MINERVA LABS

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SOUTHLAKE, TEXAS 76092
Phone: +1 965-279-2091
EMAIL: INFO@MINERVALABS.HEALTH
WEBSITE: WWW.MINERVALABS.HEALTH

HEREDITARY EYE DISORDERS RISK TESTING REQUISITION FORM

INSTRUCTIONS

- Patient and Physician must sign the consent form
- All items identified as '***Required***' must be provided/attached to the requisition form.

SUBMISSION CHECKLIST

- ☐ SOAP notes and progress notes
- ☐ Patient insurance ID card or face sheet
- ☐ Physician and Patient Signature

Ordering Physician Information

Physician Name	NPI#	FAX#
Office/Practice/Institution Name	Physician's Email	
Street Address		
City	State	Zip Code
Office Contact Name	Contact Phone	Contact Email

Ordering Provider (Please select one physician per order)

Physician name: ..... Physician NPI: ..... Physician name: ..... Physician NPI: .....

Physician name: ..... Physician NPI: ..... Physician name: ..... Physician NPI: .....

PATIENT INFORMATION

REQUIRED

Patient First Name	Patient Last Name	Date of Birth (mm/dd/yyyy)	Phone Number
Address	City	State	Zip

Gender Identity

- ☐ Male
- ☐ Female
- ☐ Female-to-Male
- ☐ Male-to-Female
- ☐ Genderqueer
- ☐ Other (Specify) .....
- ☐ Choose not to Disclose

Sexual Orientation

- ☐ Lesbian, gay, or homosexual
- ☐ Straight or heterosexual
- ☐ Bisexual
- ☐ Something else (Describe) .....
- ☐ Choose not to disclose

Ancestry

- ☐ White/Caucasian
- ☐ Native American
- ☐ Hispanic
- ☐ African American
- ☐ Ashkenazi Jewish
- ☐ Middle Eastern
- ☐ American Indian
- ☐ Asian
- ☐ Native Hawaiian and Other Pacific Islander

PAYMENT OPTIONS (SELECT ONE)

REQUIRED

- ☐ Insurance Billing (Please provide the insurance information)
- ☐ Self-Pay (Please provide credit card details or mail the check to the laboratory address)
- ☐ Client Billing / Institutional Billing

Primary Insurance	Insurance Policy/ID#	Group
Primary Policy Holder Name	Date of Birth	
Secondary Insurance	Insurance Policy/ID#	Group
Secondary Policy Holder Name	Date of Birth	

SPECIMEN INFORMATION

REQUIRED

Sample Type

☐ Buccal Swab ☐ Extracted DNA

Sample Draw Date (mm/dd/yyyy)

...../...../.....

Shipping Instructions

- Label each specimen tube with the patient's full name and date of birth or patient's full name and collection date.
- To receive the specimen requirements and shipping guidelines, please send an email to - **info@minervalabs.health**

Send completed Requisition form with collected sample to:
1203 South White Chapel STE 150,

Southlake,Texas 76092

CLINICAL HISTORY

Indications for Testing ☐ Diagnostic ☐ Presymptomatic ☐ Family History ☐ Family Variant ☐ Other:

Age of Primary Diagnosis:

Previous genetic tests: ☐ Yes ☐ No

(If Yes, please specify the test and results)

Will Patient management be changed depending on the test results? ☐ Yes ☐ No

Is this person affected? ☐ Yes ☐ No

☐ **Unilateral** ☐ **Bilateral**

Intraocular Pressure: _____ **ERG Results:** _____

Please check all that apply

Eye/Vision Abnormalities

☐ Abnormality of vision	☐ Cataracts	☐ External ophthalmoplegia	☐ Microphthalmia	☐ Photophobia	☐ Visual impairment
☐ Aniridia	☐ Coloboma	☐ Glaucoma	☐ Myopia	☐ Ptosis	
☐ Anophthalmia	☐ Corneal arcus	☐ Hyperopia	☐ Night blindness	☐ Retinal detachment	
☐ Astigmatism	☐ Ectopia lentis	☐ Hypoplasia of the fovea	☐ Nystagmus	☐ Retinitis pigmentosa	
☐ Blue sclerae	☐ Esotropia	☐ Keratoconus/anterior lenticonus	☐ Optic atrophy	☐ Strabismus	

FAMILY HISTORY

☐ No Known Family History ☐ Pedigree Attached ☐ Adopted

Relationship	Maternal	Paternal	Relavant History	Age at Disgnosis
1	☐	☐		
2	☐	☐		
3	☐	☐		

CUSTOM PANEL (SELECT GENES) OR COMPREHENSIVE PANEL

REQUIRED

- ☐ ABCA4
- ☐ ALDH7A1
- ☐ ATXN7
- ☐ BEST1
- ☐ BFSP1
- ☐ BFSP2
- ☐ CACNA1A
- ☐ CAV1
- ☐ CAV2
- ☐ CDH23
- ☐ CDKL5
- ☐ CDKN2B-AS
- ☐ CFH
- ☐ CHD2
- ☐ CLRN1
- ☐ CNGA1
- ☐ CRB1
- ☐ CRYAA
- ☐ CRYAB
- ☐ CRYGC
- ☐ CTSD
- ☐ CYP1B1
- ☐ EYS
- ☐ FOXC1
- ☐ FOXE3
- ☐ FTL
- ☐ GABRG2
- ☐ GALK1
- ☐ GJB2
- ☐ GJB6
- ☐ GPR98
- ☐ GRIN2A
- ☐ HSF4
- ☐ KCNQ2
- ☐ LTBP2
- ☐ MECP2
- ☐ MTRNR1
- ☐ MYO15A
- ☐ MYO7A
- ☐ MYOC
- ☐ NR2E3
- ☐ NRL
- ☐ OPN1L
- ☐ OPN1LW
- ☐ OTOF
- ☐ PAX2
- ☐ PAX6
- ☐ PCDH15
- ☐ PCDH19
- ☐ PDE6A
- ☐ PDE6B
- ☐ PITX2
- ☐ POLG
- ☐ PRPF31
- ☐ PRPH2
- ☐ PRRT2
- ☐ RDH12
- ☐ RHO
- ☐ RP1
- ☐ RP2
- ☐ RPE65
- ☐ RPGR
- ☐ SCN1A
- ☐ SCN1B
- ☐ SCN2A
- ☐ SCN8A
- ☐ SIX1
- ☐ SIX6
- ☐ SLC26A4
- ☐ SLC2A1
- ☐ SLC9A6
- ☐ STXBP1
- ☐ SYNGAP1
- ☐ TCF4
- ☐ TGFBI
- ☐ TMC1
- ☐ TMCO1
- ☐ TMPRSS3
- ☐ TPP1
- ☐ TSC1
- ☐ TSC2
- ☐ USH1C
- ☐ USH1G
- ☐ USH2A
- ☐ WFS1
- ☐ ZEB2

COMMONLY USED ICD10 (DIAGNOSIS) CODES

please note, the icd-10 codes herein are solely for informational use. it is incumbent upon order practitioners to the diagnosis code that precisely justifies test conduct, regardless of its presence in the subsequent list.

Category - 1: ICD10 codes

- ☐ B73.1 - Onchocerciasis without eye disease
- ☐ C43.10 - Malignant melanoma of unspecified eyelid, including canthus
- ☐ C4A.10 - Merkel cell carcinoma of unspecified eyelid, including canthus
- ☐ C69.00 - Malignant neoplasm of unspecified conjunctiva
- ☐ C69.01 - Malignant neoplasm of right conjunctiva
- ☐ C69.02 - Malignant neoplasm of left conjunctiva
- ☐ C69.10 - Malignant neoplasm of unspecified cornea
- ☐ C69.11 - Malignant neoplasm of right cornea
- ☐ C69.12 - Malignant neoplasm of left cornea
- ☐ C69.20 - Malignant neoplasm of unspecified retina
- ☐ C69.21 - Malignant neoplasm of right retina
- ☐ C69.22 - Malignant neoplasm of left retina
- ☐ C69.30 - Malignant neoplasm of unspecified choroid
- ☐ C69.31 - Malignant neoplasm of right choroid
- ☐ C69.32 - Malignant neoplasm of left choroid
- ☐ C69.40 - Malignant neoplasm of unspecified ciliary body
- ☐ C69.41 - Malignant neoplasm of right ciliary body
- ☐ C69.42 - Malignant neoplasm of left ciliary body
- ☐ C69.50 - Malignant neoplasm of unspecified lacrimal gland and duct
- ☐ C69.51 - Malignant neoplasm of right lacrimal gland and duct
- ☐ C69.52 - Malignant neoplasm of left lacrimal gland and duct
- ☐ C69.60 - Malignant neoplasm of unspecified orbit
- ☐ C69.61 - Malignant neoplasm of right orbit
- ☐ C69.62 - Malignant neoplasm of left orbit
- ☐ C69.80 - Malignant neoplasm of overlapping sites of unspecified eye and adnexa
- ☐ C69.81 - Malignant neoplasm of overlapping sites of right eye and adnexa
- ☐ C69.82 - Malignant neoplasm of overlapping sites of left eye and adnexa
- ☐ C69.90 - Malignant neoplasm of unspecified site of unspecified eye
- ☐ C69.91 - Malignant neoplasm of unspecified site of right eye
- ☐ C69.92 - Malignant neoplasm of unspecified site of left eye
- ☐ D31.90 - Benign neoplasm of unspecified part of unspecified eye
- ☐ D31.91 - Benign neoplasm of unspecified part of right eye
- ☐ D31.92 - Benign neoplasm of unspecified part of left eye
- ☐ E10.3211 - Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macularedema, right eye
- ☐ E10.3212 - Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye
- ☐ E10.3219 - Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye
- ☐ E10.3291 - Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye
- ☐ E10.3292 - Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macula edema, left eye
- ☐ E10.3299 - Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye
- ☐ E10.3311 - Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye
- ☐ E10.3312 - Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye
- ☐ E10.3313 - Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral
- ☐ E10.3319 - Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspeci ed eye
- ☐ E10.3391 - Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye
- ☐ E10.3599 - Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye
- ☐ E11.3211 - Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye
- ☐ E11.3212 - Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye
- ☐ E11.3219 - Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye
- ☐ E11.3291 - Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye
- ☐ E11.3292 - Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye
- ☐ E11.3299 - Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye
- ☐ E11.3311 - Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye
- ☐ E11.3312 - Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye
- ☐ E11.3319 - Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspeci ed eye
- ☐ E11.3391 - Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye
- ☐ E11.3392 - Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye
- ☐ E11.3399 - Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspeci ed eye
- ☐ E11.3411 - Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macularedema, right eye
- ☐ E11.3412 - Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye
- ☐ E11.3419 - Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspeci ed eye
- ☐ E11.3491 - Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye
- ☐ E11.3492 - Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye
- ☐ E11.3499 - Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye
- ☐ H01.121 - Discoid lupus erythematosus of right upper eyelid
- ☐ H01.122 - Discoid lupus erythematosus of right lower eyelid
- ☐ H01.123 - Discoid lupus erythematosus of right eye, unspecified eyelid
- ☐ H01.124 - Discoid lupus erythematosus of left upper eyelid
- ☐ H01.125 - Discoid lupus erythematosus of left lower eyelid
- ☐ H01.126 - Discoid lupus erythematosus of left eye, unspecified eyelid
- ☐ H01.129 - Discoid lupus erythematosus of unspecified eye, unspecified eyelid
- ☐ H01.131 - Eczematous dermatitis of right upper eyelid
- ☐ H01.132 - Eczematous dermatitis of right lower eyelid
- ☐ H01.133 - Eczematous dermatitis of right eye, unspecified eyelid
- ☐ H01.134 - Eczematous dermatitis of left upper eyelid
- ☐ H01.135 - Eczematous dermatitis of left lower eyelid
- ☐ H01.136 - Eczematous dermatitis of left eye, unspecified eyelid
- ☐ H01.139 - Eczematous dermatitis of unspecified eye, unspecified eyelid
- ☐ H01.141 - Xeroderma of right upper eyelid
- ☐ H01.142 - Xeroderma of right lower eyelid
- ☐ H01.143 - Xeroderma of right eye, unspecified eyelid

- ☐ E10.3392 - Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye
- ☐ E10.3399 - Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye
- ☐ E10.3411 - Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye
- ☐ E10.3412 - Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye
- ☐ E10.3413 - Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral
- ☐ E10.3419 - Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macularedema, unspeci ed eye
- ☐ E10.3491 - Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye
- ☐ E10.3492 - Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye
- ☐ E10.3499 - Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspeci ed eye
- ☐ E10.3511 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye
- ☐ E10.3512 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye
- ☐ E10.3519 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspeci ed eye
- ☐ E10.3521 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macular edema, right eye
- ☐ E10.3522 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macular edema, left eye
- ☐ E10.3529 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macular edema, unspecified eye
- ☐ E10.3531 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macu...
- ☐ E10.3532 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macu...
- ☐ E10.3539 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macu...
- ☐ E10.3541 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatog...
- ☐ E10.3542 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatog...
- ☐ E10.3549 - Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatog...
- ☐ E10.3551 - Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, right eye
- ☐ E10.3552 - Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, left eye
- ☐ E10.3553 - Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral
- ☐ E10.3559 - Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, unspeci ed eye
- ☐ E10.3591 - Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye
- ☐ E10.3592 - Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye
- ☐ H40.052 - Ocular hypertension, left eye
- ☐ H40.053 - Ocular hypertension, bilateral
- ☐ H01.144 - Xeroderma of left upper eyelid
- ☐ H01.145 - Xeroderma of left lower eyelid
- ☐ H01.146 - Xeroderma of left eye, unspeci ed eyelid
- ☐ H01.149 - Xeroderma of unspecified eye, unspecified eyelid
- ☐ H01.8 - Other specified in ammations of eyelid
- ☐ H01.9 - Unspecified in ammation of eyelid
- ☐ H40.001 - Preglaucoma, unspecified, right eye
- ☐ H40.002 - Preglaucoma, unspecified, left eye
- ☐ H40.009 - Preglaucoma, unspecified, unspecified eye
- ☐ H40.011 - Open angle with borderline findings, low risk, right eye
- ☐ H40.012 - Open angle with borderline findings, low risk, left eye
- ☐ H40.019 - Open angle with borderline findings, low risk, unspecified eye
- ☐ H40.021 - Open angle with borderline findings, high risk, right eye
- ☐ H40.022 - Open angle with borderline findings, high risk, left eye
- ☐ H40.029 - Open angle with borderline findings, high risk, unspecified eye
- ☐ H40.031 - Anatomical narrow angle, right eye
- ☐ H40.032 - Anatomical narrow angle, left eye
- ☐ H40.039 - Anatomical narrow angle, unspecified eye
- ☐ H40.051 - Ocular hypertension, right eye
- ☐ H40.059 - Ocular hypertension, unspecified eye
- ☐ H40.061 - Primary angle closure without glaucoma damage, right eye
- ☐ H40.062 - Primary angle closure without glaucoma damage, left eye
- ☐ H40.069 - Primary angle closure without glaucoma damage, unspecified eye
- ☐ H40.811 - Glaucoma with increased episcleral venous pressure, right eye
- ☐ H40.812 - Glaucoma with increased episcleral venous pressure, left eye
- ☐ H40.819 - Glaucoma with increased episcleral venous pressure, unspecified eye
- ☐ H40.821 - Hypersecretion glaucoma, right eye
- ☐ H40.822 - Hypersecretion glaucoma, left eye
- ☐ H40.829 - Hypersecretion glaucoma, unspecified eye
- ☐ H40.89 - Other specified glaucoma
- ☐ H46.00 - Optic papillitis, unspecified eye
- ☐ H46.01 - Optic papillitis, right eye
- ☐ H46.02 - Optic papillitis, left eye
- ☐ H46.10 - Retrobulbar neuritis, unspecified eye
- ☐ H46.11 - Retrobulbar neuritis, right eye
- ☐ H46.12 - Retrobulbar neuritis, left eye
- ☐ H57.00 - Unspeci ed anomaly of pupillary function
- ☐ H57.01 - Argyll Robertson pupil, atypical
- ☐ H57.02 - Anisocoria
- ☐ H57.03 - Miosis
- ☐ H57.04 – Mydriasis
- ☐ H57.051 - Tonic pupil, right eye
- ☐ H57.052 - Tonic pupil, left eye
- ☐ H57.053 - Tonic pupil, bilateral
- ☐ H57.059 - Tonic pupil, unspecified eye
- ☐ H57.09 - Other anomalies of pupillary function
- ☐ Z13.5 - Encounter for screening for eye and ear disorders
- ☐ Z83.51 - Family history of eye disorders
- ☐ Z85.84 - Personal history of malignant neoplasm of eye and nervous tissue
- ☐ Z86.69 - Personal history of other diseases of the nervous system and sense organs
- ☐ H35.50 - unspecified hereditary retinal dystrophy
- ☐ H35.51 - Vitreoretinal dystrophy
- ☐ H35.52 - Pigmentary retinal dystrophy
- ☐ H35.53 - Other dystrophies primarily involving the sensory retina
- ☐ H35.54 - Dystrophies primarily involving the retinal pigment epithelium

Category - 2: ICD10 codes

- ☐ T41.0X5A - Adverse e ect of inhaled anesthetics, initial encounter
- ☐ T41.0X5D - Adverse e ect of inhaled anesthetics, subsequent encounter
- ☐ T41.0X5S - Adverse e ect of inhaled anesthetics, sequela
- ☐ T41.0X6A - Underdosing of inhaled anesthetics, initial encounter
- ☐ T41.0X6D - Underdosing of inhaled anesthetics, subsequent encounter
- ☐ T41.0X6S - Underdosing of inhaled anesthetics, sequela
- ☐ T41.1X5A - Adverse e ect of intravenous anesthetics, initial encounter
- ☐ T41.1X5D - Adverse e ect of intravenous anesthetics, subsequent encounter
- ☐ T41.1X5S - Adverse e ect of intravenous anesthetics, sequela
- ☐ T41.1X6A - Underdosing of intravenous anesthetics, initial encounter
- ☐ T41.1X6D - Underdosing of intravenous anesthetics, subsequent encounter
- ☐ T41.1X6S - Underdosing of intravenous anesthetics, sequela

Additional ICD Codes: _____

PATIENT CONSENT

By signing this form, I acknowledge that the information provided by me is true and correct. I have read or have had read to me the **Minerva Labs** Informed Consent document at the end of this test requisition form, and understand the information regarding molecular genetics testing. For direct insurance billing: I authorize my insurance benefits to be paid directly to **Minerva Labs** and their affiliates, authorize **Minerva Labs** to release medical information concerning my testing to my insurer, to be my designated representative for purposes of appealing any denial of benefits as needed and to request additional medical records for this purpose. I understand that I am financially responsible for any amounts not covered by my insurer and responsible for sending **Minerva Labs** and their affiliates, money received from my health insurance company. I also give permission for my specimen and clinical information to be used in de-identified studies at **Minerva Labs**and their affiliates for publication, if appropriate. I have had the opportunity to ask questions about the testing, the procedure, the risks, and the alternatives. I authorize **Minerva Labs** and their affiliates to perform the testing as ordered.

Signature Date

Certificate of medical necessity, Consent, Test Authorization and Physician Signature

The individual signing this form, or their representative, hereby confirms their status as a licensed medical professional authorized to order genetic testing and confirms that the patient has provided informed consent for the testing and that it is medically necessary. They certify that any custom panel and/or ordered test(s) requested on this test requisition form are reasonable and medically necessary for the diagnosis and/or treatment of a disease, illness, impairment, symptom, syndrome, or disorder. They acknowledge that the test results may have an impact on the patient's medical management. The information provided on this form is accurate to the best of their knowledge. The signature on this form applies to the attached letter of medical necessity. If the insurance provider requests the laboratory to gather the medical necessity for any reason, the signer agrees to provide the Care Plan notes and Letter of Intent for this order.

Signature Date

INFORMED CONSENT

For the purposes of this consent, “I”, “my”, and “your” will refer to me or to my child, including my unborn child, if my child is the person for whom the healthcare provider has ordered testing.

PURPOSE OF THIS TEST

The purpose of this test is (a) to see if I may have a genetic variant or chromosome rearrangement causing a genetic disorder; or (b) to evaluate the chance that I will develop or pass on a genetic disorder in the future. If I already know the specific gene variant(s) or chromosome rearrangement that causes the genetic disorder in my family, I agree to inform the laboratory of this information.

WHAT TYPE OF TEST RESULTS CAN I EXPECT FROM GENETIC TESTING?

1. Positive: A change in your DNA was found, which is very likely the cause of your features/symptoms. This is the most straightforward test result, which can be used as the basis to test other family members to determine their chances of having either the disease or a child with the disease.
2. Negative: No variants were found to explain your symptoms. This does not mean that you do not have a genetic condition. It is still possible that there is a genetic variant not found by the test that was ordered. Your healthcare provider or genetic counselor may discuss more testing either now or in the future.
3. Variant of Uncertain Significance (VUS): A change in a gene was found. However, we are not sure whether this variant is the cause of your symptoms/features. More information is needed. We may suggest testing other family members to help figure out the meaning of the test result.
4. Unexpected Results: In rare instances, this test may reveal an important genetic change that is not directly related to the reason for ordering this test. For example, this test may find you are at risk for another genetic condition I am not aware of or it may indicate differences in the number or rearrangement of sex chromosomes.

We may disclose this information to the ordering healthcare provider if it likely affects medical care.

Because medical and scientific knowledge is constantly changing, new information that becomes available may supplement the information **Minerva Labs** used to interpret my results. Healthcare providers can contact **Minerva Labs** at any time to discuss the classification of an identified variant.

WHAT IS TRIO/DUO-BASED GENETIC TESTING?

For some genetic tests, including samples from the biological parents and/or other biological relatives along with the patient’s sample can help with the interpretation of the test results. These tests are often referred to as “trio tests” since they typically include samples from the patient and both parents.

Samples from relatives should be submitted with the patient's sample. Clinical information must be provided for the patient and any relative who submits a sample.

I understand that **Minerva Labs** will use the relative sample(s) when needed for the interpretation of my test results and that my test report may include clinical and genetic information about a relative when it is relevant to the interpretation of the test results. I further understand that relatives will not receive an independent analysis of data nor a separate report.

RISKS AND LIMITATIONS OF GENETIC TESTING

1. In some cases, testing may not identify a genetic variant even though one exists. This may be due to limitations in current medical knowledge or testing technology.
2. Accurate interpretation of test results may require knowing the true biological relationships in a family. I understand that if I fail to accurately state the biological relationships in my family, it could lead to incorrect interpretation of the test results, incorrect diagnoses, and/or inconclusive test results. If genetic testing reveals that the true biological relationships in a family are not as I reported them, including non-paternity (the reported father is not the biological father) and consanguinity (the parents are related by blood), I agree to have these findings reported to the healthcare provider who ordered the test.
3. Although genetic testing is highly accurate, inaccurate results may occur. These reasons include, but are not limited to mislabeled samples, inaccurate reporting of clinical/medical information, rare technical errors, or other reasons.
4. I understand that this test may not detect all of the long-term medical risks that I might experience. The result of this test does not guarantee my health and that additional diagnostic tests may still need to be done.
5. I agree to provide an additional sample if the initial sample is not adequate.

PATIENT CONFIDENTIALITY AND GENETIC COUNSELING

It is recommended that I receive genetic counseling before and after having this genetic test. I can find a genetic counselor in my area at www.nsgc.org. Further testing or additional consultations with a healthcare provider may be necessary.

To maintain confidentiality, test results will only be released to the referring healthcare provider, the ordering laboratory, to me, to other healthcare providers involved in my care, diagnosis and treatment, or to others with my consent or as permitted or required by law. Federal laws prohibit unauthorized disclosure of this information.
More information can be found at: www.genome.gov/10002077

INTERNATIONAL SAMPLES

If I reside outside the United States, I attest that by providing a sample for testing, I am not knowingly violating any export ban or other legal restriction in the country of my residence.

SAMPLE RETENTION After testing is complete, my sample may be de-identified and be used for test development and improvement, internal validation, quality assurance, and training purposes. **Minerva Labs** will not return DNA samples to you or to referring healthcare providers, unless specific prior arrangements have been made.

I understand that samples from residents of New York State will not be included in the de-identified research studies described in this authorization and **Minerva Labs** will not retain them for more than 60 days after test completion, unless specifically authorized by my selection. The authorization is optional, and testing will be unaffected if I do not check the box for the New York authorization language. **Minerva Labs** will not perform any tests on the biological sample other than those specifically authorized.

DATABASE PARTICIPATION De-identified health history and genetic information can help healthcare providers and scientists understand how genes affect human health. Sharing this deidentified information helps healthcare providers to provide better care for their patients and researchers to make new discoveries. **Minerva Labs** shares this type of information with healthcare providers, scientists, and healthcare databases. **Minerva Labs** will not share any personally identifying information and will replace the identifying information with a unique code not derived from any personally identifying information. Even with a unique code, there is a risk that I could be identified based on the genetic and health information that is shared. **Minerva Labs** believes that this is unlikely, though the risk is greater if I have already shared my genetic or health information with public resources, such as genealogy websites.

EXOME/GENOME SEQUENCING SECONDARY FINDINGS

- Applicable only for full exome sequencing and genome sequencing tests
- Does not pertain to Xpanded® or Slice tests

As many different genes and conditions are analyzed in an exome or genome sequencing test, these tests may reveal some findings not directly related to the reason for ordering the test. Such findings are called "incidental" or "secondary" and can provide information that was not anticipated.

Secondary findings are variants, identified by an exome or genome sequencing test, in genes that are unrelated to the individual's reported clinical features. The American College of Medical Genetics and Genomics (ACMG) has recommended that secondary findings identified in a specific subset of medically actionable genes associated with various inherited disorders be reported for all probands undergoing exome or genome sequencing. Please refer to the latest version of the ACMG recommendations for reporting of secondary findings in clinical exome and genome sequencing for complete details of the genes and associated genetic disorders. Reportable secondary findings will be confirmed by an alternate test method when needed.

WHAT WILL BE REPORTED FOR THE PATIENT?

All pathogenic and likely pathogenic variants associated with specific genotypes identified in the genes (for which a minimum of 10X coverage was achieved by exome sequencing or a minimum of 15X coverage was achieved by genome sequencing), as recommended by the ACMG.

WHAT WILL BE REPORTED FOR RELATIVES? The presence or absence of any secondary finding(s) reported for the proband will be provided for all relatives analyzed by an exome or genome sequencing test.

LIMITATIONS

Pathogenic and/or likely pathogenic variants may be present in a portion of the gene not covered by this test and therefore are not reported. The absence of reportable secondary findings for any particular gene does not mean there are no pathogenic and/or likely pathogenic variants in that gene. Pathogenic variants and/or likely pathogenic variants that may be present in a relative, but are not present in the proband, will not be identified nor reported. Only changes at the sequence level will be reported in the secondary findings report. Larger deletions/duplications, abnormal methylation, triplet repeat or other expansion variants, or other variants not routinely identified by clinical exome and genome sequencing will not be reported.

FINANCIAL AGREEMENT AND GUARANTEE

For insurance billing, I understand and authorize **Minerva Labs** to bill my health insurance plan on my behalf, to release any information required for billing, and to be my designated representative for purposes of appealing any denial of benefits. I irrevocably assign to and direct that payment be made directly to **Minerva Labs.**

I understand that my out-of-pocket costs may be different than the estimated amount indicated to me by **Minerva Labs** as part of a benefit investigation. I agree to be financially responsible for any and all amounts as indicated on the explanation of benefits issued by my health insurance plan. If my insurance provider sends a payment directly to me for services performed by **Minerva Labs** on my behalf, I agree to endorse the insurance check and forward it to **Minerva Labs** within 30 days of receipt as payment towards **Minerva Labs** claim for services rendered.

If I do not have health insurance, I agree to pay for the full cost of the genetic testing that was ordered by my healthcare provider and billed to me by **Minerva Labs.** I further understand and agree that, if I fail to make payment for genetic testing, in accordance with the payment policies of **Minerva Labs**, my account may be turned over to an external collection agency for non-payment. I agree to pay any associated collection costs, including attorney fees. By my signature on the **Minerva Labs** Test Requisition Form or at the bottom of this form, I accept full and complete financial responsibility for all genetic testing ordered by my healthcare provider.