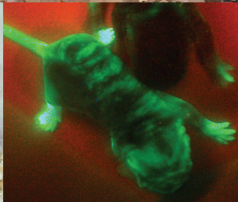
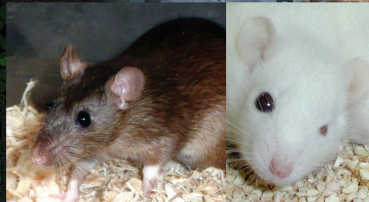
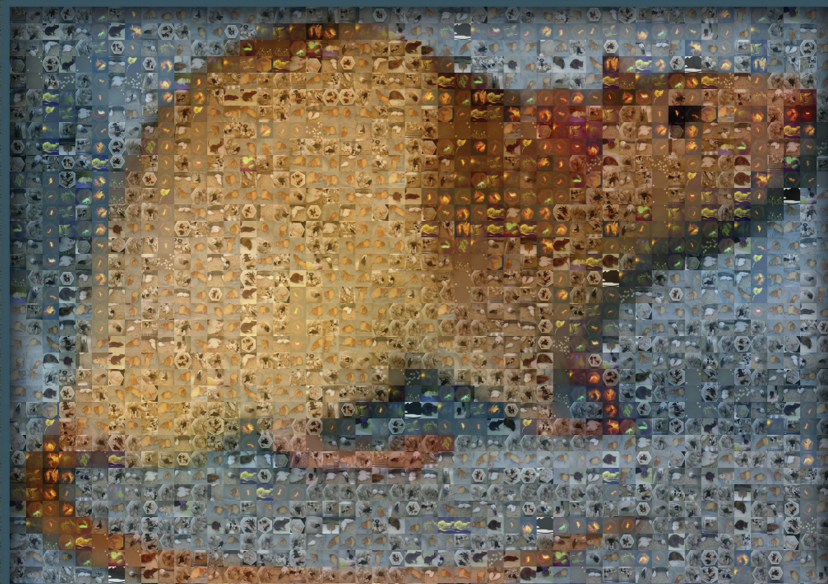


# 2011



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- $\gamma$ ) 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

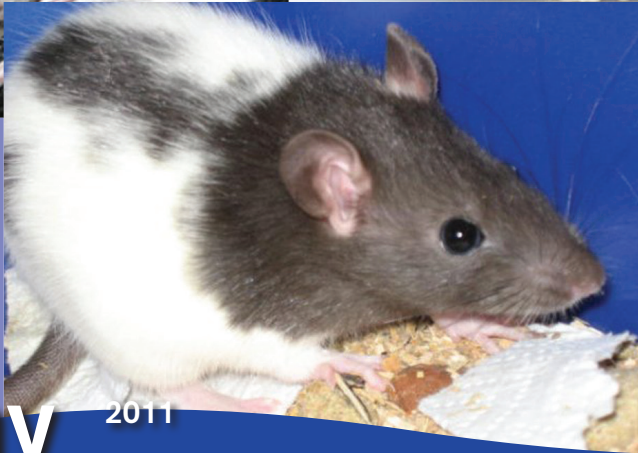
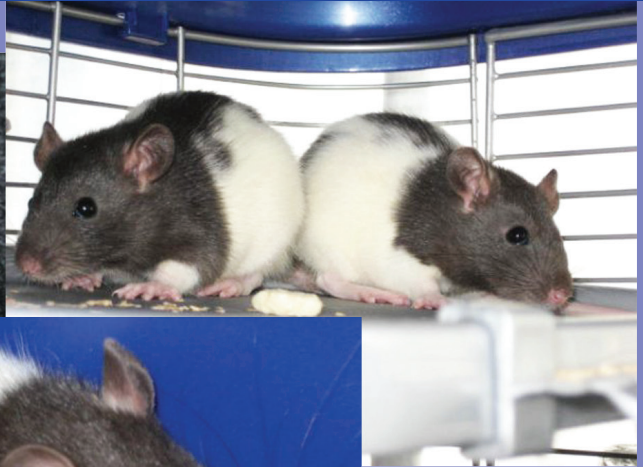
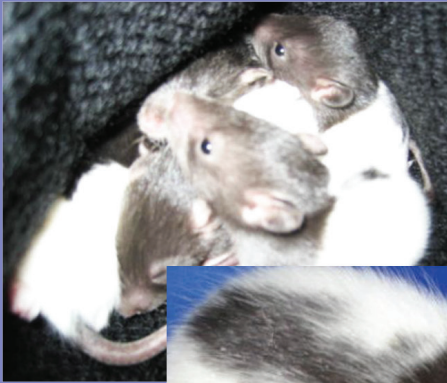
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Weanling WAG/RijYcb (WAG-F8m1Ycb) rat with Hemophilia A.  
Reference: Booth et al, J Thromb Haemost. 2010  
Nov;8(11):2472-2477. Epub 2010 Jul 1, PMID: 20626616.  
Photo courtesy of Dr. Carmen Jane Booth, Section of  
Comparative Medicine , Yale Medical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

# April 2011

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24	25	26	27	28	29	30



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

# May 2011

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29	30	31				

The poor Mc4r deficient rat, always seeking food,  
 always gaining fat but never satisfied  
 Your leptin-melanocortin signaling disruption predisposes you  
 to hyperphagia, and food that is fried  
 You have tried and tried, but the lack of anorexigenic effect  
 results in hyperinsulinemia, hyperglycemia and obesity  
 Your binge eating behavior and lack of satiety  
 is like a curse resulting in morbidity

There is hope, researchers are studying you  
 to develop anti-obesity therapeutics  
 for energy expenditure and thermogenesis  
 Bariatric surgeries are developed  
 to help you with food restriction and weight loss  
 Soon you will be lean  
 and back playing with the wild type rats,  
 but the data acquired from you little lab rat  
 ...is priceless

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>

WT


Mc4r+/-

Mc4r-/-

June 2011

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Chimeric rat produced by placing cells from the D1<sup>+</sup> 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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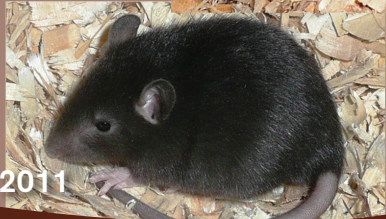
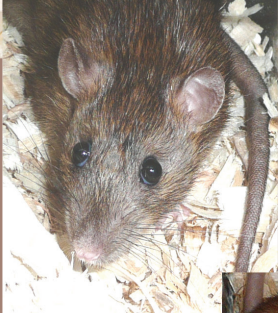
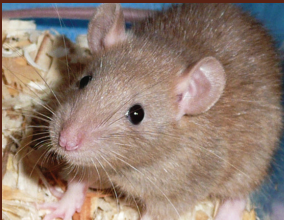


Two-cell embryos (inset) and newborn pups produced by in vitro fertilization of (F344xACI)F1 fresh sperm and oocytes. Submitted by Kathy Krentz, William F. Dove lab, McArdle Laboratory for Cancer Research, University of Wisconsin, Madison, WI  
<http://mcardle.oncology.wisc.edu/dove/>

# August 2011

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

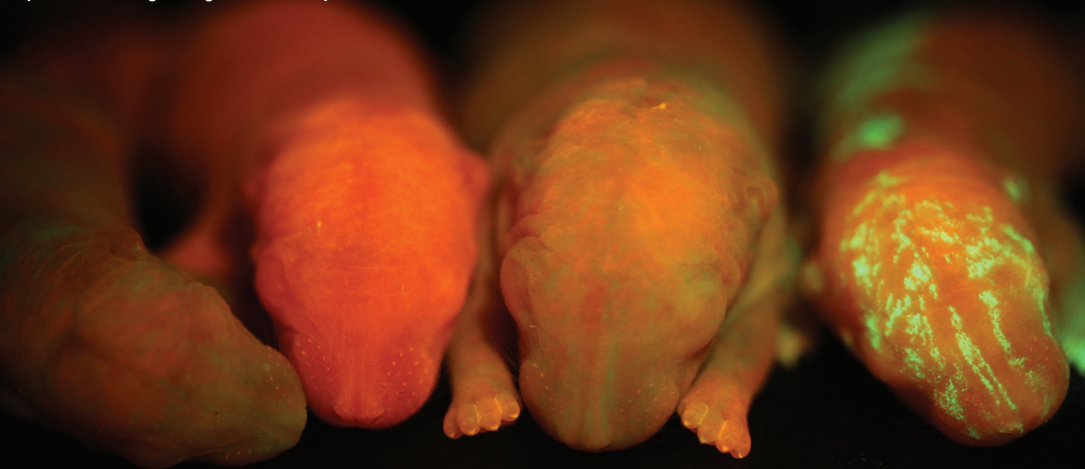


# September

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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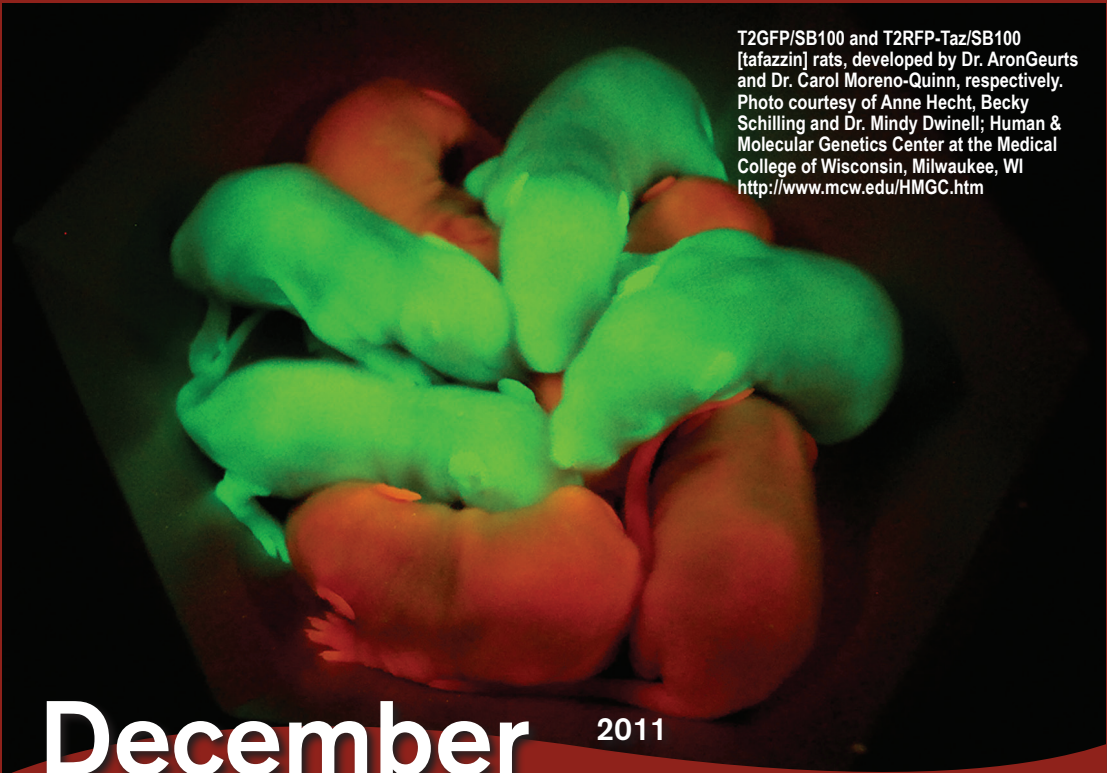


LH/Mav rat; photo, "Sleeping Beauty", submitted by Dr. Anne Kwitek, Dept. of Internal Medicine, University of Iowa, Iowa City, IA  
<http://www.int-med.uiowa.edu/Divisions/Cardiology/Directory/AnneKwitek.html>

# November

2011

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T2GFP/SB100 and T2RFP-Taz/SB100 [tafazsin] 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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**Database Administrator:**  
Stacy Zacher, MS

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## Pathways

Pathway reports and  
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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