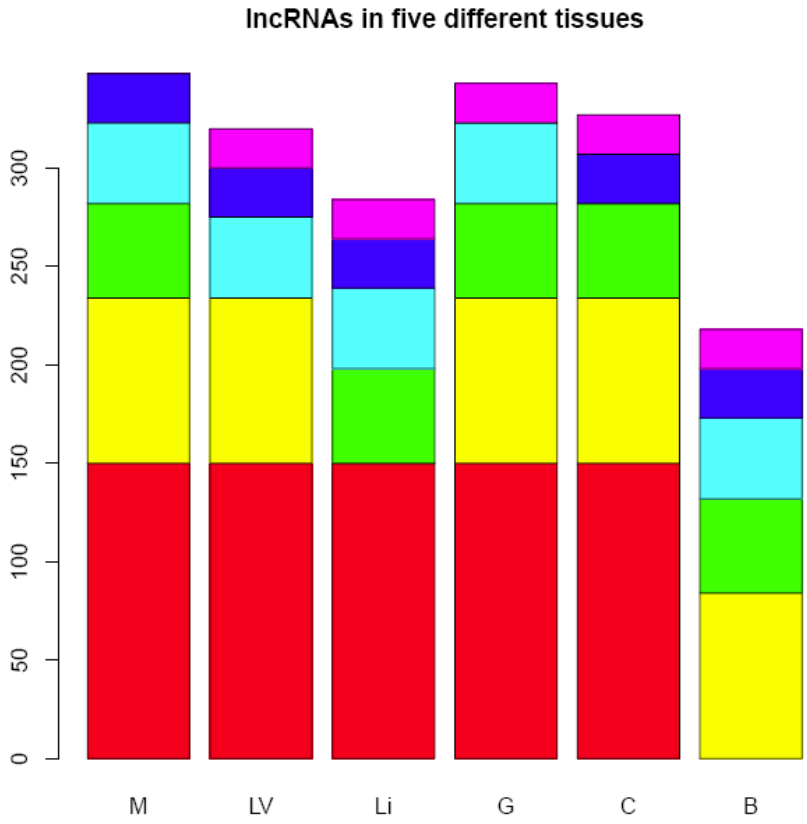
Supplementary Figure S2. Number of lncRNAs expressed in one or more tissues.

A. Overall summary. B, C, D, E showed number of lncRNAs expressed in 5, 4, 3, and 2 of the 6 tissues examined. Each bar represents a tissue. The bars with the same color indicate these tissues share common lncRNAs. See Supplementary Table S2 for abbreviations for tissue names.

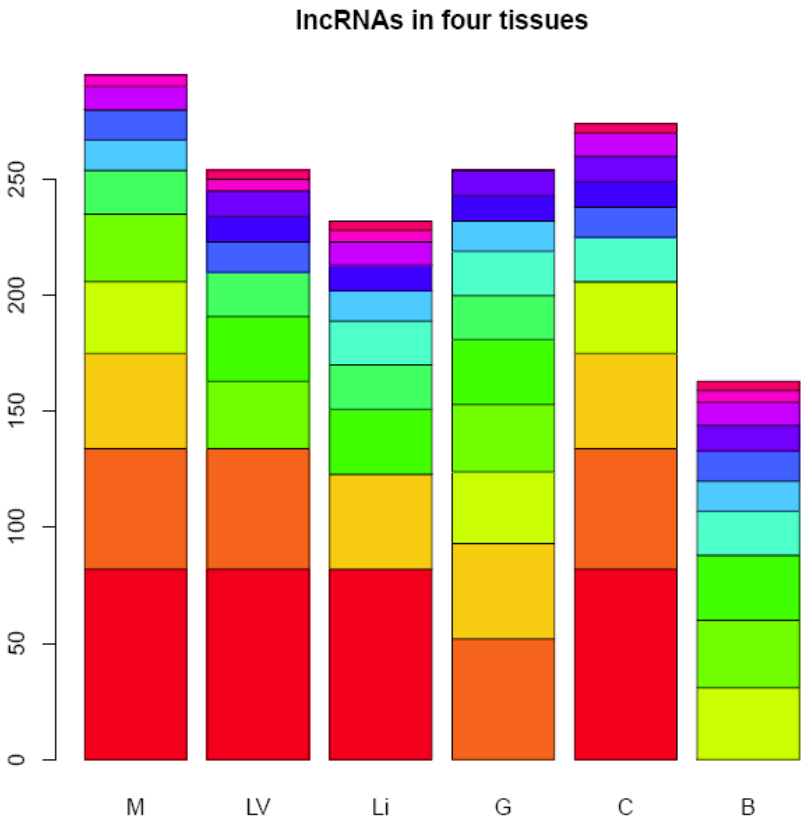
A. Number of lncRNAs expressed in one or more tissues



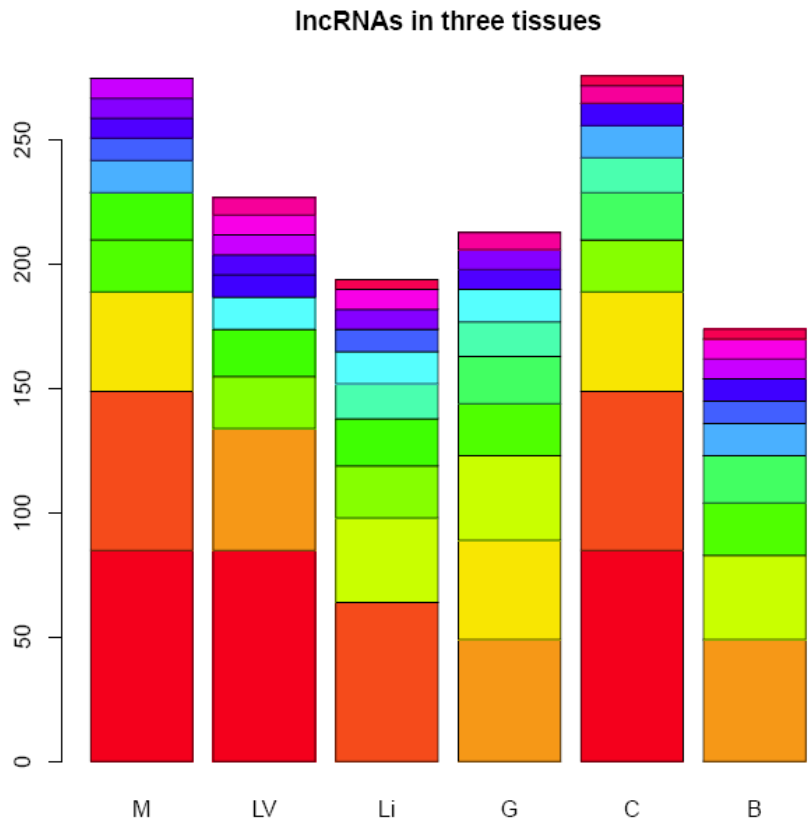
B. Number of lncRNAs expressed in 5 of the 6 tissues



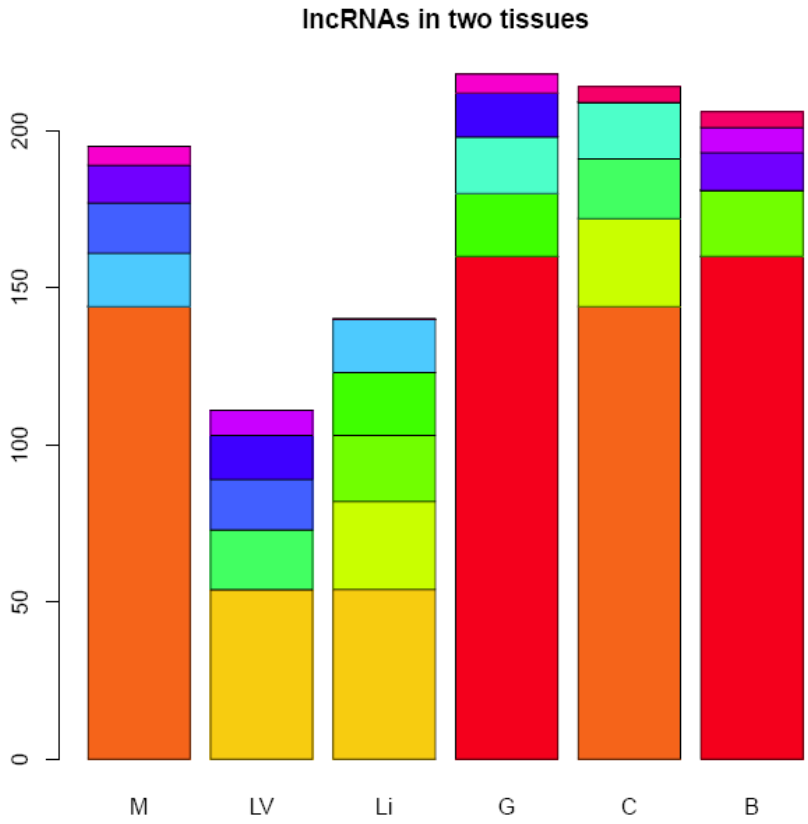
C. Number of lncRNAs expressed in 4 of the 6 tissues



D. Number of lncRNAs expressed in 3 of the 6 tissues

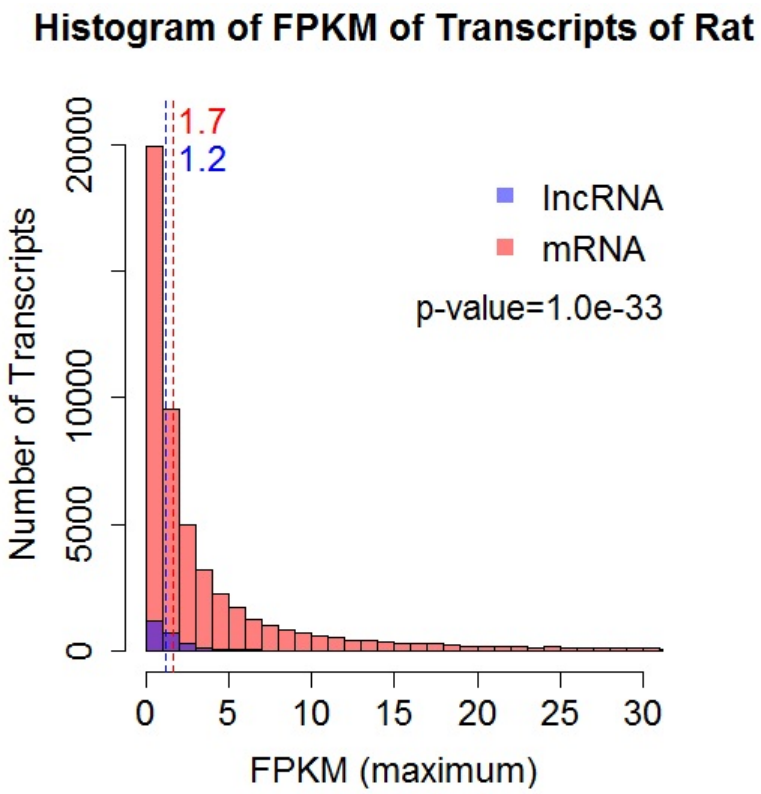


E. Number of lncRNAs expressed in 2 of the 6 tissues

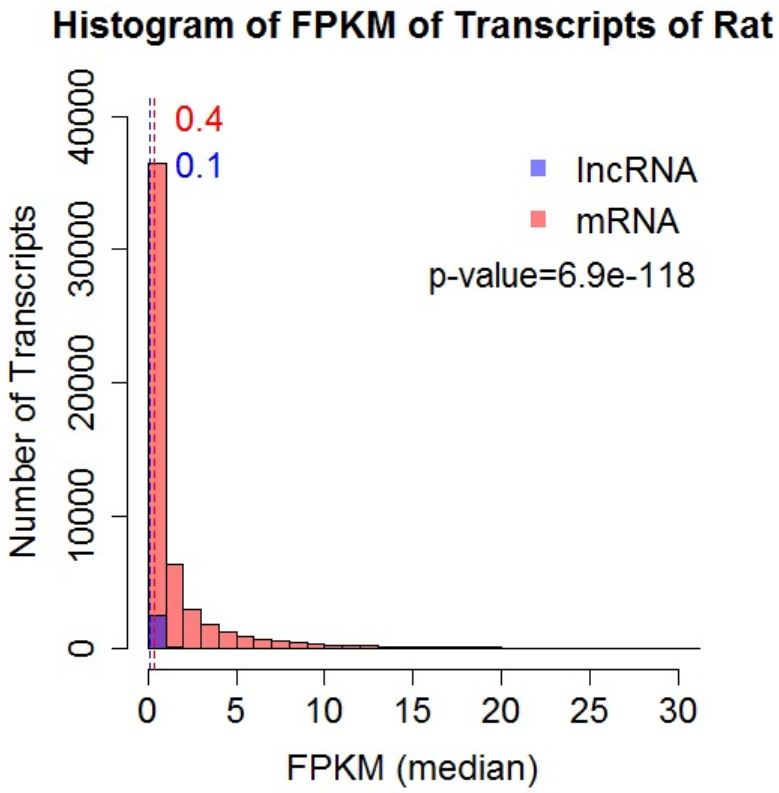


Supplementary Figure S3. Abundance of rat lncRNAs compared to mRNA. (A) For each lncRNA or mRNA, the maximum FPKM among the six tissues examined were chosen for plotting the histogram. (B) Median of FPKM among six tissues was presented. (C-H) Each tissue was presented separately. See Supplementary Table S2 for abbreviations for tissue names.

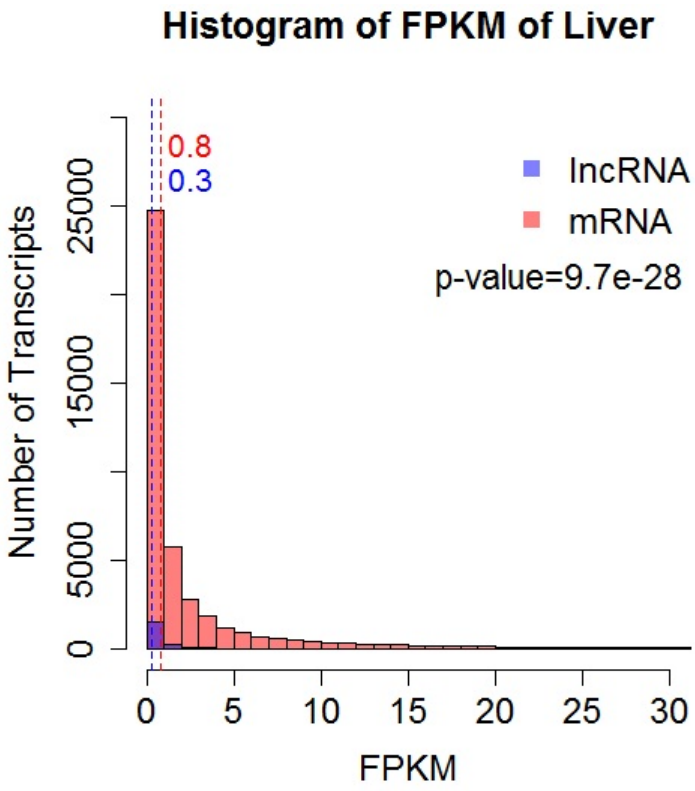
(A). Maximum expression among 6 tissues



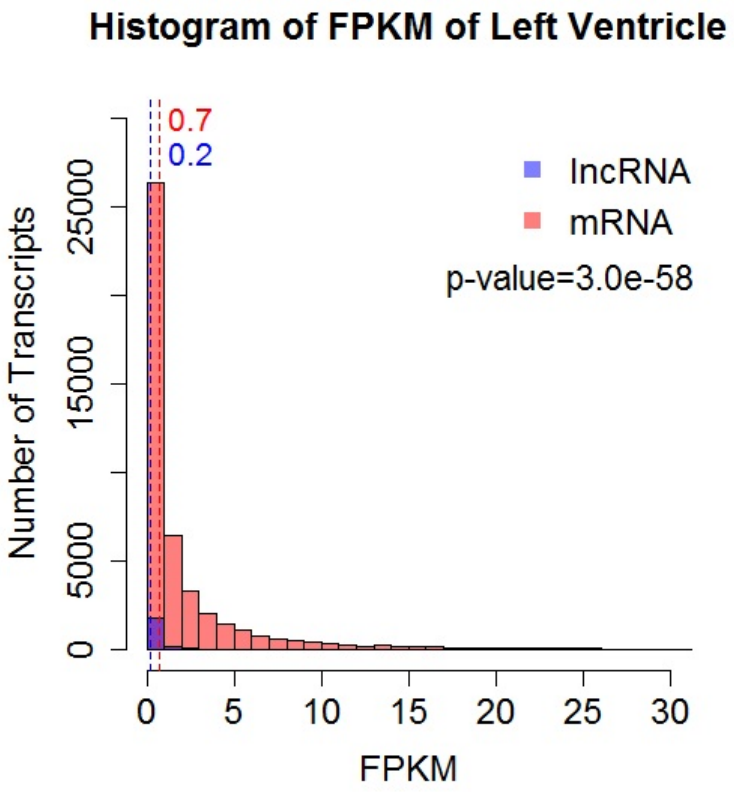
(B) Median of FPKM among tissues



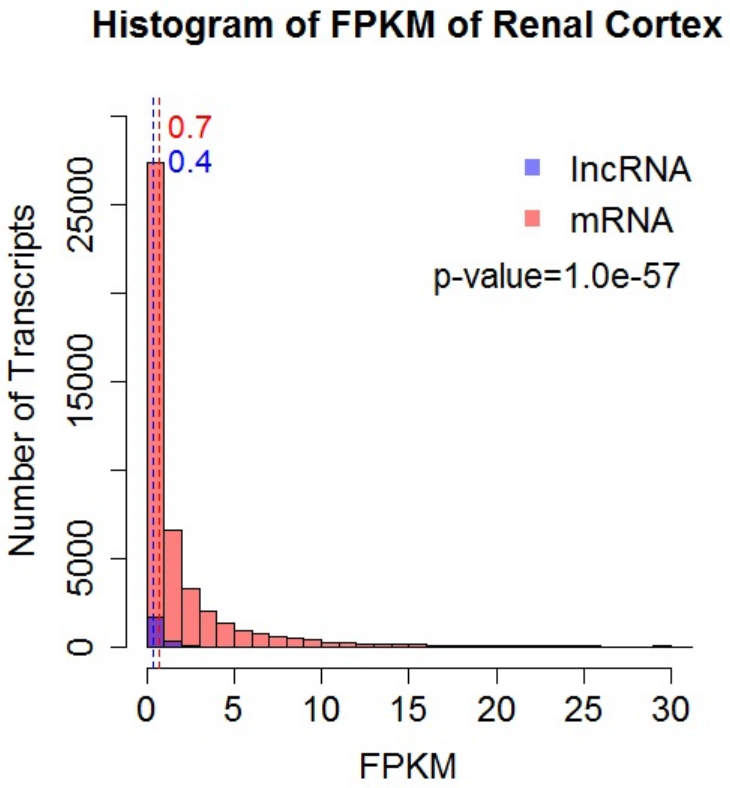
(C) Liver


Histogram of FPKM of Liver
0.8
0.3
lncRNA
mRNA
p-value=9.7e-28
Number of Transcripts
0
5000
15000
25000
0
5
10
15
20
25
30
FPKM

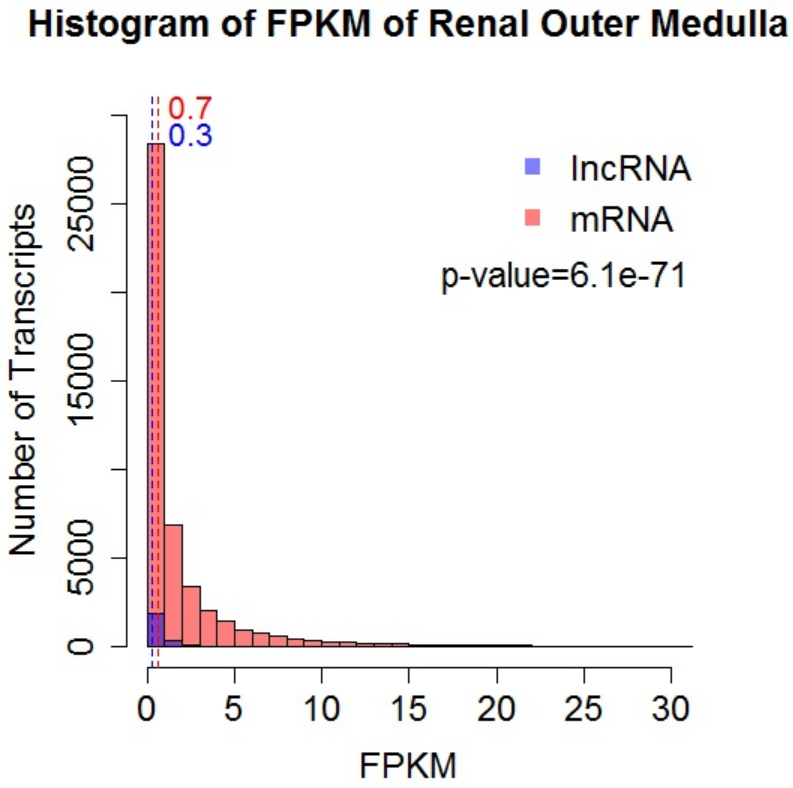
(D) Cardiac left ventricle



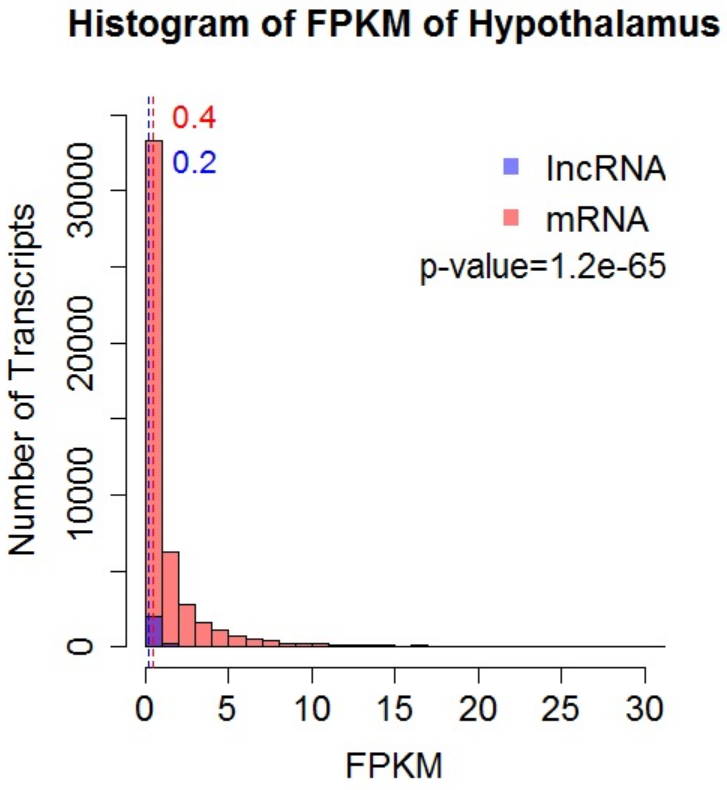
(E) Renal cortex



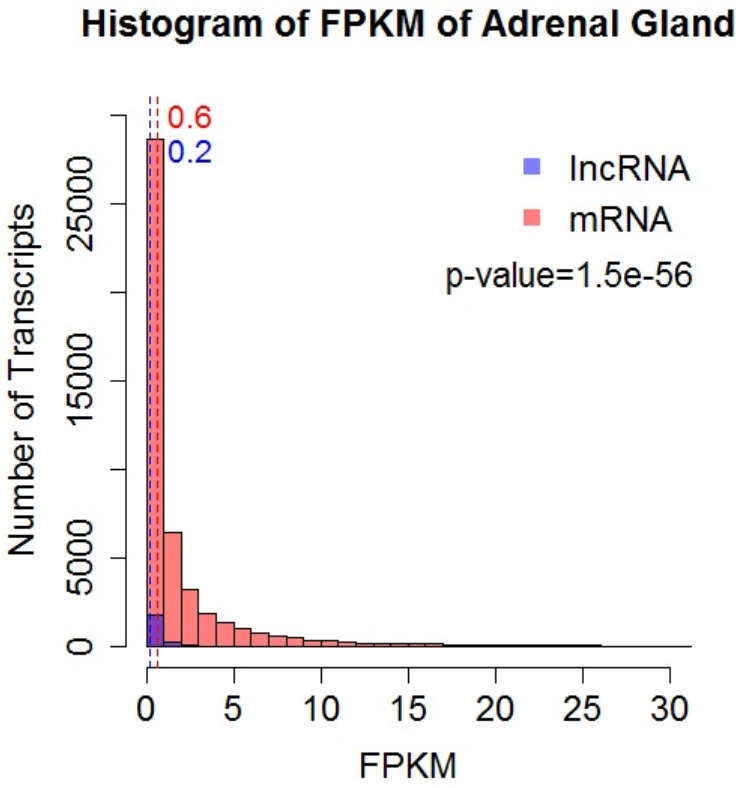
(F) Renal outer medulla



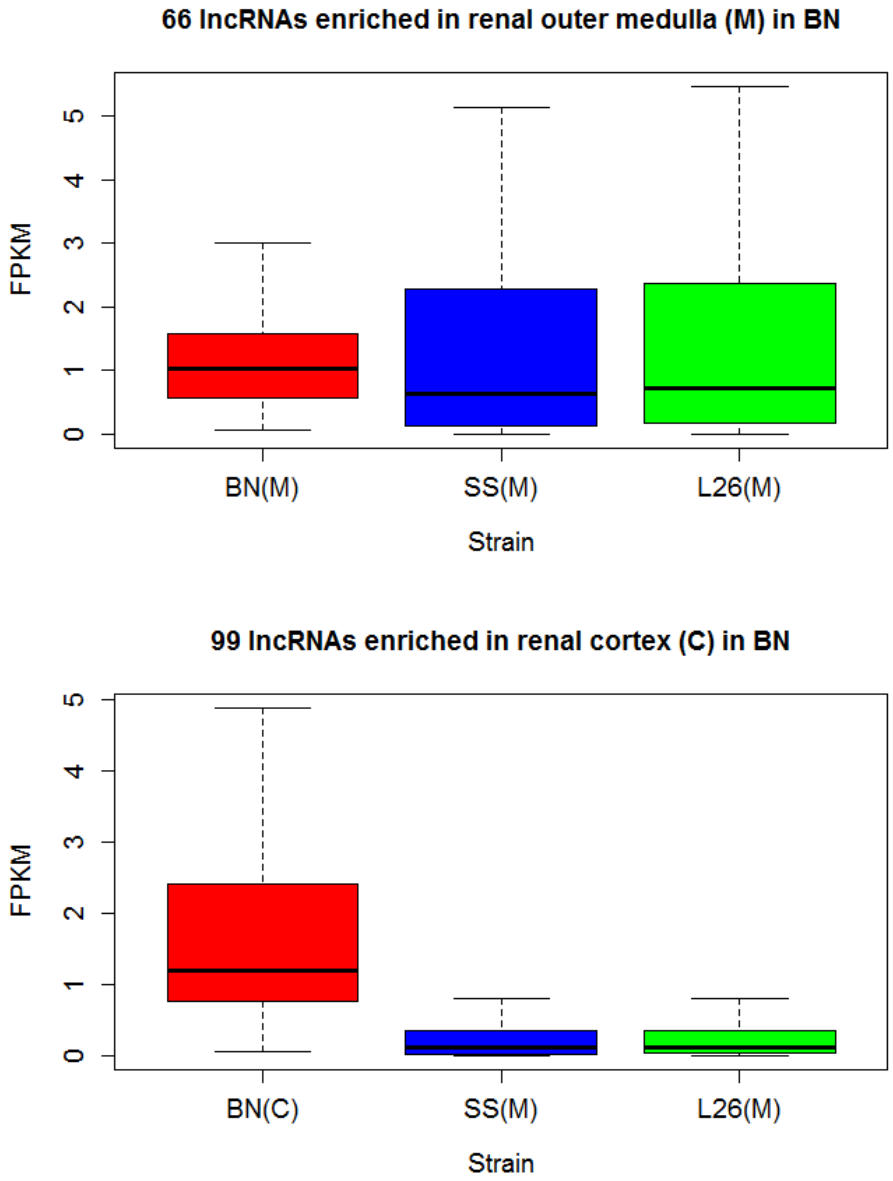
(G) Hypothalamus



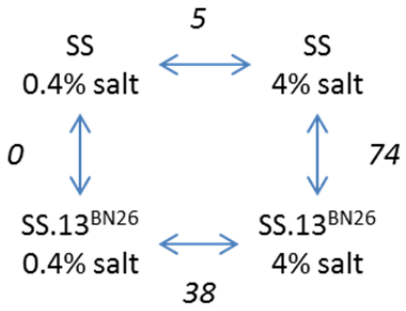
(H) Adrenal gland



Supplemental Figure S4. lncRNAs enriched in the renal outer medulla of BN rats had higher abundance in the renal outer medulla of SS and SS.13BN26 rats than lncRNAs enriched in the renal cortex of BN rats. BN, Brown Norway rat; SS, Dahl salt-sensitive rat; L26, congenic SS.13^{BN26} rat; M, renal outer medulla; C, renal cortex.



Supplementary Figure S5. Number of lncRNAs differentially expressed between SS and SS.13^{BN26} rats on 0.4% or 4% salt diet.



Supplementary Dataset. Rat lncRNAs identified in six tissue regions or organs in Brown Norway rats. Li, liver; LV, cardiac left ventricle; C, renal cortex; M, renal outer medulla; H, hypothalamus; A, adrenal gland. The dataset is in a separate Excel file.