

# REPORT OF THE 397<sup>th</sup> CELL EXCHANGE

## APRIL 1, 2017

B-cell Lines	535-536
Cells	1585-1588

### B-cell Line Exchange #268

The results for B-cell Line Exchange #268 are summarized in Tables 1 - 2 and individual laboratory results reported for each sample are listed in Tables 3 - 8. We would like express our appreciation to **Helen Bass, Jane Rowlands, and Tracey Reese, Welsh Blood Service, Pontyclun**, for providing the valuable reference cells studied in our exchanges. We also wish to thank the

labs performing NGS typing for sharing their results and encourage other NGS labs to share their findings.

The haplotype frequencies used in this report are from the NMDP Bioinformatics website, <http://bioinformatics.nmdp.org/>.

**Ter-535.** The reported consensus type for this sample from a Caucasian donor is DRB1\*04:01-DRB1\*11:01-DRB3\*02:02-DRB4\*01:03-DQA1\*03:03-DQA1\*05:05-DQB1\*03:01-DPA1\*01:03-DPB1\*03:01-DPB1\*04:01/A\*02:01-A\*02:05-B\*39:25N-B\*50:01-C\*06:02-C\*12:03. One likely association present in this cell is A\*02:05-B\*50:01-DRB1\*04:01. This rare association is observed exclusively in Caucasians, with HF=0.00006. The other likely association present may then be A\*02:01-B\*39:25N-DRB1\*11:01.

This cell was studied in the 13<sup>th</sup> International Workshop as cell 13W09502 and is the reference cell for B\*39:25N. It was also previously typed for class I in the DNA Extract Exchange as extracts 431 (2008), 303 (2004), and 226 (2002). In the initial 2002 typing, only 65% (13/20) of labs reporting at high resolution assigned B\*39:25N. In this present retyping, B\*39:25N was assigned by 90% (17/19). B\*50:01 (100%) was reported as the second B-locus type, with 5 labs reporting B\*50:01:01. Two subtypes of A\*02 were present in this cell, A\*02:01 (A\*02:01:01) and A\*02:05 (A\*02:05:01), each assigned by 100%. The C-locus types were reported as C\*06:02 (100%) and C\*12:03 (100%), with NGS assigning C\*06:02:01:02 and C\*12:03:01:01. For class II, DRB1\*04:01 and DRB1\*11:01 were each reported in complete consensus, with 7 labs assigning DRB1\*04:01:01 and 6 labs assigning DRB1\*11:01:01. DQB1\*03:01 (100%) was reported as the sole DQB1 type, with 6 labs assigning DQB1\*03:01:01.

**Ter-536.** The consensus type for this sample from a Caucasian donor is DRB1\*01:03-DRB1\*07:01-DRB4\*01:03:01:02N-DQA1\*01:01-DQA1\*02:01-DQB1\*03:03-DQB1\*05:01-DPA1\*01:03-DPB1\*03:01-DPB1\*04:01/A\*11:01-A\*26:01-B\*35:41-B\*38:01-C\*04:01-C\*12:03. One possible association in this cell is A\*26:01-B\*38:01-DRB1\*07:01, exclusively observed in Caucasians, with HF=0.00022. The other possible association may then be A\*11:01:01-B\*35:41-DRB1\*01:03-DQB1\*05:01:01, observed in MDA0000097 and 2HT21, 2 of the reference cells for B\*35:41.

This cell was previously typed as Ter-388 (2007), as astutely noted by Rao. In this present retyping, DRB1\*01:03 and DRB1\*07:01 were well assigned by 100% of labs reporting at high resolution. DRB1\*07:01:01 was assigned by 7 labs. DQB1\*03:03 (100%) and DQB1\*05:01 (100%) were the reported DQB1 types, with DQB1\*03:03:02 and DQB1\*05:01:01 assigned by 8 and 7 labs, respectively. For class I, A\*11:01, A\*26:01, B\*35:41, and B\*38:01 were well assigned by 100% of labs reporting at high resolution. A\*11:01:01 and A\*26:01:01 were each reported by 5 labs, while B\*38:01:01 was reported by 6 labs. C\*04:01 (100%) and C\*12:03 (100%) were the assigned C-locus types, with 4 labs (3 NGS + 1 SBT) assigning C\*04:01:01:05 and 3 NGS labs assigning C\*12:03:01:01.

**NEXT MAILING DATE: May 3, 2017**

**Arlene Locke, David Gjertson, Qiuheng Zhang, and Elaine F. Reed**

**Table 1: Summary of the 268<sup>th</sup> B-cell Line Exchange**

**Ter-535**

<b>DNA Typing - class II</b>		<b>32 labs High; 30 labs low-DRB1</b>		<b>%(n)</b>		<b>19 labs High; 22 labs Low-DRB3/4/5</b>		<b>%(n)</b>		<b>20 labs High; 24 labs Low-DQA1</b>		<b>%(n)</b>		<b>31 High Labs; 28 labs Low-DQB1</b>		<b>%(n)</b>		<b>14 High Labs; 12 labs Low-DPA1</b>		<b>%(n)</b>		<b>28 High Labs; 16 labs Low-DPB1</b>		<b>%(n)</b>		
DNA Typing - class II	DRB1*04:01:01	22(7)		DRB3*02:02:01:02	5 (1)	DQA1*03:03:01	15(3)	DQB1*03:01:01:01	6 (2)	DPA1*01:03:01:02	7 (1)	DPB1*03:01:01	14(4)													
	DRB1*04:01	78(25)		DRB3*02:02:01	11(2)	DQA1*03:03	75(15)	DQB1*03:01:01	13(4)	DPA1*01:03:01	7 (1)	DPB1*03:01:01G	11(3)													
	DRB1*04	100(30)		DRB3*02:02:01	5 (1)	DQA1*03:02/03	10(2)	DQB1*03:01:01G	3 (1)	DPA1*01:03	86(12)	DPB1*03:01P	4 (1)													
				DRB3*02:02	79(15)	DQA1*03	96(23)	DQB1*03:01	77(24)	DPA1*01	100(12)	DPB1*03:01	71(20)													
				DRB3*02	86(19)	DQA1*01	4 (1)	DQB1*03(DQ7)	4 (1)			DPB1*03	100(16)													
				DRB3*PRESENT	14(3)			DQB1*03	96(27)																	

  

<b>DNA Typing - class I</b>		<b>21 labs High; 22 labs low- A</b>		<b>%(n)</b>		<b>19 labs High; 23 labs low- B</b>		<b>%(n)</b>		<b>20 labs High; 23 labs low- C</b>		<b>%(n)</b>		<b>21 labs High low- B</b>		<b>%(n)</b>		<b>20 labs High; 23 labs low- C</b>		<b>%(n)</b>						
DNA Typing - class I	A*02:01:01:01	14(3)		B*39:25N	90(17)	C*06:02:01:02	15(3)	A*02:05:01	29(6)	C*12:03:01:01	15(3)															
	A*02:01:01	14(3)		B*39:01/25N	5 (1)	C*06:02:01	5 (1)	A*02:01:01:01G	6 (2)	C*12:03:01	5 (1)															
	A*02:01	71(15)		B*39:01	5 (1)	C*06:02	80(16)	DRB1*11:01:01G	6 (2)	C*12:03:01G	5 (1)															
	A*02	100(22)		B*39	96(22)	C*06	100(23)	DRB1*11	100(30)	C*12:03:01G	5 (1)															
				B*39N	4 (1)																					



**Table 3a: Individual laboratory results for B-cell #535-Class II**

Center	Investigator	Low resolution										METHOD	Other Alleles		
		DRB1		DRB3/4/5		DQA1		DQB1		DPA1				DPB1	
5462	Arnold , Paula	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*03	*04(DP401)	SSP SSO SBT	
774	Cecka , J. Michael	*04	*11	3*02	4*01	*03	*05	*03		*01		*03	*04(DP401)	SSP SSO	
3632	Colombe , Beth W.	*04	*11	3*02	4*01	*03	*05	*03		*01		*03	*04	SSP SSO	
5130	Costeas , Paul A.	*04	*11	3*02	4*01	*03	*05	*03	*03			*03	*04	SSP SSO	
779	Daniel , Claude	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*03	*04(DP401)	SSP SSO	
5219	Daniel , Dolly	*04	*11			*03	*05	*03	*03					SSO	
87	Di Paola , Nicholas	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*03	*04(DP401)	RT-PCR	
5214	Eckels/CPMC ,	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*03	*04(DP401)	SSO	
4079	Fort , Marylise	*04	*11					*03						SSP	
792	Gandhi , Manish	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*03	*04	SSP SSO SBT	
8043	Gideoni , Osnat	*04	*11			*03	*05	*03						SSP SSO	
810	Hamdi , Nuha	*04	*11	3*02	4*01	*03	*05	*03	*03					SSO	
8087	Hernandez Rosales	*04	*11			*01	*05	*03	*06					SSO	
771	Israel , Shoshana	*04	*11					*03						SSP SSO	
794	Jaatinen , Taina	*04	*11	3*02	4*01	*03	*05	*03		*01		*03	*04	SSP SSO SBT RT-PCR	
5488	Khuu , Hanh			3*02	4*01									SSP SSO SBT	
725	Lardy , N.M.	*04	*11	3*PRESENT	4*PRESENT	*03	*05	*03						SSP SSO	
278	Lee , Jar-How	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*03	*04		
6649	Lim , Young Ae	*04	*11	3*PRESENT	4*PRESENT									SSP	
2400	Liu , Chang	*04	*11	3*02	4*01	*03	*05	*03	*03			*03	*04	SSP SSO SBT NGS	
731	Loewenthal , Ron	*04	*11			*03	*05	*03						SSP SSO SBT	
206	McAlack , Robert	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*03	*04	SSO	
735	Moussa , Omar	*04	*11	3*02	4*01	*03	*05	*03		*01		*03	*04(DP401)	SSO	DPB1*124 DPB1*104
3966	Permpikul , Vejbae													SSP	
8001	Rao , Prakash					*03	*05							SSP SSO	
3519	Renac , Virginie	*04	*11					*03				*03	*04(DP401)	SSP NGS	
793	Rubocki , Ronald	*04	*11	3*02	4*PRESENT	*03	*05	*03				*03	*04(DP401)	SSP	
4251	Schiller , Jennifer	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*03	*04(DP401)	SSO NGS	
8068	Shanmugam , Hem	*04	*11	3*02	4*01			*03						SSO	
8029	Tarigopula , Anil	*04	*11			*03	*05	*03	*03					SSO	
5451	Tilanus , Marcel G.	*04	*11	3*02	4*01	*03	*05	*03						SSP SSO SBT	
5642	Varnavidou-Nicolaie	*04	*11	3*PRESENT	4*PRESENT			*03						SSP	
2847	Wakita , Atsushi	*04	*11											SSO	

**Table 3b: Individual laboratory results for B-cell #535-Class II**

		Intermediate/High resolution													
Center	Investigator	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
5462	Arnold , Paula	NT	NT	NT	NT	NT	NT	NT	NT	*01:03	NT	*03:01P	*04:01P	SSP SSO SBT	DPB1*124:01 DPB1*459:01 DPB1*534:01 DPB1*104:01 DPB1*350:01 DPB1*464:01
5133	Askar , Medhat	*04:01:01	*11:01:01	3*02:02:01	4*01:03:01	*03:03:01	*05:05:01:01	*03:01:01		*01:03:01		*03:01:01	*04:01:01	NGS	DPB1*350:01 DPB1*124:01
4492	Caillat-Zucman , Sc	*04:01:01	*11:01:01	3*02:02	4*01:03	*03:03:01	*05:05:01	*03:01:01	*03:01:01			*03:01:01	*04:01:01	SSP SSO NGS	DPB1*350:01 DPB1*124:01
774	Cecka , J. Michael	*04:01	*11:01	3*02:02	4*01:03	*03:03	*05:05	*03:01		*01:03		*03:01	*04:01	SSP SSO	DRB1*04:171 DRB1*04:175 DRB1*11:157 DRB1*11:158 DRB3*02:28 DRB3*02:29N DRB4*01:09 DRB4*01:10 DQB1*03:101 DQB1*03:92 DQB1*03:93 DQB1*03:103 DQB1*03:108 DQB1*03:121 DQB1*03:122 DQB1*03:127 DQB1*03:128 DQB1*03:129+ DPA1*01:13 DRB1*11:97 DRB1*11:100 DRB1*11:117
8070	Chang , Uckjin	*04:01	*11:01											SSP SSO SBT	
9916	Charlton , Ronald K	*04:01	*11:01	3*02:02	4*01:03			*03:01:01				*03:01	*04:01	SSP SSO SBT	DPB1*350:01 DPB1*124:01
3224	Chen , Dong-Feng	*04:01	*11:01:01G	3*02:02:01G	4*01:01:01G	NT	NT	*03:01	*03:01	NT	NT	NT	NT	SSP SSO SBT	
8021	Clark , Brendan	*04:01	*11:01	3*02:02:01	4*01:03	*03:03	*05:05	*03:01		*01:03		*03:01	*04:01	SSO NGS	
3632	Colombe , Beth W.	*04:01	*11:01	3*02:02	4*01:03	*03:03	*05:05	*03:01		*01:03		*03:01	*04:01	SSP SSO	
5130	Costeas , Paul A.	*04:01	*11:01	3*02:02	4*01:03	*03:03	*05:05	*03:01	*03:01			*03:01	*04:01	SSP SSO	DRB1*11:94
779	Daniel , Claude					*03:03	*05:05	*03:01	*03:01	*01:03	*01:03	*03:01	*04:01	SSP SSO	
8086	Du , Keming	*04:01	*11:01			*03:03	*05:05	*03:01	*03:01	*01:03	*01:03	*03:01	*04:01	SSO SBT	
5214	Eckels/CPMC									*01:03		*03:01:01G	*04:01:01G	SSO	
3135	Enczmann , J	*04:01	*11:01	3*02:02	4*01:03			*03:01	*03:01			*03:01	*04:01	SSP SSO	
747	Ferrari-Lacraz , Syl	*04:01:01	*11:01:01	3*02:02:01:02	4*01:03:01	*03:02/ *03:03	*05:05	*03:01:01:01	*03:01:01	*01:03	*01:03	*03:01:01	*04:01:01:01	SSP SSO NGS	DPA1*01:13 DPB1*124:01 DQA1*05:09 DPB1*350:01
762	Fischer , Gottfried	*04:01	*11:01	3*02:02	4*01:03	*03:03	*05:05	*03:01				*03:01	*04:01	SSO NGS	DPB1*124:01 DPB1*350:01
4079	Fort , Marylise											*03:01	*04:01	SSP	

**Table 3b: Individual laboratory results for B-cell #535-Class II**

		Intermediate/High resolution													
Center	Investigator	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
792	Gandhi , Manish	*04:01	*11:01					*03:01	*03:01			*03:01	*04:01	SSP SSO SBT	DPB1*124:01 DPB1*350:01
8043	Gideoni , Osnat	*04:01	*11:01					*03:01						SSP SSO	
810	Hamdi , Nuha													SSO	
2344	Hurley & Hartzman	*04:01:01	*11:01:01			*03:03:01	*05:05:01:01	*03:01:01:01	*03:01:01:03	01:03:01:02	*01:03:01:03	*03:01:01	*04:01:01:01	NGS	DQA1*05:05:01:02 DQA1*05:05:01:03 DPB1*124:01 DPB1*04:01:01:02 DPB1*350:01
771	Israel , Shoshana	*04:01	*11:01					*03:01						SSP SSO	
794	Jaatinen , Taina	*04:01	*11:01	3*02:02	4*01:03	*03:03	*05:05	*03:01		*01:03		*03:01	*04:01	SSP SSO SBT RT-PCR	DRB1*11:97 DRB1*11:100 DRB4*01:09 DPB1*459:01 DPB1*464:01 DQA1*03:02 DQA1*05:09 DQA1*05:11 DPA1*01:13 DPB1*104:01 DPB1*124:01 DPB1*350:01
5488	Khuu , Hanh	*04:01:01	*11:01:01			*03:03	*05:05	*03:01:01				*03:01	*04:01	SSP SSO SBT	DRB1*04:63 DPB1*124:01 DRB1*11:175 DPB1*350:01
4337	Kim , Tai-Gyu	*04:01	*11:01					*03:01	*03:01			*03:01	*04:01	SBT	
278	Lee , Jar-How	*04:01	*11:01	3*02:02	4*01:03	*03:03	*05:05	*03:01	*03:01	*01:03	*01:03	*03:01	*04:01		
2400	Liu , Chang	*04:01	*11:01			*03:03	*05:05	*03:01	*03:01			*03:01:01G	*04:01:01G	SSP SSO SBT NGS	
731	Loewenthal , Ron	*04:01:01	*11:01:01G					*03:01:01G						SSP SSO SBT	
3966	Permpikul , Vejbaes	*04:01	*11:01	3*02:02	4*01:03			*03:01	*03:01					SSP	
8001	Rao , Prakash	*04:01	*11:01	3*02:02	4*01:03			*03:01				*03:01:01G	*04:01	SSP SSO	

**Table 3b: Individual laboratory results for B-cell #535-Class II**

Center	Investigator	Intermediate/High resolution												METHOD	Other Alleles	
		DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1				
																DRB1*04:35 DRB1*04:63 DRB1*04:179 DRB1*11:08 DRB1*11:37 DRB1*11:175 DRB3*02:29N DRB3*02:28 DRB3*02:33V DRB4*01:06 DRB4*01:09 DRB4*01:10 DQA1*05:09 DQA1*05:11 DPA1*01:13 DPB1*464:01 DPB1*104:01 DPB1*124:01 DPB1*459:01 DPB1*350:01 DPB1*534:01
3753	Reed , Elaine F.	*04:01	*11:01	3*02:02	4*01:01/ *01:03	*03:02/ *03:03	*05:05	*03:01	*03:01	*01:03	*01:03	*03:01	*04:01	SSO SBT		
3519	Renac , Virginie	*04:01	*11:01	3*02:02	4*01:03	*03:03	*05:05	*03:01				*03:01	*04:01	SSP NGS	DPB1*124:01 DPB1*350:01	
793	Rubocki , Ronald					*03:03	*05:05					*03:01	*04:01	SSP		
4251	Schiller , Jennifer	*04:01	*11:01	3*02:02	4*01:03	*03:03	*05:05	*03:01	*03:01	*01:03	*01:03	*03:01:01G	*04:01:01G	SSO NGS		
230	Thoni , Deborah	*04:01	*11:01					*03:01				*03:01	*04:01	SBT		
5451	Tilanus , Marcel G.	*04:01:01	*11:01:01											SSP SSO SBT		
5642	Varnavidou-Nicolaid	*04:01	*11:01					*03:01						SSP		
3511	Zeevi , Adriana	*04:01	*11:01	3*02:02	4*01:03	*03:03	*05:05	*03:01				*03:01	*04:01	SSP SSO		

**Table 4: Individual laboratory results for B-cell #535-Class II**

Serology									
CTR	DIRNAME	DRB1		DRB3/4/5				DQB1	
910	Hahn,Amy B.	DR4	DR11	DR52	DR53			DQ7	DQ3

**Table 5: Individual laboratory results for B-cell #535-Class I**

Center	Investigator	Low resolution						High/Intermediate resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*02	*02	*39N	*50	*06	*12	NT	NT	*39:25N	NT	NT	NT	SSP SSO SBT	
5133	Askar , Medhat							*02:01:01:01	*02:05:01	*39:25N	*50:01:01	*06:02:01:02	*12:03:01:01	NGS	
4492	Caillat-Zucman , Sc							*02:01:01	*02:05:01	*39:25N	*50:01:01	*06:02:01	*12:03:01	SSP SSO NGS	
774	Cecka , J. Michael	*02	*02	*39	*50	*06	*12							SSP SSO	
8070	Chang , Uckjin													SBT	
9916	Charlton , Ronald K							*02:01:01	*02:05:01	*39:25N	*50:01:01	*06:02	*12:03	SBT	
3224	Chen , Dong-Feng							*02:01	*02:05	*39:25N	*50:01	*06:02	*12:03:01G	SSP SSO SBT	C*12:54 C*06:30
8021	Clark , Brendan							*02:01	*02:05	*39:25N	*50:01	*06:02	*12:03	SSO NGS	C*06:122 C*12:28
3632	Colombe , Beth W.													SSP SSO	
5130	Costeas , Paul A.	*02	*02	*39	*50	*06	*12	*02:01	*02:05	*39:01/ *39:25N	*50:01	*06:02	*12:03	SSP SSO	C*06:03
779	Daniel , Claude	*02	*02	*39	*50	*06	*12							SSP SSO	
5219	Daniel , Dolly	*02	*02	*39	*50	*06	*12							SSO	
8086	Du , Keming							*02:01	*02:05	*39:25N	*50:01	*06:02	*12:03	SSO SBT	
87	Di Paola , Nicholas	*02	*02	*39	*50	*06	*12							RT-PCR	
5214	Eckels/CPMC ,	*02	*02	*39	*50	*06	*12							SSO	
3135	Enczmann , J							*02:01	*02:05	*39:25N	*50:01	*06:02	*12:03		
747	Ferrari-Lacraz , Syl							*02:01:01:01	*02:05:01	*39:25N	*50:01:01	*06:02:01:02	*12:03:01:01	SSP SSO NGS	
762	Fischer , Gottfried													SSO NGS	
4079	Fort , Marylise													SSP	
792	Gandhi , Manish	*02	*02	*39	*50	*06	*12	*02:01	*02:05			*06:02	*12:03	SSP SSO SBT	
8043	Gideoni , Osnat													SSP SSO	
810	Hamdi , Nuha	*02	*02	*39	*50	*06	*12							SSO	
8087	Hernandez Rosales	*02	*02	*39	*50	*06	*12							SSO	
2344	Hurley & Hartzman							*02:01:01:01	*02:05:01	*39:25N	*50:01:01	*06:02:01:02	*12:03:01:01	NGS	
771	Israel , Shoshana													SSP SSO	
794	Jaatinen , Taina	*02	*02	*39	*50	*06	*12	*02:01	*02:05	NEW	*50:01	*06:02	*12:03	SSP SSO SBT	B*50:12 C*06:83
5488	Khuu , Hanh			*39	*50	*06	*12	*02:01:01	*02:05:01					RT-PCR	C*12:143
4337	Kim , Tai-Gyu							*02:01	*02:05	*39:25N	*50:01	*06:02	*12:03	SSP SSO SBT	
725	Lardy , N.M.													SBT	
278	Lee , Jar-How	*02	*02	*39	*50	*06	*12	*02:01	*02:05	*39:25N	*50:01	*06:02	*12:03	SSP SSO	
6649	Lim , Young Ae													SSP	
2400	Liu , Chang	*02	*02	*39	*50	*06	*12	*02:01	*02:05	*39:25N	*50:01	*06:02	*12:03	SSP SSO SBT	
731	Loewenthal , Ron													NGS	
206	McAlack , Robert	*02	*02	*39	*50	*06	*12							SSP SSO SBT	
735	Moussa , Omar	*02	*02	*39	*50	*06	*12							SSO	
3966	Permpikul , Vejbae	*02	*02	*39	*50	*06	*12							SSO	
8001	Rao , Prakash													SSP	
														SSP SSO	



**Table 5: Individual laboratory results for B-cell #535-Class I**

Center	Investigator	Low resolution						High/Intermediate resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
															A*02:02 A*02:06 A*02:14 A*02:629 A*02:22 A*02:102 A*02:591 A*02:603 A*02:623 B*50:04 B*50:17 C*06:76 C*12:28 B*50:12 C*12:54 B*50:36 C*06:11C*06:17 C*06:30 C*06:82 C*06:83 C*06:122 C*12:04 B*50:40 C*12:143 C*12:147 C*12:154 C*12:167
3753	Reed , Elaine F.							*02:01	*02:05	*39:25N	*50:01	*06:02	*12:03	SSO SBT	
3519	Renac , Virginie	*02		*39	*50	*06	*12	*02:01	*02:05	*39:25N	*50:01	*06:02	*12:03	SSP NGS	
793	Rubocki , Ronald	*02		*39	*50	*06	*12							SSP	
4251	Schiller , Jennifer	*02	*02	*39	*50	*06	*12	*02:01	*02:05	*39:25N	*50:01	*06:02	*12:03	SSO NGS	
8068	Shanmugam , Hem	*02		*39	*50	*06	*12							SSO	
8029	Tarigopula , Anil	*02	*02	*39	*50	*06	*12							SSO	
230	Thoni , Deborah							*02:01	*02:05	*39:01	*50:01	*06:02	*12:03	SBT	
5451	Tilanus , Marcel G.													SSP SSO SBT	
5642	Varnavidou-Nicolai													SSP	
2847	Wakita , Atsushi	*02	*02	*39	*50	*06	*12							SSO	
3511	Zeevi , Adriana							*02:01	*02:05	*39:25N	*50:01	*06:02	*12:03	SSP SSO	

**Table 6a: Individual laboratory results for B-cell #536-Class II**

Center	Investigator	Low resolution												METHOD	Other Alleles
		DRB*01		DRB3/4/5		DQA1		DQB1		DPA1		DPB1			
5462	Arnold , Paula	*01	*07	4*01N	NP	*01	*02	*03	*05	*01	*01	*03	*04(DP401)	SSP SSO SBT	
774	Cecka , J. Michael	*01	*07	4*NULL		*01	*02	*03	*05	*01		*03	*04(DP401)	SSP SSO	
3632	Colombe , Beth W.	*01	*07	4*01		*01	*02	*03	*05	*01		*03	*04	SSP SSO	
5130	Costeas , Paul A.	*01	*07	4*01		*01	*02	*03	*05			*03	*04	SSP SSO	
779	Daniel , Claude	*01	*07		4*NULL	*01	*02	*03	*05	*01	*01	*03	*04(DP401)	SSP SSO	
5219	Daniel , Dolly	*01	*07			*01	*02	*03	*05					SSO	
87	Di Paola , Nicholas	*01	*07	4*01N		*01	*02	*03	*05	*01	*01	*03	*04(DP401)	RT-PCR	
5214	Eckels/CPMC ,	*01	*07	4*01N		*01	*02	*03 (DQ9)	*05	*01	*01	*03	*04(DP401)	SSO	
4079	Fort , Marylise	*01	*07					*03	*05					SSP	
792	Gandhi , Manish	*103	*07	4*01N		*01	*02	*03	*05	*01	*01	*03	*04	SSP SSO SBT	
8043	Gideoni , Osnat	*01	*07			*01	*02	*03	*05					SSP SSO	
810	Hamdi , Nuha		*07			*01		*03	*05					SSO	
8087	Hernandez Rosales	*01	*07			*01	*02	*03	*05					SSO	
771	Israel , Shoshana	*01	*07					*03	*05					SSP SSO	
794	Jaatinen , Taina	*01	*07	4*01N		*01	*02	*03	*05	*01		*03	*04	SSP SSO SBT RT-PCR	
5488	Khuu , Hanh													SSP SSO SBT	
725	Lardy , N.M.	*01	*07	4*PRESENT		*01	*02	*03	*05					SSP SSO	
278	Lee , Jar-How	*01	*07	4*01	NT	*01	*02	*03	*05	*01	*01	*03	*04		
6649	Lim , Young Ae	*01	*07	4*PRESENT	5*PRESENT									SSP	
2400	Liu , Chang	*01	*07	4*NULL	NP	*01	*02	*03	*05			*03	*04	SSP SSO SBT NGS	
731	Loewenthal , Ron	*01	*07			*01	*02	*03	*05					SSP SSO SBT	
206	McAlack , Robert	*103	*07	4*01N		*01	*02	*03	*05	*01	*01	*03	*04	SSO	
735	Moussa , Omar	*01	*07	4*01N		*01	*02	*03	*05	*01		*03	*04(DP401)	SSO	DPB1*104 DPB1*124
3966	Permpikul , Vejbaes													SSP	
8001	Rao , Prakash					*01	*02							SSP SSO	
3519	Renac , Virginie	*01	*07					*03	*05			*03	*04(DP401)	SSP NGS	
793	Rubocki , Ronald	*01	*07	4*NULL		*01	*02	*03	*05			*03	*04(DP401)	SSP	
4251	Schiller , Jennifer	*01	*07	4*01N		*01	*02	*03	*05	*01	*01	*03	*04(DP401)	SSO NGS	
8068	Shanmugam , Hem	*01	*07	4*01				*03	*05					SSO	
8029	Tarigopula , Anil	*01	*07			*01	*02	*03	*05					SSO	
5451	Tilanus , Marcel G.J.	*01	*07	4*01N		*01	*02	*03	*05					SSP SSO SBT	
5642	Varnavidou-Nicolaic	*01	*07	4*PRESENT				*03	*05					SSP	
2847	Wakita , Atsushi	*01	*07											SSO	

**Table 6b: Individual laboratory results for B-cell #536-Class II**

Center	Investigator	High resolution											METHOD	Other Alleles
		DRB1		DRB3/4/5	DQA1		DQB1		DPA1		DPB1			
5462	Arnold , Paula	*01:03	NT	4*01:03N	NT	*02:01	NT	NT	*01:03	NT	*03:01P	*04:01P	SSP SSO SBT	DPB1*464:01 DPB1*104:01 DPB1*124:01 DPB1*350:01 DPB1*459:01 DPB1*534:01
5133	Askar , Medhat	*01:03	*07:01:01	4*01:03:01:02N	*01:01:01	*02:01	*03:03:02:01	*05:01:01	*01:03:01:03		*03:01:01	*04:01:01	NGS	DPB1*124:01 DPB1*350:01
4492	Caillat-Zucman , S	*01:03	*07:01:01	4*01:03:01:02N	*01:01:01	*02:01	*03:03:02	*05:01:01			*03:01:01	*04:01:01	SSP SSO NGS	DPB1*124:01 DPB1*350:01
774	Cecka , J. Michael	*01:03	*07:01	4*01:03:01:02N	*01:01	*02:01	*03:03	*05:01	*01:03		*03:01	*04:01	SSP SSO	DRB1*07:31 DRB1*07:33 DRB1*07:35 DPA1*01:13
8070	Chang , Uckjin	*01:03	*07:01										SBT	
9916	Charlton , Ronald	*01:03	*07:01:01	4*01:03:01:02N			*03:03:02	*05:01:01			*03:01	*04:01	SBT	DPB1*350:01 DPB1*124:01
3224	Chen , Dong-Feng	*01:03	*07:01:01G	4*01:03N	NT	NT	*03:03:02	*05:01	NT	NT	NT	NT	SSP SSO SBT	
8021	Clark , Brendan	*01:03	*07:01	4*01:03:01:02N	*01:01	*02:01	*03:03	*05:01	*01:03		*03:01	*04:01	SSO NGS	
3632	Colombe , Beth W	*01:03	*07:01	4*01:03N	*01:01	*02:01	*03:03	*05:01	*01:03		*03:01	*04:01	SSP SSO	
5130	Costeas , Paul A.	*01:03	*07:01	4*01:03:01:02N	*01:01	*02:01	*03:03	*05:01			*03:01	*04:01	SSP SSO	DRB1*07:12 DRB1*07:16
779	Daniel , Claude	*01:03			*01:01	*02:01	*03:03	*05:01	*01:03	*01:03	*03:01	*04:01	SSP SSO	DRB4*01:03:01:02N
8086	Du , Keming	*01:03	*07:01		*01:01	*02:01	*03:03	*05:01	*01:03	*01:03	*03:01	*04:01	SSO SBT	
5214	Eckels/CPMC	*01:03		4*01:03N					*01:03		*03:01:01G	*04:01:01G	SSO	
3135	Enczmann , J	*01:03	*07:01	4*01:03N			*03:03	*05:01			*03:01	*04:01		
747	Ferrari-Lacraz , Sy	*01:03	*07:01:01	4*01:03N	*01:01	*02:01	*03:03:02:01	*05:01:01	*01:03	*01:03	*03:01:01	*04:01:01:01	SSP SSO NGS	DQA1*01:04 DPA1*01:13 DPB1*124:01 DPB1*350:01
762	Fischer , Gottfried	*01:03	*07:01	4*01:03N	*01:01	*02:01	*03:03	*05:01			*03:01	*04:01	SSO NGS	DPB1*350:01 DPB1*124:01
4079	Fort , Marylise	*01:03									*03:01	*04:01	SSP	
792	Gandhi , Manish	*01:03	*07:01				*03:03	*05:01			*03:01	*04:01	SSP SSO SBT	DPB1*124:01 DPB1*350:01
8043	Gideoni , Osnat	*01:03	*07:01				*03:03	*05:01					SSP SSO	
810	Hamdi , Nuha	*01:03		4*01:03N		*02:01							SSO	
2344	Hurley & Hartzmar	*01:03	*07:01:01:02		*01:01:01	*02:01	*03:03:02:01	*05:01:01:03	*01:03:01:03	*01:03:01:04	*03:01:01	*04:01:01:01	NGS	DQA1*01:01:02 DPB1*124:01 DPB1*04:01:01:02 DPB1*350:01
771	Israel , Shoshana	*01:03	*07:01				*03:03	*05:01					SSP SSO	

**Table 6b: Individual laboratory results for B-cell #536-Class II**

		High resolution													
Center	Investigator	DRB1		DRB3/4/5	DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles	
794	Jaatinen , Taina	*01:03	*07:01	4*01:03N	*01:01	*02:01	*03:03	*05:01	*01:03			*03:01	*04:01	SSP SSO SBT RT-PCR	DRB1*07:34 DQA1*01:04 DQA1*01:05 DQA1*01:12 DPA1*01:13 DPB1*104:01 DPB1*124:01 DPB1*350:01 DPB1*459:01 DPB1*464:01
5488	Khuu , Hanh	*01:03	*07:01:01	4*01:03:01:02N	*01:01	*02:01	*03:03:02	*05:01:01				*03:01	*04:01	SSP SSO SBT	DPB1*124:01 DPB1*350:01
4337	Kim , Tai-Gyu	*01:03	*07:01				*03:03	*05:01				*03:01	*04:01	SBT	
278	Lee , Jar-How	*01:03	*07:01	4*01:03N	*01:01	*02:01	*03:03	*05:01	*01:03	*01:03		*03:01	*04:01		
2400	Liu , Chang	*01:03	*07:01		*01:01	*02:01	*03:03	*05:01				*03:01:01G	*04:01:01G	SSP SSO SBT NGS	
731	Loewenthal , Ron	*01:03	*07:01:01G				*03:03:02	*05:01:01						SSP SSO SBT	
3966	Permpikul , Vejbae	*01:03	*07:01	4*01:03N			*03:03	*05:01						SSP	
8001	Rao , Prakash	*01:03	*07:01	4*01:03N			*03:03	*05:01				*03:01:01G	*04:01	SSP SSO	
3753	Reed , Elaine F.	*01:03	*07:01	4*01:03N	*01:01:01G	*02:01	*03:03	*05:01	*01:03	*01:03		*03:01	*04:01	SSO SBT	DQB1*03:212 DQB1*03:26 DQB1*03:112 DQB1*05:11 DQB1*05:44 DQB1*05:51 DPA1*01:13 DPB1*124:01 DPB1*459:01 DPB1*104:01 DPB1*350:01 DPB1*464:01 DPB1*534:01
3519	Renac , Virginie	*01:03	*07:01	4*01:03N	*01:01	*02:01	*03:03	*05:01				*03:01	*04:01	SSP NGS	DPB1*350:01 DPB1*124:01
793	Rubocki , Ronald				*01:01	*02:01						*03:01	*04:01	SSP	
4251	Schiller , Jennifer	*01:03	*07:01	4*01:03N	*01:01	*02:01	*03:03	*05:01	*01:03	*01:03		*03:01:01G	*04:01:01G	SSO NGS	
230	Thoni , Deborah	*01:03	*07:01				*03:03	*05:01				*03:01	*04:01	SBT	
5451	Tilanus , Marcel G	*01:03	*07:01:01											SSP SSO SBT	
5642	Varnavidou-Nicola	*01:03	*07:01				*03:03	*05:01						SSP	DRB1*01:39N
3511	Zeevi , Adriana	*01:03	*07:01	4*01:03N	*01:01	*02:01	*03:03	*05:01				*03:01	*04:01	SSP SSO	

**Table 7: Individual laboratory results for B-cell #536-Class II**

		Serology				
CTR	DIRNAME	DRB1		DRB3/4/5	DQB1	
910	Hahn,Amy B.	DR103	DR7	DR53	DQ3	DQ1

**Table 8: Individual laboratory results for B-cell #536-Class I**

Center	Investigator	Low resolution						High resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*11	*26	*35	*38	*04	*12	NT	NT	NT	NT	NT	NT	SSP SSO SBT	
5133	Askar , Medhat							*11:01:01:01	*26:01:01:01	*35:41	*38:01:01	*04:01:01:05	*12:03:01:01	NGS	
4492	Caillat-Zucman , Sc							*11:01:01	*26:01:01	*35:41	*38:01:01	*04:01:01	*12:03:01	SSP SSO NGS	
774	Cecka , J. Michael	*11	*26	*35	*38	*04	*12							SSP SSO	
8070	Chang , Uckjin													SBT	
9916	Charlton , Ronald K							*11:01:01:01	*26:01:01	*35:41	*38:01:01	*04:01:01:05	*12:03:01	SBT	
3224	Chen , Dong-Feng							*11:01	*26:01:01G	*35:41	*38:01	*04:01:01G	*12:03:01G	SSP SSO SBT	
8021	Clark , Brendan							*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SSO NGS	
3632	Colombe , Beth W.													SSP SSO	
5130	Costeas , Paul A.	*11	*26	*35	*38	*04	*12	*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SSP SSO	A*11:20 A*11:36 B*35:41 B*38:11 B*38:19 C*04:05 C*04:112
779	Daniel , Claude	*11	*26	*35	*38	*04	*12							SSP SSO	
5219	Daniel , Dolly	*11	*26	*35	*38	*04	*12							SSO	
87	Di Paola , Nicholas	*11	*26	*35	*38	*04	*12							RT-PCR	
8086	Du , Keming							*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SSO SBT	
5214	Eckels/CPMC ,	*11	*26	*35	*38	*04	*12							SSO	
3135	Enczmann , J							*11:01	*26:01	*35:41	*38:01	*04:01	*12:03		C*04:09N
747	Ferrari-Lacraz , Syl							*11:01:01:01	*26:01:01	*35:41	*38:01:01	*04:01:01:05	*12:03:01:01	SSP SSO NGS	
762	Fischer , Gottfried													SSO NGS	
4079	Fort , Marylise													SSP	
792	Gandhi , Manish	*11	*26	*35	*38	*04	*12	*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SSP SSO SBT	
8043	Gideoni , Osnat													SSP SSO	
810	Hamdi , Nuha	*11	*26	*35	*38	*04	*12							SSO	
8087	Hernandez Rosales	*11	*26	*35	*38	*04	*12							SSO	
2344	Hurley & Hartzman							*11:01:01	*26:01:01	*35:41	*38:01:01	*04:01:01:05	*12:03:01:01	NGS	
771	Israel , Shoshana													SSP SSO	
794	Jaatinen , Taina	*11	*26	*35	*38	*04	*12	*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SSP SSO SBT RT-PCR	C*04:30 C*04:82 C*12:143
5488	Khuu , Hanh					*04	*12	*11:01	*26:01	*35:41	*38:01:01			SSP SSO SBT	A*26:117
4337	Kim , Tai-Gyu							*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SBT	
725	Lardy , N.M.													SSP SSO	
278	Lee , Jar-How	*11	*26	*35	*38	*04	*12	*11:01	*26:01	*35:41	*38:01	*04:01	*12:03		
6649	Lim , Young Ae													SSP	
2400	Liu , Chang	*11	*26	*35	*38	*04	*12	*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SSP SSO SBT NGS	
731	Loewenthal , Ron													SSP SSO SBT	
206	McAlack , Robert	*11	*26	*35	*38	*04	*12							SSO	
735	Moussa , Omar	*11	*26	*35	*38	*04	*12							SSO	
3966	Permpikul , Vejbae	*11	*26	*35	*38	*04	*12							SSP	
8001	Rao , Prakash													SSP SSO	

**Table 8: Individual laboratory results for B-cell #536-Class I**

Center	Investigator	Low resolution						High resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
3753	Reed , Elaine F.							*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SSO SBT	A*11:19 A*11:33 A*26:117 A*26:122 A*26:13 C*04:09N C*04:15 C*04:29 C*04:07 C*04:30 C*04:33 C*04:82+ C*12:04 C*12:24 C*12:154 C*12:156 C*12:167 C*12:194 C*12:143
3519	Renac , Virginie	*11	*26	*35	*38	*04	*12	*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SSP NGS	
793	Rubocki , Ronald	*11	*26	*35	*38	*04	*12							SSP	
4251	Schiller , Jennifer	*11	*26	*35	*38	*04	*12	*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SSO NGS	
8068	Shanmugam , Hem	*11	*26	*35	*38	*04	*12							SSO	
8029	Tarigopula , Anil	*11	*26	*35	*38	*04	*12							SSO	
230	Thoni , Deborah							*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SBT	
5451	Tilanus , Marcel G.													SSP SSO SBT	
5642	Varnavidou-Nicolai													SSP	
2847	Wakita , Atsushi	*11	*26	*35	*38	*04	*12							SSO	
3511	Zeevi , Adriana							*11:01	*26:01	*35:41	*38:01	*04:01	*12:03	SSP SSO	

## CELL EXCHANGE #397

The results for Cell Exchange #397 are summarized in Table 9 and Table 10. Molecular typing results for individual laboratories are listed in Tables 11

-14 for each sample and individual serology results for each sample are listed in Table 15.

**Cell 1585.** The reported type for this sample from a Black donor is A\*23:01(A23)-A\*34:02(A34)-B\*53:01(B53)-B\*81:01(B81)-C\*04:01(Cw4)-C\*18:01. From family studies, the haplotypes in this cell were determined to be A\*23:01-B\*53:01-C\*04:01 and A\*34:02-B\*81:01-C\*18:01. The B\*53:01-C\*04:01 and B\*81:01-C\*18:01 associations in this cell are observed commonly in African American populations, with respective frequencies of HF=0.09218 and 0.01101.

This sample was previously studied as cell 1550 (2015) and cell 1527 (2014) and is the offspring of previous exchange cell, 1549 (same as cell 1529 and cell 1481). In this present retyping, A\*23:01 (100%) and A\*34:02 (100%) were well assigned, with 4 labs assigning A\*23:01:01 and 5 labs assigning A\*34:02:01. A23 (100%) and A34 (88%) were reported by serology. B\*53:01 and B\*81:01 were reported in complete consensus as the B-locus types, with serology reporting B53 (100%) and B81 (88%). Two labs assigned B7 instead of B81. The C-locus types were reported as C\*04:01 (100%) and C\*18:01 (100%).

**Cell 1586.** The reported type for this sample from a Black donor is A\*01:01(A1)-A\*23:01(A23)-B\*42:01(B42)-B\*50:01(B50)-C\*06:02(Cw6)-C\*17:01(Cw17). The likely class I associations in this cell are A\*01:01-B\*50:01-C\*06:02 and A\*23:01-B\*42:01-C\*17:01, with respective frequencies of HF=0.00042 and 0.00489, in African Americans.

A\*01:01 and A\*23:01 were reported in completed consensus, with 4 labs (3 NGS, 1 SBT) assigning A\*01:01:01:01 and A\*23:01:01. A1 (100%) and A23 (100%) were reported by serology. B\*42:01 and B\*50:01 were also reported in complete consensus, with 5 labs reporting B\*42:01:01 and B\*50:01:01. B42 and B50 were each assigned by 94%, while 5 labs reported the presence of Bw4 along with Bw6 (75%). For the C-locus, C\*06:02 (100%) and C\*17:01 (100%) were assigned, with 3 NGS labs assigning C\*06:02:01:02 and C\*17:01:01:02.

**Cell 1587.** The reported type for this sample from a Hispanic donor is A\*23:01(A23)-A\*24:02(A24)-B\*14:02(B65)-B\*39:06(B39)-C\*07:02(Cw7)-C\*08:02(Cw8). The likely associations in this cell, B\*39:06-C\*07:02 and B\*14:02-C\*08:02, are commonly observed in Hispanic populations, with respective frequencies of HF=0.01982 and 0.03914.

This sample was previously typed in the exchange as cell 1493 (2013). In this present retyping, A\*23:01 and A\*24:02 were assigned by 100% of labs reporting at high resolution. Two NGS labs reported higher resolution typing for A\*24:02, assigning A\*24:02:01:01. By serology, A23 and A24 were detected by 100% and 93%, respectively. B\*14:02 (100%) and B\*39:06 (100%) were reported as the B-locus types, with 4 labs reporting B\*14:02:01 and B\*39:06:02. The assigned serological types were B65 (71%) and B39 (93%). C\*07:02 (100%) and C\*08:02 (100%) were the reported C-locus types, with serology labs reporting Cw7 and Cw8 each by 43%. Similar to cell 1586, Bw4 was reported along with Bw6 (71%) by a number (n=4) of labs.

**Cell 1588.** The reported type for this sample from a donor of mixed Black, Caucasian, and Native American ancestry is A\*23:01(A23)-A\*29:02(A29)-B\*44:03(B44)-B\*45:01(B45)-C\*06:02(Cw6)-C\*16:01. The likely associations in this cell are B\*44:03-C\*16:01 and B\*45:01-C\*06:02, observed across all populations, with HF=0.03314 and 0.00388 in Caucasians and HF=0.01049 and 0.00985 in African Americans.

This sample was previously typed as cell 1534 (2014). In this present retyping, A\*23:01 and A\*29:02 were each assigned by 100%, with 3 labs assigning A\*23:01:01 and 4 labs assigning A\*29:02:01. A23 (100%) and A29 (93%) were reported by serology. Two subtypes of B12 were detected in this cell, B44 (100%) and B45 (93%). B\*44:03 and B\*45:01 were reported in complete consensus, with 4 labs reporting B\*44:03:01 and B\*45:01:01. C\*06:02 (100%) and C\*16:01 (100%) were the reported C-locus types, with 3 labs reporting C\*06:02:01 and C\*16:01:01.

**NEXT MAILING DATE: May 3, 2017**

**Arlene Locke, David Gjertson, Qiheng Zhang, and Elaine F. Reed**

**Table 9. Summary of the 397<sup>th</sup> Cell Exchange (Cell #1585-1588)**

**DNA typing**

<b>Cell 1585</b>	
22 low/15 high labs - A	%(n)
A*23:01:01	27(4)
A*23:01:01G	13(2)
A*23:01P	7 (1)
A*23:01	53(8)
A*23	100(22)
22 low/15 high labs - A	%(n)
A*34:02:01	33(5)
A*34:02	67(10)
A*34	100(22)
22 low/15 high labs - B	%(n)
B*53:01:01	33(5)
B*53:01	67(10)
B*53	100(22)
22 low/15 high labs - B	%(n)
B*81:01:01G	20(3)
B*81:01	80(12)
B*81	100(22)
21 low/15 high Labs - C	%(n)
C*04:01:01:01	20(3)
C*04:01:01	7 (1)
C*04:01:01G	7 (1)
C*04:01P	7 (1)
C*04:01	60(9)
C*04	100(21)
21 low/15 high Labs - C	%(n)
C*18:01:01G	7 (1)
C*18:01	93 (14)
C*18	100(21)

<b>Cell 1586</b>	
22 low/15 high labs - A	%(n)
A*01:01:01:01	27(4)
A*01:01:01	7 (1)
A*01:01	66(10)
A*01	100(22)
22 low/15 high labs - A	%(n)
A*23:01:01	27(4)
A*23:01:01G	13(2)
A*23:01P	7 (1)
A*23:01	53(8)
A*23	100(22)
22 low/15 high labs - B	%(n)
B*42:01:01	33(5)
B*42:01	67(10)
B*42	100(22)
22 low/15 high labs - B	%(n)
B*50:01:01	33(5)
B*50:01	67(10)
B*50	100(22)
21 low/14 high Labs - C	%(n)
C*06:02:01:02	21(3)
C*06:02:01	7 (1)
C*06:02:01G	14(2)
C*06:02	57(8)
C*06	100(21)
21 low/14 high Labs - C	%(n)
C*17:01:01:02	20(3)
C*17:01:01	7 (1)
C*17:01:01G	13(2)
C*17:01	60(9)
C*17	100(21)

<b>Cell 1587</b>	
21 low/13 high labs - A	%(n)
A*23:01:01	23(3)
A*23:01:01G	15(2)
A*23:01P	8 (1)
A*23:01	54(7)
A*23	100(21)
21 low/13 high labs - A	%(n)
A*24:02:01:01	15(2)
A*24:02:01G	8 (1)
A*24:02	77(10)
A*24	100(21)
21 low/15 high labs - B	%(n)
B*14:02:01:01	13(2)
B*14:02:01	13(2)
B*14:02	73(11)
B*14(B65)	10(2)
B*14	90(19)
21 low/14 high labs - B	%(n)
B*39:06:02	29(4)
B*39:06	71(10)
B*39	100(21)
20 low/14 high Labs - C	%(n)
C*07:02:01:01	7 (1)
C*07:02:01	7 (1)
C*07:02:01G	14(2)
C*07:02	71(10)
C*07	100(20)
20 low/14 high Labs - C	%(n)
C*08:02:01:01	14(2)
C*08:02:01	7 (1)
C*08:02	79(11)
C*08	100(20)

<b>Cell 1588</b>	
21 low/14 high labs - A	%(n)
A*23:01:01	21(3)
A*23:01:01G	14(2)
A*23:01P	7 (1)
A*23:01	57(8)
A*23	100(21)
21 low/14 high labs - A	%(n)
A*29:02:01:01	14(2)
A*29:02:01	14(2)
A*29:02	71(10)
A*29	100(21)
21 low/15 high labs - B	%(n)
B*44:03:01:01	7 (1)
B*44:03:01	20(3)
B*44:03	73(11)
B*44	100(21)
21 low/14 high labs - B	%(n)
B*45:01:01	29(4)
B*45:01:01G	7 (1)
B*45:01	64(9)
B*45	100(21)
20 low/14 high labs - C	%(n)
C*06:02:01:03	7 (1)
C*06:02:01	14(2)
C*06:02:01G	7 (1)
C*06:02	71(10)
C*06	100(20)
20 low/13 high labs - C	%(n)
C*16:01:01	23(3)
C*16:01	77(10)
C*16	100(20)



**Table 10. Summary of the 397<sup>th</sup> Cell Exchange (Cell #1585 - 1588)**

**Serological typing**

(Black) <b>Cell 1585</b> (16 Samples Typed)	
A23	100.0%
	[100.0%]
A34	87.5%
A10	6.2%
	[93.8%]
B53	100.0%
B81	87.5%
	[87.5%]
Cw4	50.0%
	[50%]
Bw4	75.0%
Bw6	75.0%
<b>Others Found</b>	
B7	18.8%
A33	12.5%
Cw6	6.2%
Cw17	6.2%
Cw18	6.2%

(Black) <b>Cell 1586</b> (16 Samples Typed)	
A1	100.0%
A23	100.0%
	[100.0%]
B42	93.8%
B50	93.8%
B21	6.2%
	[100.0%]
Cw6	50.0%
	[50.0%]
Cw17	25.0%
Bw6	75.0%
<b>Others Found</b>	
Bw4	31.2%
Cw7	12.5%
B7	12.5%

(Hispanic) <b>Cell 1587</b> (14 Samples Typed)	
A23	100.0%
	[100.0%]
A24	92.9%
A9	7.1%
	[100.0%]
B65	71.4%
B14	28.6%
	[100.0%]
B39	92.9%
B16	7.1%
	[100.0%]
Cw7	42.9%
Cw8	42.9%
Bw6	71.4%
<b>Others Found</b>	
Bw4	28.6%
Cw2	7.1%

(Mixed) <b>Cell 1588</b> (14 Samples Typed)	
A23	100.0%
	[100.0%]
A29	92.9%
A19	7.1%
	[100.0%]
B44	100.0%
	[100.0%]
B45	92.9%
B12	7.1%
	[100.0%]
Cw6	50.0%
	[53.8%]
Bw4	64.3%
Bw6	71.4%
<b>Others Found</b>	
B37	7.7%

**Table 11. Individual laboratory results for Cell #1585**

Center	Investigator	Low Resolution						High Resolution						Method	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*23	*34	*53	*81	*04	*18	*23:01P	*34:02	*53:01	*81:01	*04:01	*18:01	SSO SBT	A*23:17
5133	Askar , Medhat							*23:01:01	*34:02:01	*53:01:01	*81:01	*04:01:01:01	*18:01	NGS	
4492	Caillat-Zucman , S	*23	*34	*53	*81	*04	*18							SSP	
774	Cecka , J. Michael	*23	*34	*53	*81	*04	*18							SSP SSO	
8070	Chang , Uckjin							*23:01	*34:02	*53:01	*81:01	*04:01	*18:01	SBT	
3632	Colombe , Beth W.	*23	*34	*53	*81	*04	*18	*23:01	*34:02	*53:01	*81:01	*04:01	*18:01	SSP SSO	
779	Daniel , Claude	*23	*34	*53	*81	*04	*18							SSO	
5214	Eckels/CPMC ,	*23	*34	*53	*81	*04	*18							SSO	
747	Ferrari-Lacraz , Sy							*23:01:01	*34:02:01	*53:01:01	*81:01	*04:01:01:01	*18:01	NGS	
762	Fischer , Gottfried							*23:01	*34:02	*53:01	*81:01	*04:01	*18:01	SSO NGS	
4079	Fort , Marylise	*23	*34	*53	*81	*04	*18	*23:01	*34:02	*53:01	*81:01	*04:01	*18:01	SSP SSO	A*23:71 C*04:221 C*04:222 C*18:02 C*18:10
8043	Gideoni , Osnat	*23	*34	*53	*81	*04	*18							SSP SSO	
3545	Goldstein , Steven	*23	*34	*53	*81	*04	*18	*23:01	*34:02	*53:01	*81:01	*04:01	*18:01	SSO SBT	A*23:17 B*81:02 C*04:82 C*04:30 C*04:226 C*18:02
810	Hamdi , Nuha	*23	*34	*53	*81	*04	*18							SSO	
3808	Hogan , Patrick	*23	*34	*53	*81	*04	*18							SSP	
771	Israel , Shoshana	*23	*34	*53	*81	*04	*18	*23:01	*34:02	*53:01	*81:01	*04:01	*18:01	SSO SBT	
725	Lardy , N.M.	*23	*34	*53	*81	*04	*18							SSP SSO	
745	Latham , Katy							*23:01:01	*34:02:01	*53:01:01	*81:01	*04:01:01:01	*18:01	SSP SBT NGS	
278	Lee , Jar-How	*23	*34	*53	*81	*04	*18	*23:01	*34:02	*53:01	*81:01	*04:01	*18:01		
6649	Lim , Young Ae	*23	*34	*53	*81									SSP	
731	Loewenthal , Ron	*23	*34	*53	*81	*04	*18	*23:01:01G	*34:02:01	*53:01:01	*81:01:01G	*04:01:01G	*18:01	SSP SSO SBT	
8001	Rao , Prakash	*23	*34	*53	*81	*04	*18							SSO	
3625	Rees , Tracey	*23	*34	*53	*81	*04	*18	*23:01	*34:02	*53:01	*81:01	*04:01	*18:01	SSP SBT	A*23:17 A*23:69 B*53:23
4251	Schiller , Jennifer	*23	*34	*53	*81	*04	*18	*23:01:01G	*34:02	*53:01	*81:01:01G	*04:01P	*18:01:01G	SSO SBT	
5642	Varnavidou-Nicolai	*23	*34	*53	*81	*04	*18							SSP	
3186	Watson , Narelle	*23	*34	*53	*81	*04	*18							SSO	
16	Zhang , Aiwen	*23	*34	*53	*81	*04	*18	*23:01:01	*34:02:01	*53:01:01	*81:01:01G	*04:01:01	*18:01	SSO SBT	A*23:17 C*18:04 C*04:166

**Table 12. Individual laboratory results for Cell #1586**

Center	Investigator	Low Resolution						High Resolution						Method	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*01	*23	*42	*50	*06	*17	*01:01	*23:01P	*42:01	*50:01	*06:02	*17:01	SSO SBT	A*23:17
5133	Askar , Medhat							*01:01:01:01	*23:01:01	*42:01:01	*50:01:01	*06:02:01:02	*17:01:01:02	NGS	
4492	Caillat-Zucman , So	*01	*23	*42	*50	*06	*17							SSP	
774	Cecka , J. Michael	*01	*23	*42	*50	*06	*17							SSP SSO	
8070	Chang , Uckjin							*01:01	*23:01	*42:01	*50:01	*06:02	*17:01	SBT	
3632	Colombe , Beth W.	*01	*23	*42	*50	*06	*17	*01:01	*23:01	*42:01	*50:01	*06:02	*17:01	SSP SSO	
779	Daniel , Claude	*01	*23	*42	*50	*06	*17							SSO	
5214	Eckels/CPMC ,	*01	*23	*42	*50	*06	*17							SSO	
747	Ferrari-Lacraz , Sylv							*01:01:01:01	*23:01:01	*42:01:01	*50:01:01	*06:02:01:02	*17:01:01:02	NGS	
762	Fischer , Gottfried							*01:01	*23:01	*42:01	*50:01	*06:02	*17:01	SSO NGS	
4079	Fort , Marylise	*01	*23	*42	*50	*06	*17	*01:01	*23:01	*42:01	*50:01	*06:02	*17:01	SSP SSO	A*01:195 A*23:71
8043	Gideoni , Osnat	*01	*23	*42	*50	*06	*17							SSP SSO	
3545	Goldstein , Steven	*01	*23	*42	*50	*06	*17	*01:01	*23:01	*42:01	*50:01	*06:02	*17:01	SSO SBT	A*23:17 C*06:83 C*17:02 C*17:03
810	Hamdi , Nuha	*01	*23	*42	*50	*06	*17							SSO	
3808	Hogan , Patrick	*01	*23	*42	*50	*06	*17							SSP	
771	Israel , Shoshana	*01	*23	*42	*50	*06	*17	*01:01	*23:01	*42:01	*50:01	*06:02	*17:01	SSO SBT	
725	Lardy , N.M.	*01	*23	*42	*50	*06	*17							SSP SSO	
745	Latham , Katy							*01:01:01:01	*23:01:01	*42:01:01	*50:01:01	*06:02:01:02	*17:01:01:02	SSP SBT NGS	
278	Lee , Jar-How	*01	*23	*42	*50	*06	*17	*01:01	*23:01	*42:01	*50:01	*06:02	*17:01	SSO SSP	
6649	Lim , Young Ae	*01	*23	*42	*50									SSP	
731	Loewenthal , Ron	*01	*23	*42	*50	*06	*17	*01:01:01	*23:01:01G	*42:01:01	*50:01:01	*06:02:01G	*17:01:01G	SSP SSO SBT	
8001	Rao , Prakash	*01	*23	*42	*50	*06	*17							SSO	
3625	Rees , Tracey	*01	*23	*42	*50	*06	*17	*01:01	*23:01	*42:01	*50:01	NT	*17:01	SSP SBT	A*23:17 A*23:38N A*23:69 C*17:02 C*17:03
4251	Schiller , Jennifer	*01	*23	*42	*50	*06	*17	*01:01	*23:01:01G	*42:01	*50:01	*06:02:01G	*17:01:01G	SSO SBT	
5642	Varnavidou-Nicolaic	*01	*23	*42	*50	*06	*17							SSP	
3186	Watson , Narelle	*01	*23	*42	*50	*06	*17							SSO	
16	Zhang , Aiwen	*01	*23	*42	*50	*06	*17	*01:01:01:01	*23:01:01	*42:01:01	*50:01:01	*06:02:01	*17:01:01	SSO SBT	A*01:14 A*01:30 A*01:61 A*23:10 A*23:14:02 A*23:17 A*23:53 A*23:64 C*06:08 C*17:23

**Table 13. Individual laboratory results for Cell #1587**

Center	Investigator	Low Resolution						High Resolution						Method	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*23	*24	*14	*39	*07	*08	*23:01P	*24:02	*14:02	*39:06	*07:02	*08:02	SSO SBT	A*23:17
5133	Askar , Medhat							*23:01:01	*24:02:01:01	*14:02:01:01	*39:06:02	*07:02:01:01	*08:02:01:01	NGS	
4492	Caillat-Zucman , So	*23	*24	*14	*39	*07	*08							SSP	
774	Cecka , J. Michael	*23	*24	*14	*39	*07	*08							SSP SSO	
8070	Chang , Uckjin							*23:01	*24:02	*14:02	*39:06	*07:02	*08:02	SBT	
3632	Colombe , Beth W.	*23	*24	*14	*39	*07	*08	*23:01	*24:02	*14:02	*39:06	*07:02	*08:02	SSP SSO	
779	Daniel , Claude	*23	*24	*14	*39	*07	*08			*14:02				SSO	
5214	Eckels/CPMC ,	*23	*24	*14(B65)	*39	*07	*08							SSO	
747	Ferrari-Lacraz , Sylv							NT						NGS	
762	Fischer , Gottfried							*23:01	*24:02	*14:02	*39:06	*07:02	*08:02	SSO NGS	
4079	Fort , Marylise	NT						NT						SSP SSO	
8043	Gideoni , Osnat	*23	*24	*14	*39	*07	*08	*23:01	*24:02	*14:02	*39:06	*07:02	*08:02	SSP SSO	
3545	Goldstein , Steven	*23	*24	*14	*39	*07	*08	*23:01	*24:02	*14:02	*39:06	*07:02	*08:02	SSO SBT	A*23:17 C*07:349 C*07:50
810	Hamdi , Nuha	*23	*24	*14	*39	*07	*08							SSO	
3808	Hogan , Patrick	*23	*24	*14	*39	*07	*08							SSP	
771	Israel , Shoshana	*23	*24	*14	*39	*07	*08	*23:01	*24:02	*14:02	*39:06	*07:02	*08:02	SSO SBT	
725	Lardy , N.M.	*23	*24	*14	*39	*07	*08							SSP SSO	
745	Latham , Katy							*23:01:01	*24:02:01:01	*14:02:01:01	*39:06:02	*07:02:01	*08:02:01:01	SSP SBT NGS	
278	Lee , Jar-How	*23	*24	*14	*39	*07	*08	*23:01	*24:02	*14:02	*39:06	*07:02	*08:02	SSO SSP	
6649	Lim , Young Ae	*23	*24	*14	*39									SSP	
731	Loewenthal , Ron	*23	*24	*14	*39	*07	*08	*23:01:01G	*24:02:01G	*14:02:01	*39:06:02	*07:02:01G	*08:02:01	SSP SSO SBT	
8001	Rao , Prakash	*23	*24	*14(B65)	*39	*07	*08							SSO	
3625	Rees , Tracey	*23	*24	*14	*39	*07	*08	NT	NT	*14:02	*39:06	*07:02	*08:02	SSP SBT	
4251	Schiller , Jennifer	*23	*24	*14	*39	*07	*08	*23:01:01G	*24:02	*14:02	*39:06	*07:02:01G	*08:02	SSO SBT	
5642	Varnavidou-Nicolaïd	*23	*24	*14	*39	*07	*08							SSP	
3186	Watson , Narelle	*23	*24	*14	*39	*07	*08							SSO	
16	Zhang , Aiwen	*23	*24	*14	*39	*07	*08	*23:01:01	*24:02	*14:02:01	*39:06:02	*07:02	*08:02	SSO SBT	A*23:14:02 A*23:17 A*24:05 C*07:39 C*07:161 C*07:260 C*08:07 C*08:15 C*07:17:01 C*08:05 C*08:94

**Table 14. Individual laboratory results for Cell #1588**

Center	Investigator	Low Resolution						High Resolution						Method	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*23	*29	*44	*45	*06	*16	*23:01P	*29:02	*44:03	*45:01	*06:02	*16:01	SSO SBT	A*23:17
5133	Askar , Medhat							*23:01:01	*29:02:01:01	*44:03:01:01	*45:01:01	*06:02:01	*16:01:01	NGS	
8070	Chang , Uckjin							*23:01	*29:02	*44:03	*45:01	*06:02	*16:01	SBT	
4492	Caillat-Zucman , So	*23	*29	*44	*45	*06	*16							SSP	
774	Cecka , J. Michael	*23	*29	*44	*45	*06	*16					*06:02		SSP SSO	
3632	Colombe , Beth W.	*23	*29	*44	*45	*06	*16	*23:01	*29:02	*44:03	*45:01	*06:02	*16:01	SSP SSO	
779	Daniel , Claude	*23	*29	*44	*45	*06	*16			*44:03				SSO	
5214	Eckels/CPMC ,	*23	*29	*44	*45	*06	*16							SSO	
747	Ferrari-Lacraz , Sylv													NGS	
762	Fischer , Gottfried							*23:01	*29:02	*44:03	*45:01	*06:02	*16:01	SSO NGS	
4079	Fort , Marylise	NT						NT						SSP SSO	
8043	Gideoni , Osnat	*23	*29	*44	*45	*06	*16	*23:01	*29:02	*44:03	*45:01	*06:02	*16:01	SSP SSO	
3545	Goldstein , Steven	*23	*29	*44	*45	*06	*16	*23:01	*29:02	*44:03	*45:01	*06:02	*16:01	SSO SBT	A*23:17 C*06:83
810	Hamdi , Nuha	*23	*29	*44	*45	*06	*16							SSO	
3808	Hogan , Patrick	*23	*29	*44	*45	*06	*16							SSP	
771	Israel , Shoshana	*23	*29	*44	*45	*06	*16	*23:01	*29:02	*44:03	*45:01	*06:02	*16:01	SSO SBT	A*23:17
725	Lardy , N.M.	*23	*29	*44	*45	*06	*16							SSP SSO	
745	Latham , Katy							*23:01:01	*29:02:01:01	*44:03:01	*45:01:01	*06:02:01:03	*16:01:01	SSP SBT NGS	
278	Lee , Jar-How	*23	*29	*44	*45	*06	*16	*23:01	*29:02	*44:03	*45:01	*06:02	*16:01	SSO SSP	
6649	Lim , Young Ae	*23	*29	*44	*45									SSP	
731	Loewenthal , Ron	*23	*29	*44	*45	*06	*16	*23:01:01G	*29:02:01	*44:03:01	*45:01:01	*06:02	*16:01	SSP SSO SBT	
8001	Rao , Prakash	*23	*29	*44	*45	*06	*16							SSO	
3625	Rees , Tracey	*23	*29	*44	*45	*06	*16	*23:01	*29:02	*44:03	*45:01	NT	NT	SSP SBT	A*23:17 A*23:69
4251	Schiller , Jennifer	*23	*29	*44	*45	*06	*16	*23:01:01G	*29:02	*44:03	*45:01:01G	*06:02:01G	*16:01	SSO SBT	
5642	Varnavidou-Nicolaïd	*23	*29	*44	*45	*06	*16							SSP	
3186	Watson , Narelle	*23	*29	*44	*45	*06	*16							SSO	
16	Zhang , Aiwen	*23	*29	*44	*45	*06	*16	*23:01:01	*29:02:01	*44:03:01	*45:01:01	*06:02:01	*16:01:01	SSO SBT	A*23:04 A*23:17 A*29:03 C*06:11 C*06:83 C*16:02:01 C*16:15:01

**Table 15. Individual laboratory results for Cell #1585-1588 by serology**

Investigator	Days Old	Cell No 1585 (Black)										Cell No 1586 (Black)								Cell No 1587 (Hispanic)								Cell No 1588 (Mixed)									
		Viab %	A23	A34	B53	B81	Cw4	Bw4	Bw6	OTHERS	Viab %	A1	A23	B42	B50	Cw6	Cw17	Bw6	OTHERS	Viab %	A23	A24	B14	B39	Cw7	Cw8	Bw6	OTHERS	Viab %	A23	A29	B44	B45	Cw6	Bw4	Bw6	OTHERS
Cecka, J. Mic	3	>95	+	+	+	+		+	+		>95	+	+	+	+			+		>95	+	+	B65	+				+		>95	+	+	+	+		+	+
Dunckley, Hea			+	+	+	+						+	+	+	+						+	+	+	+						+	+	+	+				
Enczmann, J		90	+	+	+	+					90	+	+	+	+					90	+	+	B65	+					90	+	+	+	+				
Ferrari-Lacra		90	+	+	+	+	+	+	+	Cw18	90	+	+	+	+	+	+	Bw4																			
Fort, Marylis	3	95	+	+	+	+		+	+		97	+	+	+	+		+	Bw4		NT									NT								
Hahn, Amy B.	3	99	+	+	+	+		+	+		99	+	+	+	+		+			99	+	+	+	+			+	Bw4	99	+	+	+	+		+	+	
Hogan, Patric		80	+	+	+	+	+	+	+		90	+	+	+	+	+	+			90	+	+	B65	+	+	+	+		90	+	+	+	+	+	+	+	
Loewenthal ,		70	+	+	+	+	+	+	+		80	+	+	+	+	+	+			70	+	+	B65	+	+	+	+		80	+	+	+	+	+	+	+	
Permpikul, Ve	7	90	+	+	+	+		+	+		90	+	+	+	+		+			90	+	+	+	+			+		90	+	+	+	+		+	+	
Pule, Ziningi		80	+	+	+	+	+			B7>	80	+	+	+	+	+	+	B7>		80	+	A9	B65	+	+	+			80	+	+	+	B12	+			B37
Rees, Tracey		90	+	+	+	+	+	+	+		90	+	+	+	+	+	+			90	+	+	B65	+	+	+	+		90	+	+	+	+	+	+	+	
Renac, Virgin	6	100	+	A10	+			+	+	B7	100	+	+	+	B21		+	Bw4	100	+	+	+	+		+	Bw4	100	+	+	+	+	+		+	+		
Shai, Isaac	8	88	+	A33	+		+	+	+	B7>	90	+	+	B7	+	+	Cw7	+	Bw4>	88	+	+	B65	+	+	+	Bw4>	86	+	+	+	+	+	+	+	+	
Varnavidou-Ni	7	85	+	+	+	+		+	+		95	+	+	+	+		+	Bw4	98	+	+	+	B16		+	Bw4	95	+	A19	+	+	+	+	+	+		
Vidan-Jeras,	6	100	+	+	+	+	+	+	+		100	+	+	+	+	+	+			100	+	+	B65	+	+	+	+		98	+	+	+	+	+	+	+	
Zhang, Aiwen	2	90	+	+	+	+	+				90	+	+	+	+					90	+	+	B65	+	+			90	+	+	+	+	+				