

Physiological Genomics & Rat Models

Session 1 SEQUENCING THE RAT

THURSDAY 12/11/2003, 7:30 PM

S. Old

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
1	Weinstock	The genome of the Brown Norway rat	17
2	Kwitek	High density rat radiation hybrid maps provide over 24,000 direct links to the rat genome sequence	17
3	Schein	A BAC-based physical map of the rat genome	17
4	Zhao	Human, mouse and rat genome large scale rearrangements—Stability versus	17
5	Hubner	A SNP map of the rat genome generated from transcribed sequences	12
6	Vitt	Selection of candidate disease genes by EST-based identification of genomic gene loci and synteny between rat and human	12
7	Jang	Rat genome annotations at NCBI	12
8	Di Francesco	Analysis of the Celera rat genome annotation	12

(9 **Patel** Her abstract will be a Poster Presentation)

Session 2 COMPARATIVE GENOMICS

FRIDAY 12/12/2003, 9:00 AM

D. Vollrath

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
10	Green	Decoding the mammalian genome by multi-species comparative sequencing	17
11	Goodstadt	Rat-specific biology inferred from comparative genomics	12
12	Hardison	Mammalian genome anatomy and function revealed by rat, mouse and human	12
13	Nobrega	Scanning human gene deserts for function	17
14	Eppig	Rat and mouse—Modeling human disease through comparative phenotypic	12
15	Jensen-Seaman	Recombination rate evolution in the rat, mouse and human genomes	12

Session 3 MODELS: NEUROSCIENCE

FRIDAY 12/12/2003, 11:00 AM

M.-T. Perez

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
16	Osumi	//Small eye// rat—A model for schizophrenia	12
17	Perez	Neuron-glia interactions in degeneration and rescue of photoreceptor cells in RCS	12
18	Wu	Dynamic expression of protocadherin repertoire in rat brain and identification of similar genomic organizations in mammalian genomes	12
19	Liang	!a!-synuclein expression is higher in alcohol-preferring than alcohol-nonpreferring	12
20	Furuyama	Microarray analysis of hypothalamus and multipel characteristics of the genetically heat-resistant inbred rat	12

Session 4 POSTER SESSION

FRIDAY 12/12/2003, 2:00 PM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
21	Agca	Xenotransplantation of cryopreserved testicular tissue from neonatal GFP rats into athymic nude mice	
22	Andriychuk	Metabolic alcohol adaptation in rats with different preference of ethanol over water	
23	Bartsch	Characterization of p16 ^{Cdkn2a} as a genetic determinant of mammary	
24	Bilusic	Congenetic BN.GH18 rats—An animal model for impaired baroreceptor sensitivity?	
25	Rodemich	Refinement of //iddm4// diabetes locus	
26	Blankenhorn	Requirement of //iddm4// diabetes locus for virus-induced type I diabetes in the rat	
27	Cort	Investigation of the early immune responses of EAE in susceptible and resistant strains of rat	
28	Cozzi	Fertile cloned rats after controlled timing of oocyte activation	
29	Emes	Evolution and comparative genomics of odorant- and pheromone-associated genes in rodents	
30	Ettinger	Sequencing of RT1-B and RT1-D haplotypes—Implications for the mechanism of type 1 diabetes in the rat	
31	Feng	Sprague-Dawley rats have more neuronal nitric oxide synthase in dorsolateral periaqueduct gray than Brown Norway rats	
32	Feroah	Circadian sleep bout length and movement behavior are under genetic control in inbred strains of rat	
33	Saunders	Increasing transgenic rat production efficiencies—Refinements in superovulation, recipient colony management and choice of genetic background	
34	Garrett	Genome scan and congenic strains for albuminuria QTL using Dahl salt-sensitive	
35	Hogan	Mapping genetic modifiers in the PCK rat—A model of autosomal recessive polycystic kidney disease (ARPKD)	
36	Hoopes, Jr.	QTL mapping for hypercalciuria in a rat model of kidney stone disease	
37	Joe	Identification of mannosidase IIx as a differentially expressed positional candidate gene for blood pressure QTL in a rat model of hypertension	
38	Khampang	Gene expression profiling in left ventricle of hearts from SSBN13 consomic and SS rats after exposure to ischemia	

- 39 Klinga Levan The influence of the genetic background on susceptibility to endometrial adenocarcinoma in the rat
- 40 Koelsch A 6 Mb contig based integrated map of the //Dis-1// minimal deletion region at 10q32.3 implicated in the development of EtNU-induced malignant rat schwannomas
- 41 Laneuville Rat model of knee joint immobilization reveals candidate genes associated with cartilage degeneration
- 42 Lee Global gene expression study in the left ventricles of DA and Copenhagen rats to identify candidate genes for aerobic running capacity quantitative trait loci
- 43 Liska Search for a gene causing limb malformation and male infertility in the rat hypodactyly (//Hd//)
- 44 Llamas Distinct QTL are linked to cardiac left ventricular mass in a sex-specific manner in an inbred rat intercross
- 45 Lutz Identification of sequence variations between the ACI and FHH strains in candidate genes for the //Rf-4// locus
- 46 Majewski High-throughput production of rat knockout models for hypertension using ENU mutagenesis and a yeast truncation assay
- 47 Chen Mutations induced by riddelline in the liver //cll// gene of big blue transgenic rats
- 48 Moisan Gene expression of transcortin in rat adipocytes—Potential role in obesity
- 49 Momose In vivo analysis of //Tsc2// gene function by using transgenic Eker rat system
- 50 Moralejo The cluster immune-associated nucleotide (//lan//)-related genes in the BB rat
- 51 Moreno Quinn Temporal patterns of gene expression in the kidney of the //Rf-1// congenic rat strain
- 52 Nestor A genome scan for neointimal hyperplasia in the rat
- 53 Rangel-Filho In silico physical mapping and annotation of renal failure and bleeding disorder QTLs in the Fawn Hooded Hypertensive rat
- 54 Russell Induction of SREBP-1c and lipogenic enzymes in the insulin-resistant JCR:LA-cp rat—Microarray profiling
- 55 Bartsch BAC based strategy for integration-independent and tight regulation of gene expression by the Tet-system in transgenic rats
- 56 Seda Metabolic and expression profile of rosiglitazone-treated, fat-fed BN/Cub and BN.SHR4 congenic pair of inbred rat strains
- 57 Smits Mapping of the rat //whirler// mutation with a genome-wide SNP mapping panel
- 58 Strohl Inheritance of ventilatory behavior in the presence of the leptin receptor mutation
- 59 Szpirer Rat chromosome 11 and mouse chromosome 16—Conserved synteny is associated with gene order rearrangements explicable by intrachromosomal
- 60 Tschannen A three-color microarray platform and gene expression profiling in the development of end stage renal disease
- 61 Turner Evolution of rat Sry—Duplication without gene conversion

62	van Dijk	Renal blood flow autoregulation and renal damage susceptibility in ACI.FHH//Rf -1B, Rf -4//, and //Rf -5// congenic rats
63	Vollrath	Global search for genes involved in phagocytosis of photoreceptor outer segments
64	Wedekind	Type 1 diabetes mellitus of the LEW.1AR1 -//iddm// rat is linked to susceptibility loci on RNO1 and RNO20
65	Weissert	Prevention of experimental autoimmune encephalomyelitis by a nonapeptide totally unrelated to the encephalitogen
66	Zhang	Nuclear receptors in the rat genome and a comparative study in human and mouse
67	Zidek	"Functional lipotrophy" in SHR transgenic rats with muscle-specific expression of
68	Znamenska	Lipid indexes of the skin, the cerebellum and the medulla oblongata in rats during water-immersion stress
69	Bromberg	Rat Genome Database (http://rgd.mcw.edu)—A resource for rat strain information
70	de la Cruz	The Gene Annotation Tool—Integration and access of gene information via the Rat Genome Database
71	Dracheva	Processing rat genes, markers and RefSeqs at NCBI
72	Florea	AIR—A computational framework for the Celera rat genome annotation
73	Ovcharenko	ECR Browser, a tool for accessing data from genome comparisons, and its application to rat genome analysis
74	Pasko	A new search tool for data at the Rat Genome Database (RGD)
75	Pontius	NCBI's Rat UniGene—From ESTs to genes
76	Shimoyama	Phenotype and disease data at the Rat Genome Database
77	Taylor	Predicting regulatory elements from genome-wide 3-way alignments of human, mouse and rat
78	Tonellato	Comparative analysis of prostate disease in rat, mouse and human
79	Xu	Mouse models of human cancer web-based resources
80	Zhang	Rat Genome Alignment and Annotation database

Session 5 MODELS: KIDNEY/CANCER

FRIDAY 12/12/2003, 7:30 PM

P. Harris / G. Levan

#	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
81	Harris	The PCK rat is orthologous to human autosomal recessive polycystic kidney disease (ARPKD) and a key resource for understanding pathogenesis	17
82	Hino	Genetics of a novel hereditary renal cancer (Nihon) rat	12
83	Lachel	Genetic characterization of renal agenesis in the ACI rat—Mapping of //Renag1// to	12
84	Aitman	Genetic analysis of rat nephrotoxic nephritis, a model of human crescentic glomerulonephritis	12
85	Garrett	Identification of //Resp18// as a candidate gene for the blood pressure QTL on rat chromosome 9 using congenic strains and renal expression analysis	12
86	Yagil	Genetic mapping of proteinuria-related genes in the Sabra rat model of FSGS	12
87	Levan	The BDII inbred rat—A model for the genetic analysis of endometrial cancer	12
88	Schaffer	Physical confirmation of //Emc3//, a locus that modifies estrogen-induced tumor	12

multiplicity, in the ACI.BN//Emca3// congenic rat strain

89 Kindler-Roehrborn Chromosome mapping of multiple loci affecting the genetic predisposition to Ethylnitrosourea-induced neurooncogenesis in the rat 12

Session 6 RESOURCES

SATURDAY 12/13/2003, 9:00 AM

L. Riley

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
90	Twigger	Genome sequence resources at the Rat Genome Database (http://rgd.mcw.edu)	17
91	Stahl	Comparative mapping between rat and human as a resource for QTL gene candidate prediction	17
92	Critser	Rat Resource and Research Center—An update	17
93	Rall	Cryopreservation and banking of embryos from NIH Animal Genetic Resource and Autoimmune Rat Models	12

Session 7 MODELS: DIABETES / LIPIDS / CARDIOVASCULAR

SATURDAY 12/13/2003, 10:30 AM

A. Kwitek

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
94	Markholst	New autoimmune genes in type 1 diabetes	17
95	Matsumoto	The evidence of synergetic effects on increasing the plasma glucose and insulin levels by the use of the double congenic lines with NIDDM loci	12
96	Yokoi	Positional cloning of the autoimmune type 1 diabetes gene in the KDP rat	12
97	Pravenec	Transgenic rescue of defective Srebp1c corrects dyslipidemia in the SHR	12
98	Di Nicolantonio	The //Lvm-1// locus controlling left ventricular size contains a variant of the angiotensin II type 1_B_ receptor	12
99	Krieger	Four mapped QTLs for salt loading blood pressure (BP) confirmed its role in BP regulation and salt sensitivity in congenic rat strains developed to test this hypothesis	12
100	Cicila	Identification of two distinct blood pressure QTLs at the Q-terminus of rat chromosome 3 using substitution mapping with congenic substrains derived from	12

Session 8 AUGMENTING AND INHIBITING GENE FUNCTION

SATURDAY 12/13/2003, 2:00 PM

B. Davidson / M. Gould

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
101	Fraichard	Generation of fertile cloned rats through somatic cell nuclear transfer	17
102	Iannaccone	An alternative activation suppression mechanism for rat oocytes	12
103	Reichardt	Exploring the rat immune system by classical and lentiviral transgenesis	12
(104)	Michalkiewicz	Presented as Poster	12
105	Mullins	Differential susceptibility to vascular injury in a transgenic rat model of inducible hypertension	17
106	Davidson	RNAi in neurodegenerative models	17
107	Gould	Production of knockout rats using ENU mutagenesis and a yeast-based screening	17
108	Cuppen	Making rat knockouts using target-selected mutagenesis	12
109	Peters	Ingenotyping—A rapid approach for the generation of rat models by gene-driven ENU mutagenesis – Juergen Laufs will be presenting instead.	12

Session 9 ARTHRITIS / IMMUNITY

SUNDAY 12/14/2003, 9:00 AM

M. Griffiths

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
110	Holmdahl	Identification of arthritis genes	17
111	Griffiths	Development and phenotyping of DA.BN CIA -QTL-congenic and chromosome substitution rat lines	17
112	Lernmark	Coordinate expression of immune associated nucleotide genes linked to lymphopenia in the BB rat	17
113	Mordes	Autoimmune diabetes in the LEW.1WR1 rat after infection with Kilham rat virus (KRV) and rat cytomegalovirus (RCMV)	12

Session 10 EXPRESSION PROFILING AND PHARMACOGENOMICS

SUNDAY 12/14/2003, 10:30 AM

C. Kendzioriski

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
114	Dragan	Analysis of genomic and proteomic data from transgenic rat liver neoplasms	12
115	Wallace	Integrated gene expression profiling and linkage mapping in rat recombinant inbred	12
116	Kendzioriski	Statistical methods for microarrays	17
117	Ween	Rat microarray analysis resources	12
118	Chen	Validation of the big blue rat model and its application for determining the mutagenicity of tamoxifen	12
119	Nye	Pharmgenix™—Combinatorial rat panels for predictive toxicology	12

