

Rat Genomics & Models [2007]

Session 1 CARDIOVASCULAR DISEASES

THURSDAY 12/6/2007, 7:00 PM

A. Dominiczak / N. Hübner

#	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
1	Cowley	KEYNOTE SPEAKER: Unraveling the genomic basis of complex functions and diseases	25
2	Dominiczak	Candidate genes that determine blood pressure response to salt	12
3	Hubner	Identification of a susceptibility gene for heart failure in a rat model of human disease	12
4	Jirout	Discovery of genetic regulatory network controlling catecholamine biosynthesis in the spontaneously hypertensive rat	12
5	Maatz	Genetic variation in Mrp is associated with impaired mitochondrial function in genetic hypertension	12
6	Michalkiewicz	A combined epigenomic and genomic approach to hypertension	12
7	Moreno Quinn	Pleiotropic effects of the renin loci	12
8	Silva	Selection of candidate genes for blood pressure response to high-salt diet QTL on chromosome 16 of the SHR	12

Session 2 METABOLISM AND INFLAMMATION

FRIDAY 12/7/2007, 8:30 AM

H. Markholst / R. Holmdahl

#	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
	Markholst	No title	12
	Holmdahl	No title	12
9	Barkalifa	Continued dissection of the genetic basis of type 2 diabetes in the Cohen diabetic rat—Chr4 QTL is reproduced and Ica1 is identified as priority candidate gene	12
10	Behmoaras	Positional cloning of a novel determinant of macrophage activation and susceptibility to crescentic glomerulonephritis	12
11	Dasarathy	Increased expression of yostatin in adipose tissue following portacaval anastomosis results in lower fat mass	12
12	Jagodic	VAV1 predisposes to autoimmune inflammation in rats and humans	12
13	Lazar	Functional cardiac abnormalities in animal models with type 2 diabetes mellitus	12
14	Mordes	Analysis of the <i>Idm14</i> rat autoimmune diabetes susceptibility locus reveals <i>TCRVβ1</i> , <i>TCRVβ4</i> , and <i>TCRVβ13</i> as candidate genes in multiple rat strains	12
15	Pravenec	Direct linkage of mitochondrial genome variation to risk factors for type 2 diabetes in conplastic strains	12
16	Redei	Identification of a quantitative trait locus for pre-diabetic state on chromosome 1	12

Session 3 WORKSHOP I: DATABASES

FRIDAY 12/7/2007, 11:30 AM

S. Old

RGD, Ensembl

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
17	Åkesson	Metabolic shift in DR.lyp/yp rats preceding hyperglycemia	
18	Alam	Genetic loci for femur, femoral neck and lumbar spine bone mineral density identified in inbred COP and DA rats	
19	Wedekind	Regulatory potential of T-cells in the LEW.1AR1- <i>iddm</i> rat—A rat model of diabetes mellitus type 1	
20	Ballester	EURATMart—Compendium of rat tissue expression data	
21	Beyeen	Identification and fine-mapping of a novel EAE-regulating QTL on rat chromosome 1	
22	Blankenhorn	Genetic analysis of autoimmune diabetes in the LEW.1WR1 rat reveals a requirement for <i>Idm14</i> and a new locus in the major histocompatibility complex	
23	Bou Serhal	Gene expression profiling of right ventricles in hypoxia exposed Sprague Dawley rats	
24	Bryda	Rat Resource and Research Center	
25	Cicila	Identification of epistatic genetic determinants of blood pressure and mortality in a salt-sensitive hypertension model	
26	Diez	Genetic regulation of MHC, co-stimulatory molecules and the complement system in neuroinflammation	
27	Dwinell	Integrating PhysGen Program for Genomic Applications with RGD through ontologies	
28	Grieve	Statistical investigation of transcriptomic architecture across four rat tissues	
29	Grunz	Identification of miRNAs as genetic regulators of differential gene expression in the SHR rat	
30	Heinig	Mapping of pathway expression QTLs in segregating rat populations	
31	Johnson	Genetic dissection of chromosome 18 blood pressure and salt sensitivity QTLs in the spontaneously hypertensive rat	
32	Koelsch	Functional characterization of the <i>Mss4</i> locus mediating sex-specific resistance to ethylnitrosourea-induced oncogenesis in the rat peripheral nervous system	
33	Koller	Epistatic effects contribute to variation in bone density in Fischer 344 X Lewis F2 rats	
34	Commers	High resolution mapping of <i>Renag1</i> —A major genetic determinant of renal agenesis in the rat	
35	Laulederkind	Gene curation at the rat genome database	
36	Gösele	Endogenous retrovirus mediated disruption of a centrosomal gene leads to spermatogenesis failure	
37	Liu	Reciprocal congenic mapping of malignant hypertension severity QTL on chromosome 10 in rats	
38	McBride	GSH levels are significantly reduced in the SHRSP during the development of hypertension	
39	Nigam	Worldwide repository for rat strains at the Rat Genome Database	
40	Nigam	QTL at RGD—Linking phenotype to the genome	
41	Nigam	Data registration, submission and nomenclature at the Rat Genome Database	
42	O'Meara	Investigating a triple congenic rat model to determine genes contributing to renal failure	

43	Petri	Pathway data at the Rat Genome Database
44	Pravenec	The BXH/HXB recombinant inbred strains for analyses of complex traits
45	Pravenec	Identification of mutated <i>Srebf1</i> as a QTL influencing risk for hepatic steatosis in the spontaneously hypertensive rat
46	Rangel Filho	Applications of viral vectors in rat genomics
47	Saar	Identification and mapping of single nucleotide polymorphisms for genetic analysis in the rat
48	Samuelson	Rat <i>Mcs1b</i> maps to a human breast cancer risk allele
49	Schilling	High-throughput production of rat knockout models for hypertension using ENU mutagenesis and a TILLING assay
50	Shimoyama	The Obesity/Metabolic Syndrome Portal at RGD
51	Smith	The Rat Genome Database—Creating a centralized resource for interdisciplinary research through integration of links to protein-related data types
52	Smith	The Rat Genome Database—Biological Information in a genomic context
53	Twigger	SNPlotyper—A web-based SNP genotype/haplotype visualization and analysis tool
54	Voigt	Genetic dissection of the LEXF/FXLE recombinant inbred strains—A SNP based QTL study
55	Wallis	Linkage analysis using the BB rat reveals novel and confirms previously identified type 1 diabetes loci
56	Carter	A sexually dimorphic, postnatal developmental disorder is linked to <i>Zfhx1b</i> (<i>Sip-1</i>) mis-expression in an insertional mutant rat model
57	Wilkinson	Rat models of aging—A mechanistic link between aerobic capacity and longevity
58	Yagil	Reversibility of diabetes in the Cohen diabetic rat sheds insight into the pathophysiology of the disease in this model
59	Yamashita	Linkage and microarray analyses of susceptibility genes in ACI/Seg rats—A model for prostate cancers in the aged
60	Yoshimura	Microarray gene expression analysis for the genes related recovery of the impaired heart in rat

Session 5 TUMOR BIOLOGY

FRIDAY 12/7/2007, 7:30 PM

J. Shull / T. Ushijima

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
	Gibbs	KEYNOTE SPEAKER: What's next for the Rat Genome?	25
61	Shull	Genetics of susceptibility to estrogen-induced mammary cancer in the rat	12
62	Ushijima	Silencing of <i>Tgfb2</i> due to promoter methylation in rat prostate cancers	12
63	Gould	Functional characterization of a non-coding breast cancer susceptibility QTL	12
64	Zschemisch	Point mutation in the rate <i>Dnd1</i> gene causes male infertility and initiates teratocarcinogenesis in WKY- <i>Dnd1</i> ^{ter} /Ztm rats	12

65	Adamovic	Genetic mapping of QTLs controlling chemically induced mammary tumor latency and multiplicity on chromosome 10 using a novel SS/BN consomic rat model	12
66	Szpirer	Mammary cancer resistance, precocious mammary differentiation and epistatic interactions in the WKY rat	12

Session 6 COMPARATIVE DISEASE GENOMICS SATURDAY 12/8/2007, 8:30 AM

P. Harris / T. Scheetz

#	Iname	Title	Talk Length
67	Harris	Rat models aid gene identification and understanding of the pathophysiology of polycystic kidney disease	12
68	Scheetz	Regulation of expression, splicing and a novel strategy to prioritize disease genes	12
69	Johannesson	The use of a rat heterogeneous stock for high resolution genetic mapping	12
70	Guryev	Copy-number variation in genomes of laboratory rat strains—Distribution, properties and utility for human genetics	12
71	Lee	An <i>Rtel1</i> allelic variant is associated with telomere length shortening in a rat genetic model	12
72	Liska	Deletion of a conserved noncoding sequence in <i>Plzf</i> leads to <i>Plzf</i> misexpression in limb bud and rat polydactyly-luxate syndrome	12
73	Morrissey	Validation and characterization of a dataset of <i>cis</i> -acting expression QTLs in the BXH/HXB recombinant inbred rat strains	12
74	Öckinger	Genetic variants of β -chemokines are associated with autoimmunity in humans and rats	12
75	Wallis	Analysis of candidate genes within the rat diabetes resistance locus <i>Iddm24</i> , and their association with human type 1 diabetes	12

Session 3 WORKSHOP I: DATABASES SATURDAY 12/8/2007, 11:00 AM

S. Old

MiMiR, eQTL Explorer

Session 8 SYSTEMS BIOLOGY, PHARMACOLOGY AND TOXICOLOGY SATURDAY 12/8/2007, 2:00 PM

H. Jacob / C.R. Wolf

#	Iname	Title	Talk Length
76	Birney	KEYNOTE SPEAKER: The ENCODE Project—Understanding mammalian genomes	25
77	Jacob	Tacrine toxicity detected in a rat test population	12
	Wolf	Title only: Genetic and transgenic approaches for understanding pathways of chemical toxicity	12
78	Kwitek	Integrated approaches to dissect complex disease	12
79	Aitman	EURATools—A new kid on the rat block	25
80	Petretto	Integrated genomic approaches identify osteoglycin (<i>OGN</i>) as a novel determinant of left ventricular mass	12

Session 9 GENOME RESOURCES, INFORMATICS SATURDAY 12/8/2007, 4:30 PM

T. Serikawa / E. Cuppen

#	Iname	Title	Talk Length
81	Serikawa	The National Bio Resource Project for the Rat in Japan—An update	12
82	Cuppen	Copy number variation in the rat	12

83	Pruitt	Rat genomic resources at NCBI	12
84	Ruklisa	Investigating genetic epistatic interactions in the rat	12
85	Twigger	Apropos—I want it all, and I want it now	12

Session 10 NEUROSCIENCE

SUNDAY 12/9/2007, 8:30 AM

J. Flint / T. Olsson

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
	Flint	Title only: Using expression data to find genes underlying complex traits in mice	12
86	Olsson	The genetics of rat neuroinflammation and degeneration	12
87	Anegon	New lines of transgenic rats expression EGFP in cells relevant for regenerative medicine and immunointervention	12
88	Liang	Gene expression profiling of congenic strains to identify candidate genes for alcohol preference	12
89	Mashimo	Gene-targeted rat models of human epilepsy efficiently developed by ENU mutagenesis	12
90	Stridh	Characterization of <i>Eae23</i>	12
91	Teruel	Fearfulness and learning ability in the N/Nih genetically heterogeneous rat stock—Sex differences and comparison with other strains	12

Session 11 MANIPULATING THE RAT GENOME

SUNDAY 12/9/2007, 10:30 AM

Z. Izsvak / J. Mullins

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
92	Izsvak	Transposon-mediated mutagenesis in rat spermatogonial stem cells	12
93	Chebotareva	Rat cloning—The challenge of spontaneous egg activation	12
94	Demers	Multipotency of rat ES-like cells during embryonic development in vivo	12
95	Geurts	Transposon knockouts by high throughput gene trapping in the rat	12
96	Kitada	Successful transposon-tagged mutagenesis in the rat germ and somatic lines	12
97	van Boxtel	Improved gene knockout efficiency in DNA mismatch repair deficient rats	12