Weill Cornell Medicine

Tangible Materials Catalog

Select Assets Available for Licensing

Lisa Placanica, Ph.D.
Senior Managing Director, CTL @ WCM

First Edition, 2024

Welcome to the First Edition of the Weill Cornell Medicine Tangible Materials Catalog

Weill Cornell Medicine (WCM) is proud to present our inaugural collection of tangible research materials. This catalog includes a diverse selection of research tools, including antibodies, cell lines, mice, rats, organoids, and patient-derived xenograft models which have been developed by WCM investigators.

These materials are managed by the Center for Technology Licensing at Weill Cornell Medicine (CTL@WCM) and are available for research and commercial purposes. This first edition of our Tangible Materials Catalog reflects our goal to expand access to Weill Cornell Medicine's innovative materials, supporting the research efforts of academic and industry partners.

Periodic updates and expansions of this catalog will be published to reflect our growing range of assets. For licensing inquiries, please contact Iris Bica, Business Development & Licensing Associate at iris.bica@cornell.edu.

To explore additional tangible materials available for licensing from Cornell's campus in Ithaca, please visit their Tangible Materials Catalog on Flintbox.

To explore additional technologies from Weill Cornell Medicine available for licensing, please visit our portfolio of available technologies on the Weill Cornell Medicine Enterprise Innovation website.

Portfolio of Tangible Materials: By Material Type (1 of 3)

Antibodies:

- **Monoclonal Antibody for Myosin Heavy Chain (ALD58)** *D-3355*
- **Monoclonal Antibody for Muscle Slow C-Protein (ALD66)** *D-3355*
- **Monoclonal Antibody for Desmin (D3)** *D-3355*
- **Monoclonal Antibody for Desmin (D76)** *D-3355*
- **Monoclonal Antibody for Muscle Fast C-Protein (MF1)** *D-3355*
- **Monoclonal Antibody for Myosin Heavy Chain (MF20)** *D-3355*
- **Monoclonal Antibody for Neonatal and Adult Myosin Heavy Chain (MF30)** *D-3355*
- **Monoclonal Antibody for Myosin Fast Muscle Light Chain 2 (MF5)** *D-3355*
- **Monoclonal Antibody for Adult Myosin Heavy Chain (MF14)** *D-3355*
- **Monoclonal Antibody for Immunopurification of Peptides Derived from Ubiquitinated Proteins (GX41)** *D-4403*
- **Anti-sAC Monoclonal Antibody (R5)** *D-5141*
- **Anti-sAC Monoclonal Antibody (R21)** *D-5141*
- **Anti-sAC Monoclonal Antibody (R37)** *D-5141*
- **Anti-sAC Monoclonal Antibody (R41)** *D-5141*
- **Anti-CLIC4 Polyclonal Antibody** *D-7365*
- **Anti-PfASF1 Polyclonal Antibody** *D-10747*
- **Anti-PfPMT Polyclonal Antibody** *D-10748*
- **Anti-PfSAHH Polyclonal Antibody** *D-10749*
- **Anti-PfSAMS Polyclonal Antibody** *D-10750*

Portfolio of Tangible Materials: By Material Type (2 of 3)

Cell Lines:

- **Mouse CD34+ Testicular Stromal Cell Line** *D-4444*
- **Human Cytochrome c Oxidase (COX)-Deficiency Cell Line** *D-6148*
- **Human Airway Basal Cell Progenitor Cell Line (BCi-NS1)** *D-6267*
- **Human Hepatocyte-like Cell Line (iPS-H)** *D-7678*
- **Human Small Airway Epithelium Basal Cell Line (hSABCi-NS1.1)** *D-8180*

Organoids & PDX Models:

- **Patient-Derived Solid Tumor Organoids** *D-8601*
- **hPSC-Derived Lung and Colon Organoids** *D-9438*
- **Genetically Engineered KRAS Organoids** *D-9448*
- **PDX Models of Lymphoma** *D-7943*

Portfolio of Tangible Materials: By Material Type (3 of 3)

Mouse Models:

- CD36 KO Mouse *D-2060*
- Vk*MYC Mouse *D-3498*
- $BDNF_{Met}$ Mouse *D-3960*
- $LRRK2^{R1441G}$ Mouse *D-4184*
- G/S LRRK2 Mouse *D-4184*
- WT-OX Mouse *D-4184*
- PGRN KO Mouse *D-4866*
- CRBN Mouse *D-5502*
- $MyD88\text{-}5^{-}$ Mouse *D-5872*
- Egfl7:eGFP Mouse *D-6891*
- $Brn3a\text{-}CreER^{T2}$ Mouse *D-6951*
- $S1p1^{f/stop/f}$ Mouse *D-6988*
- $R26^{F133V}$ Mouse *D-7593*
- LSL-KrasG12R Mouse *D-8465*
- LSL-KrasG12C Mouse *D-8465*
- LSL-KrasG13D Mouse *D-8465*
- $Nmur1^{iCre\text{-}eGFP}$ Mouse *D-8868*
- $RPE^{\Delta Clic4}$ Mouse *D-9229*
- IL-22-eGFP Mouse *D-9527*
- MGS34F Mouse *D-9647*
- Grn^{flox} Mouse *D-9648*
- IgG KO Mouse *D-10399*
- Inducible Base Editor Mouse *D-10533*
- hTREM2-R47H Mouse *D-10556*
- hTREM2-CV Mouse *D-10556*

Rat Models:

- Human LRRK2 G2019S Rat *D-4184*
- Human Alpha Synuclein Rat *D-5203*
- Human Alpha Synuclein A53T Rat *D-5203*
- Human Alpha Synuclein E46K Rat *D-5203*

Weill Cornell Medicine

Portfolio of Tangible Materials: By Research Area (1 of 5)

Cardiovascular:

- **Egfl7:eGFP Mouse** *D-6891*
- **S1p1$^{f/stop/f}$ Mouse** *D-6988*
- **Anti-CLIC4 Polyclonal Antibody** *D-7365*

Cell Signaling:

- **Anti-sAC Monoclonal Antibody (R5)** *D-5141*
- **Anti-sAC Monoclonal Antibody (R21)** *D-5141*
- **Anti-sAC Monoclonal Antibody (R37)** *D-5141*
- **Anti-sAC Monoclonal Antibody (R41)** *D-5141*
- **Anti-CLIC4 Polyclonal Antibody** *D-7365*

CNS:

- **BDNF$_{Met}$ Mouse** *D-3960*
- **LRRK2^{R1441G} Mouse** *D-4184*

CNS (Continued):

- **G/S LRRK2 Mouse** *D-4184*
- **WT-OX Mouse** *D-4184*
- **PGRN KO Mouse** *D-4866*
- **Human LRRK2 G2019S Rat** *D-4184*
- **Human Alpha Synuclein Rat** *D-5203*
- **Human Alpha Synuclein A53T Rat** *D-5203*
- **Human Alpha Synuclein E46K Rat** *D-5203*
- **CRBN Mouse** *D-5502*
- **MyD88-5 Mouse** *D-5872*
- **Brn3a-CreER^{T2} Mouse** *D-6951*
- **Anti-CLIC4 Polyclonal Antibody** *D-7365*
- **Nmur1$^{iCre-eGFP}$ Mouse** *D-8868*

Weill Cornell Medicine

Portfolio of Tangible Materials: By Research Area (2 of 5)

CNS (Continued):

- **Grn^{flox} Mouse** *D-9648*
- **hTREM2-R47H Mouse** *D-10556*
- **hTREM2-CV Mouse** *D-10556*

Developmental Biology:

- **Monoclonal Antibody for Desmin (D3)** *D-3355*
- **Monoclonal Antibody for Desmin (D76)** *D-3355*
- **Monoclonal Antibody for Myosin Heavy Chain (MF20)** *D-3355*
- **Monoclonal Antibody for Neonatal and Adult Myosin Heavy Chain (MF30)** *D-3355*
- **Monoclonal Antibody for Adult Myosin Heavy Chain (MF14)** *D-3355*
- **Egfl7:eGFP Mouse** *D-6891*
- **S1p1$^{f/stop/f}$ Mouse** *D-6988*

Gastrointestinal:

- **hPSC-Derived Lung and Colon Organoids** *D-9438*
- **IL-22-eGFP Mouse** *D-9527*
- **IgG KO Mouse** *D-10399*

Hepatology:

- **Human Hepatocyte-Like Cell Line (iPS-H)** *D-7678*

Inflammation & Immunology:

- **Anti-sAC Monoclonal Antibody (R5)** *D-5141*
- **Anti-sAC Monoclonal Antibody (R21)** *D-5141*
- **Anti-sAC Monoclonal Antibody (R37)** *D-5141*
- **Anti-sAC Monoclonal Antibody (R41)** *D-5141*
- **IL-22-eGFP Mouse** *D-9527*
- **Grn^{flox} Mouse** *D-9648*

Weill Cornell Medicine

Portfolio of Tangible Materials: By Research Area (3 of 5)

Inflammation & Immunology (Continued):

- **IgG KO Mouse** *D-10399*

Infectious Disease

- **Grn^{flox} Mouse** *D-9648*
- **IgG KO Mouse** *D-10399*
- **Anti-PfASF1 Polyclonal Antibody** *D-10747*
- **Anti-PfPMT Polyclonal Antibody** *D-10748*
- **Anti-PfSAHH Polyclonal Antibody** *D-10749*
- **Anti-PfSAMS Polyclonal Antibody** *D-10750*

Metabolism:

- **CD36 KO Mouse** *D-2060*
- **Human Cytochrome c Oxidase (COX)-Deficiency Cell Line** *D-6148*
- **Human Hepatocyte-Like Cell Line (iPS-H)** *D-7678*

Muscle:

- **Monoclonal Antibody for Myosin Heavy Chains (ALD58)** *D-3355*
- **Monoclonal Antibody for Muscle Slow C-Protein (ALD66)** *D-3355*
- **Monoclonal Antibody for Desmin (D3)** *D-3355*
- **Monoclonal Antibody for Desmin (D76)** *D-3355*
- **Monoclonal Antibody for Muscle Fast C-Protein (MF1)** *D-3355*
- **Monoclonal Antibody for Myosin Heavy Chain (MF20)** *D-3355*
- **Monoclonal Antibody for Neonatal and Adult Myosin Heavy Chain (MF30)** *D-3355*
- **Monoclonal Antibody for Myosin Fast Muscle Light Chain 2 (MF5)** *D-3355*

Portfolio of Tangible Materials: By Research Area (4 of 5)

Muscle (Continued):

- **Monoclonal Antibody for Adult Myosin Heavy Chain (MF14)** *D-3355*
- **Monoclonal Antibody for Adult Myosin Heavy Chain (MF14)** *D-3355*

Oncology:

- **Vk*MYC Mouse** *D-3498*
- **R26^{F133V} Mouse** *D-7593*
- **PDX Models of Lymphoma** *D-7943*
- **LSL-KrasG12R Mouse** *D-8465*
- **LSL-KrasG12C Mouse** *D-8465*
- **LSL-KrasG13D Mouse** *D-8465*
- **Patient-Derived Solid Tumor Organoids** *D-8601*
- **Genetically Engineered KRAS Organoids** *D-9448*

Oncology (Continued):

- **MGS34F Mouse** *D-9647*
- **Inducible Base Editor Mouse** *D-10533*

Ophthalmology:

- **RPEΔClic4 Mouse** *D-9229*

Respiratory:

- **Human Airway Basal Cell Progenitor Cell Line (BCi-NS1)** *D-6267*
- **Human Small Airway Epithelium Basal Cell Line (hSABCi-NS1.1)** *D-8180*
- **hPSC-Derived Lung and Colon Organoids** *D-9438*

Weill Cornell Medicine

Portfolio of Tangible Materials: By Research Area (5 of 5)

Research and Production tools:

- **Monoclonal Antibody for Immunopurification of Peptides Derived from Ubiquitinated Proteins (GX41)** *D-4403*
- **Inducible Base Editor Mouse** *D-10533*

Weill Cornell Medicine

Weill Cornell Medicine

Antibodies

Available for Licensing

Weill Cornell Medicine

Antibodies (1 of 10)

Monoclonal Antibody for Myosin Heavy Chain (ALD58)

Antigen: Myosin heavy chain **Clone:** ALD58

Known Reactivity: Chicken, Human, Rat **Host:** Mouse

Description: Monoclonal antibodies against slow myosin isolated from the anterior latissimus dorsi muscle of adult chicken. Myosin treated mouse splenocytes were used to generate the hybridomas. Antibody specificity was confirmed using solid phase radioimmunoassay. Antibodies can be used to study muscle fiber typing and muscle diseases.

Applications: WB

References:

- Shafiq et al. “Heterogeneity of type 1 skeletal muscle fibers revealed by monoclonal antibody to slow myosin.” *Muscle Nerve*. 1984.

Lead PI: Donald Fischman

Docket: D-3355

Availability: Available from DSHB with license from WCM.

Monoclonal Antibody for Muscle Slow C-Protein (ALD66)

Antigen: Muscle slow C-protein **Clone:** ALD66

Known Reactivity: Mouse **Host:** Mouse

Description: Monoclonal antibodies against myosin C-protein. Antibodies bind to the anterior latissimus dorsi myofibrils but not the pectoralis major myofibrils of adult chicken. Noncolumn purified myosin treated mouse splenocytes were used to generate hybridomas. Antibody specificity was confirmed using solid phase radioimmunoassay. Antibodies can be used to study muscle fiber typing and muscle diseases.

Applications: WB, IFA

References:

- Reinach et al. “Isoforms of C-protein in adult chicken skeletal muscle: detection with monoclonal antibodies.” *J Cell Biol*. 1982.

Lead PI: Donald Fischman

Docket: D-3355

Availability: Available from DSHB with license from WCM.

Weill Cornell Medicine

For licensing inquiries, please contact iris.bica@cornell.edu.
Availability and licensing conditions vary by material and are subject to change.

Antibodies (2 of 10)

Monoclonal Antibody for Desmin (D3)

Antigen: Desmin, intermediate filament

Clone: D3

Known Reactivity: Chicken, Hamster, Mouse, Rat

Host: Mouse

Description: Monoclonal antibody against intermediate filament protein from adult chicken gizzard. Mice splenocytes immunized to desmin were fused with myeloma cells to produce hybridomas. The D3 antibody reacts with the intermediate filaments (IF) of embryonic cardiac myocytes and the heart of early-stage embryonic chick. Antibody can be used to study IF immunoreactivity during cardiac development.

Applications: WB, IFA, ELISA, IHC, IP

References:

- Danto et al. "Immunocytochemical analysis of intermediate filaments in embryonic heart cells with monoclonal antibodies to desmin." *J Cell Biol*. 1984.

Lead PI: Donald Fischman

Docket: D-3355

Availability: Available from DSHB with license from WCM.

Monoclonal Antibody for Desmin (D76)

Antigen: Desmin, intermediate filament

Clone: D76

Known Reactivity: Chicken, Fish, Lamb, Mouse, Rat

Host: Mouse

Description: Monoclonal antibody against intermediate filament protein from adult chicken gizzard. Mice splenocytes immunized to desmin were fused with myeloma cells to produce hybridomas. D76 monoclonal antibodies bind to desmin in all adult cardiac myocytes but is unreactive with embryonic cardiac myocytes. Antibody can be used to study IF immunoreactivity during cardiac development.

Applications: WB, IFA, IHC, IP

References:

- Danto et al. "Immunocytochemical analysis of intermediate filaments in embryonic heart cells with monoclonal antibodies to desmin." *J Cell Biol*. 1984.

Lead PI: Donald Fischman

Docket: D-3355

Availability: Available from DSHB with license from WCM.

Weill Cornell Medicine

For licensing inquiries, please contact iris.bica@cornell.edu.
Availability and licensing conditions vary by material and are subject to change.

Antibodies (3 of 10)

Monoclonal Antibody for Muscle Fast C-Protein (MF1)

Antigen: Muscle fast C-protein

Clone: MF1

Known Reactivity: Mouse

Host: Mouse

Description: Monoclonal antibodies against myosin binding C-protein. Antibodies bind to the pectoralis major myofibrils but not the pectoralis major myofibrils of adult chicken. Noncolumn purified myosin treated mouse splenocytes were used to generate hybridomas. Antibody specificity was confirmed using solid phase radioimmunoassay. Antibodies can be used to study muscle fiber typing and muscle diseases.

Applications: WB, IFA

References:

- Reinach et al. “Isoforms of C-protein in adult chicken skeletal muscle: detection with monoclonal antibodies.” *J Cell Biol*. 1982.

Lead PI: Donald Fischman

Docket: D-3355

Availability: Available from DSHB with license from WCM.

Monoclonal Antibody for Myosin Heavy Chain (MF20)

Antigen: Myosin heavy chain, sarcomere

Clone: MF20

Known Reactivity: Amphibian, Avian, Axolotl, Chicken, Fish, Human, Lizard, Mammal, Pig, Snake, Xenopus, Zebrafish

Host: Mouse

Description: Monoclonal antibody against the myosin heavy chain (MHC) of chicken pectoralis. This antibody recognizes light meromyosin, the rod-like tail region of myosin heavy chain protein, and binds to MHC at all stages of embryonic development in vivo. Antibody can be used for immunochemistry of MHC development.

Applications: WB, IFA, ELISA, FACS, FFPE, IHC, IP

References:

- Bader et al. “Immunochemical Analysis of Myosin Heavy Chain during Avian Myogenesis In Vivo and In Vitro.” *J Cell Biol*. 1982.

Lead PI: Donald Fischman

Docket: D-3355

Availability: Available from DSHB with license from WCM.

Weill Cornell Medicine

For licensing inquiries, please contact iris.bica@cornell.edu.
Availability and licensing conditions vary by material and are subject to change.

Antibodies (4 of 10)

Monoclonal Antibody for Neonatal and Adult Myosin Heavy Chain (MF30)

Antigen: Neonatal and adult myosin heavy chain

Clone: MF30

Known Reactivity: Mouse

Host: Mouse

Description: Monoclonal antibody against the myosin heavy chain (MHC) of chicken pectoralis. This antibody binds to myosin subfragment 2, specifically with neonatal and adult MHC of breast muscle. Antibody can be used to study immunochemistry of MHC development.

Applications: WB, IFA

References:

- Bader et al. “Immunochemical Analysis of Myosin Heavy Chain during Avian Myogenesis In Vivo and In Vitro.” *J Cell Biol*. 1982.

Lead PI: Donald Fischman

Docket: D-3355

Availability: Available from DSHB with license from WCM.

Monoclonal Antibody for Myosin Fast Muscle Light Chain 2 (MF5)

Antigen: Myosin fast muscle light chain 2

Clone: MF5

Known Reactivity: Mouse

Host: Mouse

Description: Monoclonal antibody against chicken pectoralis myosin capable of recognizing a divalent cation-induced conformational change in myosin light chain 2. The targeted epitope is located between the first λ-helical domain and the metal binding site. Antibodies can be used to study muscle contraction mechanism and muscle diseases.

Applications: WB, IP

References:

- Reinach et al. “Recombinant DNA approach for defining the primary structure of monoclonal antibody epitopes. The analysis of a conformation-specific antibody to myosin light chain 2.” *J Mol Biol*. 1985.

Lead PI: Donald Fischman

Docket: D-3355

Availability: Available from DSHB with license from WCM.

Weill Cornell Medicine

For licensing inquiries, please contact iris.bica@cornell.edu.
Availability and licensing conditions vary by material and are subject to change.

Antibodies (5 of 10)

Monoclonal Antibody for Adult Myosin Heavy Chain (MF14)

Antigen: Adult myosin heavy chain

Clone: MF14

Known Reactivity: Chicken, Planaria, Quail

Host: Mouse

Description: Monoclonal antibody against the myosin heavy chain (MHC) of chicken pectoralis. This antibody binds to light meromyosin, the rod-like tail region of myosin heavy chain protein, but would only recognize adult MHC. Antibody can be used to study immunochemistry of MHC development.

Applications: WB, IFA, ELISA, IHC

References:

- Bader et al. “Immunochemical Analysis of Myosin Heavy Chain during Avian Myogenesis In Vivo and In Vitro.” *J Cell Biol*. 1982.

Lead PI: Donald Fischman

Docket: D-3355

Availability: Available from DSHB with license from WCM.

Antibody for Immunopurification of Peptides Derived from Ubiquitinated Proteins (GX41)

Antigen: Peptides containing lysine residues modified by diglycine

Host: Mouse

Clone: GX41

Description: This antibody simplifies the immunopurification of peptides from ubiquitinated proteins. Hybridoma-derived antibodies were screened for reactivity with Gly-Gly-modified proteins and lysate. The selected clone captures peptides with all 20 amino acids linked to modified lysine, demonstrating broad-binding capability to diglycyl-lysine peptides. Tandem MS can them be applied for peptide sequencing and protein identification, identifying ubiquitinated proteins and ubiquitination sites.

Applications: WB, IP

References:

- Xu et al. “Global analysis of lysine ubiquitination by ubiquitin remnant immunoaffinity profiling.” *Nat Biotechnol*. 2010.

Lead PI: Samie Jaffrey

Docket: D-4403

Availability: Available by license from WCM.

Weill Cornell Medicine

For licensing inquiries, please contact iris.bica@cornell.edu.
Availability and licensing conditions vary by material and are subject to change.

Antibodies (6 of 10)

Anti-sAC Monoclonal Antibody (R5)

Antigen: Soluble adenylyl cyclase (sAC) **Clone:** R5

Known Reactivity: Human, Mouse, Rat **Host:** Mouse

Description: sAC catalyzes the production of the second messenger cAMP and is found in the cytoplasm, mitochondria, centriole, and nucleus. R5 was generated against a glutathione-S-transferase fusion protein corresponding to the 50 kDa splice variant of human sAC, recognizing the epitope of 436-451. Antibodies can be used to study cAMP activities in various signaling pathways related to sterility, neuroactivities, and inflammation.

Applications: WB, IP

References:

- Hess et.al. “The ‘soluble’ adenylyl cyclase in sperm mediates multiple signaling events required for fertilization.” *Dev Cell*. 2005.

Lead PIs: Jochen Buck & Lonny Levin

Docket: D-5141

Availability: Available by license from WCM.

Anti-sAC Monoclonal Antibody (R21)

Antigen: Soluble adenylyl cyclase (sAC) **Clone:** R21

Known Reactivity: Human, Mouse, Rat **Host:** Mouse

Description: sAC catalyzes the production of the second messenger cAMP and is found in the cytoplasm, mitochondria, centriole, and nucleus. R21 was generated against a glutathione-S-transferase fusion protein corresponding to the 50 kDa splice variant of human sAC, recognizing the epitope of 203-216. Antibodies can be used to study cAMP activities in various signaling pathways related to sterility, neuroactivities, and inflammation.

Applications: WB, ICC/IHC

References:

- Farrell et.al. “Somatic 'soluble' adenylyl cyclase isoforms are unaffected in Sacy tm1Lex/Sacy tm1Lex 'knockout' mice.” *PLoS One*. 2008.

Lead PIs: Jochen Buck & Lonny Levin

Docket: D-5141

Availability: Available by license from WCM.

Weill Cornell Medicine

For licensing inquiries, please contact iris.bica@cornell.edu.
Availability and licensing conditions vary by material and are subject to change.

Antibodies (7 of 10)

Anti-sAC Monoclonal Antibody (R37)

Antigen: Soluble adenylyl cyclase (sAC) **Clone:** R37

Known Reactivity: Human, Mouse, Rat **Host:** Mouse

Description: sAC catalyzes the production of the second messenger cAMP and is found in the cytoplasm, mitochondria, centriole, and nucleus. R37 was generated against a glutathione-S-transferase fusion protein corresponding to the 50 kDa splice variant of human sAC, recognizing the epitope of 436-456. Antibodies can be used to study cAMP activities in various signaling pathways related to sterility, neuroactivities, and inflammation.

Applications: WB, IP, ICC/IHC

References:

- Farrell et.al. “Somatic 'soluble' adenylyl cyclase isoforms are unaffected in Sacy tm1Lex/Sacy tm1Lex 'knockout' mice.” *PLoS One*. 2008.

Lead PIs: Jochen Buck & Lonny Levin

Docket: D-5141

Availability: Available by license from WCM.

Anti-sAC Monoclonal Antibody (R41)

Antigen: Soluble adenylyl cyclase (sAC) **Clone:** R41

Known Reactivity: Human, Mouse, Rat **Host:** Mouse

Description: sAC catalyzes the production of the second messenger cAMP and is found in the cytoplasm, mitochondria, centriole, and nucleus. R41 was generated against a glutathione-S-transferase fusion protein corresponding to the 50 kDa splice variant of human sAC, recognizing the epitope of 450-466. Antibodies can be used to study cAMP activities in various signaling pathways related to sterility, neuroactivities, and inflammation.

Applications: WB, IP, ICC/IHC

References:

- Zippin et.al. “Compartmentalization of bicarbonate-sensitive adenylyl cyclase in distinct signaling microdomains.” *FASEB J*. 2003.

Lead PIs: Jochen Buck & Lonny Levin

Docket: D-5141

Availability: Available by license from WCM.

Weill Cornell Medicine

For licensing inquiries, please contact iris.bica@cornell.edu.
Availability and licensing conditions vary by material and are subject to change.

Antibodies (8 of 10)

Anti-CLIC4 Polyclonal Antibody

Antigen: Chloride intracellular channel 4 (CLIC4/p64H1) protein

Known Reactivity: Rabbit **Host:** Rabbit

Description: Antibody against CLIC4, an intracellular chloride channel protein. Purified GST-p64H1 fusion protein was used as an immunogen to produce rabbit antiserum, which was purified to remove cross-reactivities with the rest of the CLIC protein family. Antibodies can be used to study luminogenesis, endosomal activities, and vascular coalescence.

Applications: WB, IFA

References:

- Chou et al. "CLIC4 regulates apical exocytosis and renal tube luminogenesis through retromer- and actin-mediated endocytic trafficking." *Nat Commun*. 2016.

Lead PI: Ching-Hwa Sung

Docket: D-7365

Availability: Available by license from WCM.

Anti-PfASF1 Polyclonal Antibody

Antigen: Recombinant *Plasmodium falciparum* ASF1 (PF3D7_1224500) protein

Known Reactivity: *P. falciparum* **Host:** Rabbit

Description: Polyclonal antibodies to P. falciparum anti-silencing function 1 (ASF1) chaperone protein. ASF1 is involved in chromatin assembly and epigenetic regulation. Antigen was cloned and expressed as a his-SUMO fusion in Ecoli. Recombinant protein was purified, hisSUMO tag was cleaved and removed and used to immunize rabbits. Antibodies can be used to study chromatin assembly and epigenetic regulation in P. falciparum.

Applications: WB, IFA

Lead PI: Bjorn Kafsack

Docket: D-10747

Availability: Available by license from WCM.

Antibodies (9 of 10)

Anti-PfPMT Polyclonal Antibody

Antigen: Recombinant Plasmodium falciparum PMT (PF3D7_1343000) protein

Known Reactivity: *P. falciparum* **Host:** Guinea Pig

Description: Polyclonal antibodies to P. Falciparum phosphoethanolamine N-methyltransferase (PfPMT). Antigen was cloned and expressed as a his-SUMO fusion in Ecoli. Recombinant protein was purified, hisSUMO tag was cleaved and removed and sent to immunize a guinea pig. Antibodies can be used to study phosphatidylcholine synthesis in P. falciparum.

Applications: WB, IFA

Lead PI: Bjorn Kafsack

Docket: D-10748

Availability: Available by license from WCM.

Anti-PfSAHH Polyclonal Antibody

Antigen: Recombinant *Plasmodium falciparum* SAHH (PF3D7_0520900) protein

Known Reactivity: *P. falciparum* **Host:** Rabbit

Description: Polyclonal antibodies to P. Falciparum S-adenosylhomocysteine hydrolase (SAHH). Antigen was cloned and expressed as a his-SUMO fusion in Ecoli. Recombinant protein was purified, hisSUMO tag was cleaved and removed and sent to immunize rabbits. Antibodies can be used to study metabolism, epigenetic regulation, and reproduction in P. falciparum.

Applications: WB, IFA

Lead PI: Bjorn Kafsack

Docket: D-10749

Availability: Available by license from WCM.

Antibodies (10 of 10)

Anti-PfSAMS Polyclonal Antibody

Antigen: Recombinant *Plasmodium falciparum* SAMS (PF3D7_0922200) protein

Known Reactivity: *P. falciparum* **Host:** Guinea Pig

Description: Polyclonal antibodies to P. Falciparum SAM synthetase (SAMS). Antigen was cloned and expressed as a his-SUMO fusion in Ecoli. Recombinant protein was purified, hisSUMO tag was cleaved and removed and sent to immunize rabbits. Antibodies can be used to study metabolism, epigenetic regulation, and reproduction in P. falciparum.

Applications: WB, IFA

References:

- Schneider et al. "The human malaria parasite Plasmodium falciparum can sense environmental changes and respond by antigenic switching." *Proc Natl Acad Sci USA*. 2023.

Lead PI: Bjorn Kafsack

Docket: D-10750

Availability: Available by license from WCM.

Weill Cornell Medicine

Cell Lines

Available for Licensing

Weill Cornell Medicine

Cell Lines (1 of 3)

Mouse CD34+ Testicular Stromal Cell Line

Tissue: Testicular stromal

Disease: Normal

Species: Mouse

Modifications: None

Description: CD34 positive mouse testicular stromal cells, known as JK1, help in the long-term culture of spermatogonial stem and progenitor cells (SPCs). JK1 cells support the growth of mouse embryonic stem cells and multipotent adult spermatogonial-derived stem cells in the lab. They also help in creating and expanding embryonic germ cell colonies and SPCs.

References:

- Kim et al. "CD34+ Testicular Stromal Cells Support Long-Term Expansion of Embryonic and Adult Stem and Progenitor Cells." *Stem Cells*. 2008.

Lead PI: Shahin Rafii

Docket: D-4444

Availability: Available from WCM for internal research use. Not available for inclusion in repositories.

Human Cytochrome c Oxidase (COX)-Deficient Cell Lines

Tissue: Other

Disease: Cytochrome c oxidase deficiency

Species: Human

Modifications: COX I mutation, Cybrid

Description: Transmitochondrial cell lines containing various proportions of G6930A stop-codon mutation in COX I gene. COX enzymatic activity decreases as the levels of mutated mtDNA increase; similarly, COX I polypeptide synthesis and their steady-state levels also decrease with higher amounts of mutated mtDNA. Cell respiration and ATP synthesis are preserved in cells with lower proportions (~40%) of mutated genomes.

References:

- D'Aurelio et al. "In Vivo Regulation of Oxidative Phosphorylation in Cells Harboring a Stop-codon Mutation in Mitochondrial DNA-encoded Cytochrome c Oxidase Subunit I." *J. Biol Chem*. 2001.

Lead PI: Giovanni Manfredi

Docket: D-6148

Availability: Available from WCM for internal research use. Not available for inclusion in repositories.

Weill Cornell Medicine

For licensing inquiries, please contact iris.bica@cornell.edu.
Availability and licensing conditions vary by material and are subject to change.

Cell Lines (3 of 3)

Human Airway Basal Cell Progenitor Cell Line (BCi-NS1)

Tissue: Lung **Disease:** Normal

Species: Human **Modifications:** None

Description: Immortalized and characterized normal primary airway basal cell progenitor line with multipotent differentiation capacity. Primary airway basal cells were derived from a healthy nonsmoker donor. Cells retain original primary cell characteristics and demonstrate a multipotent differentiation capacity into secretory, goblet, Clara, and ciliated cells.

References:

- Walters et al. "Generation of a human airway epithelium derived basal cell line with multipotent differentiation capacity." *Respir Res.* 2013.

Lead PI: Ronald Crystal, M.D.

Docket: D-6267

Availability: Available from WCM for internal research use. Not available for redistribution via repositories or reagent companies.

Human Hepatocyte-Like Cell Line (iPS-H)

Tissue: Liver **Disease:** Normal

Species: Human **Modifications:** None

Description: iPS-H cells are derived from iPSCs and can be cocultured with stromal cells to create functional hepatic engraftments in mice. These engraftments display human albumin and α1-antitrypsin levels comparable to primary human hepatocytes. iPS-H cells have also been shown to support hepatitis B virus infections.

References:

- Song et al. "Engraftment of human induced pluripotent stem cell-derived hepatocytes in immunocompetent mice via 3D co-aggregation and encapsulation." *Scientific Reports*. 2015.

Lead PI: Robert Schwartz

Docket: D-7678

Availability: Available from WCM.

Cell Lines (2 of 3)

Human Small Airway Epithelium Basal Cell Line (hSABCi-NS1.1)

Tissue: Lung **Disease:** Normal

Species: Human **Modifications:** None

Description: Immortalized and characterized normal small airway epithelium basal cell line. Small airway basal cells were derived from a healthy nonsmoker donor. Cells retain small airway epithelium features and maintain differentiation capacities for region-specific cell types including ciliated, club, mucous, neuroendocrine, ionocyte, and surfactant protein positive cells.

References:

- Wang et al. ” Characterization of an immortalized human small airway basal stem/progenitor cell line with airway region-specific differentiation capacity.” *Respir Res.* 2019.

Lead PI: Ronald Crystal, M.D.

Docket: D-8180

Availability: Available from WCM for internal research use. Not available for redistribution via repositories or reagent companies.

Weill Cornell Medicine

Organoids & PDX Models

Available for Licensing

Weill Cornell Medicine

Organoids & PDX Models (1 of 2)

Patient-Derived Solid Tumor Organoids

Tissue: Multiple **Disease:** Cancer (Multiple)

Species: Human **Modifications:** None

Description: An extensive catalog of patient-derived organoids for solid tumors, including both primary and metastatic samples. Samples have associated clinical, sequencing, and pathology data.

Solid tumor models available include:

Bile Duct, Bladder, Breast, Cervix, Colorectal, Endometrium, Esophagus, Kidney, Liver, Lung, Melanoma, Ovary, Pancreas, Prostate, Rectal, Urothelial, Uterus

References:

- Pauli et al. “Personalized In Vitro and In Vivo Cancer Models to Guide Precision Medicine.” *Cancer Discov*. 2017.

Lead PI: Englander Institute for Precision led by Olivier Elemento

Docket: D-9645

Availability: Available by license from WCM.

hPSC-Derived Lung and Colon Organoids

Tissue: Lung, Colon **Disease:** Normal

Species: Human **Modifications:** None

Description: Lung and colon organoid models generated using human pluripotent stem cells (hPSCs) which recapitulate relevant organ biology. The hPSC-derived lung organoids express ACE2, are permissive to SARS-CoV-2 infection, and phenocopy COVID-19 disease. The organoids may be used in vitro or implanted into immunodeficient mice to generate in vivo xenograft models and are compatible with high-throughput screening

References:

- Han et al. “Identification of SARS-CoV-2 inhibitors using lung and colonic organoids.” *Nature*. 2021.

Lead PI: Shuibing Chen

Docket: D-9438, D-9421

Availability: Available by license from WCM.

Organoids & PDX Models (2 of 2)

Genetically Engineered KRAS Organoids

Tissue: Pancreas, Colon, Small Intestine

Disease: Cancer

Species: Mouse

Modifications: Targeted Mutation

Description: Series of genetically engineered organoids derived from mouse pancreas, colon, and small intestine. Organoids were generated from either wild-type tissue, or animals carrying specific tissue restricted transgenes, and further manipulated in culture to generate targeted mutations in oncogenes and tumor suppressors. Organoids carry CRISPR engineered mutations in Apc and/or p53. The organoids also carry Cre-conditional KRAS alleles, including G12D, G12C, G12R, and G13D mutations

References:

- Zafra et al. “An In Vivo Kras Allelic Series Reveals Distinct Phenotypes of Common Oncogenic Variants.” *Cancer Discov*. 2020.

Lead PI: Lukas Dow

Docket: D-9448

Availability: Available by license from WCM.

PDX Models of Lymphoma

Tissue: Blood

Disease: Leukemia & Lymphoma

Species: Human

Modifications: None

Description: An extensive catalog of patient-derived xenograft (PDX) models. Disease states available include:

Anaplastic large cell lymphoma (ALCL), Angioimmunoblastic T-cell lymphoma (AITL), Peripheral T-cell lymphoma (PTCL), Myelofibrosis (MF), Monomorphic epitheliotropic intestinal T-cell lymphoma (MEITL), Adult T-cell leukemia/lymphoma (ATLL), T-cell prolymphocytic leukemia (T-PLL), Diffuse large B-cell lymphoma (DLBCL), Mantle cell lymphoma (MCL), T-cell acute lymphoblastic leukemia (T-ALL)

References:

- Cacciapuoti et al. “In Vivo and Ex Vivo Patient-Derived Tumor Xenograft Models of Lymphoma for Drug Discovery.” *Curr Protoc*. 2021.

Lead PI: Giorgio Inghirami

Docket: D-10620

Availability: Available by license from WCM.

Weill Cornell Medicine

For licensing inquiries, please contact iris.bica@cornell.edu.
Availability and licensing conditions vary by material and are subject to change.

Weill Cornell Medicine

Rodent Models

Available for Licensing

Weill Cornell Medicine

Mouse Models (1 of 13)

CD36 KO Mouse

Name: B6.129S1-*Cd36*^{tm1Mfe}/J

Strain: 019006 **Modification:** Targeted mutation

Description: CD36 KO mice carry a mutation where exon 3 of *Cd36* is replaced by a Neo cassette. Mice exhibit reduced preference for fat-rich food, lower food intake and altered fatty acid uptake.

Application: Mouse model to study glucose metabolism and lipid homeostasis.

References:

- Febbraio et al. A null mutation in murine CD36 reveals an important role in fatty acid and lipoprotein metabolism. *Journal of Biological Chemistry*.1999.

Lead PI: Roy Silverstein, M.D.

Docket: D-2060

Availability: Available from JAX with license from WCM.

Vk*MYC Mouse

Name: C57BL/6J-Tg(Igkv3-5*-MYC)24Plbe/Mmmh

Strain: 068098-MU **Modification:** Transgenic

Description: Mice injected with the transgenic construct Vk*MYC accumulate plasma cells in their bone marrow. They develop multiple myeloma with characteristic biological and clinical features through Activation-Induced Deaminase (AID)-dependent MYC activation in germinal center B-cells.

Application: Mouse model to study human multiple myeloma.

References:

- Chesi et al. AID-dependent activation of a MYC transgene induces multiple myeloma in a conditional mouse model of post-germinal center malignancies. *Cancer Cell*. 2008.

Lead PI: Leif Bergsagel, M.D.

Docket: D-3498

Availability: Available from MMRRC with license from WCM.

Mouse Models (2 of 13)

$BDNF_{Met}$ Mouse

Name: B6;129S-Bdnf^{tm1V66MFlee}

Strain: N/A **Modification:** Knock-In

Description: BDNFMet knock-in mice endogenously express the human BDNF Val66Met SNP (rs6265). These mice exhibit defective BDNF secretion and altered anxiety-like behavior and fear extinction learning.

Application: Mouse model useful in studying anxiety and depressive disorders.

References:

- Chen et al. Genetic variant BDNF (Val66Met) polymorphism alters anxiety-related behavior. *Science*. 2006.
- Soliman et al. A genetic variant BDNF polymorphism alters extinction learning in both mouse and human. *Science*. 2010.

Lead PI: Francis Lee, M.D., Ph.D.

Docket: D-3960

Availability: Available from WCM.

$LRRK2^{R1441G}$ Mouse

Name: FVB/N-*Khdrbs2*$^{Tg(LRRK2*R1441G)135Cjli}$/J

Strain: 009604 **Modification:** Transgenic

Description: $LRRK2^{R1441G}$ transgenic mice express the mutant form of human leucine-rich repeat kinase 2 (LRRK2*R1441G) under the control of the human *LRRK2* promoter/enhancer regions on the BAC transgene. These mice exhibit multiple late-onset and progressive features of Parkinson's disease.

Application: Mouse model for studying Parkinson's disease pathogenesis and neurodegeneration by $LRRK2^{R1441G}$ expression.

References:

- Li et al. Mutant LRRK2(R1441G) BAC transgenic mice recapitulate cardinal features of Parkinson's disease. *Nature Neuroscience*. 2009.

Lead PI: Chenjian Li, Ph.D.

Docket: D-4184

Availability: Available from JAX with license from WCM.

Mouse Models (3 of 13)

G/S LRRK2 Mouse

Name: FVB/N-Tg(LRRK2*G2019S)1Cjli/J

Strain: 009609 **Modification:** Transgenic

Description: G/S LRRK2 mice express the mutant form of human leucine rich repeat kinase 2 (LRRK2*G2019S) under the control of the human *LRRK2* promoter/enhancer regions on the BAC transgene. Mice show no change in behavior or motor skills.

Application: Mouse model useful for studying Parkinson's disease via LRRK2*G2019S expression.

References:

- Karuppagounder et al. LRRK2 G2019S transgenic mice display increased susceptibility to 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP)-mediated neurotoxicity. *Journal of Chemical Neuroanatomy*. 2016.

Lead PI: Chenjian Li, Ph.D.

Docket: D-4184

Availability: Available from JAX with license from WCM.

WT-OX Mouse

Name: FVB/N-Tg(LRRK2)1Cjli/J

Strain: 009610 **Modification:** Transgenic

Description: WT-OX mice express wild-type human leucine-rich repeat kinase 2 (LRRK2) under the control of the human *LRRK2* promoter/enhancer regions on the BAC transgene.

Application: Mouse control strain for $LRRK2^{R1441G}$ Parkinson's disease mouse strain (009604).

References:

- Li et al. Mutant LRRK2(R1441G) BAC transgenic mice recapitulate cardinal features of Parkinson's disease. *Nature Neuroscience*. 2009.

Lead PI: Chenjian Li, Ph.D.

Docket: D-4184

Availability: Available from JAX with license from WCM.

Mouse Models (4 of 13)

PGRN KO Mouse

Name: B6(Cg)-*Grn*$^{tm1.1Aidi}$/J

Strain: 013175 **Modification:** Knock-out

Description: PGRN knock-out mice have exons 1-4 deleted from the granulin locus (*Grn*). These mice exhibit frontotemporal dementia-like behavior and neuropathology as well as a dysregulated inflammatory response.

Application: Mouse model useful in studying frontotemporal dementia.

References:

- Yin et al. Exaggerated inflammation, impaired host defense, and neuropathology in progranulin-deficient mice. *Journal of Experimental Medicine*. 2010.

Lead PI: Carl Nathan, M.D.

Docket: D-4866

Availability: Available from JAX with license from WCM.

CRBN Mouse

Name: B6(Cg)-*Crbn*$^{tm1.1Jjh}$/J

Strain: 017564 **Modification:** Targeted mutation

Description: Crbn mice carry *loxP* sites flanking exons 3 and 4 of the cereblon (*Crbn*) gene. When bred with mice expressing Cre recombinase, offspring will have exons 3 and 4 deleted and exhibit learning deficits.

Application: Mouse model useful in studies of non-syndromic intellectual disability, memory, and learning.

References:

- Rajadhyaksha et al. Behavioral characterization of cereblon forebrain-specific conditional null mice: a model for human non-syndromic intellectual disability. *Behavioural Brain Research*. 2012.

Lead PI: Joseph Higgins, M.D.

Docket: D-5502

Availability: Available from JAX with license from WCM.

Mouse Models (5 of 13)

MyD88-5^{-} Mouse

Name: B6.129X1-*Sarm1*^{tm1Aidi}/J

Strain: 018069 **Modification:** Knock-out

Description: MyD88-5^{-} knock-out mice have exons 3-6 of the *Sarm1* gene disrupted. These mice exhibit enhanced resistance to oxygen and glucose deprivation-induced neuronal death.

Application: Mouse model useful in studies of neurodegeneration.

References:

- Kim et al. MyD88-5 links mitochondria, microtubules, and JNK3 in neurons and regulate neuronal survival. *Journal of Experimental Medicine*. 2007.

Lead PI: Carl Nathan, M.D.

Docket: D-5872

Availability: Available from JAX with license from WCM.

Egfl7:eGFP Mouse

Name: STOCK Tg(Egfl7-EGFP)12Stmn/J

Strain: 026104 **Modification:** Transgenic

Description: *Egfl7*:eGFP transgenic mice express eGFP under the control of the Epidermal growth factor-like domain 7 (*Egfl7*) promoter/enhancer regions.

Application: Mouse model useful in monitoring endothelial cells at sites of angiogenesis and vasculogenesis.

References:

- Bambino et al. Epidermal growth factor-like domain 7 is a marker of the endothelial lineage and active angiogenesis. *Genesis*. 2014.

Lead PI: Heidi Stuhlmann, Ph.D.

Docket: D-6891

Availability: Available from JAX with license from WCM.

Mouse Models (6 of 13)

Brn3a-CreER^{T2} Mouse

Name: STOCK Tg(Pou4f1-cre/ERT2)2Jiz/J

Strain: 032594 **Modification:** Transgenic

Description: Brn3a-CreER^{T2} transgenic mice express a tamoxifen-inducible Cre recombinase driven by the mouse *Pou4f1* gene promoter. When crossed with a strain containing a *loxP* site flanked sequence of interest, the offspring generated contain Cre-mediated targeted deletions in *Pou4f1*-expressing tissues.

Application: Mouse model useful for mediating Cre-recombination in *Pou4f1*-expressing tissues such as sensory neurons.

References:

- O'Donovan & Ma et al. B-RAF kinase drives developmental axon growth and promotes axon regeneration in the injured mature CNS. *Journal of Experimental Medicine*. 2014.

Lead PI: Jian Zhong, Ph.D.

Docket: D-6951

Availability: Available from JAX with license from WCM.

S1p1$^{f/stop/f}$ Mouse

Name: B6.C-*Gt(ROSA)26Sor*$^{tm1(CAG-S1pr1)Thla}$/J

Strain: 030438 **Modification:** Targeted mutation

Description: In *S1p1*$^{f/stop/f}$ mice, Cre-mediated excision of a floxed STOP enables tissue-specific overexpression of *S1pr1*. Overexpression results in decreased endothelial sprouting angiogenesis with reduced vascular network, vessel density, tip cells and branch points.

Application: Mouse model useful in studies related to endothelial angiogenesis and vascular development.

References:

- Jung et al. Flow-regulated endothelial S1P receptor-1 signaling sustains vascular development. *Developmental Cell*. 2012.

Lead PI: Timothy Hla, Ph.D.

Docket: D-6988

Availability: Available from JAX with license from WCM.

Mouse Models (7 of 13)

R26^{F133V} Mouse

Name: B6.Cg-*Gt(ROSA)26Sor*$^{tm1(SPOP*F133V)Mrbn}$/J

Strain: 030102 **Modification:** Targeted mutation

Description: R26F133V mice contain a *loxP*-flanked STOP sequence upstream of a mutated human speckle-type POZ protein (*SPOP*) gene. When bred to mice that express Cre recombinase under the control of a promoter of interest, SPOP-F133V is expressed with genomic alterations characteristic of prostate cancer.

Application: Mouse model useful in studying prostate cancer.

References:

- Boysen et al. SPOP mutation leads to genomic instability in prostate cancer. *eLife*. 2015.

Lead PI: Christopher Barbieri, M.D., Ph.D.

Docket: D-7593

Availability: Available from JAX with license from WCM.

LSL-KrasG12R Mouse

Name: B6.129S4-*Kras*^{em2Ldow}/J

Strain: 033316 **Modification:** Endonuclease-mediated mutation

Description: LSL-KrasG12R mice carry a CRISPR/cas9 generated mutation (G12R) in *Kras* commonly found pancreatic cancer. Expression of this mutant is blocked by a *loxP*-flanked stop codon. Cre-mediated recombination allows for the oncogenic protein to be expressed by excising the stop codon.

Application: Mouse strain useful for studying pancreatic cancer.

References:

- Zafra et al. An *in vivo* KRAS allelic series reveals distinct phenotypes of common oncogenic variants. *Cancer Discovery*. 2020.

Lead PI: Lukas Dow, Ph.D.

Docket: D-8465

Availability: Available from JAX with license from WCM.

Mouse Models (8 of 13)

LSL-KrasG12C Mouse

Name: B6;129S4-*Kras*^{em1Ldow}/J

Strain: 033068 **Modification:** Endonuclease-mediated mutation

Description: LSL-KrasG12C mice carry a CRISPR/cas9 generated mutation (G12C) in *Kras* commonly found in lung cancer. Expression of this mutant is blocked by a *loxP*-flanked stop codon. Cre-mediated recombination allows for the oncogenic protein to be expressed by excising the stop codon.

Application: Mouse strain useful for studying lung cancer.

References:

- Zafra et al. An *in vivo* KRAS allelic series reveals distinct phenotypes of common oncogenic variants. *Cancer Discovery*. 2020.

Lead PI: Lukas Dow, Ph.D.

Docket: D-8465

Availability: Available from JAX with license from WCM.

LSL-KrasG13D Mouse

Name: B6N.129S4-*Kras*^{em3Ldow}/J

Strain: 033317 **Modification:** Endonuclease-mediated mutation

Description: LSL-KrasG13D mice carry a CRISPR/cas9 generated mutation (G13D) in *Kras* commonly found in colon cancer. Expression of this mutant is blocked by a *loxP*-flanked stop codon. Cre-mediated recombination allows for the oncogenic protein to be expressed by excising the stop codon.

Application: Mouse strain useful for studying colon cancer.

References:

- Zafra et al. An *in vivo* KRAS allelic series reveals distinct phenotypes of common oncogenic variants. *Cancer Discovery*. 2020.

Lead PI: Lukas Dow, Ph.D.

Docket: D-8465

Availability: Available from JAX with license from WCM.

Mouse Models (9 of 13)

Nmur1$^{iCre\text{-}eGFP}$ Mouse

Name: C57BL/6-Tg(Nmur1-iCre,-eGFP)1Dart/J

Strain: 038197 **Modification:** Transgenic

Description: *Nmur1*$^{iCre\text{-}eGFP}$ transgenic mice express an improved Cre recombinase (iCre) and enhanced GFP (eGFP) driven by the neuromedin U receptor 1 (*Nmur1*) promoter. When bred with mice containing a *loxP*-flanked sequence of interest, Cre-mediated recombination results in the deletion of the floxed sequences in *Nmur1*-expressing cells of the offspring.

Application: Mouse model to study the function of *Nmur1*-positive cells in immunity, inflammation and tissue homeostasis.

References:

- Tsou & Yano et al. Neuropeptide regulation of non-redundant ICL2 responses at barrier surfaces. *Nature*. 2022.

Lead PI: David Artis, Ph.D.

Docket: D-8868

Availability: Available from JAX with license from WCM.

RPE$^{\Delta Clic4}$ Mouse

Name: C57BL/6J-Clic4$^{tm1.1Aidi}$;Tg(Best1-cre)1Jdun

Strain: N/A **Modification:** Knock-out

Description: RPEΔClic4 mice have a retinal pigment epithelium-specific knockout of the Clic4 gene. These mice exhibit pathological and functional hallmarks of dry age-related macular degeneration (AMD), including drusen-like deposits, RPE cell death, and photoreceptor degeneration, due to aberrant lipid metabolism and transport.

Application: Mouse model useful in studies of age-related macular degeneration (AMD) and retinal diseases.

References:

- Chuang et al. Retinal pigment epithelium-specific CLIC4 mutant is a mouse model of dry age-related macular degeneration. *Nature Communications*. 2022.

Lead PI: Ching Hwa Sung, Ph.D.

Docket: D-9229

Availability: Available from WCM.

Mouse Models (10 of 13)

IL-22-eGFP Mouse

Name: C57BL/6-Tg(Il22-EGFP)1Gson/J

Strain: 035005 **Modification:** Transgenic

Description: IL-22-eGFP transgenic mice express enhanced GFP (eGFP) under the control of the interleukin 22 (*Il22)* promoter. IL22 is produced by group 3 innate lymphoid cells (ILC3s) in the intestine and CD4+ T cells and is associated with chronic intestinal inflammation. EGFP expression reflects IL22 production by ILC3s.

Application: Mouse model useful in visualizing IL22 production by ILC3s and its implication in inflammatory bowel disease.

References:

- Teng et al. A circadian clock is essential for homeostasis in group 3 innate lymphoid cells in the gut. *Science Immunology*. 2019.

Lead PI: Gregory Sonnenberg, Ph.D.

Docket: D-9527

Availability: Available from JAX with license from WCM.

MGS34F Mouse

Name: B6.Cg-*U2af1*$^{tm1.1Hev}$/J

Strain: 032638 **Modification:** Targeted mutation

Description: MGS34F mice carry *loxP*-sites that flank exon 2-8 of *U2af1* followed by a transcriptional STOP cassette and an S34F mutation in exon 2 of the gene seen in myelodysplastic syndromes (MDS). Cre-mediated excision of the of the STOP cassette allows for the expression of the mutant and mice to develop impaired blood cells with MDS-like features accompanied by abnormal splicing patterns.

Application: Mouse model to study splicing factor mutation in U2AF1 commonly found in MDS and acute myeloid leukemia.

References:

- Fei et al. Impaired hematopoiesis and leukemia development in mice with a conditional knock-in allele of a mutant splicing factor gene U2af1. *Proc Natl Acad Sci USA*. 2018.

Lead PI: Harold Varmus, M.D.

Docket: D-9647

Availability: Available from JAX with license from WCM.

Mouse Models (11 of 13)

Grn^{flox} Mouse

Name: C57BL/6-*Grn*^{tm1Aidi}/J

Strain: 013174 **Modification:** Targeted mutation

Description: *Grn*^{flox} mutant mice have a *loxP* site upstream of the granulin (*Grn*) gene promoter and a second *loxP* site fused to an FRT-flanked neomycin/kanamycin resistance cassette downstream of exon 4.

Application: Mouse model useful in generating mutants for studying inflammation, infectious disease, and neurodegenerative diseases.

References:

- Yin et al. Exaggerated inflammation, impaired host defense, and neuropathology in progranulin-deficient mice. *Journal of Experimental Medicine*. 2010.

Lead PI: Aihao Ding, Ph.D.

Docket: D-9648

Availability: Available from JAX with license from WCM.

IgG KO Mouse

Name: C57BL/6J-Del(12Ighg3-Ighg2b)1Mzeng/J

Strain: 038643 **Modification:** Knock-out

Description: IgG knock-out mice contain an CRISPR/cas9-generated 80 kbp deletion that removes IgG isotypes *Ighg1*, *Ighg2a*, *Ighg2b*, and *Ighg3*. Homozygous mice develop an altered gut microbiome that promotes differentiation of IL17A-producing δγ T cells in the small intestine and colon.

Application: Mouse model to study enteric pathogens and the gut microbiome.

References:

- Sanidad et al. Maternal gut microbiome-induced IgG regulates neonatal gut microbiome and immunity. *Science Immunology*. 2022.

Lead PI: Melody Zeng, Ph.D.

Docket: D-10399

Availability: Available from JAX with license from WCM.

Mouse Models (12 of 13)

Inducible Base Editor (IBE) Mouse

Name: B6.Cg-*Col1a1*$^{tm1(tetO\text{-}cas9*)Ldow}$/Mmjax

Strain: 069789-JAX **Modification:** Knock-In

Description: IBE knock-in mice express a cytosine base editor (C:G to T:A) under the control of a tetO promoter. This strain provides cytosine base editing to create cancer-related single nucleotide variants (SNVs).

Application: Mouse strain useful in creating individual or multiple SNVs in pancreatic, lung, and intestinal organoids and somatic cells for cancer models.

References:

- Katti & Vega-Perez et al. Generation of precision preclinical cancer models using regulated in vivo base editing. *Nature Biotechnology*. 2023.

Lead PI: Lukas Dow, Ph.D.

Docket: D-10533

Availability: Available from JAX with license from WCM.

hTREM2-R47H Mouse

Name: C57BL/6J-Trem2$^{tm1(TREM2*R47H)Lgn}$

Strain: N/A **Modification:** Knock-in

Description: hTREM2-R47H knock-in mice contain a CRISPR/cas9 generated insertion of R47H-hTREM2 that replaces the mTREM2 allele. The R47H variant elevates Alzheimer's disease risk by 2-4.5-fold, and is associated with earlier AD onset, faster cognitive decline, and increased tau pathology.

Application: Mouse model useful for studying R47H point mutation in Alzheimer's Disease.

References:

- Sayed et al. AD-linked R47H- TREM2 mutation induces disease-enhancing microglial states via AKT hyperactivation. *Science Translational Medicine*. 2021.

Lead PI: Li Gan, Ph.D.

Docket: D-10556

Availability: Available from WCM.

Weill Cornell Medicine

For licensing inquiries, please contact iris.bica@cornell.edu.
Availability and licensing conditions vary by material and are subject to change.

Mouse Models (13 of 13)

hTREM2-CV Mouse

Name: C57BL/6J-Trem2$^{tm1(TREM2)Lgn}$

Strain: N/A **Modification:** Knock-In

Description: hTREM2-CV knock-in mice contain a CRISPR/cas9 generated insertion of common variant (CV) of human TREM2 that replaces the mTREM2 allele.

Application: Mouse model useful for studying the role of human TREM2 in Alzheimer's Disease or serve as a reference for hTREM2-R47H mice.

References:

- Carling et al. Alzheimer's disease-linked risk alleles elevate microglial cGAS-associated senescence and neurodegeneration in a tauopathy model. *bioRxiv*. 2024 (pre-print)

Lead PI: Li Gan, Ph.D.

Docket: D-10556

Availability: Available from WCM.

Rat Models (1 of 2)

Human LRRK2 G2019S Rat

Name: NTac:SD-Tg(LRRK2*G2019S)571CJLi

Strain: 10681 **Modification:** Transgenic

Description: These rats contain a human LRRK2 gene with the G2019S mutation, which is implicated in both inherited and sporadic Parkinson's Disease. Rats exhibit PD phenotypes such as bradykinesia, immobility, dopaminergic deficits, and shortened lifespan.

Application: Basic research and drug development for Parkinson's Disease.

Lead PI: Chenjian Li

Docket: D-4184

Availability: Available from Taconic with license from WCM.

Human Alpha Synuclein Rat

Name: NTac:SD-Tg(SNCA*WT)446CJLi

Strain: 10680 **Modification:** Transgenic

Description: These rats contain a human SNCA gene and express wild type alpha synuclein.

Application: Basic research and drug development for Parkinson's Disease.

Lead PI: Chenjian Li

Docket: D-5203

Availability: Available from Taconic with license from WCM.

Rat Models (2 of 2)

Human Alpha Synuclein A53T Rat

Name: NTac:SD-Tg(SNCA*A53T)268Cjli

Strain: 10678 **Modification:** Transgenic

Description: These rats contain a human SNCA gene with the A53T mutation, which is linked to familial Parkinson's Disease.

Application: Basic research and drug development for Parkinson's Disease.

Lead PI: Chenjian Li

Docket: D-5203

Availability: Available from Taconic with license from WCM.

Human Alpha Synuclein E46K Rat

Name: NTac:SD-Tg(SNCA*E46K)70CJLi

Strain: 10679 **Modification:** Transgenic

Description: These rats contain a human SNCA gene with the E46K mutation, which is liked to familial Parkinson's Disease. Rats demonstrate accumulation and aggregation of α-synuclein in nigral dopamine neurons, decreased dopamine metabolites in the striatum, and oxidative stress – characteristic of early-stage PD.

Application: Basic research and drug development for Parkinson's Disease.

References:

- Cannon et al. "Expression of human E46K-mutated α-synuclein in BAC-transgenic rats replicates early-stage Parkinson's disease features and enhances vulnerability to mitochondrial impairment." *Exp Neurol*. 2014.

Lead PI: Chenjian Li

Docket: D-5203

Availability: Available from Taconic with license from WCM.

Weill Cornell Medicine

For licensing inquiries, please contact iris.bica@cornell.edu.
Availability and licensing conditions vary by material and are subject to change.

Weill Cornell Medicine