

Role of long non-coding RNAs in adipogenesis: state of the art and implications in obesity and obesity-associated diseases

Federica Rey^{1,2}, Valentina Urrata^{1,2}, Luisa Gilardini³, Simona Bertoli^{3,4}, Valeria Calcaterra^{5,6}, Gian Vincenzo Zuccotti^{1,2,6}, Raffaella Canello³, Stephana Carelli^{1,2}

¹ Department of Biomedical and Clinical Sciences "L. Sacco", University of Milan, Via Grassi 74, 20157 Milan, Italy

² Pediatric Clinical Research Center Fondazione "Romeo ed Enrica Invernizzi", University of Milano, Milano, Italy

³ Obesity Unit—Laboratory of Nutrition and Obesity Research, Department of Endocrine and Metabolic Diseases, IRCCS Istituto Auxologico Italiano, Milan, Italy

⁴ International Center for the Assessment of Nutritional Status (ICANS), Department of Food, Environmental and Nutritional Sciences (DeFENS), University of Milan, Milan, Italy

⁵ Pediatrics and Adolescentology Unit, Department of Internal Medicine, University of Pavia, Pavia, Italy

⁶ Department of Pediatrics, Children's Hospital "V. Buzzi", Milano, Italy

Correspondence: Dr. Stephana Carelli, Pediatric Research Center "Romeo ed Enrica Invernizzi", Dept. Biomedical and Clinical Sciences, University of Milano, Via G.B. Grassi 74, 20157, Milano, Italy. E-mail: stephana.carelli@unimi.it. Tel. 00390250319825

Table S1: List of lncRNAs cited in the manuscript listed in alphabetical order with the number of known orthologues and a specific focus on their presence in the most common models (*Rattus Norvegicus*, *Mus Musculus* and *Homo Sapiens*)

	# of orthologues	<i>Rattus Norvegicus</i>	<i>Mus musculus</i>	<i>Homo Sapiens</i>
1700020I14Rik	5	Yes	Yes	Yes
AC092834.1	N/A	No	No	Yes
ADINR (CEBPA-DT)	N/A	No	No	Yes
AdipoQ AS	N/A	No	Yes	No
ADNCR	N/A (<i>Bos Taurus</i>)	No	No	No
AF131217.1	N/A	No	No	Yes
Ahit	N/A	No	Yes	No
AK012226 (<i>Lrmda</i>)	332	Yes	Yes	Yes
AK055347	N/A	No	No	Yes
AK079912	N/A	No	Yes	No
AK080084	N/A	No	Yes	No
AK088388 (<i>N4bp2</i>)	330	Yes	Yes	Yes
AK098656 (<i>LINC01227</i>)	N/A	No	No	Yes
AK125261 (<i>CDHR3</i>)	256	Yes	Yes	Yes
AP001053.11	N/A	No	No	Yes
APF	N/A	No	Yes	No
ASMER-1	N/A	No	No	Yes
ASMER-2	N/A	No	No	Yes
ASncmtRNA-2	N/A	No	Yes	Yes
Blnc1 (<i>PAQR9</i>)	326	Yes	Yes	Yes
CAIF	N/A	No	No	Yes
CARL	N/A	No	Yes	No
CASC2	N/A	No	No	Yes
CDKN2BAS1/ <i>ANRIL</i>	N/A	No	No	Yes
Cebpd	N/A	No	Yes	No
Chaer	N/A	No	No	Yes
CHRF	N/A	No	Yes	No
CILinc01	N/A	No	No	Yes
CILinc02	N/A	No	No	Yes
CJ241444	N/A	No	Yes	No
CoroMarker	N/A	No	No	Yes
CTA-384D8.35	N/A	No	No	Yes
CTB-114C7.4	N/A	No	No	Yes
CYP4B1-PS1-001	N/A	No	Yes	No
DACH1	310	Yes	Yes	Yes
DANCR	5	Yes	Yes	Yes
DNAJC27-AS1	N/A	No	No	Yes
E330013P06 (<i>Carmn</i>)	3	Yes	Yes	Yes
ECRAR	N/A	No	No	Yes
ENSMUST00000147869	N/A	No	Yes	No
ENST00000550337.1 (<i>LINC02402</i>)	N/A	No	No	Yes
ErbB4-IR	N/A	No	Yes	No
ETF1P2	N/A	No	No	Yes

FAF (FANCF)	310	Yes	Yes	Yes
FLRL2	N/A	No	Yes	No
FOXD2-AS1	N/A	No	No	Yes
GAS5	3	Yes	Yes	Yes
Giver	N/A	No	No	Yes
Gm15051 (Hotairm1)	3	Yes	Yes	Yes
Gm15622	N/A	No	Yes	No
Gm15645	N/A	No	Yes	No
Gm4419	N/A	No	Yes	No
H19	3	No	Yes	Yes
HAGLR	2	No	Yes	Yes
HAS2-AS1	N/A	No	No	Yes
HCG27_201	N/A	No	No	Yes
HI-LNC45	N/A	No	No	Yes
HIF1A-AS1	N/A	No	No	Yes
hLMR	N/A	No	No	Yes
HOTAIR	4	No	Yes	Yes
HOXA11-AS1	4	Yes	Yes	Yes
HRCR	N/A	No	Yes	No
HypERlnc	N/A	No	No	Yes
IMFNCR	N/A (Chicken)	No	No	No
KCNQ1OT1	N/A	No	No	Yes
LET	N/A	No	No	Yes
LeXis (CT70)	N/A	No	No	Yes
Linc-p21	2	No	Yes	Yes
LINC00523	N/A	No	No	Yes
LINC00994	N/A	No	No	Yes
LINC01021 (PURPL)	N/A	No	No	Yes
LINC01426	N/A	No	No	Yes
LINC01619	10	No	No	Yes
LINC01705	N/A	No	No	Yes
LINC01915	N/A	No	No	Yes
lnc-Ang362 (MIR222HG)	N/A	No	No	Yes
lnc-BATE	N/A	No	Yes	No
lnc-leptin	N/A	No	Yes	No
lnc-MCG	N/A	No	Yes	No
lnc-MKI67IP-3 (LINC01826)	N/A	No	No	Yes
lnc-ORA	N/A	No	Yes	No
lnc19959.2	N/A	Yes	No	No
lncARSR	N/A	No	No	Yes
lncPPARδ	N/A	No	No	Yes
lncR-UCA1	N/A	No	Yes	No
lncRNA-Adi	N/A	Yes	No	No
LncRNA-p3134	N/A	No	Yes	Yes
LY86-AS1	N/A	No	No	Yes
MALAT1	2	No	Yes	Yes
MDRL	N/A	No	Yes	No
MEG3	2	No	Yes	Yes
MeXis	N/A	No	Yes	No

MFI2-AS1	N/A	No	No	Yes
MHRT	N/A	No	No	Yes
MIAT	3	Yes	Yes	Yes
MIR31HG	2	No	No	Yes
MIR155HG	6	Yes	Yes	Yes
MIR221HG	N/A	No	No	Yes
MIRT1	N/A	No	Yes	No
MIRT2	N/A	No	Yes	No
MRAK048635 P1	N/A	Yes	No	No
NEAT1	2	No	Yes	Yes
NBR2	N/A	No	No	Yes
Nespas (GNAS-AS1)	N/A	No	No	Yes
NONHSAT040387	N/A	No	No	Yes
NONHSAT098586	N/A	No	No	Yes
NONMMUT010685	N/A	No	Yes	No
NONRATT021972	N/A	Yes	No	Yes
NR_033515 (Cyp2d37-ps)	N/A	No	Yes	No
NR_045363 (2810429I04Rik)	N/A	No	Yes	No
PACER	N/A	No	No	Yes
PANDA	N/A	No	No	Yes
PCGEM1	N/A	No	No	Yes
Plnc1	N/A	No	Yes	No
Plscr4	140	Yes	Yes	Yes
PLUTO	N/A	No	No	Yes
PVT1	2	No	Yes	Yes
PU.1 AS	N/A	No	Yes	No
RNCR3 (MIR124-1HG)	2	No	Yes	Yes
RP11-20G13.3 (LINC02244)	N/A	No	No	Yes
RP11-290M5.4	N/A	No	No	Yes
RP11-362F19.1	N/A	No	No	Yes
RP11-363E7.4	N/A	No	No	Yes
RP11-367F23.2	N/A	No	No	Yes
RP11-392O17.1	N/A	No	No	Yes
RP11-536K7.3	N/A	No	No	Yes
RP11-559N14.5	N/A	No	No	Yes
RP11-707P17	N/A	No	No	Yes
RP11-79H23.3	N/A	No	No	Yes
RP11-863P13.3	N/A	No	No	Yes
RP11-99E15.2	N/A	No	No	Yes
RP23 (OFD1)	393	Yes	Yes	Yes
RP3-523K23.2	N/A	No	No	Yes
RP5-833A20.1	N/A	No	No	Yes
Rpph1	N/A	No	No	Yes
SALRNA1	N/A	No	No	Yes
SENCR	N/A	No	No	Yes
slicRAD	N/A	No	Yes	No
SMILR	N/A	No	No	Yes
SNHG1	N/A	No	No	Yes
SNHG7	N/A	No	No	Yes

SRA	289	Yes	Yes	Yes
TCONS_00075467	N/A (Rabbit)	No	No	No
TCONS_00202959	N/A	Yes	No	No
TGFB2-OT1	N/A	No	No	Yes
THRIL	N/A	No	No	Yes
TINCR	3	Yes	Yes	Yes
Tmem189	176	No	Yes	Yes
TTY15	N/A	No	No	Yes
TUG1	4	Yes	Yes	Yes
Uc.323	N/A	No	Yes	No
VLDLR-AS1	N/A	No	No	Yes
Wisper	N/A	No	Yes	Yes
XIST	N/A	No	No	Yes
XR-007793	N/A	Yes	No	No
ZFAS1	N/A	No	No	Yes