LifeNet Health
LifeSciences Division

CERTIFICATE OF ANALYSIS – DONOR DATA

ORGAN:	Human Liver	○ Brain Death ◉ DCD	TISSUE ID:	2019300

DONOR DEMOGRAPHICS				
Age	**Sex**	**Race**	**BMI**	**Cause of Death**
46	Female	African American	34.7	Anoxia

MEDICAL AND SOCIAL HISTORY	
Medical History	Drowning with CPR to ER. Hx of depression. Gastric bypass 2005. Gallbladder removed 2005.
Medication(s)	NOK did not know names of any medications.
Alcohol	Wine 3-4 glasses, 2-3 times a week for 3 years.
Tobacco	None.
Illicit Drug(s)	None.

LABORATORY BLOOD RESULTS			
Blood Type	O Positive	**HLA Typing**	A2A29, B42B49, C7C17, DR8DR15
BLOOD CULTURE RESULTS			
Negative		**Organisms if positive**	No growth
INFECTIOUS DISEASE RESULTS			
The donor was tested and found non-reactive to	☑ HIV-1/2 ☑ Syphilis	☑ Hepatitis-B ☑ Hepatitis-C	
Any other serological tests with positive results	CMV antibody		

FINAL LAB PROFILE							
Total Bili	0.4	**Direct Bili**	N/A	**AST**	83	**ALT**	43
TP	6.5	**Alk Phos**	147	**PT**	9.5	**PTT**	N/A

AUTHORIZATION RESTRICTIONS	
◉ No ○ Yes, explain	None

Signature: Gary D. Walters Date: 9/30/2020

Print Name: Gary D. Walters Title: Sr. Director & GM RTF

Authorization was obtained from the donor or the donor's legal next of kin, for use of the tissue and its derivatives for research purposes. Caution: The user should treat all human cells as potential pathogens. Wear protective clothing and eyewear. Practice appropriate disposal techniques for potentially pathogenic or biohazardous materials. For research use only. Not intended for human or animal therapeutic or diagnostic use.

For more information: **cells_tissues@lifenethealth.org**

FRCP-0065-01.00

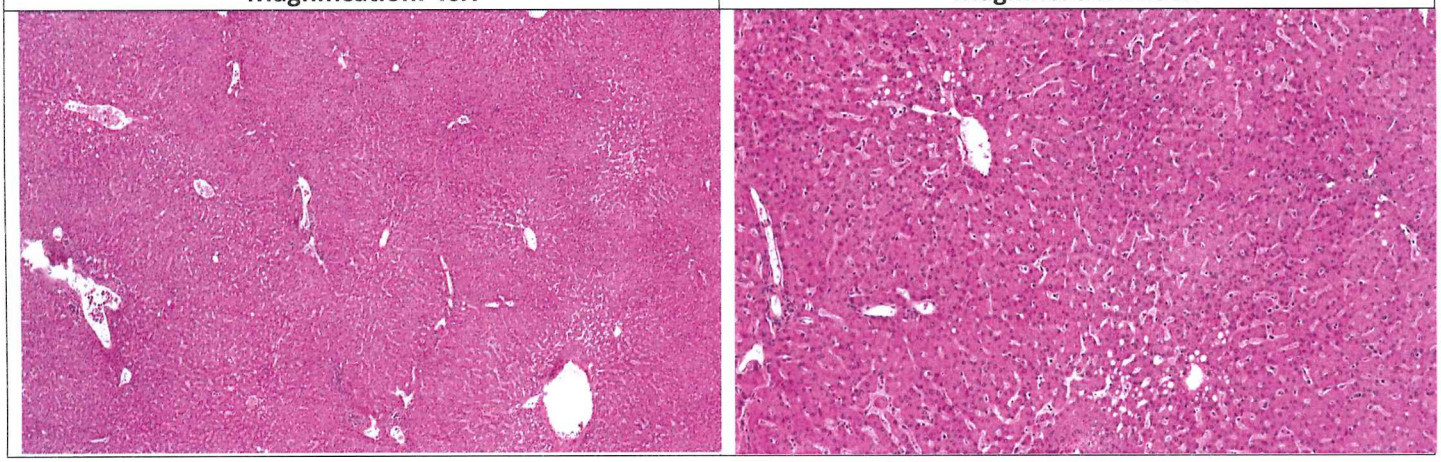
LifeNet Health
LifeSciences Division

CERTIFICATE OF ANALYSIS - HISTOLOGY

CELL TYPE:	Primary Human Hepatocytes	Lot No:	2019300
Storage Condition:	Cryopreserved in Vapor Phase Liquid Nitrogen (< -150°C)		

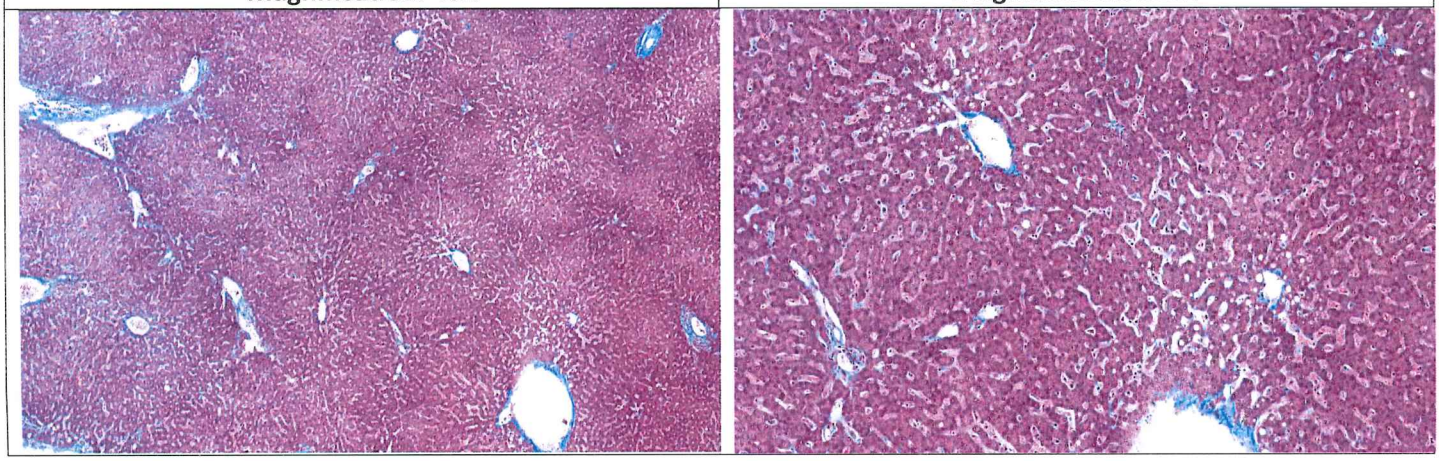
H&E - REPRESENTATIVE IMAGES

Magnification: 40X	Magnification: 100X



TRICHROME - REPRESENTATIVE IMAGES

Magnification: 40X	Magnification: 100X



HISTOPATHOLOGICAL SCORING

NAS Score*	Steatosis Score	Lobular Inflammation Score	Hepatocyte Ballooning Score	Fibrosis Stage
1	1	0	0	0

*NAS scores 0-2 are not considered diagnostic of NASH, scores of 3-4 can be considered diagnostic of NASH with high interobserver variability, and scores of 5-8 are diagnostic of NASH.

Additional Information/Comments:
Mild steatosis (~15-20% of hepatocytes). No excess inflammation or fibrosis.

Signature: Kristina Wolf Date: 19 Oct 2020

Print Name: Kristina Wolf Title: Scientist, R+D, Life Sciences

Authorization was obtained from the donor or the donor's legal next of kin, for use of the tissue and its derivatives for research purposes.
Caution: The user should treat all human cells as potential pathogens. Wear protective clothing and eyewear. Practice appropriate disposal techniques for potentially pathogenic or biohazardous materials. For research use only. Not intended for human or animal therapeutic or diagnostic use.

For more information: **cells_tissues@lifenethealth.org**

1864 Concert Drive, Virginia Beach, VA 23453 • 1-888-847-7831 • Fax: 1-888-847-4832 • **www.LifeNetHealth.org**

LifeNet Health® LifeSciences

CERTIFICATE OF ANALYSIS

TISSUE TYPE:	Human Liver	ETHNICITY:	African American	DONOR ID:	2019300

CYP ENZYME GENOTYPING

Gene	rs Number	Result	Allele Freq. ¥	Ref. Allele	cDNA Ref. Seq.
CYP1A2	rs762551	C/C	A=0.5593§	C	c.-163C>A
CYP2C9	rs1057910	A/A	A=0.9869	A	c.1075A>C
CYP2C9	rs1799853	C/C	C=0.9639	C	c.430C>T
CYP2C19	rs4244285	G/A	G=0.8253	G	c.681G>A
CYP2C19	rs4986893	G/G	G=0.9996	G	c.636G>A
CYP2C19	rs12248560	C/T	C=0.7730	C	c.-806C>T
CYP2D6	rs1065852	G/G	G=0.8608	G	g.100C>T
CYP2D6	rs3892097	C/C	C=0.9046	C	c.506-1G>A
CYP2D6	rs5030655	A/A	A=0.9978	A	c.454del
CYP2D6	rs28371706	G/G	G=0.9125	G	g.1023C>T
CYP2D6	rs28371725	C/C	C=0.9606	C	g.2988G>A
CYP2D6	rs59421388	C/C	C=0.9181	C	c.1012G>A
CYP2D6	rs61736512	C/C	C=0.9176	C	g.1659G>A
CYP3A4	rs2740574	C/C	C=0.6341	C	c.-392G>A

PHASE II AND TRANSPORTER ENZYME GENOTYPING

Gene	rs Number	Result	Allele Freq. ¥	Ref. Allele	cDNA Ref. Seq.
ABCB1	rs1045642	G/G	G=0.7748§	A	c.3435T>C
ABCG2	rs2231142	G/G	G=0.9737	G	c.421C>A
COMT	rs4680	G/A	G=0.69098	G	c.472G>A
MTHFR	rs1801131	T/T	T=0.83006	T	c.1286A>C
MTHFR	rs1801133	G/G	G=0.87745	G	c.665C>T
SLCO1B1	rs2306283	A/G	G=0.74875§	A	c.388A>G
SLCO1B1	rs4149056	T/T	T=0.96298	T	c.521T>C
TPMT	rs1142345	T/T	T=0.9457	T	c.719A>G
TPMT	rs1800460	C/C	C=0.9923	C	c.460G>A
TPMT	rs1800462	C/C	C=0.9997	C	c.626-1G>A
UGT1A1	rs4148323	G/G	G=0.9987	G	c.211G>A
UGT2B15	rs1902023	C/C	C=0.5782§	A	c.253T>G
UGT2B7	rs28365063	A/A	A=0.9077	A	c.372A>G
VKORC1	rs9923231	C/C	C=0.8899	C	c.-1639G>A

§Alternate allele in database is the reference allele for this ethnicity.
¥ All allele frequencies were taken from the Allele Frequency Aggregator (ALFA) from the National Center for Biotechnology Information.

METHOD SUMMARY

Genomic DNA was isolated from Primary Human Hepatocytes and sequenced using next generation sequencing. rs numbers and cDNA reference sequence annotations are designations in the National Center for Biotechnology Information's SNP database (Build 154, release date: 04/21/20). Allele frequencies and reference alleles are from the ALFA database (Release 2, date: 01/06/21) for the **African American** ethnicity unless otherwise noted.

Signature: Mary Jane Sloan Date: 5/11/21

Authorization was obtained from the donor or the donor's legal next of kin for use of the tissue and its derivatives for research purposes.
Caution: The user should treat all human cells as potential pathogens. Wear protective clothing and eyewear. Practice appropriate disposal techniques for potentially pathogenic or biohazardous materials. For research use only. Not intended for human or animal therapeutic or diagnostic use.

1864 Concert Drive, Virginia Beach, VA 23453 · cells_tissue@lifenethealth.org · www.LNHLifeSciences.org