

CELL EXCHANGE #403

MARCH 18, 2018

Cells 1609-1612

The results for Cell Exchange #403 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. The haplotype frequencies used in this report are from the NMDP Bioinformatics website, <https://bioinformatics.bethematchclinical.org/>.

Cell 1609. The consensus type for this cell from an Asian donor is A*33:03(A33)-B*44:03(B44)-B*46:01(B46)-C*01:02(Cw1)-C*14:03. One likely association present is A*33:03-B*46:01-C*01:02, observed exclusively in Asians, with HF=0.00127. This same association was observed in one other exchange cell, cell 837 (same as cell 762 and 742), from a Thai donor. The other association likely present is A*33:03-B*44:03-C*14:03, commonly observed in Asians, with HF=0.01136. A*33:03, B*44:03, B*46:01, C*01:02, and C*14:03 were assigned in complete consensus; 4 labs assigned A*33:03:01, B*44:03:01, and C*01:02:01, and 5 labs assigned B*46:01:01. A33 (93%) and B44 (100%) were each well assigned by serology. However, B46 (80%) was not as well assigned, as 1 lab assigned B62 instead of B46 and 2 labs did not assign a second B-locus antigen.

Cell 1610. The consensus type for this cell from a Hispanic donor is A*11:12-A*31:01-B*18:01-B*40:02-C*03:06-C*07:01. The likely associations present in this cell are B*40:02-C*03:06 and B*18:01-C*07:01, observed in Hispanics, with respective HF=0.00778 and HF=0.00779. A*11:12 was assigned in complete consensus by labs reporting at high resolution. This is the first A*11:12 cell typed in the Exchange. A*11:12 differs from A*11:01 by a single nucleotide substitution in exon 2 at codon 90 (GAC → GCC), resulting in an amino acid change from aspartic acid to alanine (1). A*31:01, B*18:01, B*40:02, and C*07:01 were each assigned in complete consensus, while C*03:06 was assigned by 93%. The serological types were reported as A11 (100%), A31 (93%), B18 (100%), B61 (67%), Cw3 (40%), and Cw7 (40%).

Cell 1611. The consensus type for this cell from a Chinese donor is A*24:02(A24)-A*33:03(A33)-B*40:01(B60)-B*58:01(B58)-*03:02(Cw3)-C*04:03(Cw4). One likely association present in this cell is B*58:01-C*03:02, the second most common association observed in Asians, with HF=0.05543. The other likely association present is B*40:01-C*04:03, observed exclusively in Asians, with HF=0.00102. A*24:02, A*33:03, B*40:01, B*58:01, C*03:02, and C*04:03 were each assigned in complete agreement, with 3 labs assigning A*24:02:01, A*33:03:01, B*40:01:02, B*58:01:01, C*03:02:02:01, and 4 labs assigning C*04:03:01. Serology labs were also in complete agreement in assigning A24, A33, B40 (B60), and B17 (B58).

Cell 1612. The consensus type for this cell from an Asian donor is A*33:03(A33)-B*44:03(B44)-B*58:01(B58)-C*03:02(Cw3)-C*07:01:01G(Cw7). One likely associations present in this cell is A*33:03-B*58:01-C*03:02, the most common association observed in Asians, with HF=0.04458. The other likely association present is A*33:03-B*44:03-C*07:01:01G, also commonly observed in Asians, with HF = 0.01756. B*44:03, B*58:01, and C*03:02 were each assigned in complete consensus by labs reporting at high resolution. However, the assignment of the second C-locus allele remained unresolved, as 7 labs assigned C*07:06, 3 labs assigned C*07:01, and 3 labs assigned C*07:01:01G. A33 (100%), B44 (100%), B58 (92%), Cw3 (31%), and Cw7 (39%) were assigned as the serological types.

References:

1. Garino E, Belvedere M, Berrino M, et al. New HLA-A*11 allele, A*1112, identified by sequence-based typing. *Tissue Antigens*. 2002;60:84-87.

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Table 9. Summary of the 403rd Cell Exchange (Cell #1609-1612)

DNA typing

Cell 1609	
19 low/13 high labs - A	%(n)
A*33:03:01	30(4)
A*33:03:01G	8 (1)
A*33:03	62(8)
A*33	100(19)
19 low/14 high labs - B	%(n)
B*44:03:01	29(4)
B*44:03:01G	7 (1)
B*44:03	64(9)
B*44	100(19)
19 low/14 high labs - B	%(n)
B*46:01:01	36(5)
B*46:01	64(9)
B*46	100(19)
18 low/14 high Labs - C	%(n)
C*01:02:01	29(4)
C*01:02:01G	14(2)
C*01:02	57(8)
C*01	100(18)
18 low/14 high Labs - C	%(n)
C*14:03	100(14)
C*14	100(18)

Cell 1610	
19 low/15 high labs - A	%(n)
A*11:12	100(15)
A*11	100(19)
19 low/15 high labs - A	%(n)
A*31:01:02:01	27(4)
A*31:01:02G	20(3)
A*31:01	53(8)
A*31	100(19)
21 low/14 high labs - B	%(n)
B*18:01:01	29(4)
B*18:01:01G	14(2)
B*18:01	57(8)
B*18	100(19)
19 low/15 high labs - B	%(n)
B*40:02:01	27(4)
B*40:02:01G	13(2)
B*40:02	60(9)
B*40 (B61)	11(2)
B*40	89(17)
18 low/15 high Labs - C	%(n)
C*03:06:01	33(5)
C*03:06	60(9)
C*03:04	7 (1)
C*03 (Cw10)	11(2)
C*03	89(16)
18 low/14 high Labs - C	%(n)
C*07:01:01:01	21(3)
C*07:01:01	7 (1)
C*07:01:01G	14(2)
C*07:01	57(8)
C*07	100(18)

Cell 1611	
17 low/13 high labs - A	%(n)
A*24:02:01:01	15(2)
A*24:02:01	8 (1)
A*24:02:01G	8 (1)
A*24:02P	8 (1)
A*24:02	61(8)
A*24	100(17)
17 low/13 high labs - A	%(n)
A*33:03:01	23(3)
A*33:03:01G	8 (1)
A*33:03	69(9)
A*33	100(17)
17 low/14 high labs -B	%(n)
B*40:01:02:01	7 (1)
B*40:01:02	14(2)
B*40:01:01G	14(2)
B*40:01	64(9)
B*40 (B60)	13(2)
B*40	87(15)
17 low/13 high labs -B	%(n)
B*58:01:01:03	8 (1)
B*58:01:01	15(2)
B*58:01:01G	8 (1)
B*58:01	69(9)
B*58	100(17)
16 low/14 high Labs - C	%(n)
C*03:02:02:01	21(3)
C*03:02:01G	7 (1)
C*03:02	71(10)
C*03 (Cw10)	12(2)
C*03	88(14)
16 low/14 high Labs - C	%(n)
C*04:03:01	29(4)
C*04:03	71(10)
C*04	100(16)

Cell 1612	
17 low/13 high labs - A	%(n)
A*33:03:01	23(3)
A*33:03:01G	8 (1)
A*33:03	69(9)
A*33	100(17)
17 low/13 high labs - B	%(n)
B*44:03:02	31(4)
B*44:03	69(9)
B*44	100(17)
17 low/13 high labs - B	%(n)
B*58:01:01:03	8 (1)
B*58:01:01	15(2)
B*58:01:01G	8 (1)
B*58:01	69(9)
B*58	100(17)
16 low/14 high labs - C	%(n)
C*03:02:02:01	21(3)
C*03:02:01G	14(2)
C*03:02	64(9)
C*03 (Cw10)	12(2)
C*03	88(14)
16 low/13 high labs - C	%(n)
C*07:01:01G	23(3)
C*07:06	54(7)
C*07:01:01G	23(3)
C*07	100(16)

Table 10. Summary of the 403rd Cell Exchange (Cell #1609 - 1612)

Serological typing

(Asian) Cell 1609 (15 Samples Typed)	
A33	93.3% [93.3%]
B44	100.0% [100.0%]
B46	80.0%
Cw1	33.3%
Bw4	80.0%
Bw6	60.0%
Others Found	
Cw3	13.3%
B62	6.7%
A31	6.7%
Cw14	6.7%
A29	6.7%
A68	6.7%

(Hispanic) Cell 1610 (15 Samples Typed)	
A11	93.3%
A11.1	6.7% [100.0%]
A31	93.3% [93.3%]
B18	100.0%
B61	66.7%
B40	26.7% [93.3%]
Cw3	40.0% [40.0%]
Cw7	40.0%
Bw6	80.0%
Others Found	
A30	13.3%
B60	6.7%
B48	6.7%

(Chinese) Cell 1611 (13 Samples Typed)	
A24	100.0% [100.0%]
A33	100.0% [100.0%]
B60	92.3%
B40	7.7% [100.0%]
B58	92.3%
B17	7.7% [100.0%]
Cw3	38.5% [38.5%]
Cw4	30.8% [30.8%]
Bw4	69.2%
Bw6	69.2%
Others Found	
B52	7.7%
A29	7.7%
A23	7.7%
Cw6	7.7%
Bw4 Bw6	7.7%

(Asian) Cell 1612 (13 Samples Typed)	
A33	100.0% [100.0%]
B44	100.0% [100.0%]
B58	92.3%
B17	7.7% [100.0%]
Cw3	30.8% [30.8%]
Cw7	38.5%
Bw4	76.9%
Others Found	
A29	15.4%
A30	7.7%
A34	7.7%

Table 11. Individual laboratory results for Cell #1609

Center	Low Resolution						High Resolution						Method	Other Alleles	
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C				
725	*33		*44	*46	*01	*14								SSO	
731	*33		*44	*46	*01	*14	*33:03:01G		*44:03:01G	*46:01:01	*01:02:01G	*14:03	SSP SSO SBT		
745							*33:03:01		*44:03:01	*46:01:01	*01:02:01	*14:03	SSP SBT NGS		
747	*33	*33	*44	*46	*01	*14	*33:03:01	*33:03:01	*44:03:01	*46:01:01	*01:02:01	*14:03	SSP SSO NGS		
762							*33:03:01		*44:03:01	*46:01:01	*01:02:01	*14:03	NGS		
771	*33		*44	*46	*01	*14	*33:03		*44:03	*46:01	*01:02	*14:03	SSO SBT		
774	*33		*44	*46	*01	*14							SSP SSO		
779	*33	*33	*44	*46	*01	*14							SSP SSO		
3186	*33	*33	*44	*46	*01	*14							SSO		
3545	*33		*44	*46	*01	*14	*33:03		*44:03	*46:01	*01:02	*14:03	SSP SSO SBT	C*01:85 C*01:127 C*01:142	
3625							*33:03	*33:03	*44:03	*46:01	*01:02	*14:03		C*01:127	
3632	*33		*44	*46	*01	*14	*33:03		*44:03	*46:01	*01:02	*14:03	SSP SSO		
3766	*33		*44	*46	*01	*14							SSO		
3808	*33		*44	*46	*01	*14							SSP SBT		
4079	*33		*44	*46	*01	*14			*44:03	*46:01	*01:02	*14:03	SSP SSO		
4251	*33	*33	*44	*46	*01	*14	*33:03	*33:03	*44:03	*46:01	*01:02:01G	*14:03	SSO SBT		
5133							*33:03:01		*44:03:01	*46:01:01	*01:02:01	*14:03	NGS		
5214	*33		*44	*46	*01	*14							SSO		
5462	*33		*44	*46	*01	*14	*33:03		*44:03	*46:01	*01:02	*14:03	SSO NGS		
5642	*33		*44	*46	*01	*14							SSP		
6649	*33		*44	*46									SSP		
8001	*33		*44	*46	*01	*14							SSO		
8043	*33		*44	*46	*01	*14	*33:03		*44:03	*46:01	*01:02	*14:03	SSP SSO		
8070							*33:03		*44:03	*46:01	*01:02	*14:03	SBT		

Table 12. Individual laboratory results for Cell #1610

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
725	*11	*31	*18	*40	*03	*07							SSO	
731	*11	*31	*18	*40	*03	*07	*11:12	*31:01:02G	*18:01:01G	*40:02:01G	*03:06:01	*07:01:01G	SSP SSO SBT	
745							*11:12	*31:01:02:01	*18:01:01	*40:02:01	*03:06:01	*07:01:01	SSP SBT NGS	
747	*11	*31	*18	*40	*03	*07	*11:12	*31:01:02:01	*18:01:01	*40:02:01	*03:06:01	*07:01:01:01	SSP SSO NGS	
762							*11:12	*31:01:02:01	*18:01:01	*40:02:01	*03:06:01	*07:01:01:01	NGS	
771	*11	*31	*18	*40	*03	*07	*11:12	*31:01	*18:01	*40:02	*03:06	*07:01	SSO SBT	
774	*11	*31	*18	*40	*03	*07							SSP SSO	
779	*11	*31	*18	*40	*03	*07				*40:02	*03:04		SSP SSO	
3186	*11	*31	*18	*40	*03	*07							SSO	
3545	*11	*31	*18	*40	*03	*07	*11:12	*31:01	*18:01	*40:02	*03:06	*07:01	SSP SSO SBT	B*18:17N B*18:131 C*07:06 C*07:18 A*31:119 B*40:303 B*40:356 C*07:591 C*07:343 C*07:419 C*07:458
3625							*11:12	*31:01	*18:01	*40:02	*03:06	*07:01		A*31:119 B*18:17N B*18:131 B*40:303
3632	*11	*31	*18	*40	*03	*07	*11:12	*31:01	*18:01	*40:02	*03:06	*07:01	SSP SSO	
3766	*11	*31	*18	*40	*03	*07							SSO	
3808	*11	*31	*18	*40	*03	*07	*11:12	*31:01:02G					SSP SBT	
4079	*11	*31	*18	*40	*03	*07	*11:12	*31:01	*18:01	*40:02	*03:06	*07:01	SSP SSO	
4251	*11	*31	*18	*40	*03	*07	*11:12	*31:01:02G	*18:01:01G	*40:02:01G	*03:06	*07:01:01G	SSO SBT	
5133							*11:12	*31:01:02:01	*18:01:01	*40:02:01	*03:06:01	*07:01:01:01	NGS	
5214	*11	*31	*18	*40 (B61)	*03 (Cw10)	*07							SSO	
5462	*11	*31	*18	*40	*03	*07	*11:12	*31:01	*18:01	*40:02	*03:06	*07:01	SSO NGS	
5642	*11	*31	*18	*40	*03	*07							SSP	
6649	*11	*31	*18	*40									SSP	
8001	*11	*31	*18	*40 (B61)	*03 (Cw10)	*07							SSO	
8043	*11	*31	*18	*40	*03	*07	*11:12	*31:01	*18:01	*40:02	*03:06	*07:01	SSP SSO	
8070							*11:12	*31:01	*18:01	*40:02	*03:06	*07:01	SBT	

Table 13. Individual laboratory results for Cell #1611

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
725	*24	*33	*40	*58	*03	*04							SSO	
731	*24	*33	*40	*58	*03	*04	*24:02:01G	*33:03:01G	*40:01:01G	*58:01:01G	*03:02:01G	*04:03:01	SSP SSO SBT	
745							*24:02:01:01	*33:03:01	*40:01:02	*58:01:01	*03:02:02:01	*04:03:01	SSP SBT NGS	
747	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP SSO NGS	A*24:352 A*24:353
762							*24:02:01:01	*33:03:01	*40:01:02	*58:01:01	*03:02:02:01	*04:03:01	NGS	
771	*24	*33	*40	*58	*03	*04	*24:02	*33:03	*40:01	*58:01	*03:02	*04:03	SSO SBT	
774	*24	*33	*40	*58	*03	*04							SSP SSO	
779	*24	*33	*40	*58	*03	*04			*40:01		*03:02	*04:03	SSP SSO	
3186	*24	*33	*40	*58	*03	*04							SSO	
3545	*24	*33	*40	*58	*03	*04	*24:02	*33:03	*40:01	*58:01	*03:02	*04:03	SSP SSO SBT	
3625							*24:02	*33:03	*40:01	*58:01	*03:02	*04:03		
3625							*24:02	*33:03	*40:01	*58:01	*03:02	*04:03		
3632	*24	*33	*40	*58	*03	*04	*24:02	*33:03	*40:01	*58:01	*03:02	*04:03	SSP SSO	
3766	*24	*33	*40	*58	*03	*04							SSO	
3808	*24	*33	*40	*58	*03	*04							SSP SBT	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP SSO	
4251	*24	*33	*40	*58	*03	*04	*24:02P	*33:03	*40:01:01G	*58:01	*03:02	*04:03	SSO SBT	
5133							*24:02:01	*33:03:01	*40:01:02:01	*58:01:01:03	*03:02:02:01	*04:03:01	NGS	
5214	*24	*33	*40 (B60)	*58	*03 (Cw10)	*04							SSO	
5462	*24	*33	*40	*58	*03	*04	*24:02	*33:03	*40:01	*58:01	*03:02	*04:03	SSO NGS	
5642	*24	*33	*40	*58	*03	*04							SSP	
6649	*24	*33	*40	*58									SSP	
8001	*24	*33	*40 (B60)	*58	*03 (Cw10)	*04							SSO	
8043	*24	*33	*40	*58	*03	*04	*24:02	*33:03	*40:01	*58:01	*03:02	*04:03	SSP SSO	A*24:352 A*24:353
8070							*24:02	*33:03	*40:01	*58:01	*03:02	*04:03	SBT	B*40:353

Table 14. Individual laboratory results for Cell #1612

Center	Low Resolution						High Resolution						Method	Other Alleles	
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C				
725	*33		*44	*58	*03	*07								SSO	
731	*33		*44	*58	*03	*07	*33:03:01G		*44:03:02	*58:01:01G	*03:02:01G	*07:01:01G		SSP SSO SBT	
745							*33:03:01		*44:03:02	*58:01:01	*03:02:02:01	*07:06		SSP SBT NGS	
747	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		SSP SSO NGS	
762							*33:03:01		*44:03:02	*58:01:01	*03:02:02:01	*07:06		NGS	
771	*33		*44	*58	*03	*07	*33:03		*44:03	*58:01	*03:02	*07:01		SSO SBT	
774	*33		*44	*58	*03	*07								SSP SSO	
779	*33		*44	*58	*03	*07					*03:02			SSP SSO	
3186	*33	*33	*44	*58	*03	*07								SSO	
3545	*33		*44	*58	*03	*07	*33:03		*44:03	*58:01	*03:02	*07:01		SSP SSO SBT	C*07:06 C*07:18 C*07:343 C*07:419 C*07:458 C*07:591
3625							*33:03	*33:03	*44:03	*58:01	*03:02	*07:06			
3625							*33:03	*33:03	*44:03	*58:01	*03:02	*07:06			
3632	*33		*44	*58	*03	*07	*33:03		*44:03	*58:01	*03:02	*07:06		SSP SSO	
3766	*33		*44	*58	*03	*07								SSO	
3808	*33		*44	*58	*03	*07								SSP SBT	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		SSP SSO	
4251	*33	*33	*44	*58	*03	*07	*33:03	*33:03	*44:03	*58:01	*03:02:01G	*07:01:01G		SSO SBT	
5133							*33:03:01		*44:03:02	*58:01:01:03	*03:02:02:01	*07:06		NGS	
5214	*33		*44	*58	*03 (Cw10)	*07								SSO	
5462	*33		*44	*58	*03	*07	*33:03		*44:03	*58:01	*03:02	*07:06		SSO NGS	
5642	*33		*44	*58	*03	*07								SSP	
6649	*33		*44	*58										SSP	
8001	*33		*44	*58	(Cw10)	*07								SSO	
8043	*33		*44	*58	*03	*07	*33:03		*44:03	*58:01	*03:02	*07:01:01G		SSP SSO	
8070							*33:03		*44:03	*58:01	*03:02	*07:01		SBT	

Table 15. Individual laboratory results for Cell #1609-16012 by serology

Investigator	Days Old	Cell No 1609 (Asian)								Cell No 1610 (Hispanic)								Cell No 1611 (Chinese)								Cell No 1612 (Asian)									
		Viab %	A33	B44	B46	Cw1	Bw4	Bw6	OTHERS	Viab %	A11	A31	B18	B61	Cw3	Cw7	Bw6	OTHERS	Viab %	A24	A33	B60	B58	Cw3	Cw4	Bw4	Bw6	OTHERS	Viab %	A33	B44	B58	Cw3	Cw7	Bw4
Cecka, J. Mic	2	>95	+	+	+		+	+		>95	+	+	+	+		+		>95	+	+	+	+			+	+		>95	+	+	+			+	
Dunckley, Hea	6	99	+	+							+	+	+	+				99	+	+	+	+						99	+	+	+				
Enczmann, J		90	+	+	+					90	+	+	+	+				90	+	+	+	+						90	+	+	+				
Fort, Marylis	2	95	+	+	+		+	+		95	+	+	+	+		+		NT									NT								
Hahn, Amy B.		100	+	+	+		+			100	+	+	+	+		+		100	+	+	+	+				Bw4 Bw6	100	+	+	+			+		
Hogan, Patric		90	+	+	+	+	+			90	+	+	+	+	+	+	+	90	+	+	+	+	+	+	+	+	90	+	+	+	+	+	+		
Latham, Katy	2	100	+	+	+		+	+		99	+	+	+	+		+		100	+	+	+	+			+	+	100	+	+	+			+		
Loewenthal ,		80	+	+	+	+	+	+		85	+	+	+	+	+	+	+	90	+	+	+	+	+		+	+	80	+	+	+	+	+	+		
Permpikul, Ve	5	90	+	+	+		+	+		90	A11.1		+			+	B60,A30	90	+	+	+	+			+	+	90	+	+	+			+	A34	
Pule, Ziningi		70	A31	+			Cw3		A68	70	+	+	+	+	+	+		80	+	+	+	+	+	+		B52	80	+	+	+		+	A29,A30		
Renac, Virgin	2	90	+	+	+		+	+		90	+	+	+	B40		+		90	+	+	+	+			+	+	90	+	+	+			+		
Shai, Isaac	8	90	+	+	B62	+	+	+	A29,Cw3	92	+	+	+	B40	+	+	+	90	+	+	B40	+	+	+	+	Cw6,A29+	90	+	+	+	+	+	+	A29	
Varnavidou-Ni	7	98	+	+	+		+	+		98	+	+	+	+		+		98	+	+	+	B17			+	+	98	+	+	B17		+			
Vidan-Jeras,	7	70	+	+	+	+	+			80	+	+	+	B40	+	+	+	65	+	+	+	+	+	+	+		85	+	+	+	+	+			
Villard, Jean	5	95	+	+	+	+	+	+	CW14	95	+	+	+	B40	+	+	+																		