

University of Colorado Biomaterials: Model Organisms

Model	Case #	Investigator	Utility	Relevant publications
Mouse Model for Hyperhomocysteinemia and Redox Imbalance	CU1190H	Jan Kraus	Cardiovascular diseases (thrombosis, homocystinuria, arteriosclerosis); oxidative stress	
IP3R3-GFP Mice	CU1780H	Diego Restrepo	This mouse would be useful to companies interested in developing compounds that modulate taste sensation.	
Transgenic mouse model of pulmonary hypertension	CU1130H CU1732H	James West	Transgenic mouse model for pulmonary hypertension, inducible mouse model for pulmonary arterial hypertension	BMP signaling controls PASMCKV channel expression in vitro and in vivo Pulmonary Hypertension in Transgenic Mice Expressing a Dominant-Negative BMPRII Gene in Smooth Muscle
Transgenic mice with prolactin mutant	1999.10049H	Steven Anderson	Useful for testing drugs that inhibit mammary cancer, for testing for oncogenes that can accelerate tumor formation in mammary gland or for chemical carcinogens that induce mammary gland cancer	
Transgenic mice with myr-AKT	1999.10050H	Steven Anderson	Useful for testing drugs that inhibit Akt, testing for oncogenes that can accelerate tumor formation in mammary gland or testing chemical carcinogens that induce mammary gland cancer	
Generation of long-lived mouse mutants by chemical mutagenesis in embryonic stem cells	CU1522H	Wallace Chick	Compound screening for anti-aging agents with an emphasis on anti-oxidation pathways	X-ray-induced deletion complexes in embryonic stem cells on mouse chromosome 15.
Mouse model for testing immunotherapeutic drugs for DM-I	CU1573H	Kathryn Haskins	Testing immunotherapeutic drugs for autoimmune type I diabetes	
Mouse model for malignant melanoma	CU1479H	Mayumi Fujita	Carcinogen application on the ear and the ultraviolet exposure on the tail induces malignant melanoma. A tendency to develop highly invasive and/or metastatic melanoma may be induced in these animals by further applying carcinogen multiple times with combination of ultraviolet exposure.	
Treatment of leukemia with "super-competent" hematopoietic stem/progenitor cells	CU1735H	James DeGregori	Immunology (manipulates expression of regulatory genes in hematopoietic cells)	The Development of Diabetes in E2f1/E2f2 mutant mice reveals important roles for bone marrow derived cells in preventing islet cell loss
Mouse model for pancreatitis induced diabetes	CU1667H	James DeGregori	Pancreatitis-induced diabetes	
Mouse Mutant with a Phenotype of Resistance to Mouse Hepatitis Viral Infections	CU1229H	Kathryn Holmes	Study of viral hepatitis	Note: Managed by McGill Cancer Centre
ILSXISS Ris (Large Recombinant Inbred Mouse Panel)	1999.10023B	John DeFries	Susceptibility to alcoholism and anesthetics	
Congenic mouse model for lupus	CU1884H	Trine Jorgensen	B6.Nba2 congenic mice as a model for spontaneous lupus-like disease development	Type I interferon signaling is involved in the spontaneous development of lupus-like disease in B6.Nba2 and (B6.Nba2 x NZW)F(1) mice.

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