Clinical Genomics Laboratory: Clinical Genome Sequencing

Shipping address:

Washington University Department of Pathology & Immunology Clinical Support Office 425 S. Euclid Ave. | MSC 8024-14-4711 | St. Louis MO 63110 Tel: (314) 747-7337 | Fax: (314) 747-7336

Specimen drop-off locations:

Children's Hospital One Children's Place Central Receiving 2N-25 St. Louis, MO 63110 Tel: (314) 454-4161

North Campus Lab

Institute of Health (IOH) Core Lab 425 S. Euclid Ave. | Room 4701 St. Louis, MO 63110 Tel: (314) 362-1470

		This requisition	on has	two pages, ple	ease coi	mplete both pages	to ensu	re testin	ıg.		
PATIENT IDENTIFICATION					PHYSICIAN ORDERING TEST (NPI required)						
Patient Status: 🗆 Inpatient 🗆 Outpatient 🗆 Office Visit			Na	Name:							
Name Last:				In	Institution:						
DOB (mm/dd/yyyy):	:	Sex:	Male	□Female	N	NPI: Email:					
Medical Record # (if	applicable):				Ac	dress:					
Address:					Ci	ty:		State:	Zip:		Country:
City:		State: Zip:	C	Country:	Pł	Phone: Fax:					
Ethnicity (select all	that apply):				Al	Alternative Contact Information:					
African American	⊔ Asian 🛛 🛛	☐ Caucasian/NW Europ	bean		Pł	Phone: Email:					
🗆 E Indian	□ Hispanic [∃ Jewish-Ashkenazi	🗆 Jewi	sh-Sephardic	No	Notes:					
🗆 Mediterranean	□ Native Hawa	aiian/Pacific Islander	□ Othe	rs							
				SPE		ТҮРЕ					
Date Collected (mm	n/dd/yyyy):		Time	Collected:	Di	Directions 1. Draw 3-5 ml of peripheral blood in lavender top EDTA tube.					
Collected By:											
						 Label tube with patient first/last name, DOB, and collection date/time. Place tube in a biohazard bag and form into document sleeve of the biohazard bag ensuring no patient information is visible. 					
Sample Type (Selec	t one):										
□ Peripheral Blood □ Other (please specify)				4.	 Ship specimen overnight in appropriate packaging at room temperature or with cold pack (Monday-Thursday only). 						
		REASON FOR	TESTI	NG (Required-failu	ure to inc	lude complete informat	tion may de	elay testin	g)		
Diagnosis:											
ICD10 Code(s):					Age of Onset:						
				CLINIC	AL INFO	ORMATION					
	(Orders MUS	T include the completed c	clinical fe	eatures checklist OR c	linical not	tes/records. Also include fa	amily medica	al history/p	edigree, if a	available.)	
TESTING REQUESTED											
Individual(s) Tested	:						Please	note: a d	complete	ed test r	equisition form is
□ Patient Only	1						required for each individual providing a sample				
□ Family—Trio, Duo, etc. <i>please complete the additional family member section below</i>						for sequ	iencing,	includin	ıg famil	y members.	
				FOR ADDITIC	ONAL F	AMILY MEMBER(S)					
Name (Last, First MI): Date of Birth (mm		n/dd/yyy	yy): Sample Type: Peripheral Blood Other			Relations	hip to pat	ient		Affected Status □Yes □No	
Name (Last, First MI): Date of Birth (mm		n/dd/yyy	□ Pei	Sample Type: Peripheral Blood Other				Affected Status □Yes □No			
Name (Last, First M	I):	Date of Birth (mm	n/dd/yy		ole Type: ripheral I		Relations	hip to pat	ient		Affected Status □Yes □No

□ Other

Clinical Genome Sequencing

SECONDARY FINDINGS								
See consent documentation for details. Please note: this selection must be consistent with the choice selected in the informed consent.								
□ Opt in secondary findings □ C	Opt out seconda	ry findings □Pa	itient's informed consent is o	completed.				
Healthcare Professional Signature to Authorize Testing, Statement of Medical Necessity and Transmission of Results Verification I certify that the patient specified above and/or their legal guardian has been informed of the benefits, risks, and limitations of the laboratory test(s) requested and Informed Consent has been obtained, as well as any other consent from the patient required by my state in order to perform a genetic test on a specimen has been obtained. I further certify that the test(s) requested is/are medically necessary and the results of this test will be used in the medical management of the patient. The undersigned Client authorizes the Washington University School of Medicine to send Protected Healthcare Information (PHI) as identified in the Health Insurance Portability and Accountability Act (HIPAA) to the facsimile phone number above. Client acknowledges they are solely responsible for adopting and implementing appropriate policies and procedures, including physical safeguards, so that the location and use of the facsimile machine complies with all applicable HIPAA regulations.								
Signature:			Date:					
Below, office use only:								
Date/Time Received:		Accession Number:		Technician Initial:				
Insurance and Precertification Patients are responsible for non-covered services, deductibles, co-insurance, contract exclusions, non-authorized services, and remaining balances after insurance reimbursement. Washington University School of Medicine can only accept authorized Missouri and Illinois MEDICAID covered charges for genetic testing. Other out-of-state welfare programs cannot be billed. Please contact our Patient Accounts Manager office at (314) 362-5641 or via email at pathbillingoffice@path.wustl.edu. Prior Authorization Number: ICD10 Code(s): CPT Codes and Units Authorized :								
	ATTACH CC	OPY OF INSURANCE CAP	(If not available, complet	e the following)				
Policy Holder's Name:	Last:		First:		MI:			
Policy Holder's DOB (mm/dd/yyyy):								
Relationship to patient:								
Insurance Co. Name:								
Insurance Co. Phone:								
Plan Name:								
ID #:								

Group #:

Self-Pay/Patient Financial Assistance

Patients who are self-pay should contact our office to arrange for payment. Financial assistance may be available. For more information, contact our Patient Accounts Manager office at (314) 362-5641 or via email at path-billing@email.wustl.edu.

INSTITUTIONAL BILLING: COMPLETE SECTION BELOW

Institutional Billing							
Institution Name:							
Contact Name:							
Email:							
Billing Address:							
City:	State:	Zip:					
Phone:	Fax:						

Washington University Physicians[®]

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PRE/PERINATAL □ Abnormality of septum pellucidum: □ Absent septum pellucidum □ Cavum septum pellucidum Choroid plexus cyst (CPC) □ Absent nasal bone

Congenital heart defect □ Intracardiac echogenic focus (IEF)

- Cystic hygroma
- □ Increased nuchal translucency,

Size (mm): □ Pleural effusion

- Pericardial effusion
- Generalized edema
- □ Fetal ascites

□ Hydrops fetalis

- Diaphragmatic hernia
- □ Absent stomach bubble
- □ Omphalocele
- Gastroschisis
- Echogenic bowel
- Fetal pyelectasis/hydronephrosis
- Decreased fetal movement
- □ Encephalocele
- □ Myelomeningocele/Spina bifida
- □ Sacrococcygeal teratoma
- □ Intrauterine growth retardation (IUGR)
- □ Small for gestational age (SGA)
- □ Oligohydramnios
- □ Polvhvdramnios
- □ Short long bones
- □ Small thorax
- □ Fetal demise
- □ Prematurity,

Type II

□ Unspecified

- Gestational Age: Other:

STRUCTURAL BRAIN ABNORMALITIES/IMAGING

□ Abnormal/delayed myelination Abnormality of basal ganglia □ Abnormality of brainstem □ Abnormality of white matter: □ Periventricular □Other: Abnormality of cerebral ventricles: □ Colpocephaly □ Hydrocephalus □ Ventriculomegaly □ Abnormality of corpus callosum: morphology □ Agenesis Complete □ Partial □ Aplasia/hypoplasia □ Aplasia/hypoplasia of cerebellar vermis □ Aplasia/hypoplasia of cerebellum Arnold-Chiari malformation: Type I

CLINICAL FEATURES CHECKLIST Cerebral atrophy/hypoplasia Cerebral calcification □ Holoprosencephaly □ Iron deposition Leukodystrophy □ Neuronal migration abnormality: □ Cortical gyration □ Lisssencephaly □ Pachygyria □ Polymicrogyria □ Macrogyria □ Simplified gyria Gray matter heterotopia: □ Subcortical □ Periventricular □ Other:_

DEVELOPMENTAL/BEHAVIORAL

- □ Aggressive/violent behavior □ Anxiety □ Attention-deficit hyperactivity disorder □ Autistic behavior Autism/autism spectrum disorder Cognitive impairment Delayed fine motor development Delayed gross motor development Developmental regression □ Gait disturbance Specify:_ Global developmental delay □ Hyperactivity □ Incoordination □ Intellectual disability: □ Mild □ Moderate □ Severe/profound □ Learning disability □ Language impairment: □ Absent speech □ Apraxia □ Articulation difficulties Delayed speech and language development □ Expressive □ Receptive Dysarthria 🗆 Echolalia □ Loss of speech □ Memory impairment □ Obsessive-compulsive behavior □ Self-injurious behavior: □ Biting □ Head-banging □ Skin picking □ Sensory processing disorder/ neurodevelopmental abnormality □ Sleep disturbance □ Stereotypy:
- □ Recurrent hand flapping □ Stereotypical hand wringing □ Other:_

□ Abnormality of nervous system 🗆 Ataxia □ Athetosis □ Bradykinesia Cerebral palsy Chorea Cortical visual impairment Dementia Dysarthria Dyskinesia Dvsphasia Dystonia □ Encephalopathy □ Gait disturbance, Specify:_ □ Headache □ Hemiplegia □ Hypotonia □ Hypertonia □ Infantile spasms □ Migraine □ Myoclonus □ Neuropathy: □ Peripheral □ Sensory Parkinsonism/Parkinson Disease □ Seizures, Type: □ Spasticity □ Syncope □ Tremors □Vertigo

NEUROLOGICAL

CRANIOFACIAL/DYSMORPHISM

□ Other:

□ Abnormal facial shape, Specify: □ Abnormality of incisors, Specify: □ Ala nasi: □ Cleft □ Thick □ Underdeveloped □ Anteverted nares □ Brachycephaly □ Chin abnormality, Specify: Cleft lip: □ Unilateral □ Bilateral □ Midline □ Cleft palate: □ Unilateral 🗆 Bilateral □ Midline □ Submucous cleft Cloverleaf skull Columella abnormality: Broad □ High insertion

□ Low hanging Low insertion □ Short Craniosynostosis: Coronal Lambdoidal □ Metopic □ Orbital □ Sagittal □ Dolichocephaly □ Face abnormality: □ Broad Coarse facial features □ Flat □ Long □ Narrow □ Round □ Short □ Square □ Triangular □ Forehead abnormality: Broad □ Narrow □ Prominent □ Sloping Creases □ Frontal bossing □ Jaw Abnormality: □ Broad □ Narrow Lip vermilion abnormality Lip abnormality: 🗆 Pit □ Thin □ Thick □ Tented □ Exaggerated cupid's bow □ Absent cupid's bow □ Malar abnormality: □ Flattening □ Prominence □ Midface abnormality: □ Flat □ Prominence □ Retrusion □ Macrocephaly: □ Relative □ True □ Metopic suture abnormality: Depression □ Ridge □ Microcephaly □ Micrognathia □ Nasal base abnormality: □ Narrow □ Wide □ Nasal bridge abnormality: Depressed □ Narrow □ Prominent □ Short

Clinical Genome Sequencing

□ Wide □ Prominent □ Nasal cartilage, absent □ Nasal ridge abnormality: □ Depressed □ Narrow □ Wide □ Nasal tip abnormality: □ Bifid Broad □ Depressed Deviated □ Narrow □ Overhanging □ Nasolabial fold abnormality: □ Prominent □ Underdeveloped □ Neck abnormality: □ Broad □ Long □ Webbed □ Short □ Redundant nuchal skin □ Nose abnormality: □ Absent □ Bifid Long □ Narrow □ Prominent □ Short □ Wide □ Occiput abnormality: □ Flat □ Prominent □ Plagiocephaly □ Philtrum abnormality: □ Broad □ Deep □ Hypoplastic □Long □ Narrow □ Smooth □ Short □ Tented □ Proboscis □ Prognathism □ Retrognathia □ Scaphocephaly □ Supraorbital ridge abnormality: □ Prominent □ Underdeveloped □ Trigonocephaly □ Turricephaly □Other: EYE/VISION

Age of onset of vision issues:______
Esotropia
Exotropia
Nystagmus
Smooth pursuit
Strabismus
Other:______

□ Abnormality of vision, □ Specify: □ Abnormal anterior eye segment morphology □Ablepharon □ Achromatopsia □ Aniridia □ Ankyloblepharon □ Anophthalmia □ Blepharochalasis □ Blepharophimosis □ Cataracts □ Cataracts, congenital □ Coloboma Corneal opacity Corneal dystrophy Cone/cone-rod dystrophy Congenital stationary night blindness Cryptophthalmos Deeply set eyes □ Distichiasis Dyschromatopsia (color blindness) □ Ectopia lentis □ Ectropion □ Entropion □ Epiblepharon □ Epicanthus/epicanthal folds Epicanthus inversus Eyebrow abnormality: □ Broad □ Highly arched □ Horizontal □ Sparse □ Thick Eyelash abnormality: □ Absent □ Long □ Prominent □ Sparse Eyelid cleft External ophthalmoplegia: □ Progressive Glaucoma □ Infraorbital abnormality: □ Crease □ Fold □ Iris abnormality, Specify: □ Lagophthalmos Leber optic atrophy Lens subluxation □ Macular abnormality, Specify: □ Macular dystrophy □ Microphthalmia □ Myopia Ocular albinism □ Optic atrophy □ Optic neuropathy □ Palpebral fissure abnormality: Downslanted □ Upslanted □ Long

□ Short □ Almond-shaped □ Proptosis □ Ptosis □ Retinal flecks □ Retinitis pigmentosa: □ Synophrys □ Telecanthus □ Other:_____

EARS/HEARING

□ Age of onset of hearing loss:_ □ Hearing impairment Congenital □ Progressive □ Conductive □ Sensorineural □ Mixed □ Unilateral 🗆 Bilateral □ Anotia □ Abnormal newborn screen, □ Specify: □ Antihelix abnormality: □ Absent □ Additional crus □ Angulated □ Inferior crus broad □ Inferior crus prominent □ Inferior crus underdeveloped □ Superior crus prominent □ Superior crus underdeveloped □ Antitragus abnormality: □ Absent □ Bifid □ Everted □ Prominent Underdeveloped Ear abnormality: □ Abnormality of the tragus □ Auricular pit □ Crumpled □ Cupped □ Long Low-set □ Posteriorly rotated □ Preauricular pit □ Protruding □ Short □ Satyr □ Tag □ Helix abnormality: □ Cleft □ Crimped Darwin notch Darwin tubercle □ Notching □ Overfolded □ Prominent □ Thin □ Lobe abnormality: □ Cleft

□ Forward-facing □ Large □ Small Uplifted □Macrotia Other: ENDOCRINE Adrenal insufficiency (Addison) □ Androgen insensitivity □ Androgen excess Congenital adrenal hypoplasia Congenital adrenal hyperplasia Delayed bone age Delayed puberty Diabetes insipidus Diabetes Mellitus □ Hyperandrogenism □ Hyperglycemia □ Hyperphosphatemia □ Hyperthyroidism □ Hypoglycemia

Hypogycenna
 Hypophosphatemia
 Hypothyroidism
 Increased cortisol level (Cushing)
 Maturity-onset diabetes of the young
 Precocious puberty
 Rickets
 Other:

RESPIRATORY

□ Asthma
□ Bronchiectasis
□ Bronchomalacia
□ Hyperventilation
□ Hypoventilation
□ Laryngomalacia
□ Laryngeal cleft
□ Pneumothorax
□ Pulmonary fibrosis
□ Respiratory insufficiency
□ Tracheomalacia
□ Tracheoesophageal fistula
□ Other:

HEMATOLOGIC/IMMUNOLOGIC

SKIN/HAIR

□ Abnormal blistering of the skin, Specify:_____

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□ Abnormality of nail: □ Broad Deep-set □ Pits □Albinism □ Alopecia □ Anhidrosis □ Cafe-au-lait spot: □ Single □ Multiple Coarse hair Collodion baby Cutaneous photosensitivity Cutis laxa Dry skin □ Eczema Erythematous skin □ Hemangioma □ Hairline: □ Low □ High □ Anterior □ Posterior Hyperextensible skin Hyperpigmentation of the skin Hypopigmentation of the skin □ Hypohidrosis □ Ichthvosis □ Jaundice □ Lipoma □ Lymphedema □ Palmoplantar keratoderma □ Scarring of skin □ Skin rash □ Sparse hair □ Telangiectasia □ Vascular skin abnormality □ Velvety skin □ Other:

CARDIAC

□ Amyloidosis □ Aortic root dilatation □ Arrhythmia Atrial septal defect □ Atrioventricular canal defect Arrhythmogenic right ventricular dysplasia □ Bicuspid aortic valve Bradycardia Coarctation of the aorta Congenital heart defect Dilated cardiomyopathy Double outlet right ventricle Ebstein anomaly □ Heterotaxy □ Hypertension □ Hypertrophic cardiomyopathy □ Mitral valve prolapse □ Noncompaction cardiomyopathy □ Patent ductus arteriosus □ Patent foramen ovale □ Prolonged QTc interval □ Pulmonary hypertension:

Arterial
Vascular
Sudden death
Tetralogy of Fallot
Transposition of the great vessels
Truncus arteriosus
Ventricular septal defect
Ventricular tachycardia
Other:

GASTROINTESTINAL

□ Biliary atresia □ Cholestasis Constipation: □ Acute □ Chronic Diarrhea Diaphragmatic hernia Duodenal stenosis/atresia Esophageal stenosis/atresia Exocrine pancreatic insufficiency □ Failure to thrive □ Feeding difficulties Gastroesophageal reflux Gastroschisis □ Hepatomegaly □ Hepatosplenomegaly □ Inflammatory bowel disease □ Jaundice Liver disease Liver failure □ Nausea □ Omphalecele □ Pancreatitis □ Pyloric stenosis □ Splenomegaly □ Tracheoesophageal fistula □ Tube feeding: □ Nasogastric □ Gastrostomy Gastrojejunal Umbilical hernia □ Vomiting □ Other:_

GENITOURINARY

□ Abnormality of the uterus, Specify:_ Ambiguous genitalia □ Chordee □ Cryptorchidism □ Duplicated collecting system □ Horseshoe kidney □ Hydronephrosis □ Hypospadias/epispadias □ Inguinal hernia □ Micropenis □ Multicystic kidney dysplasia □ Nephrolithiasis □ Polycystic kidney disease □ Renal agenesis/hypoplasia: □ Unilateral □ Bilateral

Sex reversal
 Vesicoureteral reflux
 Other:

MUSCULOSKELETAL

□ Abnormal connective tissue □ Abnormal digit morphology: □ Broad □ Short □ Clinodactyly □ Ectrodatyly □ Oligodactyly □ Polydactyly □ Postaxial □ Preaxial □ Syndactyly □ Arachnodactyly □Arthralgia □ Arthrogryposis □ Bruising susceptibility Chest abnormality: □ Small chest □ Barrel-shaped Bell-shaped thorax □ Pectus carinatum □ Pectus excavatum Contractures of joint(s) Decreased muscle mass □ Delayed bone age Dolichostenomelia □ Exercise intolerance □ Fatigue □ Fracture(s) Hemihypertrophy □ Hypertonia □ Hypotonia □ Joint hypermobility □ Kyphosis Limb shortening: □ Mesomelic □ Micromelic □ Rhizomelic □ Metaphyseal abnormalities: Dumbbell □ Flared □ Muscle weakness □ Myalgia □ Myopathic facies □ Myopathy □ Myelomeningocele/Spina Bifida/ Neural □ Tube Defect □ Osteoarthritis □ Osteoporosis □ Osteopenia □ Pain: □ Absent/decreased Abnormal sensation □ Episodic Limb □ Muscle □ Platyspondyly □ Recurrent fractures □ Rhabdomyolysis

□ Rib abnormalities: □ Cupped □ Fused □ Supernumerary □ Missing □ Short □ Spatulate □Other: □ Rickets □ Scoliosis □ Short stature □ Skeletal dysplasia □ Talipes: □ Equinovarus □Other: □ Tall stature Thoracic dysplasia □ Thumb abnormality: □ Adducted □ Broad □ Triphalangeal □ Vertebral bodies, abnormal form: □ Aplasia/hypoplasia □ Butterfly □ Fusion □ Hemivertebrae □ Other:

VASCULAR SYSTEM:

Aneurysm: □ Aortic □ Abdominal □ Dissecting □ Thoracic Cerebral □ Other: Arterial calcification □ Arterial dissection □ Arterial tortuosity □ Arteriovenous malformation □ Epistaxis □ Lymphedema □ Pulmonary hypertension: □ Arterial □ Vascular □ Stroke Other:

CANCER Primary Diagnosis:

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Metastatic Family history of cancer, Specify: Include pathology reports OTHER TESTING Provide copy of report(s)	Echocardiogram: EEG: EMG/NCV: Biopsy: Gene testing: Results:	If y the ide of Chror (CMA)
Provide copy of report(s)		MRI B

If you would like us to comment on	MRI (other):
the presence/absence of previously	CT Brain:
identified variants, provide a copy	CT (other):
of the original report.	Muscle biopsy:
nromosomal Microarray:	Ultrasound:
MA):	X-Ray:
RI Brain:	

	↑	≁	WNL
Purine/pyrimidines Specify:			
□ Serum alpha fetoprotein (AFP) □ Serum pyruvate □ Sterols/Oxysterols Specify:			
Transferrin IEF			
Specify:			
 Very long chain fatty acids (VLCFA) Plasma Specify: 			
□ Vitamins/minerals □ Copper □ Magnesium □ Manganese □ Vitamin B6 □ Vitamin B12 □ Vitamin D □ Zinc □ Other:			

METABOLIC FINDINGS

Attach relevant lab reports and values Mark where appropriate increased (\uparrow), decreased (\downarrow), or within normal limits (WNL).

	1	1	WNL
Abnormal newborn screen			
Specify:			_
□ Acylcarnitine profile			
Specify:			
□ Acylglycines			
Specify:			
Amino Acids			
🗆 Plasma			
Specify:			
□ Urine			
Specify:			
☐ Muscle			
Specify:			
□ Creatine phosphokinase (CPK)			
Essential fatty acids			
□ Plasma			
Specify:			
□ Folate			
□ Glycosylation studies			
Specify:			

	↑	$\mathbf{+}$	WNL
Hepatic transaminases			
□ Homocystine			
Hormones			
Specify:			
□ Hyperammonemia			
□ Hyperbillirubinemia			
□ Hyperglycemia			
□ Hyperlipidemia			
□ Ketones			
🗆 Plasma			
Specify:			
□ Urine			
Specify:			
□ Other enzymes			
Specify:			
□ Porphyrins			
🗆 Plasma			
Specify:			
□ Urine			
Specify:			
□ Stool			
Specify:			
□ Pterins			
Specify:			