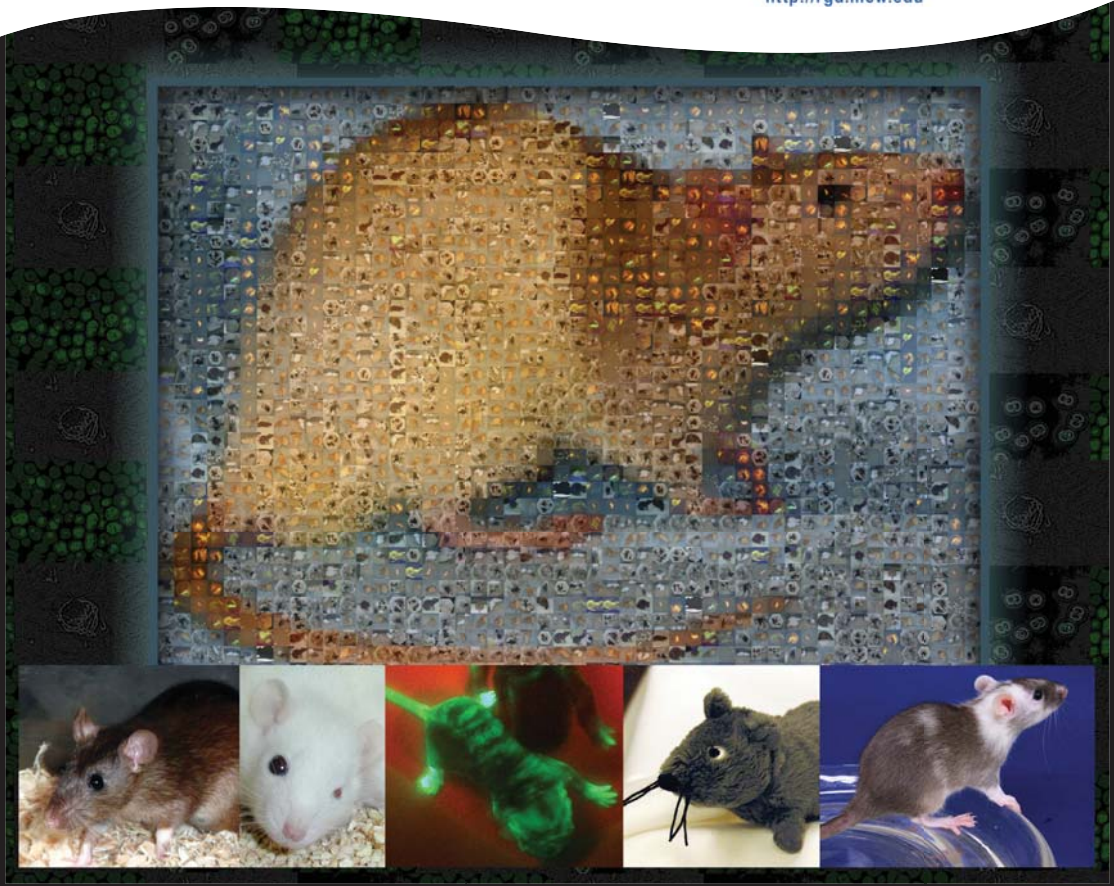
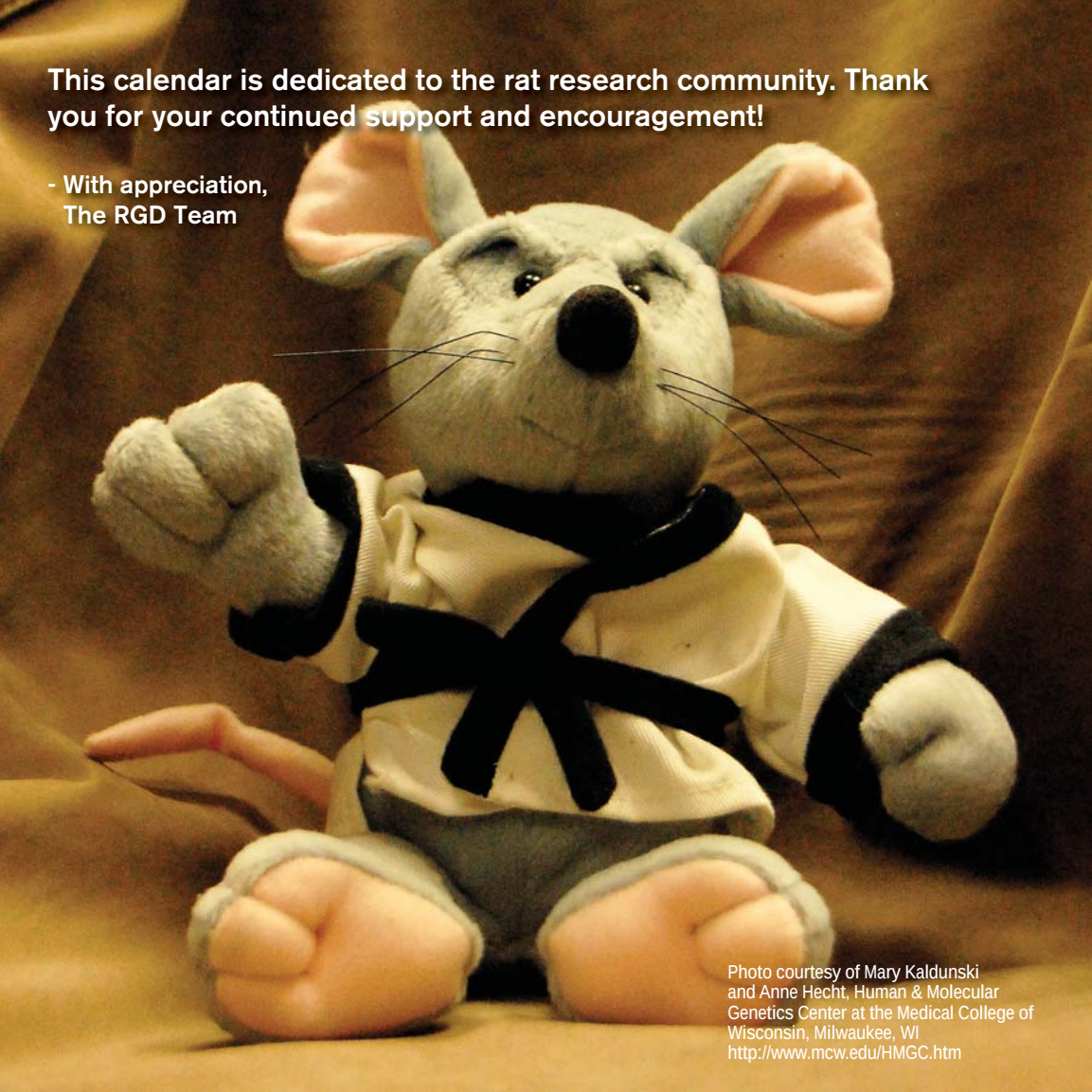
2011

Rat Genome Database

http://rgd.mcw.edu




This calendar is dedicated to the rat research community. Thank you for your continued support and encouragement!
- With appreciation,
The RGD Team
Photo courtesy of Mary Kaldunski and Anne Hecht, Human & Molecular Genetics Center at the Medical College of Wisconsin, Milwaukee, WI
http://www.mcw.edu/HMGC.htm

6 week old Russian Blue Dumbo rat. The "Russian blue" and "Dumbo" phenotypes both result from recessive gene mutations. Photo courtesy of Joanne Bella Hodges, Fern Park, FL http://ratguide.com/

January 2011

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Five week-old male X-SCID (Il2rg–/Y) and F344/Stm (+/Y) rats. Photo courtesy of Dr. Ryoko Okajima and Dr. Tadao Serikawa, Kyoto University, National Bio Resource Project – Rat (NBRP-Rat), Japan http://www.anim.med.kyoto-u.ac.jp/NBR/

February 2011

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The Belgrade Rat

The Belgrade Rat
- Has a G185R mutation in DMT1/DCT1/Nramp2/SLC11A2
- Has hypochromic, microcytic anemia (like *mk* mouse)
- Resembles iron deficiency closely
- Inherited as an autosomal recessive
- Gene symbol is *b*; (normal = +); so above we have a +/*b* & a *b/b* in each photo
- GI iron uptake severely decreased
- Iron trafficking also severely depressed
- The *b/b* is on the bottom & left, respectively

The Belgrade Rat; Photos and information courtesy of Dr. Michael Garrick, Department of Biochemistry, State University of New York, Buffalo, NY
http://findadoc.med.buffalo.edu/profile/facultyprofile.asp?fid=0F70L4CJP

March 2011

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Weanling WAG/RijYcb (WAG-F8m1Ycb) rat with Hemophilia A.
Reference: Booth et al, J Thromb Haemost. 2010 Nov;8(11):2472–2477. Epub 2010 Jul 1, PMID: 20626616.
Photo courtesy of Dr. Carmen Jane Booth, Section of Comparative Medicine , Yale Medical School, New Haven, CT
http://medicine.yale.edu/compmed/people/booth.aspx

April 2011

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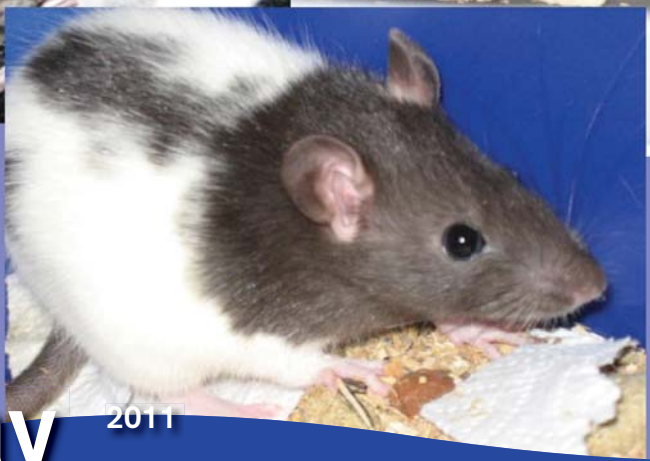

"Tiny Rats"
Photos courtesy of Dr. Susan Brunelli, The Sackler Institute for Developmental Psychobiology, Columbia College of Physicians & Surgeons, New York, NY
http://nypisys.cpmc.columbia.edu/DevelopmentalPsych/sections/research/sabrunelli.htm

May 2011

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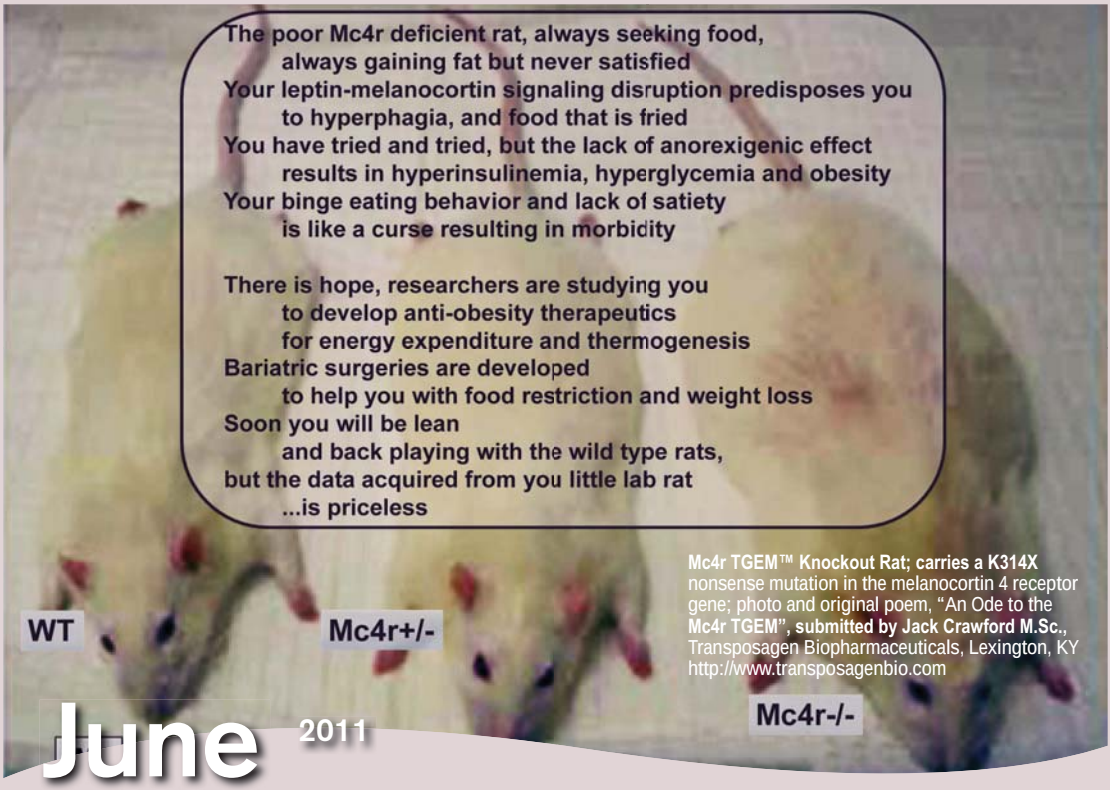

Mc4r TGEM™ Knockout Rat; carries a K314X nonsense mutation in the melanocortin 4 receptor gene; photo and original poem, "An Ode to the **Mc4r TGEM", submitted by Jack Crawford M.Sc.,** Transposagen Biopharmaceuticals, Lexington, KY http://www.transposagenbio.com

June 2011

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Chimeric rat produced by placing **cells from the D1' ES cell line derived** from a (DA x BN)F1 blastocyst into the corresponding anatomical location of an albino Wistar rat blastocyst. Photo courtesy of Dr. Thom Saunders, Transgenic Animal Model Core, University of Michigan, Ann Arbor, MI http://www.med.umich.edu/tamc

July 2011

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Two-cell embryos (inset) and newborn pups produced by in vitro fertilization of (F344xACI)F1 fresh sperm and oocytes. Submitted by Kathy Krentz, William F. Dove lab, McArdle Laboratory for Cancer Research, University of Wisconsin, Madison, WI http://mcardle.oncology.wisc.edu/dove/

August 2011

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Brown Norway wild type and BN x FHH rats; photos courtesy of Jerome Donohoe, Milwaukee, WI

September 2011

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2 day old transgenic rats, left to right: [1] SD-Tg(Ubi-fDsRed-GFP)26Narl Tg(Col1a1(5A)-Cre)03Narl; [2] SD-Tg(Ubi-fDsRed-GFP)26Narl; [3] SD-Tg(Ubi-fDsRed-GFP)26Narl Tg(Col1a1(5A)-Cre)02Narl; [4] SD-Tg(Ubi-fDsRed-GFP)26Narl Tg(Col1a1(5A)-Cre)01Narl. Rats were generated by Dr. Chi-Kuang Leo Wang and Dr. Hsiao-Hui Chang. Photo submitted by Dr. Genie Chin, National Laboratory Animal Center, NARL, Nankang, Taipei, Taiwan
http://www.nlac.org.tw/english/default.asp

October 2011

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LH/Mav rat; photo, “Sleeping Beauty”, submitted by Dr. Anne Kwitek, Dept. of Internal Medicine, University of Iowa, Iowa City, IA
http://www.int-med.uiowa.edu/Divisions/Cardiology/Directory/AnneKwitek.html

November 2011

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T2GFP/SB100 and T2RFP-Taz/SB100 [tafazzin] rats, developed by Dr. AronGeurts and Dr. Carol Moreno-Quinn, respectively. Photo courtesy of Anne Hecht, Becky Schilling and Dr. Mindy Dwinell; Human & Molecular Genetics Center at the Medical College of Wisconsin, Milwaukee, WI http://www.mcw.edu/HMGC.htm

December 2011

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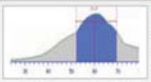
Pushkala Jayaraman, MS
Rene Lopez , MS

Database Administrator:
Stacy Zacher, MS

Genes
Map positions, functions and more

Strains
Search Strains



QTL
Phenotypes & Traits linked to the genome

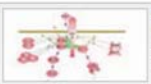
Function
Gene Ontology, Phenotype, Pathway info

Diseases
Genes, QTL & Strains related to Disease

Phenotypes & Models
Phenotype data, Assays, Husbandry and more

Rat Genome
Browse the Rat Genome

Genome Tools
Data mining, analysis and visualization



Pathways
Pathway reports and diagrams

Cover Mosaic

Mosaic assembled by Anne Hecht using MosaicCreator software and photos supplied by members of the Jacob Lab, Human & Molecular Genetics Center at the Medical College of Wisconsin, Milwaukee, WI http://www.mcw.edu/HMGC/

Inset photos courtesy of, left to right:

- **Jerome Donohoe, Milwaukee, WI**
- **Dr. Carmen Jane Booth, Section of Comparative Medicine , Yale Medical School, New Haven, CT**
- **Dr. Sheng Yang, Jacob Lab, Human & Molecular Genetics Center at the Medical College of** Wisconsin, Milwaukee, WI
- **Jennifer Smith and Anne Hecht, Rat Genome Database and the Human & Molecular Genetics Center** at the Medical College of Wisconsin, Milwaukee, WI
- **Dr. Ryoko Okajima and Dr. Tadao Serikawa, Kyoto University, National Bio Resource Project – Rat** (NBRP-Rat), Japan