NATIONAL MARROW DONOR PROGRAM®

HLA Nomenclature Transition – April 2010

The science of HLA matching is a rapidly advancing and evolving field with new alleles discovered nearly every day. As a result, the current naming convention for HLA nomenclature is quickly reaching or has exceeded capacity to name these newly discovered alleles.

To accommodate the naming of HLA alleles in the future, the Nomenclature Committee of the World Health Organization (WHO) launched a new format of HLA nomenclature on April 1, 2010.

TRAINING INFORMATION

Key Modifications

Key modifications to HLA nomenclature include (see opposite side for examples):

1. **Introduction of colons into allele names**
   - Colons (:) will act as delimiters of the separate fields in allele names, allowing for expansion from two to three digits as needed
2. **HLA-C alleles no longer contain 'w'**
3. **Codes for ambiguous HLA allele typing**
   - HLA alleles with identical nucleotide sequences within the Antigen Recognition Site = G
   - HLA alleles with identical protein structure within the Antigen Recognition Site = P

Transition in Your Center

The new HLA nomenclature may impact HLA lab reports (electronic and paper), patient search reports, data entry forms, as well as applications and databases that manipulate and store HLA information.

To transition to the new HLA nomenclature, transplant programs may want to:

1. **Review the current flow of HLA information in your center** to determine if updates are needed to accommodate the new HLA nomenclature, including paper and electronic forms, reports, applications, databases, patient records, etc.
2. **Develop a plan to implement updates to these resources**
3. **Communicate this change and your center's transition plan with:**
   - Team members
   - IT staff
   - HLA experts and laboratory staff
   - Partner organizations or companies

World Wide Organizations are Ready

Organizations around the world are now accepting the new version of HLA nomenclature. National Marrow Donor Program (NMDP) will accept the new and continue to accept current versions until April 2011. The World Marrow Donor Association (WMDA) and NMDP will continue to work closely with American Society for Histocompatibilty and Immunogenetics (ASHI), European Federation for Immunogenetics (EFI), American Society for Blood and Marrow Transplantation (ABMT), European Group for Blood and Marrow Transplantation (EBMT) and laboratory software vendors to ensure a smooth and efficient transition.

Existing nomenclature		New nomenclature
A EXAMPLES:		
A*01010101	→	A*01:01:01:01
A*02010101	→	A*02:01:01:01
A*0299	→	A*02:99
A*9201	→	A*02:101
A*9202	→	A*02:102
A*9203	→	A*02:103
A*03010101	→	A*03:01:01:01

Existing nomenclature		New nomenclature
B EXAMPLES:		
B*1401	→	B*14:01
B*150102	→	B*15:01:02
B*1599	→	B*15:99
B*9501	→	B*15:101
B*9502	→	B*15:102
B*9503	→	B*15:103
B*2702	→	B*27:02

Existing nomenclature		New nomenclature
C EXAMPLES:		
Cw*0103	→	C*01:03
Cw*020201	→	C*02:02:01
Cw*07020101	→	C*07:02:01:01

Existing nomenclature		New nomenclature
DRB1 EXAMPLES:		
DRB1*03010101	→	DRB1*03:01:01:01
DRB1*1402	→	DRB1*14:02

Existing nomenclature		New nomenclature
DQB1 EXAMPLES:		
DQB1*0202	→	DQB1*02:02
DQB1*030101	→	DQB1*03:01:01

Existing nomenclature		New nomenclature
DPB1 EXAMPLES:		
DPB1*010101	→	DPB1*01:01:01
DPB1*0102	→	DPB1*100:01
DPB1*0203	→	DPB1*101:01
DPB1*0302	→	DPB1*102:01
DPB1*0403	→	DPB1*103:01
DPB1*0502	→	DPB1*104:01

More Information

- Access HLA nomenclature training presentations and additional resources at: **www.marrow.org/hla**
- An overview of the changes and a complete list of renamed alleles can be found at: **hla.alleles.org/nomenclature/nomenclature_2009.html**
- If you need further information, please send an e-mail to **new-nomenclature@nmdp.org**.

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Entrusted to operate the C.W. Bill Young Cell Transplantation Program, including the Be The Match Registry®.

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