

RALLEE[®] Certified Genetic Test Requisition Form

I. Client (Owner) Information

First Name _____ Last Name _____
Email Address _____ Primary Phone _____
Mailing Address _____ Country _____
City _____ State _____ Zip/Postal Code _____

Additional Final Report Access:
List up to 3 other people who are approved to receive and discuss the final report with MoxxiTech LLC.

First Name _____ Last Name _____
Email Address _____ Primary Phone _____

First Name _____ Last Name _____
Email Address _____ Primary Phone _____

First Name _____ Last Name _____
Email Address _____ Primary Phone _____

II. Patient (Animal) Information

Name or Unique ID _____ Date of Birth _____
Sex _____ Species _____ Breed _____

If any relatives have also been tested, please list their information here:

Name or Unique Identifier _____ Date of Birth _____
Sex _____ Date Tested _____ RALLEE ID _____

Name or Unique Identifier _____ Date of Birth _____
Sex _____ Date Tested _____ RALLEE ID _____

Name or Unique Identifier _____ Date of Birth _____
Sex _____ Date Tested _____ RALLEE ID _____

Name or Unique Identifier _____ Date of Birth _____
Sex _____ Date Tested _____ RALLEE ID _____

III. Veterinary Office Information

Veterinary Clinic _____ Phone _____
Mailing Address _____ Country _____
City _____ State _____ Zip/Postal Code _____
Submitting Veterinarian _____
Email Address _____ Phone _____

IV. Billing

Bill To: Client Veterinary Office Prepaid: Invoice # _____

RALLEE® Certified Genetic Test Requisition Form

V. Testing Information

Patient History - Use the space below to list any symptoms and current or suspected diagnosis; attach relevant medical charts as necessary. ***Medical history required if requesting a Custom Panel

Age at Initial Symptom Presentation or Diagnosis: _____

Family History - If there is any known family history of disease, please list below

Relationship to Patient _____ Diagnosis _____

Relationship to Patient _____ Diagnosis _____

Relationship to Patient _____ Diagnosis _____

Relationship to Patient _____ Diagnosis _____

RALLEE® Certified Genetic Test Panel Selection

View our test panels on page 3-5 or online at moxxitech.com

Canine

- Panel 1
- Panel 2
- Panel 3
- Custom Panel

Equine

- Panel 1
- Panel 2
- Custom Panel

Feline

- Panel 1
- Panel 2
- Panel 3
- Custom Panel

Bovine

- Panel 1
- Panel 2
- Panel 3
- Custom Panel

Please note any special requests here:

Date of Sample Collection _____

By signing this form, the veterinarian confirms that the information provided is accurate to their knowledge, the sample provided to MoxxiTech LLC belongs to the described Patient, and the Client has all legal rights to obtain genetic testing for the Patient. The veterinarian acknowledges that sample processing will not begin until payment is received by MoxxiTech LLC.

Veterinarian Signature _____ Date _____

RALLEE® Certified Genetic Test Requisition Form

CANINE RALLEE® Certified Genetic Test Panels

Panel 1: Drug Metabolism, Hearing, Nervous System, Vision

Number of Alleles Tested: 174					
Condition	Gene(s)	Condition	Gene(s)	Condition	Gene(s)
AC-3933 Poor Metabolizer	CYP1A2	Ivermectin Sensitivity 1, 2	ABCB1	Oculoskeletal Dysplasia I 1, 2	COL9A3
Achromatopsia 1-4	CNGA3, CNGB3	L-2-Hydroxyglutaric Aciduria 1, 2	L2HGDH	Oculoskeletal Dysplasia II	COL9A2
Acral Mutilation Syndrome	GDNF	Lagotto Storage Disease	ATG4D	Osteochondromatosis	EXT2
Alexander Disease	GFAP	Laryngeal Paralysis Risk Factor	RAPGEF6	Paroxysmal Dyskinesia	PIGN
Beta Mannosidosis 1, 2	MANBA	Leber Congenital Amaurosis	RPE65	Periodic Fever Syndrome	MTBP
Bilateral Deafness and Vestibular Dysfunction	MYO7A	Leukodystrophy 1, 2	CYTB, TSEN54	Photoreceptor Dysplasia	PPT1
Cerebellar Ataxia 1, 2	RAB24, KCNIP4	Leukoencephalopathy 1, 2	NAPEPLD	Polyneuropathy 1-6	NDRG1, RAB3GAP1, ARHGEF10, GJA9
Cerebellar Cortical Degeneration	SNX14	Macular Corneal Dystrophy	LOC489707	Pompe Disease	GAA
Cerebellar Hypoplasia	VLDLR	Merle/Cryptic Merle	PMEL	Primary Glaucoma 1, 2	ADAMTS10
Collie Eye Anomaly	NHEJ1	Microphthalmia	RBP4	Primary Lens Luxation	ADAMTS17
Cone Rod Dystrophy, Age of Onset Modifier	MAP9	Mucopolysaccharidosis Type I	IDUA	Primary Open Angle Glaucoma 1-3	ADAMTS17
Cone-Rod Dystrophy 1-4	NPHP4, IQCB1, RPRGRI	Mucopolysaccharidosis Type IIIA 1, 2	SGSH	Primary Open Angle Glaucoma and/or Primary Lens Luxation	ADAMTS17
Congenital Eye Malformations	SIX6	Mucopolysaccharidosis Type IIIB 1, 2	NAGLU	Progressive Early Onset Cerebellar Ataxia	SEL1L
Congenital Myasthenic Syndrome 1-5	CHAT, CHRNE, COLQ	Multifocal Retinopathy I 1, 2	BEST1	Progressive Retinal Atrophy 1-10	BBS4, HIVEP3, CNGA1, CNGB1, MERTK, NECAPI, SAG1, SLC4A3, TTC8, RHO
Copper Toxicosis	COMMD1	Multifocal Retinopathy II	BEST1	Progressive Retinal Atrophy Type 2	C17H2or71
Deafness, Unilateral and Vestibular Dysfunction	PTPRQ	Multifocal Retinopathy III 1, 2	BEST1	Progressive Retinal Atrophy X-Linked Type 1, 1-3	RPRG
Degenerative Myelopathy	SOD1	Myoclonus Epilepsy of Lafora	NHLRC1	Progressive Retinal Atrophy X-Linked Type 2	RPRG
Demyelinating Peripheral Neuropathy	SBF2	Myotubular Myopathy 1, 2	MTM1	Progressive Rod-Cone Degeneration (PRCD-PRA)	PRCD
Dermoid Sinus	FGF3	Narcolepsy 1-3	HCRTR2	Protection Against Liver Copper Accumulation	ATP7A
Early Onset Cataracts 1, 2	HSF4	Necrotising Encephalopathy	SLC19A3	Refractory Idiopathic Epilepsy	ABCB1
Early Retinal Degeneration	STK38L	Neonatal Cerebellar Ataxia	GRM1	Refractory Idiopathic Epilepsy	LG12
Epileptic Drug Resistance	ABCB1	Neonatal Encephalopathy With Seizures	ATF2	Remitting Focal Epilepsy	PDE6B
Episodic Falling Syndrome	BCAN	Neuroaxonal Dystrophy 1-3	PLA2G6, TECPR2, VPS11	Rod-Cone Dysplasia Type 1, 1-4	PDE6A
Fetal Onset Neuroaxonal Dystrophy	MFN2	Neuronal Ceroid Lipofuscinosis 1	PPT1	Rod-Cone Dysplasia Type 3	CUBN
Fucosidosis Alpha	FUCA1	Neuronal Ceroid Lipofuscinosis 2	TPP1	Selective Cobalamin Malabsorption 1-3	tRNA-TYR
Gangliosidosis 1-3	GLB1	Neuronal Ceroid Lipofuscinosis 3	PPT1	Sensory Ataxic Neuropathy	FAM134B
Generalized Myoclonic Epilepsy	DIRAS1	Neuronal Ceroid Lipofuscinosis 4A 1	ARSG	Sensory Neuropathy	NKX2-8
Generalized Progressive Retinal Atrophy 1, 2	ADAM9, CCDC66	Neuronal Ceroid Lipofuscinosis 5 1, 2	CLN5	Spinal Dyrhaphism	SCN8A, KCNJ10, SPTBN2, CAPN1, ITPR1
Globoid Cell Leukodystrophy 1, 2	GALC	Neuronal Ceroid Lipofuscinosis 6	CLN6	Spinocerebellar Ataxia 1-7	ATP1B2
GM2 Gangliosidosis Type 1	HEXA	Neuronal Ceroid Lipofuscinosis 7	MFSD8	Spongy Degeneration with Cerebellar Ataxia 1, 2	ABCA4
GM2 Gangliosidosis Type II 1, 2	HEXB	Neuronal Ceroid Lipofuscinosis 8 1-4	CLN8	Stargardt Disease	PLP
Hepatic Copper Toxicosis	ATP7B	Neuronal Ceroid Lipofuscinosis 10	CTSD	Tremor	
Hyperekplexia 1, 2	SLC6A5	Neuronal Ceroid Lipofuscinosis 12 1, 2	ATP13A2		
Hypomyelination of Central Nervous System	FNIP2	Neuronal Ceroid Lipofuscinosis	OCA2		
Hypophosphatasia	ALPL	Oculocutaneous Albinism Type IV 1-3	SLC45A2		

Panel 2: Development, Musculoskeletal System, Reproduction, Skin and Hair, Teeth and Oral Cavity

Number of Alleles Tested: 160					
Condition	Gene(s)	Condition	Gene(s)	Condition	Gene(s)
Abortion	BTBD17	Fanconi Syndrome	FAN1	Osteochondromatosis	EXT2
Alexander Disease	GFAP	Fucosidosis Alpha	FUCA1	Osteogenesis Imperfecta 1-5	COL1A1, COL1A2, SERPINH1
Amelogenesis Imperfecta 1-3	ACP4, ENAM	Gangliosidosis 1-3	GLB1	Palmoplantar Keratoderma	KRT16
Bernard-Soulier Syndrome Type C	GP9	Globoid Cell Leukodystrophy 1, 2	GALC	Paroxysmal Dyskinesia	PIGN
Beta Mannosidosis 1, 2	MANBA	Glycogen Storage Disease IIIa 1	AGL	Periodic Fever Syndrome 1, 2	HAS2, MTBP
Centronuclear Myopathy 1, 2	BINI, HACD1	Glycogen Storage Disease VII 1, 2	PFKM	Persistent Mullerian Duct Syndrome	AMHR2
CHILD-like Syndrome	NSDHL	Hereditary Methemoglobinemia 1, 2	CYB5R3	Pituitary Dwarfism	LHX3
Chondrodysplasia	ITGA10	Hyperkeratosis	FAM83G	Polyneuropathy 1-6	NDRG1, RAB3GAP1, ARHGEF10, GJA9
Chondrodystrophy (HT1)	CFA 12	Hypomyelination of Central Nervous System	FNIP2	Pompe Disease	GAA
Ciliary Dyskinesia 1, 2	CCDC39, NME5	Hypophosphatasia	ALPL	Pyruvate Dehydrogenase Deficiency	PDP1
Cleft Lip and Palate	ADAMTS20	Hypothyroidism 1-4	TPO	Pyruvate Kinase Deficiency of Erythrocyte 1-6	PKLR
Cleft Palate	DLX6	Ichthyosis 1, 2	SGK3	Screw Tail	DVL2
Coat Color Dilution (d ^A 1, d ^A 2)	MLPH	Ichthyosis 1-4	ASPRV1, PNPLA1, SLC27A4, TGM1	Selective Cobalamin Malabsorption 1-3	CUBN
Congenital Ichthyosis	NIPAL4	Intestinal Cobalamin Malabsorption	AMN	Spinal Dyrhaphism	NKX2-8
Congenital Keratoconjunctivitis Sicca and Ichthyosiform Dermatitis	FAM83H	Junctional Epidermolysis Bullosa	LAMA3	Spinocerebellar Ataxia 6	CAPN1
Congenital Myasthenic Syndrome 1-4	CHAT, CHRNE, COLQ	Lethal Acrodermatitis	MKLNI	Spondylocostal Dysostosis	HES7
Craniofacial Dysmaturity Syndrome 1-4	SLC37A2, COL1A1, SLC35D1	Leukodystrophy	CYTB	Tail Length (TBXT)	T (TBXT)
Cushing's Syndrome 1-6	GNAS	Ligneous Membranitis	PLG	Van den Ende-Gupta Syndrome	SCARF2
Cyclic Neutropenia	AP3B1	Limb Girdle Muscular Dystrophy Type 2F	SGCD	Vitamin D Deficiency Rickets Type II	VDR
Decreased Fecundity	GDF9	Malignant Hyperthermia	RYR1	X-linked Hypohidrotic Ectodermal Dysplasia 1, 2	EDA
Dental Hypomineralization	FAM20C	Merle (Mc, Mc+, Ma, Ma+, M, Mh)	PMEL		
Dermatosparaxis	ADAMTS2	Mucopolysaccharidosis Type I 1	IDUA		
Dermoid Sinus	FGF3	Mucopolysaccharidosis Type VI 1, 2	ARSB		
Disorder of Sexual Development	HSD17B3	Mucopolysaccharidosis Type VII 1, 2	GUSB		
Disproportionate Dwarfism	COL11A2	Muscular Dystrophy 1-8	COL6A1, DMD		
Dystrophic Epidermolysis Bullosa 1, 2	COL7A1	Muscular Hypertrophy	MSTN		
Ectodermal Dysplasia, 1-2	FOXI3, PKP1	Musladin Lueke Syndrome	ADAMTSL2		
Ehlers-Danlos Syndrome 1-4	COL5A1, TNXB	Myotonia 1-3	CLCN1		
Epidermolysis Bullosa	PLEC	Nasal Parakeratosis 1, 2	SUV39H2		
Epidermolytic Hyperkeratosis	KRT10	Nemaline Myopathy	NEB		
Episodic Falling Syndrome	BCAN	Oculocutaneous Albinism	OCA2		
Exercise Induced Collapse	DNMI	Oculocutaneous Albinism Type IV 1-3	SLC45A2		
Exercise Induced Metabolic Myopathy	ACADVL	Oculoskeletal Dysplasia 1, 2	COL9A2, COL9A3		
Exfoliative Cutaneous Lupus Erythematosus (ECL)	UNC93B1	Osteochondrodysplasia	SLC13A1		

RALLEE® Certified Genetic Test Requirement Form

CANINE RALLEE® Certified Genetic Test Panels *Continued*

Panel 3: Blood, Cancer, Endocrine System, Gastrointestinal Tract, Heart, Immune System, Kidneys, Liver, Metabolism, Respiratory System

Number of Alleles Tested: 135

Condition	Gene(s)	Condition	Gene(s)	Condition	Gene(s)
Acute Respiratory Distress Syndrome	ANLN	Hepatic Copper Toxicosis	ATP7B	Primary Hyperoxaluria	AGXT
Bernard-Soulier Syndrome Type C	GP9	Hereditary Nephritis	COL4A5	Primary Polycythemia I	JAK2
C3 Deficiency	C3	Hereditary Methemoglobinemia 1, 2	CY5B3	Protection Against Liver Copper Accumulation	ATP7A
Cardiomyopathy	YARS2	Hereditary Nephropathy I-3	COL4A4, COL4A5	Pyruvate Dehydrogenase Deficiency	PDP1
Ciliary Dyskinesia 1, 2	CCDC39, NME5	Hypocalcemia	CAT	Pyruvate Kinase Deficiency of Erythrocyte I-6	PKLR
Colorectal Hamartomatous Polyposis and Ganglioneuromatosis	PTEN	Hypothyroidism I-4	TPO	Renal Cystadenocarcinoma	FLCN
Congenital Dysmaturational Hypothyroidism	SLC5A5	Inflammatory Pulmonary Disease	AKNA	Scott Syndrome	ANO6
Copper Toxicosis	COMMD1	Intestinal Cobalamin Malabsorption	AMN	Selective Cobalamin Malabsorption I-3	CUBN
Cushing's Syndrome I-6	GNAS	Invasive Transitional Cell Carcinoma	BRAF	Severe Combined Immunodeficiency Disease 1, 2	PRKDC, RAG1
Cyclic Neutropenia	AP3B1	Laryngeal Paralysis Risk Factor	RAPGEF6	Squamous Cell Carcinoma	KITLG
Cystinuria Type IA	SLC3A1	Lethal Acrodermatitis	MKLN1	Thrombasthenia I-3	ITGA2B
Cystinuria Type IIA 1, 2	SLC3A1	Leukocyte Adhesion Deficiency	FERMT3	Thrombocytopenia 1, 2	TUBB1
Cystinuria Type IIB	SLC7A9	Leukocyte Adhesion Deficiency Type I	ITGB2	Thrombopathia I-3	RASGRP1
Demyelinating Peripheral Neuropathy	SBF2	Ligneous Membranitis	PLG	Trapped Neutrophil Syndrome	VPS13B
Diffuse Cystic Renal Dysplasia and Hepatic Fibrosis	INPP5E	Lundehund Syndrome	LEPREL1	Upper Airway Syndrome	ADAMTS3
Dilated Cardiomyopathy	PLN	Malignant Hyperthermia	RYR1	Urolithiasis	SLC2A9
Elliptocytosis	SPTB	May-Hegglin Anomaly	MYH9	Vitamin D Deficiency Rickets Type II	VDR
Exercise Induced Metabolic Myopathy	ACADVL	Mucopolysaccharidosis Type I	IDUA	Von Willebrand Disease Type I	VWF
Factor VII Deficiency	F7	Mucopolysaccharidosis Type VI 1, 2	ARSB	Von Willebrand Disease Type II 1, 2	VWF
Factor XI Deficiency	F11	Myeloperoxidase Deficiency	MPO	Von Willebrand Disease Type III 1-3	VWF
Fanconi Syndrome	FAN1	Myotubular Myopathy 1, 2	MTM1	X-linked Severe Combined Immunodeficiency 1, 2	IL2RG
Fatal Neonatal Interstitial Lung Disease	LAMP3	Obesity and Food Motivation	POMC		
Gallbladder Mucoceles	ABCB4	Oculocutaneous Albinism Type IV 1-3	SLC45A2		
Gastrointestinal Stromal Tumors I-6	KIT	Pancreatitis Variant 1-3	SPINK1		
Glycogen Storage Disease Ia	G6PC	Periodic Fever Syndrome 1, 2	HAS2, MTBP		
Glycogen Storage Disease IIIa	AGL	Pituitary Dwarfism	LHX3		
Glycogen Storage Disease VII 1, 2	PFKM	Polycystic Kidney Disease	PKD1		
Hemophilia A 1-5	F8	Pompe Disease	GAA		
Hemophilia B 1-7	F9	Postoperative Hemorrhage	P2RY12		
		Prekallikrein Deficiency	KLKB1		

Custom Panel

Testing of all alleles in Panels 1-3 and Custom Whole Genome Screening for *de novo* mutations

EQUINE RALLEE® Certified Genetic Test Panels

Panel 1: Development, Hooves, Hair and Skin, Musculoskeletal System

Number of Alleles Tested: 19

Condition	Gene(s)
Dwarfism (DI-4)	ACAN
Dwarfism with Joint Laxity	B4GALT7
Congenital Myotonia	CLCN1
Skeletal Muscle Glycogenesis (PSSM)	GYSI
Malignant Hyperthermia	RYR1
Hyperkalemic Periodic Paralysis (HYPP)	SCN4A
Epidermolysis Bullosa Junctionalis	LAMA3
Hereditary Junctional Mechanobullous Disease	LAMC2
Hereditary Equine Regional Dermal Asthenia (HERDA)	PP1B
Hoof Wall Separation Disease (HWSD)	SERPIN11
Naked Foal Syndrome (NFS)	ST14
Glycogen Storage Disease IV (GBED)	GBE1
Occipitoatlantoaxial Malformation (OAAM)	HOXD3
Skeletal Atavism	SHOX
Incontinentia Pigmenti I	IKBKG
Warmblood Fragile Foal Syndrome Type (WFFS)	PLOD1

Panel 2: Blood, Cancer, Endocrine System, Heart, Liver, Gastrointestinal Tract, Vision, Immune System, Nervous System, Reproduction

Number of Alleles Tested: 24

Condition	Gene(s)
Androgen Insensitivity I-5	AR
Hydrocephalus	B3GALNT2
Limbic Squamous Cell Carcinoma	DDB2
Melanoma Susceptibility	ASIP
Lethal White Foal Syndrome	EDNRB
Glanzmann Thrombasthenia 1, 2	ITGA2B
Cerebellar Abiotrophy	TOE1
Lavender Foal Syndrome	MYOSA
Immune Mediated Myositis (IMM) Susceptibility	MYH1
Multiple Congenital Ocular Anomalies	PMEL
Severe Combined Immunodeficiency	PRKDC
Foal Immunodeficiency Syndrome	SLC5A3
Congenital Stationary Night Blindness (CSNB)	TRPM1
Disorder of Sexual Development (Sex Reversal)	AKR1C
Glycogen Storage Disease IV (GBED)	GBE1
Occipitoatlantoaxial Malformation (OAAM)	HOXD3
Skeletal Atavism	SHOX
Incontinentia Pigmenti	IKBKG
Warmblood Fragile Foal Syndrome Type (WFFS)	PLOD1

Custom Panel

Testing of all alleles in Panels 1-2 and Custom Whole Genome Screening for *de novo* mutations

RALLEE® Certified Genetic Test Requisition Form

FELINE RALLEE® Certified Genetic Test Panels

Panel I: Hearing, Nervous System, Vision

Number of Alleles Tested: 30	
Condition	Gene(s)
Alpha Mannosidosis	MAN2B1
Brachycephaly and Craniofacial Defects	ALX1
Congenital Glaucoma	LTBP2
Dihydropyrimidinase (DHP)	CPYS
Erythrocyte Pyruvate Kinase Deficiency (PK Deficiency)	PKLR
Glycogen Storage Disease Type IV (GSD IV)	GBE
GM1 Gangliosidosis I-5	GLB1, GM2A, HEXB
Hemophilia B 1, 2	F9
Hypokalemic Periodic Paralysis	WNK4
Leber Congenital Amaurosis (aka Retinal Pigment Epithelial Dystrophy)	AIPL
Mucopolipidosis II	GNPTAB
Mucopolysaccharidosis VII 1, 2	GUSB
Neuronal Ceroid Lipofuscinosis Type 7 (CLN7)	MFSD8
Niemann-Pick Disease Type C1 (NPC1) 1, 2	NPC1
Niemann-Pick Disease Type C2 (NPC2)	NPC2
Retinal Degeneration II	CEP290
Rickets Type IB	CYP2R1
Rickets Type I 1, 2	CYP27B1, CYP27B2
Rod-Cone Dysplasia	CRX
Spasticity (Congenital Myasthenic Syndrome, CMS)	COLQ
Spinal Muscular Atrophy	LIX1

Panel II: Development, Skin and Hair, Musculoskeletal System

Number of Alleles Tested: 45	
Condition	Gene(s)
Acute Intermittent Porphyria (AIP) 1-6	HMBS
Alpha Mannosidosis	MAN2B1
Brachycephaly and Craniofacial Defects	ALX1
Chediak-Higashi Syndrome	LYST
Congenital Hypothyroidism	TPO
Dihydropyrimidinase (DHP)	CPYS
Ehlers-Danlos Syndrome, Classic Type I (EDS)	COL5A1
Erythrocyte Pyruvate Kinase Deficiency (PK Deficiency)	PKLR
Erythropoietic Porphyria	UROS
Fibrodysplasia Ossificans	ACVR1
Glycogen Storage Disease Type IV (GSD IV)	GBE
GM1 Gangliosidosis I-5	GLB1, GM2A, HEXB
Hairless with shortened lifespan	FOXN1
Hemophilia B 1, 2	F9
Hyperlipoproteinaemia	LPL
Hypokalemic Periodic Paralysis	WNK4
Inflammatory Linear Verrucous Epidermal Nevus (ILVEN)	NSDHL
Mucopolipidosis Type II	GNPTAB
Mucopolysaccharidosis Type I	IDUA
Mucopolysaccharidosis Type VI	ARSB
Mucopolysaccharidosis VII 1, 2	GUSB
Myotonia Congenita	CLCN1
Neuronal Ceroid Lipofuscinosis Type 7 (CLN7)	MFSD8
Niemann-Pick Disease Type C1 (NPC1) 1, 2	NPC1
Niemann-Pick Disease Type C2 (NPC2)	NPC2
Osteochondrodysplasia	TRPV4
Rickets Type I 1, 2	CYP27B1, CYP27B2
Rickets Type IB	CYP2R1
Spasticity (Congenital Myasthenic Syndrome, CMS)	COLQ
Spinal Muscular Atrophy	LIX1
Testicular Hypoplasia and Persistent Primary Dentition	TAC3

Panel III: Blood, Endocrine System, Gastrointestinal Tract, Heart, Immune System, Kidneys, Liver, Reproduction

Number of Alleles Tested: 40	
Condition	Gene(s)
Acute Intermittent Porphyria (AIP) 1-6	HMBS
Autoimmune Lymphoproliferative Syndrome (ALPS)	FASL
Chediak-Higashi Syndrome	LYST
Congenital Hypothyroidism	TPO
Cystinuria Type IA	SLC3A1
Cystinuria Type IB 1-4	SLC7A9
Cystinuria Type IB	SLC7A9
Dihydropyrimidinase (DHP)	CPYS
Erythrocyte Pyruvate Kinase Deficiency (PK Deficiency)	PKLR
Erythropoietic Porphyria	UROS
Factor XII Deficiency 1, 2	F12
Glycogen Storage Disease Type IV (GSD IV)	GBE
Hemophilia B 1, 2	F9
Hepatic Copper Accumulation	ATP7B
Hyperlipoproteinaemia	LPL
Hyperoxaluria Type II	GRHPR
Hypertrophic Cardiomyopathy (HCM) 1-3	MYBPC3, MYH7
Leukocyte Adhesion Deficiency Type I	ITGB2
Methemoglobinemia 1, 2	CYBSR3
Mucopolipidosis II	GNPTAB
Mucopolysaccharidosis Type I	IDUA
Niemann-Pick Disease Type C1 (NPC1) 1, 2	NPC1
Niemann-Pick Disease Type C2 (NPC2)	NPC2
Polycystic Kidney Disease (PKD)	PKD1
Resistance to FIV 1	APOBEC3C
Testicular Hypoplasia and Persistent Primary Dentition I	TAC3

Custom Panel

Testing of all alleles in Panels I-3 and Custom Whole Genome Screening for *de novo* mutations

RALLEE® Certified Genetic Test Requisition Form

BOVINE RALLEE® Certified Genetic Test Panels

Panel I: Development, Hearing, Musculoskeletal System, Nervous System, Vision

Number of Alleles Tested: 114	
Condition	Gene(s)
Chondrodysplasia 1-7	ACAN, EVC2, FGFR3
Pulmonary Hypoplasia and Anasarca Syndrome (PHA)	ADAMTS3
Contractural Arachnodactyly (Fawn calf syndrome)	ADAMTSL3
Arthrogryposis Multiplex Congenita (Curly Calf Syndrome) 1-3	AGRN, CHRNBI, PIGH
Tibial Hemimelia 1, 2	ALX4
Cholesterol Deficiency (CD)	APOB
Citrullinemia	ASS1
Congenital Muscular Dystonia I (CMD1)	ATP2A1
Congenital Pseudomyotonia 1, 2 (PMT 1, 2)	BCKDHA
Maple Syrup Urine Disease 1, 2 (MSUD 1, 2)	CEP250
Seckel-like Syndrome (SHGC)	CHD7
Neurocristopathy	CHRNAE
Myasthenic Syndrome	CLCN7, SLC4A2
Osteopetrosis with gingival hamartomas 1, 2	CLDN16
Renal Tubular Dysplasia (RTD1, 2) 1, 2	CLN5
Neuronal Ceroid Lipofuscinosis 5 (NCL5)	COL1A1
Osteogenesis Imperfecta Type II 1, 2	COL2A1
Achondrogenesis Type II 1-7 (Bulldog calf syndrome 1-7)	CPAMD8
Morgagnian Cataract	FBN1
Marfan Syndrome (MFS) 1, 2	FGFR2
Facial Dysplasia Syndrome	FMO3
Trimethylaminuria	GAA
Generalized Glycogenosis Type II 1-3	GHI, GON4L
Dwarfism 1-4	PRKG2, RNF11
Myoclonus	GLRA1
Diaphragmatic Muscle Myopathy (HMDM)	HSPA1A
Perinatal Weak Calf Syndrome	IARS
Immunodeficiency	IL17RA
Leukocyte Adhesion Deficiency	ITGB2
Lethal Multi-Organ Developmental Dysplasia	KDSR
Spinal Muscular Atrophy	KIF1C
Hypomyelination	KRT71
Hypotrichosis 2	SLC6A5
Congenital Muscular Dystonia 2 (CMD2)	LRP4
Syndactyly 1-5	MAN2B1
Alpha-Mannosidosis 1, 2	MANBA
Beta-Mannosidosis I	MFN2
Degenerative Axonopathy	MITF
Microphthalmia	MITF
Dominant White with Bilateral Deafness 1, 2	MOCOS
Xanthinuria Type II 1, 2	MOCOS1, SUOX
Arachnomelia 1, 2	MRC2
Crooked Tail Syndrome 1, 2	MSTN
Double Muscling 1-9	MYBPC1
Arthrogryposis Type 1B	NAGLU
Mucopolysaccharidosis IIIB	NHLRC2
Polymelia and Neural Tube Defects	NID1
Cataracts	NPC1
Niemann-Pick Disease Type I	OBFC1, PFAS
Abortion 11, 12	OPA3
Dilated Cardiomyopathy	PLD4
Zinc Deficiency-Like Syndrome	PNPLA8
Progressive Degenerative Myeloencephalopathy	PPP1R13L
Cardiomyopathy	PRNP
Bovine Spongiform Encephalopathy	PYGM
Glycogen Storage Disease V	ROR2
Interdigital Hyperplasia	RPI
Retinitis Pigmentosa	RSPO2
Tetradymelia	SLC2A2
Fanconi-Bickel Syndrome	SLC25A46
Turning Calves Syndrome	SLC35A3
Complex Vertebral Malformation 1, 2	SPAST
Spinal Dysmyelination	T
Vertebral and Spinal Dysplasia	UBE3B
PIRM Syndrome	WFDC1
Multiple Ocular Defects (MOD)	ZEB2
Polled and Multisystemic Syndrome (PMS) 1, 2	ZIC2
Frontonasal Dysplasia I	

Panel II: Blood, Heart, Kidneys, Liver, Lungs, Gastrointestinal Tract, Immune System

Number of Alleles Tested: 29	
Condition	Gene(s)
Cholesterol Deficiency (CD)	APOB
Congenital Muscular Dystonia I (CMD1)	ATP2A1
Neurocristopathy	CHD7
Renal Tubular Dysplasia (RTD1, 2) 1, 2	CLDN16
Chondrodysplasia 3-5	EVC2
Hemophilia A 1, 2	F8
Factor XI Deficiency 1, 2	F11
Brachyspina Syndrome (BS)	FANCI
Marfan Syndrome (MFS) 1, 2	FBN1
Protoporphyrinuria	FECH
Immunodeficiency	IL17RA
Leukocyte Adhesion Deficiency	ITGB2
Lethal Multi-Organ Developmental Dysplasia	KDM2B
Chediak-Higashi Syndrome	LYST
Niemann-Pick Disease Type I	NPC1
Dilated Cardiomyopathy	OPA3
Zinc Deficiency-Like Syndrome	PLD4
Cardiomyopathy	PPP1R13L
Thrombopathia	RASGRP2
Dwarfism 4	RNF11
Fanconi-Bickel Syndrome	SLC2A2
Spherocytosis	SLC4A1
Acrodermatitis Enteropathica	SLC39A4

Panel III: Dental, Dermal, Hair, Endocrine System, Metabolism, Milk Production, Reproduction

Number of Alleles Tested: 79	
Condition	Gene(s)
Ichthyosis Fetalis (IF) 1-3	ABCA12
Chondrodysplasia 1-3	ACAN
Dermatosparaxis	ADAMTS2
Pulmonary Hypoplasia and Anasarca Syndrome (PHA)	ADAMTS3
Tibial Hemimelia 1, 2	ALX4
Abortion 1-24	ANXA10, APAF1, CAD, CENPU, CWC15, EXOSC4, GART, MED22, MIMT1, MYH6, OBFC1, PFASRABGGTB, RNASEH2B, RNF20, RPIA, SDE2, SHBG, SLC37A2, SMC2, SUGT1, TFB1M, TTF1, TUBD1
Tail Stump Sperm Defect	ARMC3
Athenospermia	CCDC189
Epidermolysis Bullosa 1-5	COL7A1, ITGB4, KRT5, LAMA3, LAMC2
Tricho-dento-osseous-like syndrome	DLX3
Anhidrotic Ectodermal Dysplasia 1-7 (XLHED1-7)	EDA, EDAR
Ehlers-Danlos Syndrome Variant I	EPYC
Factor XI Deficiency 1, 2	F11
Brachyspina Syndrome (BS)	FANCI
Trimethylaminuria	FMO3
Dwarfism	GHI
Hypotrichosis 1, 2	HEPPL1, KRT71
Immunodeficiency	IL17RA
Lethal Multi-Organ Developmental Dysplasia	KDM2B
Spinal Muscular Atrophy	KDSR
Gonadal Hypoplasia (Cs ^Δ 29)	KIT
Dominant White with Bilateral Deafness 1, 2	MITF
Zinc Deficiency-Like Syndrome	PLD4
Hydrallantois	SLC12A1
Complex Vertebral Malformation 1, 2	SLC35A3
Acrodermatitis Enteropathica	SLC39A4
Oculocutaneous Albinism Type IV 1, 2	SLC45A2
Arachnomelia 2	SUOX
Goiter	TG
Male Subfertility	TMEM95
Streaked Hairlessness	TSR2
Scurs Type II	TWIST1
Oculocutaneous Albinism Type I	TYR
Deficiency of Uridine Monophosphate Synthase (DUMPS)	UMPS
Polled and Multisystemic Syndrome (PMS) 1, 2	ZEB2

Custom Panel

Testing of all alleles in Panels 1-3 and Custom Whole Genome Screening for *de novo* mutations