

CELL EXCHANGE #422 MAY 5, 2021

Cells 1685 - 1688

The results for Cell Exchange #422 are summarized in Table 7 - 10. Molecular typing results for individual laboratories are listed in Tables 11 – 18 for each sample. Twelve 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 assignments can be graded. Haplotype frequencies used in this report are from the NMDP Bioinformatics website, <https://bioinformatics.bethematchclinical.org/>.

Cell 1685. The reported HLA type for this cell from a Hispanic donor was A*02:01-A*33:01-B*39:11-B*44:03-C*02:02-C*07:02-DRB1*04:17-DRB1*13:01-DRB3*01:01-DRB4*01:03-DQA1*01:03-DQA1*03:03-DQB1*04:02-DQB1*06:03-DPA1*01:03-DPB1*04:01:01G-DPB1*04:02:01G. This cell was previously examined as cell 1648 (2019). In this present retyping, consensus among labs with respect to class I and class II allele assignments was $\geq 90\%$.

One possible association present in this cell was B*39:11-DRB1*04:17. It is observed exclusively in Hispanics, with HF = 0.00025. The other likely association present, B*44:03-DRB1*13:01, was observed across all populations, with HF = 0.00247, in Hispanics.

Cell 1686. The reported HLA type for this cell from a Hispanic donor was A*32:01-A*68:01-B*15:15-B*35:08-C*01:02-C*04:01-DRB1*04:03-DRB1*08:02-DRB4*01:03-DQA1*03:01-DQA1*04:01-DQB1*03:02-DQB1*04:02-DPA1*01:03-DPB1*03:01-DPB1*04:01. This cell was previously examined as cells 1654 (2019) and 1575 (2016). Good agreement ($\geq 90\%$) was achieved among labs for class I and class II allele assignments.

Likely associations present in this cell were B*15:15-C*01:02-DRB1*08:02-DQB1*04:02 and B*35:08-C*04:01-DRB1*04:03-DQB1*03:02. Each are observed in Hispanics, with respective HF = 0.00512 and 0.00233.

Cell 1687. The reported HLA type for this cell from a Caucasian donor was A*01:01-A*03:01-B*52:01-C*12:02-DRB1*03:01-DRB1*13:03-DRB3*01:01-DRB3*02:02-DQA1*05:01-DQA1*05:05-DQB1*02:01-DQB1*03:01-DPA1*01:03-DPB1*02:01-DPB1*04:02/*701:01. Good agreement ($\geq 90\%$) was achieved for each allele assignment, except DPB1*04. Four labs assigned DPB1*701:01, 2 labs assigned DPB1*04:02:01G, and 2 labs assigned DPB1*04:02. DPB1*701:01 "is identical over exon 2 to a DPB1*04:02:01:02, differing only by SNP in exon 4."(1)

The likely associations present in this cell were A*01:01-B*52:01-C*12:02 and A*03:01-B*52:01-C*12:02. Each were observed in Caucasian populations, with respective HF = 0.00269 and 0.00054.

Cell 1688. The reported HLA type for this cell from a Hispanic donor was A*02:05-A*24:02-B*39:06-B*41:01-C*07:01-C*07:02-DRB1*08:01-DRB1*13:05-DRB3*02:02-DQA1*04:01-DQA1*05:05-DQB1*03:01-DQB1*04:02-DPA1*01:03-DPB1*02:01-DPB1*03:01. Good agreement ($\geq 90\%$) was achieved for all allele assignments.

The likely associations present in this cell, A*02:05-B*41:01-C*07:01 and A*24:02-B*39:06-C*07:02, were observed in Hispanics, with respective HF = 0.00152 and 0.01259.

References:

1. Cambridge CA, Turner, TR, Abraham JP, et al. HLA-DPB1*64:01N and DPB1*701:01 sequence extensions by single molecule real-time DNA sequencing. 2018;92:426-427.

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Table 7: Summary of the 422nd Cell Exchange - DNA Typing

Cell 1685

DNA Typing - class I	13 labs High; 13 labs low- A		14 labs High; 13 labs low- B		14 labs High; 11 labs low- C	
		%(n)		%(n)		%(n)
	A*02:01:01:01	8 (1)	B*39:11	100(14)	C*02:02:02:01	7 (1)
	A*02:01:01	8 (1)	B*39	100(13)	C*02:02:02	7 (1)
	A*02:01	84(11)			C*02:02	86(12)
A*02	100(13)			C*02	100(11)	
13 labs High; 12 labs low- A		13 labs High; 13 labs low- B		13 labs High; 11 labs low- C		
	%(n)		%(n)		%(n)	
A*33:01:01:01	8 (1)	B*44:03:01:02	8 (1)	C*07:02:01:01	8 (1)	
A*33:01:01	8 (1)	B*44:03:01	8 (1)	C*07:02:01	8 (1)	
A*33:01	84(11)	B*44:03	84(11)	C*07:02	84(11)	
A*33	100(12)	B*44	100(13)	C*07	100(11)	

DNA Typing - class II	12 labs High; 6 labs low-DRB1		7 labs High; 1 labs low-DRB3/4/5		9 labs High; 5 labs Low-DQA1		11 labs High; 5 labs Low-DQB1		7 labs High; 2 labs Low-DPA1		10 labs High; 3 labs Low-DPB1	
		%(n)		%(n)		%(n)		%(n)		%(n)		%(n)
	DRB1*04:17:02	17(2)	DRB3*01:01:02	29(2)	DQA1*01:03:01	22(2)	DQB1*04:02:01	18(2)	DPA1*01:03:01	29(2)	DPB1*04:01:01	20(2)
	DRB1*04:17	83(10)	DRB3*01:01	71(5)	DQA1*01:03	78(7)	DQB1*04:02:01G	9 (1)	DPA1*01:03:01G	14(1)	DPB1*04:01:01G	20(2)
	DRB1*04	100(6)	DRB3*01	100(1)	DQA1*01	100(5)	DQB1*04:02	73(8)	DPA1*01:03	57(4)	DPB1*04:01P	10(1)
						DQB1*04	100(5)	DPA1*01	100(2)	DPB1*04:01	40(4)	
										DPB*126:01	10(1)	
										DPB1*04(DP401)	67(2)	
										DPB1*04	33(1)	
11 labs High; 6 labs low-DRB1		7 labs High; 1 labs low-DRB3/4/5		8 labs High; 5 labs Low-DQA1		11 labs High; 5 labs Low-DQB1				10 labs High; 3 labs Low-DPB1		
	%(n)		%(n)		%(n)		%(n)				%(n)	
DRB1*13:01:01	18(2)	DRB4*01:03:02	29(2)	DQA1*03:03:01	25(2)	DQB1*06:03:01	18(2)			DPB1*04:02:01	20(2)	
DRB1*13:01:01G	9 (1)	DRB4*01:03	71(5)	DQA1*03:03	63(5)	DQB1*06:03:01G	9 (1)			DPB1*04:02:01G	20(2)	
DRB1*13:01	73(8)	DRB4*01	100(1)	DQA1*03:02	12(1)	DQB1*06:03	73(8)			DPB1*04:02P	10(1)	
DRB1*13	100(6)			DQA1*03	100(5)	DQB1*06	100(5)			DPB1*04:02	40(4)	
										DPB1*665:01	10(1)	
										DPB1*04(DP402)	67(2)	
										DPB1*04	33(1)	

Table 8: Summary of the 422nd Cell Exchange - DNA Typing

Cell 1686

DNA Typing - class I		14 labs High; 13 labs low- A	%(n)	15 labs High; 12 labs low- B	%(n)	13 labs High; 11 labs low- C	%(n)
		A*32:01:01:01	7 (1)	B*15:15:01	13(2)	C*01:02:01:01	8 (1)
A*32:01:01	7 (1)	B*15:15	87(13)	C*01:02:01	8 (1)		
A*32:01	86(12)	B*15	100(12)	C*01:02	84(11)		
A*32	100(13)			C*01	100(11)		
DNA Typing - class I		13 labs High; 13 labs low- A	%(n)	15 labs High; 13 labs low- B	%(n)	13 labs High; 11 labs low- C	%(n)
		A*68:01:02:01	8 (1)	B*35:08:01	13(2)	C*04:01:01:06	8 (1)
A*68:01:02	8 (1)	B*35:08	87(13)	C*04:01:01	8 (1)		
A*68:01	84(11)	B*35	100(13)	C*04:01:01G	8 (1)		
A*68	92(12)			C*04:01	76(10)		
A*69	8 (1)			C*04	100(11)		
DNA Typing - class II		11 labs High; 6 labs low-DRB1	%(n)	7 labs High; 2 labs low-DRB3/4/5	%(n)	9 labs High; 4 labs Low-DQA1	%(n)
		DRB1*04:03:01	18(2)	DRB4*01:03:01	29(2)	DQA1*03:01:01	22(2)
DRB1*04:03:01G	9 (1)	DRB4*01:03	71(5)	DQA1*03:01	78(7)		
DRB1*04:03	73(8)	DRB4*01	100(2)	DQA1*03	100(4)		
DRB1*04	100(6)						
DNA Typing - class II		12 labs High; 6 labs low-DRB1	%(n)	9 labs High; 4 labs Low-DQA1	%(n)	11 labs High; 5 labs Low-DQB1	%(n)
		DRB1*08:02:01	17(2)	DQA1*04:01:01	22(2)	DQB1*03:02:01	18(2)
DRB1*08:02	83(10)	DQA1*04:01	78(7)	DQB1*03:02:01G	9 (1)		
DRB1*08	100(6)	DQA1*04	100(4)	DQB1*03:02	73(8)		
				DQB1*03	100(5)		
DNA Typing - class II		7 labs High; 3 labs Low-DPA1	%(n)	10 labs High; 5 labs Low-DPB1	%(n)		
		DPA1*01:03:01	29(2)	DPB1*03:01:01	20(2)		
DPA1*01:03	71(5)	DPB1*03:01:01G	10(1)				
DPA1*01	100(3)	DPB1*03:01P	10(1)				
		DPB1*03:01	60(6)				
		DPB1*03	100(5)				
DNA Typing - class II		7 labs High; 3 labs Low-DPA1	%(n)	10 labs High; 5 labs Low-DPB1	%(n)		
		DPA1*01:03:01	29(2)	DPB1*04:01:01	20(2)		
DPA1*01:03	71(5)	DPB1*04:01:01G	10(1)				
DPA1*01	100(3)	DPB1*04:01P	10(1)				
		DPB1*04:01	60(6)				
		DPB1*04(DP401)	40(2)				
		DPB1*04	60(3)				

Table 9: Summary of the 422nd Cell Exchange - DNA Typing

Cell 1687

DNA Typing - class I	<u>10 labs High; 12 labs low- A</u>		<u>11 labs High; 12 labs low- B</u>		<u>12 labs High; 10 labs low- C</u>	
		%(n)		%(n)		%(n)
	A*01:01:01:01	10(1)	B*52:01:01:02	9 (1)	C*12:02:02:01	8 (1)
	A*01:01	90(9)	B*52:01	91(10)	C*12:02	92(11)
	A*01	100(12)	B*52	100(12)	C*12	100(10)
<u>11 labs High; 11 labs low- A</u>						
	%(n)					
A*03:01:01:01	9 (1)					
A*03:01	91(10)					
A*03	100(11)					

DNA Typing - class II	<u>10 labs High; 6 labs low-DRB1</u>		<u>5 labs High; 1 lab low-DRB3/4/5</u>		<u>7 labs High; 5 labs Low-DQA1</u>		<u>9 labs High; 5 labs Low-DQB1</u>		<u>5 labs High; 2 labs Low-DPA1</u>		<u>8 labs High; 3 labs Low-DPB1</u>	
		%(n)		%(n)		%(n)		%(n)		%(n)		%(n)
	DRB1*03:01:01	10(1)	DRB3*01:01:02	20(1)	DQA1*05:01:01	14(1)	DQB1*02:01:01	11(1)	DPA1*01:03:01	20(1)	DPB1*02:01:02	12(1)
	DRB1*03:01:01G	10(1)	DRB3*01:01P	20(1)	DQA1*05:01	86(6)	DQB1*02:01:01G	11(1)	DPA1*01:03:01G	20(1)	DPB1*02:01:02G	12(1)
	DRB1*03:01P	10(1)	DRB3*01:01	60(3)	DQA1*05	100(5)	DQB1*02:01	78(7)	DPA1*01:03	60(3)	DPB1*02:01	75(6)
	DRB1*03:01	70(7)	DRB3*01	100(1)			DQB1*02	100(5)	DPA1*01	100(2)	DPB1*02(DP201)	67(2)
	DRB1*03	100(6)									DPB1*02	33(1)
<u>10 labs High; 6 labs low-DRB1</u>		<u>5 labs High; 1 lab low-DRB3/4/5</u>		<u>6 labs High-DQA1</u>		<u>8 labs High; 5 labs Low-DQB1</u>				<u>8 labs High; 3 labs Low-DPB1</u>		
	%(n)		%(n)		%(n)		%(n)				%(n)	
DRB1*13:03:01	10(1)	DRB3*02:02:01	20(1)	DQA1*05:05:01	17(1)	DQB1*03:01:01	12(1)			DPB1*04:02:01G	25(2)	
DRB1*13:03	90(9)	DRB3*02:02:01G	20(1)	DQA1*05:05	83(5)	DQB1*03:01:01G	12(1)			DPB1*701:01	50(4)	
DRB1*13	100(6)	DRB3*02:02	60(3)			DQB1*03:01	75(6)			DPB1*04:02	25(2)	
		DRB3*02	100(1)			DQB1*03	100(5)			DPB1*04(DP402)	67(2)	
										DPB1*04	33(1)	

Table 10: Summary of the 422nd Cell Exchange - DNA Typing

Cell 1688

DNA Typing - class I	11 labs High;12 labs low- A		12 labs High; 12 labs low- B		10 labs High; 11 labs low- C	
		%(n)		%(n)		%(n)
	A*02:05:01:01	9 (1)	B*39:06:02:01	8 (1)	C*07:01:01:09	10(1)
	A*02:05	91(10)	B*39:06	92(11)	C*07:01	90(9)
	A*02	100(12)	B*39	100(12)	C*07	100(11)
11 labs High;12 labs low- A		11 labs High; 12 labs low- B		10 labs High- C		
	%(n)		%(n)		%(n)	
A*24:02:01:01	9 (1)	B*41:01:01:01	9 (1)	C*07:02:01:01	10(1)	
A*24:02	91(10)	B*41:01	91(10)	C*07:02	90(9)	
A*24	100(12)	B*41	92(11)			
		B*38	8 (1)			

DNA Typing - class II	9 labs High; 6 labs low-DRB1		5 labs High; 2 labs low-DRB3/4/5		7 labs High; 5 labs Low-DQA1		8 labs High; 5 labs Low-DQB1		5 labs High; 3 labs Low-DPA1		8 labs High; 4 labs Low-DPB1	
		%(n)		%(n)		%(n)		%(n)		%(n)		%(n)
	DRB1*08:01:01	11(1)	DRB3*02:02:01	20(1)	DQA1*04:01:01	14(1)	DQB1*03:01:01	12(1)	DPA1*01:03:01	20(1)	DPB1*02:01:02	12(1)
	DRB1*08:01	89(8)	DRB3*02:02	80(4)	DQA1*04:01	86(6)	DQB1*03:01:01G	12(1)	DPA1*01:03:01G	20(1)	DPB1*02:01:02G	12(1)
	DRB1*08	100(6)	DRB3*02	100(2)	DQA1*04	100(5)	DQB1*03:01	75(6)	DPA1*01:03	60(3)	DPB1*02:01P	12(1)
							DQB1*03	100(5)	DPA1*01	100(3)	DPB1*02:01	63(5)
											DPB1*02(DP201)	75(3)
											DPB1*02	25(1)
	10 labs High; 6 labs low-DRB1				6 labs High; 5 labs Low-DQA1		9 labs High; 5 labs Low-DQB1				8 labs High; 4 labs Low-DPB1	
	%(n)		%(n)		%(n)		%(n)		%(n)		%(n)	
DRB1*13:05:01	10(1)			DQA1*05:05:01	17(1)	DQB1*04:02:01	11(1)			DPB1*03:01:01	12(1)	
DRB1*13:05	90(9)			DQA1*05:05	83(5)	DQB1*04:02	89(8)			DPB1*03:01:01G	12(1)	
DRB1*13	100(6)			DQA1*05	100(5)	DQB1*04	100(5)			DPB1*03:01P	12(1)	
										DPB1*03:01	63(5)	
										DPB1*03	100(4)	

Table 11. Individual laboratory results for Cell #1685 - Class I

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
278	*02	*33	*39	*44	*02	*07	*02:01	*33:01	*39:11	*44:03	*02:02	*07:02	SSP SSO	
725	*02	*33	*39	*44	*02	*07							SSO	
731	*02	*33	*39	*44	*02	*07	*02:01	*33:01	*39:11	*44:03	*02:02	*07:02	SSP SBT RT-PCR	
747	*02	*33	*39	*44	*02	*07	*02:01:01	*33:01:01	*39:11	*44:03:01	*02:02:02	*07:02:01	SSP SSO NGS	
762							*02:01	*33:01	*39:11	*44:03	*02:02	*07:02	NGS	
771	*02	*33	*39	*44	*02	*07	*02:01	*33:01	*39:11	*44:03	*02:02	*07:02	SSO NGS	
774	*02	*33	*39	*44	*02	*07							SSP SSO	
3545	*02	*33	*39	*44	*02	*07	*02:01	*33:01	*39:11	*44:03	*02:02	*07:02	SSO SBT	C*02:27 C*07:76
3808	*02	*33	*39	*44	*02	*07			*39:11		*02:02		SSO	
4079							*02:01	*33:01	*39:11	*44:03	*02:02	*07:02	NGS	
4251							*02:01	*33:01	*39:11	*44:03	*02:02	*07:02	NGS	
5133							*02:01:01:01	*33:01:01:01	*39:11	*44:03:01:02	*02:02:02:01	*07:02:01:01	NGS	
5462							*02:01	*33:01	*39:11	*44:03	*02:02	*07:02	NGS	
5642	*02	*33	*39	*44	*02	*07								
6649	*02	*33	*39	*44									SSO	
8001							*02:01	*33:01	*39:11	*44:03	*02:02	*07:02	NGS	
8043	*02	*33	*39	*44	*02	*07	*02:01	*33:01	*39:11	*44:03	*02:02	*07:02	SSP SSO	
8058	*02		*39	*44									OTHER	
8103	*02	*33	*39	*44	*02	*07	*02:01	*33:01	*39:11	*44:03	*02:02	*07:02	SSO	A*33:03

Table 12a: Individual laboratory results for Cell #1685 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04	*13			*01	*03	*04	*06					SSP SBT RT-PCR	
771	*04	*13			*01	*03	*04	*06					SSO NGS	
774	*04	*13	3*01	4*01	*01	*03	*04	*06			*04(DP401)	*04(DP402)	SSP SSO	
3545	*04	*13											SSO SBT	
3808	*04	*13	NT	NT	*01	*03	*04	*06	*01	*01	*04(DP401)	*04(DP401)	SSO	
8103	*04	*13			*01	*03	*04	*06	*01	*01	*04	*04	SSO	

Table 12b: Individual laboratory results for Cell #1685 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04:17	*13:01					*04:02	*06:03					SSP SBT RT-PCR	
747	*04:17:02	*13:01:01	3*01:01:02	4*01:03:02	*01:03:01	*03:03:01	*04:02:01	*06:03:01	*01:03:01	*01:03:01	*04:01:01	*04:02:01	SSP SSO NGS	DPB1*126:01 DPB1*105:01 DPB1*665:01
771	*04:17	*13:01					*04:02	*06:03			*126:01	*665:01	SSO NGS	
774	*04:17	*13:01	3*01:01	4*01:03	*01:03	*03:03	*04:02	*06:03			*04:01	*04:02	SSP SSO	DRB1*13:138 DRB1*13:141 DRB1*13:148 DRB1*13:153 DRB1*13:166 DRB1*13:173 DRB1*13:186 DRB1*13:187 DRB3*01:16 DRB3*01:17 DRB3*01:19 DRB4*01:09 DRB4*01:10 DQB1*06:221
3545	*04:17	*13:01											SSO SBT	
3808	*04:17				*01:03		*04:02	*06:03	*01:03	*01:03	*04:01:01G	*04:02:01G	SSO	
4079	*04:17	*13:01	3*01:01	4*01:03	*01:03	*03:03	*04:02	*06:03	*01:03		*04:01	*04:02	NGS	
4251	*04:17	*13:01:01G	3*01:01	4*01:03	*01:03	*03:03	*04:02:01G	*06:03:01G	*01:03:01G	*01:03:01G	*04:01:01G	*04:02:01G	NGS	
5133	*04:17:02	*13:01:01	3*01:01:02	4*01:03:02	*01:03:01	*03:03:01	*04:02:01	*06:03:01	*01:03:01		*04:01:01	*04:02:01	NGS	DPB1*105:01 DPB1*126:01
5462	*04:17	*13:01	3*01:01	4*01:03	*01:03	*03:03	*04:02	*06:03	*01:03		*04:01P	*04:02P	NGS	DPB1*126:01 DPB1*105:01
8001	*04:17	*13:01	3*01:01	4*01:03	*01:03	*03:03	*04:02	*06:03			*04:01	*04:02	NGS	DRB3*01:62
8103	*04:17	*13:01			*01:03	*03:02	*04:02	*06:03	*01:03	*01:03	*04:01	*04:02	SSO	DQA1*03:03 DPB1*105:01

Table 13. Individual laboratory results for Cell #1686 - 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	*15	*35	*01	*04	*32:01	*68:01	*15:15	*35:08	*01:02	*04:01	SSP SSO	
725	*32	*68	*15	*35	*01	*04							SSO	
731	*32	*68	*15	*35	*01	*04	*32:01	*68:01	*15:15	*35:08	*01:02	*04:01	SSP SBT RT-PCR	
747	*32	*68	*15	*35	*01	*04	*32:01:01	*68:01:02	*15:15:01	*35:08:01	*01:02:01	*04:01:01	SSP SSO NGS	
762							*32:01	*68:01	*15:15	*35:08	*01:02	*04:01	NGS	
771	*32	*68	*15	*35	*01	*04	*32:01	*68:01	*15:15	*35:08	*01:02	*04:01	SSO NGS	
774	*32	*68	*15	*35	*01	*04			*15:15	*35:08			SSP SSO	
3545	*32	*68	*15	*35	*01	*04	*32:01	*68:01	*15:15	*35:08	*01:02	*04:01	SSO SBT	
3808	*32	*68	*15	*35	*01	*04	*32:01		*15:15	*35:08	*01:02		SSO	
4079							*32:01	*68:01	*15:15	*35:08	*01:02	*04:01	NGS	
4251							*32:01	*68:01	*15:15	*35:08	*01:02	*04:01	NGS	
5133							*32:01:01:01	*68:01:02:01	*15:15:01	*35:08:01	*01:02:01:01	*04:01:01:06	NGS	
5462							*32:01	*68:01	*15:15	*35:08	*01:02	*04:01	NGS	
5642	*32	*68	*15	*35	*01	*04								
6649	*32	*68	*15	*35									SSO	
8001							*32:01	*68:01	*15:15	*35:08	*01:02	*04:01	NGS	
8043	*32	*68	*15	*35	*01	*04	*32:01	*68:01	*15:15	*35:08		*04:01:01G	SSP SSO	
8058	*32	*69		*35									OTHER	
8103	*32	*68	*15	*35	*01	*04	*32:01	*68:01	*15:15	*35:08	*01:02	*04:01	SSO	

Table 14a: Individual laboratory results for Cell #1686 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04	*08	4*01	NP	*03	*04	*03	*04	*01	*01	*03	*04	SSP SBT RT-PCR	
771	*04	*08					*03	*04			*03	*04	SSO NGS	
774	*04	*08	4*01		*03	*04	*03	*04			*03	*04(DP401)	SSP SSO	
3545	*04	*08											SSO SBT	
3808	*04	*08	NT	NT	*03	*04	*03	*04	*01	*01	*03	*04(DP401)	SSO	
5642														
8103	*04	*08			*03	*04	*03	*04	*01	*01	*03	*04	SSO	

Table 14b: Individual laboratory results for Cell #1686 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04:03	*08:02					*03:02	*04:02					SSP SBT RT-PCR	
747	*04:03:01	*08:02:01	4*01:03:01		*03:01:01	*04:01:01	*03:02:01	*04:02:01	*01:03:01	*01:03:01	*03:01:01	*04:01:01	SSP SSO NGS	DPB1*350:01 DQB1*03:289 DPB1*124:01
771	*04:03	*08:02					*03:02	*04:02			*03:01	*04:01	SSO NGS	
774	*04:03	*08:02	4*01:03		*03:01	*04:01	*03:02	*04:02			*03:01	*04:01	SSP SSO	DRB1*04:93 DRB1*04:165 DRB1*04:181 DRB4*01:09 DRB*4*01:10 DRB1*04:109 DRB1*04:142N DRB1*04:96 DRB1*04:148 DRB1*04:163 DRB1*08:44 DQB1*04:19 DQB1*04:21
3545	*04:03	*08:02											SSO SBT	
3808		*08:02			*03:01	*04:01	*03:02	*04:02	*01:03	*01:03	*03:01:01G	*04:01:01G	SSO	
4079	*04:03	*08:02	4*01:03	4*01:03:01:02N	*03:01	*04:01	*03:02	*04:02	*01:03		*03:01	*04:01	NGS	
4251	*04:03:01G	*08:02	4*01:03		*03:01	*04:01	*03:02:01G	*04:02:01G	*01:03	*01:03	*03:01	*04:01	NGS	
5133	*04:03:01	*08:02:01	4*01:03:01		*03:01:01	*04:01:01	*03:02:01	*04:02:01	*01:03:01		*03:01:01	*04:01:01	NGS	
5462	*04:03	*08:02	4*01:03	NP	*03:01	*04:01	*03:02	*04:02	*01:03		*03:01P	*04:01P	NGS	DPB1*124:01 DPB1*350:01
8001	*04:03	*08:02	4*01:03		*03:01	*04:01	*03:02	*04:02			*03:01	*04:01	NGS	
8103	*04:03	*08:02			*03:01	*04:01	*03:02	*04:02	*01:03	*01:03	*03:01	*04:01	SSO	DPB1*104:01 DRB1*04:06

Table 15. Individual laboratory results for Cell #1687 - Class I

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
278	*01	*03	*52	*52	*12	*12	*01:01	*03:01	*52:01	*52:01	*12:02	*12:02	SSP SSO	
725	*01	*03	*52		*12								SSO	
731	*01	*03	*52	*52	*12	*12	*01:01	*03:01	*52:01	*52:01	*12:02	*12:02	SSP SBT RT-PCR	
747	NT						NT						SSP SSO NGS	
762							*01:01	*03:01	*52:01		*12:02		NGS	
771	*01	*03	*52		*12		*01:01	*03:01	*52:01		*12:02		SSO NGS	
774	*01	*03	*52		*12								SSP SSO	
3545	*01	*03	*52		*12		*01:01	*03:01	*52:01		*12:02		SSO SBT	
3808	*01	*03	*52	*52	*12	*12					*12:02	*12:02	SSO	
4079							NT	NT	NT	NT	NT	NT	NGS	
4251							*01:01	*03:01	*52:01	*52:01	*12:02	*12:02	NGS	
5133							*01:01:01:01	*03:01:01:01	*52:01:01:02	*52:01:01:08	*12:02:02:01		NGS	
5462							*01:01	*03:01	*52:01		*12:02		NGS	
5642	*01	*03	*52		*12									
6649	*01	*03	*52										SSO	
8001							*01:01	*03:01	*52:01		*12:02		NGS	
8043	*01	*03	*52		*12		*01:01	*03:01	*52:01		*12:02		SSP SSO	
8058	*01		*52	*51									OTHER	
8103	*01	*03	*52	*52	*12	*12	*01:01	*03:01	*52:01	*52:01	*12:02	*12:02	SSO	B*52:04

Table 16a: Individual laboratory results for Cell #1687 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*03	*13			*05	*05	*02	*03					SSP SBT	
747													RT-PCR	
771	*03	*13			*05		*02	*03					SSP SSO NGS	
774	*03	*13	3*01	3*02	*05	*05	*02	*03			*02(DP201)	*04(DP402)	SSO NGS	
3545	*03	*13											SSP SSO	
3808	*03	*13	NT	NT	*05	*05	*02	*03	*01	*01	*02(DP201)	*04(DP402)	SSO SBT	
5642													SSO	
8103	*03	*13			*05	*05	*02	*03	*01	*01	*02	*04	SSO	

Table 16b: Individual laboratory results for Cell #1687 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*03:01	*13:03					*02:01	*03:01					SSP SBT	
747	NT												RT-PCR	
771	*03:01	*13:03					*02:01	*03:01			*02:01	*701:01	SSP SSO NGS	
														DRB1*03:83 DRB1*03:93 DRB1*03:98 DRB1*03:100 DRB1*03:104 DRB1*03:112 DRB1*13:152 DQB1*03:73 DQB1*03:92 DQB1*03:93 DRB1*03:56 DRB1*03:58 DRB1*03:59 DRB1*03:61 DRB1*03:62+
774	*03:01	*13:03	3*01:01	3*02:02	*05:01	*05:05	*02:01	*03:01			*02:01	*04:02	SSP SSO	
3545	*03:01	*13:03											SSO SBT	
3808	*03:01	*13:03			*05:01		*02:01		*01:03	*01:03	*02:01:02G	*04:02:01G	SSO	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NGS	
4251	*03:01:01G	*13:03	3*01:01	3*02:02:01G	*05:01	*05:05	*02:01:01G	*03:01:01G	*01:03:01G	*01:03:01G	*02:01	*04:02:01G	NGS	
5133	*03:01:01	*13:03:01	3*01:01:02	3*02:02:01	*05:01:01	*05:05:01	*02:01:01	*03:01:01	*01:03:01		*02:01:02	*701:01	NGS	DRB1*03:01:08 DRB1*13:03:09
5462	*03:01P	*13:03	3*01:01P	3*02:02	*05:01	*05:05	*02:01	*03:01	*01:03		*02:01	*701:01	NGS	DRB3*01:62 DRB1*03:147
8001	*03:01	*13:03	3*01:01	3*02:02	*05:01	*05:05	*02:01	*03:01			*02:01	*701:01	NGS	DRB*3*01:62
8103	*03:01	*13:03			*05:01	*05:05	*02:01	*03:01	*01:03	*01:03	*02:01	*04:02	SSO	DQA1*05:09 DQB1*03:19

Table 17. Individual laboratory results for Cell #1688 - Class I

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
278	*02	*24	*39	*41	*07	*07	*02:05	*24:02	*39:06	*41:01	*07:01	*07:02	SSP SSO	
725	*02	*24	*39	*41	*07								SSO	
731	*02	*24	*39	*41	*07	*07	*02:05	*24:02	*39:06	*41:01	*07:01	*07:02	SSP SBT RT-PCR	
747	NT												SSP SSO NGS	
762							*02:05	*24:02	*39:06	*41:01	*07:01	*07:02	NGS	
771	*02	*24	*39	*41	*07	*07	*02:05	*24:02	*39:06	*41:01	*07:01	*07:02	SSO NGS	
774	*02	*24	*39	*41	*07								SSP SSO	
3545	*02	*24	*39	*41	*07	*07	*02:05	*24:02	*39:06	*41:01	*07:01	*07:02	SSO SBT	C*07:639 C*07:27
3808	*02	*24	*39	*41	*07	*07			*39:06				SSO	
4079							NT	NT	NT	NT	NT	NT	NGS	
4251							*02:05	*24:02	*39:06	*41:01	*07:01	*07:02	NGS	
5133							*02:05:01:01	*24:02:01:01	*39:06:02:01	*41:01:01:01	*07:01:01:09	*07:02:01:01	NGS	
5462							*02:05	*24:02	*39:06	*41:01	*07:01	*07:02	NGS	
5642	*02	*24	*39	*41	*07									
6649	*02	*24	*39	*41									SSO	
8001							*02:05	*24:02	*39:06	*41:01	*07:01	*07:02	NGS	
8043	*02	*24	*39	*41	*07		*02:05	*24:02	*39:06	*41:01			SSP SSO	
8058	*02	*24	*39	*38	*07								OTHER	
8103	*02	*24	*39	*41	*07	*07	*02:05	*24:02	*39:06	*41:01	*07:01	*07:02	SSO	C*07:06 C*07:18 B*41:07 C*07:06 C*07:02

Table 18a: Individual laboratory results for Cell #1688 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*08	*13	3*02	NP	*04	*05	*03	*04	*01	*01	*02	*03	SSP SBT RT-PCR	
747	NT												SSP SSO NGS	
771	*08	*13			*04	*05	*03	*04					SSO NGS	
774	*08	*13	3*02		*04	*05	*03	*04			*02(DP201)	*03	SSP SSO	
3545	*08	*13											SSO SBT	
3808	*08	*13	NT	NT	*04	*05	*03	*04	*01	*01	*02	*03	SSO	
8103	*08	*13			*04	*05	*03	*04	*01	*01	*02	*03	SSO	

Table 18b: Individual laboratory results for Cell #1688 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*08:01	*13:05					*03:01	*04:02					SSP SBT RT-PCR	
747	NT												SSP SSO NGS	
771	*08:01	*13:05					*03:01	*04:02			*02:01	*03:01	SSO NGS	
														DRB1*08:50 DRB1*08:55 DQB1*03:73 DQB1*03:92 DQB1*03:93 DPB1*414:01 DQB1*04:19 DQB1*04:21 DPB1*124:01
774	*08:01	*13:05	3*02:02		*04:01	*05:05	*03:01	*04:02			*02:01	*03:01	SSP SSO	
3545	*08:01	*13:05											SSO SBT	
3808		*13:05			*04:01			*04:02	*01:03	*01:03	*02:01:02G	*03:01:01G	SSO	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NGS	
4251	*08:01	*13:05	3*02:02		*04:01	*05:05	*03:01:01G	*04:02	*01:03:01G	*01:03	*02:01	*03:01	NGS	
5133	*08:01:01	*13:05:01	3*02:02:01		*04:01:01	*05:05:01	*03:01:01	*04:02:01	*01:03:01		*02:01:02	*03:01:01	NGS	
5462	*08:01	*13:05	3*02:02	NP	*04:01	*05:05	*03:01	*04:02	*01:03		*02:01P	*03:01P	NGS	DPB1*352:01 DPB1*124:01
8001	*08:01	*13:05	3*02:02		*04:01	*05:05	*03:01	*04:02			*02:01	*03:01	NGS	
														DQA1*05:09 B*41:07 DPB1*104:01
8103	*08:01	*13:05			*04:01	*05:05	*03:01	*04:02	*01:03	*01:03	*02:01	*03:01	SSO	