

# CELL EXCHANGE #418

## OCTOBER 7, 2020

Cells 1669-1672

The results for Cell Exchange #418 are summarized in Table 7 - 11. Molecular typing results for individual laboratories are listed in Tables 12 – 19 for each sample and individual serological results for each sample are listed in Table 20. Fifteen labs submitted low and/or high resolution class II results for

this study. We would like to thank each of them for sharing their results and encourage other labs to do so as well so that the class II assignment can be graded. Haplotype frequencies used in this report are from the NMDP Bioinformatics website, <https://bioinformatics.bethematchclinical.org/>.

**Cell 1669.** A\*24:02-A\*68:03-B\*39:05-B\*44:02-C\*07:02-C\*16:04 is the reported class I consensus type for this cell from a Hispanic donor. Additionally, 9 labs submitted class II high resolution typing results for this sample, with the class II type reported as, DRB1\*04:07-DRB1\*07:01-DRB4\*01:01-DRB4\*01:03-DQA1\*02:01-DQA1\*03:01-DQB1\*02:02-DQB1\*03:02-DPA1\*01:03-DPA1\*02:01-DPB1\*04:02-DPB1\*11:01.

Only likely association present, A\*68:03-B\*39:05-DRB1\*04:07, is commonly observed in Hispanics, with HF = 0.00652. The other association likely present is A\*24:02-B\*44:02-DRB1\*07:01, observed in Caucasians, with HF = 0.00016. This sample was examined previously in the Cell Exchange as cell 1364 (2009) and cell 1328 (2008). In the present study, good agreement (< 90%) was achieved for all allele assignments.

**Cell 1670.** A\*24:02-A\*68:02-B\*51:01-B\*81:01-C\*15:02-C\*18:01 is the reported class I consensus type for this cell from a Black donor. Eight labs reported high resolution class II typing results for this sample. The class II type was reported as DRB1\*09:01-DRB1\*11:01-DRB3\*02:02-DRB4\*01:01-DQA1\*03:03-DQA1\*05:05-DQB1\*02:02-DQB1\*03:01-DPA1\*01:03-DPA1\*02:02-DPB1\*01:01-DPB1\*04:01.

Class I associations likely present in this cell are A\*68:02-B\*81:01-C\*18:01 and A\*24:02-B\*51:01-C\*15:02, observed in African American populations, with respective HF = 0.00165 and 0.00042. This cell was examined several times in the Exchange as cells 1595 (2017), 1461 (2012), 1354 (2009), and 1295 (2007). In the present retyping, good agreement (< 90%) was achieved for all allele assignments.

**Cell 1671.** A\*11:01-A\*34:01-B\*15:35-B\*55:02-C\*01:02-C\*07:02 is the reported class I consensus type for this cell from a Filipino donor. High resolution class II typing results were reported by 8 labs, with the class II type reported as DRB1\*04:05-DRB1\*12:02-DRB3\*03:01-DRB4\*01:03-DQA1\*03:03-DQA1\*06:01-DQB1\*03:01-DQB1\*04:02-DPA1\*02:02-DPB1\*01:01-DPB1\*05:01.

Likely associations present in this cell are A\*34:01-B\*15:35-DRB1\*04:05-A\*11:01-B\*55:02-DRB1\*12:02. Each are observed exclusively in Asian populations, with respective HF = 0.00224. and 0.00032. Good agreement (< 90%) was achieved for allele assignments.

**Cell 1672.** A\*32:01-A\*68:01-B\*07:02-B\*35:43-C\*01:02-C\*07:02 is the consensus class I type for this sample from a Hispanic donor. A number of labs (n= 8) reported class II high resolution results for this cell, with the class II type reported as DRB1\*04-DRB1\*15:01-DRB4\*01:03-DRB5\*01:01-DQA1\*01:02-DQA1\*03:01-DQB1\*03:02-DQB1\*06:02-DPA1\*01:03-DPB1\*04:01-DPB1\*04:02.

From family studies, the haplotypes present in this cell were determined to be A\*32:01-B\*07:02-C\*07:02-DRB1\*15:01-DRB5\*01:01-DQA1\*01:02-DQB1\*06:02-DPB1\*04:01 and A\*68:01-B\*35:43-C\*01:02-DRB1\*04-DRB4\*01:03-DQA1\*03:01-DQB1\*03:02-DPB1\*04:02. This cell was previously examined in the Exchange as cells 1558 (2015) and 1492 (2013). In this present retyping, good agreement (< 90%) was once again achieved for class I allele assignments. For class II, labs were unable to resolve the subtype for DRB1\*04. Three labs assigned DRB1\*04:92, 3 labs assigned DRB1\*04:07, and 2 labs assigned DRB1\*04:07:01G. DRB1\*04:92 differs from DRB1\*04:07:01 in exon 4 by a single amino acid substitution at codon 207 (GTG → ATG) where valine is replaced by methionine in DRB1\*04:92.

**NEXT MAILING DATE: November 4, 2020**

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**Table 7: Summary of the 418<sup>th</sup> Cell Exchange - DNA Typing**

**Cell 1669**

DNA Typing - class I		<u>11 labs High; 16 labs low- A</u>		<u>13 labs High; 16 labs low- B</u>		<u>12 labs High; 15 labs low- C</u>							
			%(n)		%(n)		%(n)						
		A*24:02:01:01	18(2)	B*39:05:01:01	8 (1)	C*07:02:01:01	8 (1)						
		A*24:02:01	9 (1)	B*39:05:01	23(3)	C*07:02:01	17(2)						
		A*24:02:01G	9 (1)	B*39:05	69(9)	C*07:02:01G	17(2)						
		A*24:02	64(7)	B*39	100(16)	C*07:02	58(7)						
		A*24	100(16)			C*07	100(15)						
DNA Typing - class II		<u>9 labs High; 10 labs low-DRB1</u>		<u>4 labs High; 7 labs low-DRB3/4/5</u>		<u>5 labs High; 9 labs Low-DQA1</u>		<u>8 labs High; 9 labs Low-DQB1</u>		<u>4 labs High; 6 labs Low-DPA1</u>		<u>8 labs High; 6 labs Low-DPB1</u>	
			%(n)		%(n)		%(n)		%(n)		%(n)		%(n)
		DRB1*04:07:01	11(1)	DRB4*01:01:01	25(1)	DQA1*02:01:01	40(2)	DQB1*02:02	100(8)	DPA1*01:03:01	25(1)	DPB1*04:02:01	25(2)
		DRB1*04:07:01G	11(1)	DRB4*01:01	75(3)	DQA1*02:01	60(3)	DQB1*02	100(9)	DPA1*01:03	75(3)	DPB1*04:02:01G	25(2)
		DRB1*04:07	78(7)	DRB4*01	86(6)	DQA1*02	100(9)			DPA1*01	100(6)	DPB1*04:02	50(2)
		DRB1*04	100(10)	DRB4*PRESENT	14(1)							DPB1*04(DP402)	67(4)
												DPB1*04	33(2)
DNA Typing - class II		<u>8 labs High; 10 labs low-DRB1</u>		<u>4 labs High-DRB3/4/5</u>		<u>5 labs High; 9 labs Low-DQA1</u>		<u>8 labs High; 9 labs Low-DQB1</u>		<u>4 labs High; 6 labs Low-DPA1</u>		<u>8 labs High; 6 labs Low-DPB1</u>	
			%(n)		%(n)		%(n)		%(n)		%(n)		%(n)
		DRB1*07:01:01	12(1)	DRB4*01:03:02	25(1)	DQA1*03:01:01	20(1)	DQB1*03:02	100(8)	DPA1*02:01:01	25(1)	DPB1*11:01:01	38(3)
		DRB1*07:01:01G	12(1)	DRB4*01:03	75(3)	DQA1*03:01:01G	20(1)	DQB1*03(DQ8)	11(1)	DPA1*02:01	75(3)	DPB1*11:01G	12(1)
		DRB1*07:01	75(6)			DQA1*03:01	60(3)	DQB1*03	89(8)	DPA1*02	100(6)	DPB1*11:01	50(4)
		DRB1*07	100(10)			DQA1*03	100(9)					DPB1*11	100(6)

**Table 8: Summary of the 418<sup>th</sup> Cell Exchange - DNA Typing**

**Cell 1670**

DNA Typing - class I		<u>11 labs High; 16 labs low- A</u>		<u>11 labs High; 16 labs low- B</u>		<u>11 labs High; 15 labs low- C</u>							
			%(n)		%(n)		%(n)						
	A*24:02:01:01	18(2)		B*51:01:01	27(3)	C*15:02:01:01	9 (1)						
	A*24:02:01	9 (1)		B*51:01:01G	9 (1)	C*15:02:01	18(2)						
	A*24:02:01G	9 (1)		B*51:01P	9 (1)	C*15:02:01G	9 (1)						
	A*24:02	64(7)		B*51:01	55(6)	C*15:02	64(7)						
	A*24	100(16)		B*51	100(16)	C*15	100(15)						
DNA Typing - class I		<u>12 labs High; 16 labs low- A</u>		<u>11 labs High; 16 labs low- B</u>		<u>11 labs High; 15 labs low- C</u>							
			%(n)		%(n)		%(n)						
	A*68:02:01:01	17(2)		B*81:01:01	9 (1)	C*18:01:01	9 (1)						
	A*68:02:01	8 (1)		B*81:01:01G	9 (1)	C*18:01:01G	9 (1)						
	A*68:02:01G	8 (1)		B*81:01	82(9)	C*18:01	82(9)						
	A*68:02	67(8)		B*81	100(16)	C*18	100(15)						
	A*68	100(16)											
DNA Typing - class II		<u>8 labs High; 10 labs low-DRB1</u>		<u>4 labs High; 7 labs low-DRB3/4/5</u>		<u>4 labs High; 9 labs Low-DQA1</u>		<u>8 labs High; 9 labs Low-DQB1</u>		<u>3 labs High; 6 labs Low-DPA1</u>		<u>8 labs High; 6 labs Low-DPB1</u>	
			%(n)		%(n)		%(n)		%(n)		%(n)		%(n)
	DRB1*09:01:02	25(2)		DRB3*02:02:01	25(1)	DQA1*03:03:01	50(2)	DQB1*02:02:01	38(3)	DPA1*01:03:01	33(1)	DPB1*01:01:01	25(2)
	DRB1*09:01:02G	12(1)		DRB3*02:02	75(3)	DQA1*03:03	50(2)	DQB1*02:02	62(5)	DPA1*01:03	67(2)	DPB1*01:01:01G	25(2)
	DRB1*09:01	63(5)		DRB3*02	86(6)	DQA1*03	100(9)	DQB1*02	100(9)	DPA1*01	100(6)	DPB1*01:01	50(4)
	DRB1*09	100(10)		DRB3*PRESENT	14(1)							DPB1*01	100(6)
DNA Typing - class II		<u>8 labs High; 10 labs low-DRB1</u>		<u>4 labs High; 7 labs low-DRB3/4/5</u>		<u>4 labs High; 9 labs Low-DQA1</u>		<u>7 labs High; 9 labs Low-DQB1</u>		<u>3 labs High; 6 labs Low-DPA1</u>		<u>8 labs High; 6 labs Low-DPB1</u>	
			%(n)		%(n)		%(n)		%(n)		%(n)		%(n)
	DRB1*11:01:01	25(2)		DRB4*01:01:01	25(1)	DQA1*05:05:01	50(2)	DQB1*03:01:01G	14(1)	DPA1*02:02:02	33(1)	DPB1*04:01:01	25(2)
	DRB1*11:01:01G	12(1)		DRB4*01:01	75(3)	DQA1*05:05	50(2)	DQB1*03:01	86(6)	DPA1*02:02	67(2)	DPB1*04:01:01G	25(2)
	DRB1*11:01	63(5)		DRB4*01	86(6)	DQA1*05	100(9)	DQB1*03(DQ7)	11(1)	DPA1*02	100(6)	DPB1*04:01	50(4)
	DRB1*11	100(10)		DRB4*PRESENT	14(1)			DQB1*03	89(8)			DPB1*04(DP401)	67(4)
												DPB1*04	33(2)

**Table 9: Summary of the 418<sup>th</sup> Cell Exchange - DNA Typing**

**Cell 1671**

DNA Typing - class I	<u>10 labs High; 14 labs low- A</u>	%(n)	<u>12 labs High; 14 labs low- B</u>	%(n)	<u>11 labs High; 13 labs low- C</u>	%(n)
	A*11:01:01:01	20(2)		B*15:35	100(12)	C*01:02:01:01
A*11:01:01G	10(1)		B*15(B62)	7 (1)	C*01:02:01	9 (1)
A*11:01	70(7)		B*15	93(14)	C*01:02:01G	9 (1)
A*11	100(14)				C*01:02	73(8)
					C*01	92(12)
					C*15	8 (1)
<u>10 labs High; 14 labs low- A</u>	%(n)		<u>11 labs High; 14 labs low- B</u>	%(n)	<u>11 labs High; 13 labs low- C</u>	%(n)
A*34:01:01:01	20(2)		B*55:02:01	18(2)	C*07:02:01:01	9 (1)
A*34:01:01G	10(1)		B*55:02:01G	9 (1)	C*07:02:01	9 (1)
A*34:01	70(7)		B*55:02	73(8)	C*07:02:01G	18(2)
A*34	100(14)		B*55	100(14)	C*07:02	64(7)
					C*07	13(100)

DNA Typing - class II	<u>8 labs High; 8 labs low-DRB1</u>	%(n)	<u>3 labs High; 5 labs low-DRB3/4/5</u>	%(n)	<u>3 labs High; 7 labs Low-DQA1</u>	%(n)	<u>6 labs High; 7 labs Low-DQB1</u>	%(n)	<u>2 labs High; 5 labs Low-DPA1</u>	%(n)	<u>7 labs High; 4 labs Low-DPB1</u>	%(n)
	DRB1*04:05:01	25(2)		DRB3*03:01	100(3)	DQA1*03:03:01	33(1)	DQB1*03:01:01G	17(1)	DPA1*02:02	100(1)	DPB1*01:01:01G
DRB1*04:05	75(6)		DRB3*03	100(5)	DQA1*03:03	67(2)	DQB1*03:01:01	17(1)	DPA1*02	100(5)	DPB1*01:01:01	14(1)
DRB1*04	100(8)				DQA1*03	100(7)	DQB1*03:01	67(4)			DPB1*01:01	57(4)
							DQB1*03(DQ7)	14(1)			DPB1*01	100(4)
							DQB1*03	86(6)				
<u>8 labs High; 8 labs low-DRB1</u>	%(n)		<u>2 labs High; 5 labs low-DRB3/4/5</u>	%(n)	<u>4 labs High; 7 labs Low-DQA1</u>	%(n)	<u>47 labs High; 7 labs Low-DQB1</u>	%(n)			<u>7 labs High; 4 labs Low-DPB1</u>	%(n)
DRB1*12:02:01	25(2)		DRB4*01:03	100(2)	DQA1*06:01:01G	25(1)	DQB1*04:02:01G	14(1)			DPB1*05:01:01G	29(2)
DRB1*12:02	75(6)		DRB4*01	100(5)	DQA1*06:01	75(3)	DQB1*04:02:01	14(1)			DPB1*05:01:01	14(1)
DRB1*12	100(8)				DQA1*06	100(7)	DQB1*04:02	71(5)			DPB1*05:01	57(4)
							DQB1*04	100(7)			DPB1*05	100(4)

**Table 10: Summary of the 418<sup>th</sup> Cell Exchange - DNA Typing**

**Cell 1672**

DNA Typing - class I	<u>10 labs High; 14 labs low- A</u>	%(n)	<u>10 labs High; 14 labs low- B</u>	%(n)	<u>10 labs High; 13 labs low- C</u>	%(n)
	A*32:01:01:01	20(2)		B*07:02:01:01	10(1)	C*01:02:01:01
A*32:01:01G	10(1)		B*07:02:01	10(1)	C*01:02:01	10(1)
A*32:01	70(7)		B*07:02:01G	10(1)	C*01:02:01G	10(1)
A*32	100(14)		B*07:02	70(7)	C*01:02	70(7)
			B*07	100(14)	C*01	100(13)
<u>10 labs High; 14 labs low- A</u>	%(n)		<u>12 labs High; 14 labs low- B</u>	%(n)	<u>11 labs High; 13 labs low- C</u>	%(n)
A*68:01:02:01	20(2)		B*35:43:01	17(2)	C*07:02:01:03	18(2)
A*68:01:02G	10(1)		B*35:43:01G	8 (1)	C*07:02:01G	18(2)
A*68:01	70(7)		B*35:43	75(9)	C*07:02	64(7)
A*68	100(14)		B*35	100(14)	C*07	100(13)

DNA Typing - class II	<u>8 labs High; 8 labs low-DRB1</u>	%(n)	<u>3 labs High; 5 labs low-DRB3/4/5</u>	%(n)	<u>4 labs High; 7 labs Low-DQA1</u>	%(n)	<u>7 labs High; 7 labs Low-DQB1</u>	%(n)	<u>2 labs High; 5 labs Low-DPA1</u>	%(n)	<u>7 labs High; 4 labs Low-DPB1</u>	%(n)
	DRB1*04:07:01G	25(2)		DRB4*01:03	100(3)	DQA1*01:02:01G	25(1)	DQB1*03:02:01G	14(1)	DPA1*01:03	100(2)	DPB1*04:01:01G
DRB1*04:07	37(3)		DRB4*01	100(5)	DQA1*01:02	75(3)	DQB1*03:02	86(6)	DPA1*01	100(5)	DPB1*04:01:01	14(1)
DRB1*04:92	37(3)				DQA1*01	100(7)	DQB1*03(DQ8)	14(1)			DPB1*04:01P	29(2)
DRB1*04	100(8)						DQB1*03	86(6)			DPB1*04:01	14(1)
											DPB1*04(DP401)	75(3)
											DPB1*04	25(1)
<u>8 labs High; 8 labs low-DRB1</u>	%(n)		<u>3 labs High; 5 labs low-DRB3/4/5</u>	%(n)	<u>4 labs High; 7 labs Low-DQA1</u>	%(n)	<u>5 labs High; 7 labs Low-DQB1</u>	%(n)			<u>7 labs High; 4 labs Low-DPB1</u>	%(n)
DRB1*15:01:01	12(1)		DRB5*01:01	100(3)	DQA1*03:01:01G	25(1)	DQB1*06:02:01	20(1)			DPB1*04:02:01G	43(3)
DRB1*15:01:01G	25(2)		DRB5*01	100(5)	DQA1*03:01	75(3)	DQB1*06:02:01G	20(1)			DPB1*04:02P	28(2)
DRB1*15:01	63(5)				DQA1*03	100(7)	DQB1*06:02	60(3)			DPB1*04:02	28(2)
DRB1*15	100(8)						DQB1*06	100(7)			DPB1*04(DP402)	75(3)
											DPB1*04	25(1)

**Table 11. Summary of the 418<sup>th</sup> Cell Exchange (Cell #1669- 1672)**

**Serological typing**

(Hispanic) <b>Cell 1669</b>	
(6 Samples Typed)	
A24	100.0%
	[100.0%]
A68	83.3%
A28	16.7%
	[100.0%]
B39	66.7%
B16	16.7%
	[83.3%]
B44	83.3%
	[83.3%]
Bw4	100.0%
Bw6	100.0%
Others Found	
B45	16.7%
B38	16.7%

(Black) <b>Cell 1670</b>	
(6 Samples Typed)	
A24	100.0%
	[100.0%]
A68	66.7%
A28	33.3%
	[100.0%]
B51	100.0%
	[100.0%]
B81	100.0%
	[100.0%]
Bw4	100.0%
Bw6	100.0%
Others Found	

(Filipino) <b>Cell 1671</b>	
(3 Samples Typed)	
A11	100.0%
	[100.0%]
A34	100.0%
	[100.0%]
B62	100.0%
	[100.0%]
B55	100.0%
	[100.0%]
Bw6	100.0%
Others Found	

(Hispanic) <b>Cell 1672</b>	
(4 Samples Typed)	
A32	100.0%
	[100.0%]
A68	75.0%
A28	25.0%
	[100.0%]
B7	100.0%
	[100.0%]
B35	100.0%
Bw6	100.0%
Others Found	

**Table 12. Individual laboratory results for Cell #1669 - Class I**

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
278	*24	*68	*39	*44	*07	*16	*24:02	*68:03	*39:05	*44:02	*07:02	*16:04		
725	*24	*68	*39	*44	*07	*16							SSO	
731	*24	*68	*39	*44	*07	*16	*24:02:01G	*68:03:01	*39:05:01	*44:02:01G	*07:02:01G	*16:04:01	SSO SBT NGS	
745							*24:02:01:01	*68:03:01	*39:05:01	*44:02:01	*07:02:01	*16:04:01	SSP SBT NGS	
747	*24	*68	*39	*44	*07	*16	*24:02:01	*68:03:01	*39:05:01	*44:02:01	*07:02:01	*16:04:01	SSP SSO NGS	
762							*24:02	*68:03	*39:05	*44:02	*07:02	*16:04	NGS	
771	*24	*68	*39	*44	*07	*16	*24:02	*68:03	*39:05	*44:02	*07:02	*16:04	SSO NGS	
774	*24	*68	*39	*44	*07	*16			*39:05				SSP SSO	B*39:56
3186	*24	*68	*39	*44	*07	*16							SSO	
														A*24:352 A*24:353 A*24:402 A*24:418 A*24:419 A*24:422 A*24:436 A*24:437 A*24:443 A*24:448N A*24:451 A*24:454 A*24:460 A*24:463 A*24:464 A*24:465 A*24:466 A*24:469 A*24:470 A*24:473Q A*24:474 A*24:479Q B*44:19N B*44:270 B*44:292 B*44:301 B*44:306N B*44:321 B*44:344 B*44:437 B*44:457 B*44:464 B*44:468 B*44:470 B*44:473 C*07:50 C*07:349 C*07:566 C*07:592 C*07:594 C*07:595 C*07:596 C*07:612 C*07:665 C*07:666 C*07:667 C*07:684 C*07:688 C*07:703 C*07:704 C*07:722 C*07:736 C*07:741 C*07:767+
3545	*24	*68	*39	*44	*07	*16	*24:02	*68:03	*39:05	*44:02	*07:02	*16:04	SSO SBT	
3808	*24	*68	*39	*44	*07	*16		*68:03	*39:05		*07:02:01G	*16:04	SSO	
4079							*24:02	*68:03	*39:05	*44:02	*07:02	*16:04	SSP NGS	
4251							*24:02	*68:03	*39:05	*44:02	*07:02	*16:04	NGS	
5133							*24:02:01:01	*68:03:01:01	*39:05:01:01	*44:02:01:01	*07:02:01:01	*16:04:01:01	NGS	
5214	*24	*68	*39	*44	*07	*16							SSO	
5462	*24	*68	*39	*44	*07	*16	*24:02	*68:03	*39:05	*44:02P	*07:02	*16:04	SSO NGS	B*44:479 B*44:470
6649	*24	*68	*39	*44									SSO	
8001	*24	*68	*39	*44	*07	*16							SSP SSO	
8043	*24	*68	*39	*44	*07	*16							SSO	
8103	*24	*68	*39	*44	*07	*16							SSO	
													SSP SBT NGS	
8119	*24	*68	*39	*44	*07	*16							RT-PCR	

**Table 13a: Individual laboratory results for Cell #1669 - Class II**

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
747	*04	*07	4*PRESENT	4*PRESENT	*02	*03	*02	*03	*01	*02	*04	*11	SSP SSO NGS	
771	*04	*07			*02	*03	*02	*03					SSO NGS	
3186	*04	*07	4*01		*02	*03	*02	*03	*01	*02	*04(DP402)	*11	SSO	
3545	*04	*07											SSO SBT	
3808	*04	*07	NT	NT	*02	*03	*02	*03	*01	*02	*04(DP402)	*11	SSO	
5214	*04	*07	4*01		*02	*03	*02	*03 (DQ8)	*01	*02	*04(DP402)	*11	SSO	
5462	*04	*07	4*01	4*01	*02	*03	*02	*03	*01	*02	NT	NT	SSO NGS	
8001	*04	*07	4*01	4*01	*02	*03	*02	*03					SSP SSO	
8103	*04	*07	4*01	4*01	*02	*03	*02	*03	*01	*02	*04	*11	SSO	
8119	*04	*07	4*01		*02	*03	*02	*03			*04(DP402)	*11	SSP SBT NGS RT-PCR	

**Table 13b: Individual laboratory results for Cell #1669 - Class II**

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04:07:01G	*07:01:01G			*02:01:01	*03:01:01G	*02:02	*03:02			*04:02:01G	*11:01:01	SSO SBT NGS	
745	*04:07	*07:01					*02:02	*03:02			*04:02:01	*11:01:01	SSP SBT NGS	DRB1*07:79 DRB1*07:93 DQB1*02:156 DQB1*03:289
747	*04:07:01	*07:01:01	4*01:01:01	4*01:03:02	*02:01:01	*03:01:01	*02:02	*03:02	*01:03:01	*02:01:01	*04:02:01	*11:01:01	SSP SSO NGS	DQB1*02:156 DQB1*03:289 DQB1*02:163N
771	*04:07	*07:01					*02:02	*03:02					SSO NGS	
774													SSP SSO	B*39:56
3545	*04:07	*07:01											SSO SBT	DRB1*04:92 DRB1*07:79 DRB1*07:93
3808	*04:07				*02:01	*03:01	*02:02	*03:02	*01:03	*02:01	*04:02	*11:01	SSO	
4079	*04:07	*07:01	4*01:01	4*01:03	*02:01	*03:01	*02:02	*03:02	*01:03	*02:01	*04:02	*11:01	SSP NGS	
5214											*04:02G	*11:01G	SSO	
5462	*04:07	*07:01	4*01:01	4*01:03	*02:01	*03:01	*02:02	*03:02	*01:03	*02:01	*04:02	*11:01	SSO NGS	
8001	*04:07	*07:01	4*01:01	4*01:03			*02:02	*03:02			*04:02	*11:01	SSP SSO	



**Table 14. Individual laboratory results for Cell #1670 - Class I**

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
278	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01	*81:01	*15:02	*18:01		
725	*24	*68	*51	*81	*15	*18							SSO	
731	*24	*68	*51	*81	*15	*18	*24:02:01G	*68:02:01G	*51:01:01G	*81:01:01G	*15:02:01G	*18:01:01G	SSO SBT NGS	
745							*24:02:01:01	*68:02:01:01	*51:01:01	*81:01	*15:02:01:01	*18:01	SSP SBT NGS	
747	*24	*68	*51	*81	*15	*18	*24:02:01	*68:02:01	*51:01:01	*81:01	*15:02:01	*18:01	SSP SSO NGS	
762							*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	NGS	
771	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	SSO NGS	
774	*24	*68	*51	*81	*15	*18							SSP SSO	
3186	*24	*68	*51	*81	*15	*18							SSO	
														B*51:289 A*24:352 A*24:353 A*24:402 A*24:418 A*24:419 A*24:422 A*24:436 A*24:437 A*24:443 A*24:448N A*24:451 A*24:454 A*24:460 A*24:463 A*24:464 A*24:465 A*24:466 A*24:469 A*24:470 A*24:473Q A*24:474 A*24:479Q A*68:163 A*68:198 A*68:216N B*51:193 B*51:224 B*51:230 B*51:232 B*51:248 B*51:249 B*51:250 B*51:260 B*51:262 B*51:269 B*51:270 B*51:271 B*51:285 B*51:286 B*51:296 B*51:297 B*51:308 B*51:309 B*81:02 C*15:87 C*15:154 C*15:176 C*18:02 C*18:11 C*15:197 C*15:202 C*15:205
3545	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	SSO SBT	
3808	*24	*68	*51	*81	*15	*18		*68:02					SSO	
4079							*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	SSP NGS	
4251							*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	NGS	
5133							*24:02:01:01	*68:02:01:01	*51:01:01	*81:01:01	*15:02:01	*18:01:01	NGS	
5214	*24	*68	*51	*81	*15	*18							SSO	
5462	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01P	*81:01	*15:02	*18:01	SSO NGS	B*51:289
6649	*24	*68	*51	*81									SSO	
8001	*24	*68	*51	*81	*15	*18							SSP SSO	
8043	*24	*68	*51	*81	*15	*18							SSO	
8103	*24	*68	*51	*81	*15	*18							SSO	
													SSP SBT NGS	
8119	*24	*68	*51	*81	*15	*18							RT-PCR	

**Table 15a: Individual laboratory results for Cell #1670 - Class II**

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
747	*09	*11	3*PRESENT	4*PRESENT	*03	*05	*02	*03	*01	*02	*01	*04	SSP SSO NGS	
771	*09	*11			*03	*05	*02	*03					SSO NGS	
3186	*09	*11	3*02	4*01	*03	*05	*02	*03	*01	*02	*01	*04(DP401)	SSO	
3545	*09	*11											SSO SBT	
3808	*09	*11	NT	NT	*03	*05	*02	*03	*01	*02	*01	*04(DP401)	SSO	
5214	*09	*11	3*02	4*01	*03	*05	*02	*03(DQ7)	*01	*02	*01	*04(DP401)	SSO	
5462	*09	*11	3*02	4*01	*03	*05	*02	*03	*01	*02	NT	NT	SSO NGS	
8001	*09	*11	3*02	4*01	*03	*05	*02	*03					SSP SSO	
8103	*09	*11	3*02	4*01	*03	*05	*02	*03	*01	*02	*01	*04	SSO	
													SSP SBT NGS	
8119	*09	*11	3*02	4*01	*03	*05	*02	*03			*01	*04(DP401)	RT-PCR	

**Table 15b: Individual laboratory results for Cell #1670 - Class II**

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*09:01:02G	*11:01:01G			*03:03:01	*05:05:01	*02:02:01	*03:01:01G			*01:01:01G	*04:01:01G	SSO SBT NGS	
745	*09:01:02	*11:01:01					*02:02:01	*03:01			*01:01:01	*04:01:01	SSP SBT NGS	DQB1*03:297
747	*09:01:02	*11:01:01	3*02:02:01	4*01:01:01	*03:03:01	*05:05:01	*02:02:01	*03:01	*01:03:01	*02:02:02	*01:01:01	*04:01:01	SSP SSO NGS	DQB1*03:297 DQB1*02:163N
771	*09:01	*11:01					*02:02	*03:01					SSO NGS	
3545	*09:01	*11:01											SSO SBT	DRB1*09:21 DRB1*09:31
3808							*02:02				*01:01	*04:01	SSO	
4079	*09:01	*11:01	3*02:02	4*01:01	*03:03	*05:05	*02:02	*03:01	*01:03	*02:02	*01:01	*04:01	SSP NGS	
5214											*01:01G	*04:01G	SSO	
5462	*09:01	*11:01	3*02:02	4*01:01	*03:03	*05:05	*02:02	*03:01	*01:03	*02:02	*01:01	*04:01	SSO NGS	
8001	*09:01	*11:01	3*02:02	4*01:01			*02:02	*03:01			*01:01	*04:01	SSP SSO	

**Table 16. Individual laboratory results for Cell #1671 - Class I**

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
278	*11	*34	*15	*55	*01	*07	*11:01	*34:01	*15:35	*55:02	*01:02	*07:02		
725	*11	*34	*15	*55	*01	*07							SSO	
731	*11	*34	*15	*55	*15	*07	*11:01:01G	*34:01:01G	*15:35	*55:02:01G	*01:02:01G	*07:02:01G	SSO SBT NGS	
745							*11:01:01:01	*34:01:01:01	*15:35	*55:02:01	*01:02:01	*07:02:01	SSP SBT NGS	
747	NT												SSP SSO NGS	
762							*11:01	*34:01	*15:35	*55:02	*01:02	*07:02	NGS	
771	*11	*34	*15	*55	*01	*07	*11:01	*34:01	*15:35	*55:02	*01:02	*07:02	SSO NGS	
774	*11	*34	*15	*55	*01	*07			*15:35				SSP SSO	
3186	*11	*34	*15	*55	*01	*07							SSO	
														A*11:263 A*11:270 A*11:278 A*11:280 A*11:295 A*11:303 A*11:306 A*11:313Q A*11:316 A*11:320 A*11:324 A*11:328 A*11:347N A*11:353 A*34:18 C*07:349 C*07:566 C*07:592 C*07:594 C*01:85 C*01:127 C*01:142 C*01:150 C*01:151 C*07:50 C*07:595 C*07:596 C*07:612 C*07:665 C*07:666 C*07:667 C*07:684 C*07:688 C*07:703 C*07:704 C*07:722 C*07:736 C*07:741 C*07:767 C*07:769 C*07:779 C*07:783 C*07:789 C*07:791 C*07:801 C*07:807N C*07:809 C*07:810 C*01:164 C*01:172 C*01:173 C*01:174 C*01:182 C*01:185Q B*55:107 C*07:818 C*07:822
3545	*11	*34	*15	*55	*01	*07	*11:01	*34:01	*15:35	*55:02	*01:02	*07:02	SSO SBT	
3808	*11	*34	*15	*55	*01	*07			*15:35	*55:02	*01:02	*07:02:01G	SSO	
4079							NT	NT	NT	NT	NT	NT	SSP NGS	
4251							*11:01	*34:01	*15:35	*55:02	*01:02	*07:02	NGS	
5214	*11	*34	*15	*55	*01	*07							SSO	
5133							*11:01:01:01	*34:01:01:01	*15:35	*55:02:01	*01:02:01:01	*07:02:01:01	NGS	
5462	*11	*34	*15	*55	*01	*07	*11:01	*34:01	*15:35	*55:02	*01:02	*07:02	SSO NGS	
6649	*11	*34	*15	*55									SSO	
8001	*11	*34	*15(B62)	*55	*01	*07							SSP SSO	
8043	*11	*34	*15	*55	*01	*07							SSO	
8103	*11	*34	*15	*55	*01	*07							SSO	
													SSP SBT NGS	
8119							*11:01	*34:01	*15:35	*55:02	*01:02	*07:02	RT-PCR	

**Table 17a: Individual laboratory results for Cell #1671 - Class II**

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
747	NT												SSP SSO NGS	
771	*04	*12			*03	*06	*03	*04					SSO NGS	
3186	*04	*12	3*03	4*01	*03	*06	*03	*04	*02		*01	*05	SSO	
3545	*04	*12											SSO SBT	
3808	*04	*12	NT	NT	*03	*06	*03	*04	*02	*02	*01	*05	SSO	
5214	*04	*12	3*03	4*01	*03	*06	*03(DQ7)	*04	*02		*01	*05	SSO	
5462	*04	*12	3*03	4*01	*03	*06	*03	*04	*02		NT	NT	SSO NGS	
8001	*04	*12	3*03	4*01	*03	*06	*03	*04					SSP SSO	
8103	*04	*12	3*03	4*01	*03	*06	*03	*04	*02	*02	*01	*05	SSO	
8119	NT												SSP SBT NGS RT-PCR	

**Table 17b: Individual laboratory results for Cell #1671 - Class II**

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04:05:01	*12:02:01			*03:03:01	*06:01:01G	*03:01:01G	*04:02:01G			*01:01:01G	*05:01:01G	SSO SBT NGS	
745	*04:05:01	*12:02:01					*03:01:01	*04:02:01			*01:01:01	*05:01:01	SSP SBT NGS	
747	NT												SSP SSO NGS	
771	*04:05	*12:02					*03:01	*04:02					SSO NGS	
3545	*04:05	*12:02											SSO SBT	
3808	*04:05	*12:02				*06:01		*04:02			*01:01	*05:01	SSO	
4079	NT												SSP NGS	
5214						*06:01					*01:01G	*05:01G	SSO	
5462	*04:05	*12:02	3*03:01	4*01:03	*03:03	*06:01	*03:01	*04:02	*02:02		*01:01	*05:01	SSO NGS	
8001	*04:05	*12:02	3*03:01	4*01:03			*03:01	*04:02			*01:01	*05:01	SSP SSO	
8119	*04:05	*12:02	3*03:01		*03:03	*06:01	*03:01	*04:02			*01:01	*05:01	SSP SBT NGS RT-PCR	

**Table 18. Individual laboratory results for Cell #1672 - Class I**

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
278	*32	*68	*07	*35	*01	*07	*32:01	*68:01	*07:02	*35:43	*01:02	*07:02		
725	*32	*68	*07	*35	*01	*07							SSO	
731	*32	*68	*07	*35	*01	*07	*32:01:01G	*68:01:02G	*07:02:01G	*35:43:01G	*01:02:01G	*07:02:01G	SSO SBT NGS	
745							*32:01:01:01	*68:01:02:01	*07:02:01	*35:43:01	*01:02:01	*07:02:01:03	SSP SBT NGS	
747	NT												SSP SSO NGS	
762							*32:01	*68:01	*07:02	*35:43	*01:02	*07:02	NGS	
771	*32	*68	*07	*35	*01	*07	*32:01	*68:01	*07:02	*35:43	*01:02	*07:02	SSO NGS	
774	*32	*68	*07	*35	*01	*07				*35:43			SSP SSO	B*35:67 B*35:79 B*35:102
3186	*32	*68	*07	*35	*01	*07							SSO	
														A*32:103 A*32:117N A*68:152 B*07:61 B*07:161N B*07:271 B*07:294 B*07:298 B*07:311 B*07:312 B*07:338 B*07:339 B*07:354 B*07:355 C*01:85 C*01:127 C*01:142 C*01:150 C*01:151 C*01:164 C*01:172 C*01:173 C*01:174 C*01:182 C*01:185Q C*07:50 C*07:349 C*07:566 C*07:592 C*07:594 C*07:595 C*07:596 C*07:612 C*07:665 C*07:666 C*07:667 C*07:791 C*07:684 C*07:688 C*07:703 C*07:704 C*07:722 C*07:736 C*07:741 C*07:767+
3545	*32	*68	*07	*35	*01	*07	*32:01	*68:01	*07:02	*35:43	*01:02	*07:02	SSO SBT	
3808	*32	*68	*07	*35	*01	*07				*35:43		*07:02:01G	SSO	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP NGS	
4251							*32:01	*68:01	*07:02	*35:43	*01:02	*07:02	NGS	
5133							*32:01:01:01	*68:01:02:01	*07:02:01:01	*35:43:01	*01:02:01:01	*07:02:01:03	NGS	
5214	*32	*68	*07	*35	*01	*07							SSO	
5462	*32	*68	*07	*35	*01	*07	*32:01	*68:01	*07:02	*35:43	*01:02	*07:02	SSO NGS	
6649	*32	*68	*07	*35									SSO	
8001	*32	*68	*07	*35	*01	*07							SSP SSO	
8043	*32	*68	*07	*35	*01	*07							SSO	
8103	*32	*68	*07	*35	*01	*07							SSO	
													SSP SBT NGS	
8119							*32:01	*68:01	*07:02	*35:43	*01:02	*07:02	RT-PCR	

**Table 19a: Individual laboratory results for Cell #1672 - Class II**

Low resolution														
Center	DRB1		DRB*03/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
747	NT												SSP SSO NGS	
771	*04	*15			*01	*03	*03	*06					SSO NGS	
3186	*04	*15	4*01	5*01	*01	*03	*03	*06	*01		*(04(DP401)	*04(DP402)	SSO	
3545	*04	*15											SSO SBT	
3808	*04	*15	NT	NT	*01	*03	*03	*06	*01	*01	*(04(DP401)	*04(DP402)	SSO	
5214	*04	*15	4*01	5*01	*01	*03	*03(DQ8)	*06	*01		*(04(DP401)	*04(DP402)	SSO	
5462	*04	*15	4*01	5*01	*01	*03	*03	*06	*01		NT	NT	SSO NGS	
8001	*04	*15	4*01	5*01	*01	*03	*03	*06					SSP SSO	
8103	*04	*15	4*01	5*01	*01	*03	*03	*06	*01	*01	*04	*04	SSO	
8119	NT												SSP SBT NGS RT-PCR	

**Table 19b: Individual laboratory results for Cell #1672 - Class II**

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04:07:01G	*15:01:01G			*01:02:01G	*03:01:01G	*03:02:01G	*06:02:01G			*04:01:01G	*04:02:01G	SSO SBT NGS	
745	*04:92	*15:01:01					*03:02	*06:02:01			*04:01:01	*04:02	SSP SBT NGS	DQB1*0*03:289 DPB1*105:01
747	NT												SSP SSO NGS	
771	*04:07	*15:01					*03:02						SSO NGS	
3545	*04:07	*15:01											SSO SBT	DRB1*04:92 DRB1*15:171
3808	*04:07	*15:01:01G			*01:02	*03:01	*03:02		*01:03	*01:03	*04:01:01G	*04:02:01G	SSO	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP NGS	
5214											*04:01G	*04:02G	SSO	
5462	*04:92	*15:01	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03		*04:01P	*04:02P	SSO NGS	DPB1*126:01 DPB1*105:01 DPB1*665:01
8001	*04:07:01G	*15:01	4*01:03	5*01:01			*03:02	*06:02			*04:01	*04:02	SSP SSO	
8119	*04:92	*15:01	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02			*04:01P	*04:02P	SSP SBT NGS RT-PCR	

**Table 20. Individual laboratory results for Cell #1669-1672 by serology**

Investigator	Days Old	Viab %	Cell No 1669 (Hispanic)								Cell No 1670 (Black)							Cell No 1671 (Filipino)							Cell No 1672 (Hispanic)											
			A24	A68	B39	B44	Cw7	Bw4	Bw6	OTHERS	Viab %	A24	A68	B51	B81	Bw4	Bw6	OTHERS	Viab %	A11	A34	B62	B55	Cw1	Cw7	Bw6	OTHERS	Viab %	A32	A68	B7	B35	Cw1	Cw7	Bw6	OTHERS
Cecka, J. Mic		>95	+	+	+	+		+	+		>95	+	+	+	+	+	+	>95	+	+	+	+			+		>95	+	+	+	+				+	
Fort, Marylis	3	93	+	+	+	+		+	+		93	+	+	+	+	+		NT								NT										
Gillis, David	14	50	+	A28	+	+		+	+		50	+	A28	+	+	+	+	20								50	+	A28	+	+				+		
Loewenthal ,	2	NT									NT							NT								NT										
Permpikul, Ve	6	90	+	+	B38	B45		+	+		90	+	+	+	+	+	+	90	+	+	+	+		+		90	+	+	+	+				+		
Villard, Jean	6	95	+	+	B16	+		+	+		95	+	A28	+	+	+	+	NT								NT										
Walsh, Lisa	3	90	+	+	+	+		+	+		90	+	+	+	+	+	+	90	+	+	+	+		+		90	+	+	+	+				+		