



October 31, 2012

CDR Sheri Parker  
Office of Naval Research (ONR 342)  
875 N. Randolph St.  
Arlington, VA 22203-1995

**Subject: Quarterly Performance/Technical Report of the National Marrow Donor Program<sup>®</sup>**

**Reference:** Grant Award #N00014-12-1-0142 between the Office of Naval Research and the National Marrow Donor Program

Dear Cdr. Parker:

Enclosed is subject document which provides the performance activity for each statement of work task item of the above reference for the period of July 1, 2012 to September 30, 2012.

Should you have any questions as to the scientific content of the tasks and the performance activity of this progress report, you may contact our Chief Medical Officer – Dennis L Confer, MD directly at 612-362-3425.

With this submittal of the quarterly progress report, the National Marrow Donor Program has satisfied the reporting requirements of the above reference for quarterly documentation. Other such quarterly documentation has been previously submitted under separate cover.

Please direct any questions pertaining to the cooperative agreement to my attention at 612-362-3403 or at [cabler@nmdp.org](mailto:cabler@nmdp.org).

Sincerely,

Carla Abler-Erickson, MA  
Contracts Manager

Enclosure: Quarterly Report with SF298

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |                                    |                                                                  |                                                              |                                                                                       |  |
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| <b>REPORT DOCUMENTATION PAGE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                         |                                    |                                                                  | <b>Form Approved<br/>OMB No. 0704-0188</b>                   |                                                                                       |  |
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| <b>PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                         |                                    |                                                                  |                                                              |                                                                                       |  |
| <b>1. REPORT DATE</b> (DD-MM-YYYY)<br>31-10-2012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                         | <b>2. REPORT TYPE</b><br>Quarterly |                                                                  | <b>3. DATES COVERED</b> (From - To)<br>Jul 2012 - Sep 2012   |                                                                                       |  |
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| <b>6. AUTHOR(S)</b><br>Spellman, Stephen                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                         |                                    |                                                                  | <b>5d. PROJECT NUMBER</b><br>N/A                             |                                                                                       |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |                                    |                                                                  | <b>5f. WORK UNIT NUMBER</b><br>N/A                           |                                                                                       |  |
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| <b>9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b><br>Office of Naval Research<br>875 N. Randolph St.<br>Arlington, VA 22203                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                         |                                    |                                                                  | <b>10. SPONSOR/MONITOR'S ACRONYM(S)</b><br>ONR               |                                                                                       |  |
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| <b>13. SUPPLEMENTARY NOTES</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                         |                                    |                                                                  |                                                              |                                                                                       |  |
| <b>14. ABSTRACT</b><br><u>1. Contingency Preparedness:</u> Collect information from transplant centers, build awareness of the Transplant Center Contingency Planning Committee and educate the transplant community about the critical importance of establishing a nationwide contingency response plan.<br><br><u>2. Rapid Identification of Matched Donors :</u> Increase operational efficiencies that accelerate the search process and increase patient access are key to preparedness in a contingency event.<br><br><u>3. Immunogenetic Studies:</u> Increase understanding of the immunologic factors important in HSC transplantation.<br><br><u>4. Clinical Research in Transplantation:</u> Create a platform that facilitates multicenter collaboration and data management. |                         |                                    |                                                                  |                                                              |                                                                                       |  |
| <b>15. SUBJECT TERMS</b><br>Research in HLA Typing, Hematopoietic Stem Cell Transplantation and Clinical Studies to Improve Outcomes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                         |                                    |                                                                  |                                                              |                                                                                       |  |
| <b>16. SECURITY CLASSIFICATION OF:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                         |                                    | <b>17. LIMITATION OF ABSTRACT</b><br>Same as Report              | <b>18. NUMBER OF PAGES</b><br>17                             | <b>19a. NAME OF RESPONSIBLE PERSON</b><br>Dennis L. Confer, MD – Chief Medical Office |  |
| <b>a. REPORT</b><br>U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>b. ABSTRACT</b><br>U | <b>c. THIS PAGE</b><br>U           | <b>19b. TELEPHONE NUMBER (Include area code)</b><br>612.362.3425 |                                                              |                                                                                       |  |

Grant Award N00014-12-1-0142

DEVELOPMENT OF MEDICAL TECHNOLOGY  
FOR CONTINGENCY RESPONSE TO MARROW TOXIC AGENTS  
QUARTERLY  
PERFORMANCE / TECHNICAL REPORT  
FOR  
JULY 01, 2012 to SEPTEMBER 30, 2012  
PERIOD 3

Office of Naval Research

And

The National Marrow Donor Program  
3001 Broadway Street N.E.  
Minneapolis, MN 55413  
1-800-526-7809

**QUARTER PROGRESS REPORT****Development of Medical Technology for Contingency Response to Marrow Toxic Agents****July 01, 2012 through September 30, 2012**

| <b>TABLE OF CONTENTS</b> |                                                            |               |             |
|--------------------------|------------------------------------------------------------|---------------|-------------|
| <b>TASK</b>              | <b>DESCRIPTION</b>                                         | <b>STATUS</b> | <b>PAGE</b> |
| <b>IIA</b>               | <b>Contingency Preparedness</b>                            |               |             |
| <b>IIA.1</b>             | <b>Objective 1 – Care Plans by Transplant Physicians</b>   |               |             |
|                          | Task 1 – Secure Interest of Transplant Physicians          | Open          | 4           |
|                          | Task 2 – GCSF in Radiation Exposure                        | No Activity   | 4           |
|                          | Task 3 – Patient Assessment Guidelines                     | No Activity   | 4           |
|                          | Task 4 – National Data Collection and Management Model     | Closed        | 4           |
| <b>IIA.2</b>             | <b>Objective 2 – Coordination of Care of Casualties</b>    |               |             |
|                          | Task 1 – Contingency Response Network                      | Open          | 4           |
|                          | Task 2 – Standard Operating Procedures                     | No Activity   | 6           |
| <b>IIA.3</b>             | <b>Objective 3 – Information Technology Infrastructure</b> |               |             |
|                          | Task 1 – Disaster Recovery                                 | Closed        | 6           |
|                          | Task 2 – Critical Facility and Staff Related Functions     | Open          | 6           |
| <b>II.B</b>              | <b>Rapid Identification of Matched Donors</b>              |               |             |
| <b>II.B.1</b>            | <b>Objective 1 – Resolution of Speeds Donor Selection</b>  |               |             |
|                          | Task 1 – Increase Registry Diversity                       | Open          | 6           |
|                          | Task 2 – Evaluate HLA-DRB1 High Resolution Typing          | Closed        | 7           |
|                          | Task 3 – Evaluate HLA-C Typing of Donors                   | Closed        | 7           |
|                          | Task 4 – Evaluate Buccal Swabs                             | Open          | 7           |
|                          | Task 5 – Enhancing HLA Data for Selected Donors            | Closed        | 7           |
|                          | Task 6 – Maintain a Quality Control Program                | Open          | 8           |
| <b>II.B.2</b>            | <b>Objective 2 – Improve HLA Quality &amp; Resolution</b>  |               |             |
|                          | Task 1 – Collection of Primary Data                        | No Activity   | 8           |
|                          | Task 2 – Validation of Logic of Primary Data               | Closed        | 8           |
|                          | Task 3 – Reinterpretation of Primary Data                  | Closed        | 8           |
|                          | Task 4 – Genotype Lists & Matching Algorithm               | Open          | 8           |
| <b>II.B.3</b>            | <b>Objective 3 – Algorithm to Predict Best Donor</b>       |               |             |
|                          | Task 1 – Incorporate Frequencies into Matching Algorithm   | No Activity   | 9           |
|                          | Task 2 – Enhancement of EM Algorithm                       | No Activity   | 9           |
|                          | Task 3 – Optimal Registry Size Analysis                    | No Activity   | 9           |
|                          | Task 4 – Target Underrepresented Phenotypes                | Open          | 9           |

## QUARTER PROGRESS REPORT

## Development of Medical Technology for Contingency Response to Marrow Toxic Agents

July 01, 2012 through September 30, 2012

|              |                                                                            |        |    |
|--------------|----------------------------------------------------------------------------|--------|----|
|              | Task 5 – Bioinformatics Web Site                                           | Closed | 9  |
|              | Task 6 – Utilize Search Strategy Advisors to Improve Algorithm             | Closed | 9  |
|              | Task 7 – Population Genetics                                               | Closed | 9  |
|              | Task 8 – Haplotype Matching                                                | Closed | 9  |
|              | Task 9 – Global Haplotype/Benchmark                                        | Closed | 9  |
| <b>IIB.4</b> | <b>Objective 4 – Reduction of Donor Matching Time</b>                      |        |    |
|              | Task 1 – Expand Network Communications                                     | Closed | 10 |
|              | Task 2 – Central Contingency Management                                    | Open   | 10 |
|              | Task 3 – Benchmarking Analysis                                             | Closed | 10 |
|              | Task 4 – Expand Capabilities of Collection and Apheresis Centers           | Closed | 10 |
| <b>IIC.</b>  | <b>Immunogenetic Studies</b>                                               |        |    |
| <b>IIC.1</b> | <b>Objective 1 – Influence of HLA Mismatches</b>                           |        |    |
|              | Task 1 – Donor Recipient Pair Project                                      | Open   | 10 |
| <b>IIC.2</b> | <b>Objective 2 – Role of Other Loci and GVHD</b>                           |        |    |
|              | Task 1 – Analysis of Non-HLA Loci                                          | Open   | 11 |
|              | Task 2 – Related Pairs Research Repository                                 | Closed | 11 |
|              | Task 3 – CIBMTR Integration                                                | Closed | 11 |
| <b>IID</b>   | <b>Clinical Research in Transplantation</b>                                |        |    |
| <b>IID.1</b> | <b>Objective 1 – Clinical Research Improves Outcomes</b>                   |        |    |
|              | Task 1 – Observational Research, Clinical Trials and NIH Transplant Center | Open   | 11 |
|              | Task 2 – Research with NMDP Donors                                         | Closed | 12 |
|              | Task 3 – Expand Immunobiology Research                                     | Open   | 12 |
|              | Acronym List                                                               |        | 14 |

## QUARTER PROGRESS REPORT

## Development of Medical Technology for Contingency Response to Marrow Toxic Agents

July 01, 2012 through September 30, 2012

**IIA. Contingency Preparedness – Objective 1:** Recovery of casualties with significant myelosuppression following radiation or chemical exposure is optimal when care plans are designed and implemented by transplant physicians

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IIA.1 Task 1:</b> Secure Interest of Transplant Physicians              | <b>Period 3 Activity:</b> <ul style="list-style-type: none"> <li>26 RITN center staff (including 9 physicians or physician multipliers) attended Advanced Medical Radiation Response training on July 16-17, 2012 at the Radiation Emergency Assistance Center and Training Site in Oakridge, TN (a total of 181 RITN staff have completed this training)</li> </ul> |
| <b>IIA.1 Task 2:</b> GCSF in Radiation Exposure                            | <b>Period 3 Activity:</b> <ul style="list-style-type: none"> <li>No activity this period.</li> </ul>                                                                                                                                                                                                                                                                 |
| <b>IIA.1 Task 3:</b> Patient Assessment Guidelines and System Enhancements | <b>Period 3 Activity:</b> <ul style="list-style-type: none"> <li>No activity this period.</li> </ul>                                                                                                                                                                                                                                                                 |

**IIA.1 Task 4:** National Data Collection Model – This task is closed.

**IIA. Contingency Preparedness – Objective 2:** Coordination of the care of casualties who will require hematopoietic support will be essential in a contingency situation.

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>IIA.2 Task 1:</b> Contingency Response Network | <b>Period 3 Activity:</b> <ul style="list-style-type: none"> <li>98% of 65 RITN centers completed all of their tasks on time, one requested an extension and five were inactive due to competing priorities (e.g. HIS implementation and FACT Accreditation) <ul style="list-style-type: none"> <li>A total of five (5) new hospitals have joined RITN this year including: <ul style="list-style-type: none"> <li>University of UT-Primary Children's</li> <li>Westchester (NY)</li> <li>Massachusetts General</li> <li>West Virginia University Hospital</li> <li>Mount Sinai (NY)</li> </ul> </li> </ul> </li> </ul> |
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**QUARTER PROGRESS REPORT****Development of Medical Technology for Contingency Response to Marrow Toxic Agents****July 01, 2012 through September 30, 2012**

- RITN participated in the BARDA Medical Countermeasures Capacity review in the National Capital Region and New York City
- RITN participated in the FDA Public Workshop; Use of Computer Simulation of the United States Blood Supply in Support of Planning for Emergency Preparedness and Medical Countermeasures
- Continued to develop relationships with the National Association of County and City Health Officials (NACCHO), the Association of State and Territorial Health Officials (ASTHO) and the Federal Emergency Management Agency (FEMA)
- Conducted a drill of submitting the RITN Capabilities Report through the HealthCareStandard software system
- Conducted the monthly RITN Center conference call to review task completion status and allow a venue for centers to talk to peers
- RITN Medical Advisor activity; Dr. Weinstock participated in the following activities supporting the Radiation Injury Treatment Network:
  - o He met with representatives from the Veterans Administration and Department of Health and Human Services to establish links with RITN
  - o He was invited to speak at the BARDA symposium on blood products in November 2012
  - o He is leading the RITN effort to secure a contract with BARDA to establish a user managed inventory system at RITN centers
  - o He updated pediatric and adult template admission orders for casualties of a radiation incident. These are national treatment guidelines for patient management and are posted on the REMM (National Library of Medicine) and RITN websites
  - o He was invited to author a chapter on Radiation Emergency Response in the forthcoming: Koenig & Schultz's Disaster Medicine: Comprehensive Principles & Practice textbook
  - o He coordinated a response framework between RITN and REAC/TS for future radiation events.

### QUARTER PROGRESS REPORT

#### Development of Medical Technology for Contingency Response to Marrow Toxic Agents

July 01, 2012 through September 30, 2012

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| <b>IIA.2 Task 2:</b> Sibling Typing Standard Operating Procedures                                                                                                                                             | <b>Period 3 Activity:</b> <ul style="list-style-type: none"> <li>No activity this period.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>IIA. Contingency Preparedness – Objective 3:</b> NMDP's critical information technology infrastructure must remain operational during contingency situations that directly affect the Coordinating Center. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>IIA.3 Task 1:</b> I.S. Disaster Recovery – This task is closed.                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>IIA.3 Task 2:</b> Critical Facility and Staff Related Functions                                                                                                                                            | <b>Period 3 Activity:</b> <ul style="list-style-type: none"> <li>Conducted the 2012 Business Continuity Exercise; 79 staff worked from remote locations not operated by the NMDP to test their ability to use the VPN service as well as to verify the recently upgraded VPN server could handle a significant load; server load monitoring software recorded that the server was at 25% capacity.</li> <li>Conducted a Business Continuity Site Visit of the NMDP offices in Oakland, CA, Rochester, PA, Spokane, WA, Richmond, VA, Portland, OR and St. Petersburg, FL</li> </ul>                                                                                                                                                                        |
| <b>IIB. Rapid Identification of Matched Donors – Objective 1:</b> Increasing the resolution and quality of the HLA testing of volunteers on the registry will speed donor selection.                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>IIB.1 Task 1:</b> Increase Registry Diversity                                                                                                                                                              | <b>Period 3 Activity:</b><br><b>Recruitment Typing</b> <ul style="list-style-type: none"> <li>6 laboratories provided HLA typing on a total of 1,907 newly recruited donors.               <ul style="list-style-type: none"> <li>3 laboratories performed HLA-A, B, DRB1 typing</li> <li>3 laboratories performed HLA-A, B, C, DRB1 and DQB1 typing</li> <li>1 laboratory performed HLA-A, B, C, DRB1, DQB1 and DPB1 typing</li> </ul> </li> <li>The blind quality control testing error rate was 0.24%, meeting the project requirement of <math>\leq 2.0\%</math>.</li> <li>On-time testing completion rate was 98.6%, meeting the project requirement of a minimum of 90% of typing results reported within 14 days of shipment of samples.</li> </ul> |



**QUARTER PROGRESS REPORT****Development of Medical Technology for Contingency Response to Marrow Toxic Agents****July 01, 2012 through September 30, 2012**

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|                                                                                    | <b>Rare allele typing project</b> <ul style="list-style-type: none"> <li>In the process of typing and confirming rare alleles, certain patterns became evident that indicated when a sample was likely incorrectly reported. These patterns included 1.) allele reported in multiple race groups or allele reported in race group that differed from the IMGT/HLA submission, 2.) allele reported with a second rare or uncommon allele, and 3.) allele frequently reported before 2004 and infrequently reported after that date. Using these guidelines, uncommon alleles in 384 samples stored at the repository were selected for typing at either intermediate or high resolution typing. To date, 76% of the results came back a different allele.</li> <li>Typing continued on a small group of remaining questionable rare alleles. Eight samples were sent for high resolution typing and five of the samples came back a different allele; three of the samples were confirmed.</li> </ul> |
| <b>IIB.1 Task 2:</b> Evaluate HLA-DRB1 High Res typing – This task is closed.      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>IIB.1 Task 3:</b> Evaluate HLA-C Typing of Donors – This task is closed         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>IIB.1 Task 4:</b><br>Evaluate Buccal Swabs                                      | <b>Period 3 Activity:</b><br><b>Alternate Sample Collection Methods Study</b> <ul style="list-style-type: none"> <li>Purified DNA from 3 sample collection formats (Oragene saliva collection kit from DNA Genotek, CEP-Swab ejectable-tip swab from Fitzco, and the standard NMDP cotton-tipped swab) have been stored in a room-temperature stable dry format (GenTegra tubes from GenVault).</li> <li>Sample sets derived from 10 individuals have been sent for Whole Genome Amplification (WGA) of the stored DNA. WGA DNA will be returned as both frozen aliquots and as dry aliquots in GenTegra tubes. Samples will be returned next quarter and then distributed for HLA typing evaluation.</li> </ul>                                                                                                                                                                                                                                                                                     |
| <b>IIB.1 Task 5:</b> Enhancing HLA Data for Selected Donors – This task is closed. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

# **QUARTER PROGRESS REPORT**

## **Development of Medical Technology for Contingency Response to Marrow Toxic Agents**

**July 01, 2012 through September 30, 2012**

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| <b>IIB.1 Task 6:</b><br>Maintain a Quality Control Program                                                                                                                                          | <b>Period 3 Activity:</b><br><br>During this quarter, 6 cell lines were received from the cell processing laboratory and incorporated into the regular QC rotation, bringing the total number of active buccal B-LCL QC master lots to 497. Of the 65 cells lines selected for incorporation into the QC program in FY2012, 29 (45%) have exhibited negative cell growth, and another 3 have poor progression. Thirty-five replacement cells were shipped for B-LCL cell initiation/transformation/culture/expansion in September. These samples ensure that the NMDP QC inventory has complete coverage of all CWD alleles with a count greater than 1:10,000 and expand alleles that were depleted to an n of 1. In addition, the majority of CWD alleles with a minimum count of 25 by sequenced based typing methods will now be represented.<br><br>An error in the sequence of C*02:09 was discovered through the NMDP QC program. As a result, this allele will be deleted in the IMGT/HLA database. |
| <b>IIB. Rapid Identification of Matched Donors – Objective 2:</b> Primary DNA typing data can be used within the registry to improve the quality and resolution of volunteer donor HLA assignments. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>IIB.2 Task 1:</b><br>Collection of Primary Data                                                                                                                                                  | <b>Period 3 Activity:</b> <ul style="list-style-type: none"> <li>• No activity this period.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>IIB.2 Task 2:</b> Validation of Logic of Primary Data – This task is closed.                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>IIB.2 Task 3:</b> Reinterpretation of Primary Data – This task is closed.                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>IIB.2 Task 4:</b><br>Genotype Lists & Matching Algorithm                                                                                                                                         | <b>Period 3 Activity:</b><br><br>The Bioinformatics Research Advisory Ginger Group met on Sept 21, 2012. 15 external advisors and a number of staff employees discussed a range of topics including KIR, ancestry typing and data standards. This group meets twice per year to review the scientific and strategic direction of the Bioinformatics Research department and all activity carried out pursuant to the goals of this research grant.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## QUARTER PROGRESS REPORT

## Development of Medical Technology for Contingency Response to Marrow Toxic Agents

July 01, 2012 through September 30, 2012

**IIB. Rapid Identification of Matched Donors – Objective 3:** Registry data on HLA allele and haplotype frequencies and on the nuances of HLA typing can be used to design computer algorithms to predict the best matched donor.

|                                                                              |                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IIB.3 Task 1:</b><br>Phase I of EM<br>Haplotype Logic                     | <b>Period 3 Activity:</b> <ul style="list-style-type: none"> <li>No activity this period.</li> </ul>                                                                                                                                                                        |
| <b>IIB.3 Task 2:</b><br>Enhancement of EM<br>Algorithm                       | <b>Period 3 Activity:</b> <ul style="list-style-type: none"> <li>No activity this period.</li> </ul>                                                                                                                                                                        |
| <b>IIB.3 Task 3:</b><br>Optimal Registry Size<br>Analysis                    | <b>Period 3 Activity:</b> <ul style="list-style-type: none"> <li>No activity this period.</li> </ul>                                                                                                                                                                        |
| <b>IIB.3 Task 4:</b><br>Target Under- Repre-<br>sented Phenotypes            | <b>Period 3 Activity:</b> <ul style="list-style-type: none"> <li>Carried out preparatory statistical model building on donor demand models, as well as donor availability models</li> <li>Development of Genetic Ancestry educational session for annual meeting</li> </ul> |
| <b>IIB.3 Task 5:</b> Bioinformatics Web Site – This task is closed.          |                                                                                                                                                                                                                                                                             |
| <b>IIB.3 Task 6:</b> Consultants to Improve Algorithm – This task is closed. |                                                                                                                                                                                                                                                                             |
| <b>IIB.3 Task 7:</b> Population Genetics – This task is closed.              |                                                                                                                                                                                                                                                                             |
| <b>IIB.3 Task 8:</b> Haplotype Matching – This task is closed.               |                                                                                                                                                                                                                                                                             |
| <b>IIB.3 Task 9:</b> Global Haplotype/Benchmark – This task is closed.       |                                                                                                                                                                                                                                                                             |

# QUARTER PROGRESS REPORT

## Development of Medical Technology for Contingency Response to Marrow Toxic Agents

July 01, 2012 through September 30, 2012

**IIB. Rapid Identification of Matched Donors – Objective 4:** Reducing the time and effort required to identify closely matched donors for patients in urgent need of HSC transplants will improve access to transplantation and patient survival in the context of a contingency response and routine patient care.

**IIB.4 Task 1:** Expand Network Communications – This task is closed.

### **IIB.4 Task 2:**

Central Contingency Management

### **Period 3 Activity:**

- NMDP provided support for donor/cord blood unit identification, selection and collection for the NIH intramural unrelated donor transplant program. Activity in the last quarter was as follows:
  - o 3 formal searches
  - o 34 donor confirmatory typing blood sample and IDM testing requests
  - o 10 cord blood unit confirmatory typing requests
  - o 1 cord blood unit, 3 PBSC collections and 2 therapeutic stem cell collections

**IIB.4 Task 3:** Benchmarking Analysis – This task is closed

**IIB.4 Task 4:** Expand Capabilities of Collection and Apheresis Centers – This task is closed.

**IIC. Immunogenetic Studies – Objective 1:** HLA mismatches may differ in their impact on transplant outcome, therefore, it is important to identify and quantify the influence of specific HLA mismatches. In contingency situations it will not be possible to delay transplant until a perfectly matched donor can be found.

### **IIC.1 Task 1:**

Donor Recipient Pair Project

### **Period 3 Activity:**

Donor Recipient Pair Project

In 1994 a retrospective D/R Pair HLA typing project to characterize class I and class II alleles of donor/recipient paired samples from NMDP's Repository was initiated. The goals of this ongoing research project are to assay the impact of DNA-based HLA matching on unrelated donor transplant outcome, develop strategies for optimal HLA matching, evaluate the impact of matching at alternative HLA loci on transplant outcome and finally to promote the development of DNA-based high resolution HLA typing methodologies. Presence/absence typing of 14 KIR loci (2DL1-5, 2DS1-5, 3DL1-3 and 3DS1) has been included.

- SG27, SG 28 and SG 29 HLA and KIR were audited during this period.

# QUARTER PROGRESS REPORT

## Development of Medical Technology for Contingency Response to Marrow Toxic Agents

July 01, 2012 through September 30, 2012

|                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>• SG30 period of performance came to a close on September 30<sup>th</sup>, 2012.</li> <li>• KIR discrepancy and no make resolution are ongoing.</li> <li>• KIR linkage analysis was received from the typing labs and updates were made in the data base.</li> <li>• The KIR manuscript including the high resolution KIR typing project data was accepted for publication in PLoS One. Publication should occur next quarter.</li> </ul> <p>To date over 2500 pairs and 1180 additional donors have been typed for presence/absence of 14 KIR loci (2DL1-5, 2DS1-5, 3DL1-3 and 3DS1).</p> |
| <b>IIC. Immunogenetic Studies – Objective 2:</b> Even when patient and donor are HLA matched, GVHD occurs so other loci may play a role.                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>IIC.2 Task 1:</b><br>Analysis of non-HLA loci                                                                                                                                        | <p><b>Period 3 Activity:</b></p> <ul style="list-style-type: none"> <li>• Developed rigorous quality assurance tests for IIDB, which is a combined repository for infusion outcomes data for research purposes.</li> <li>• Periodically functionally test IPR's interface as new features are implemented into the suite.</li> <li>• Developed new functionality for exporting IPR reports.</li> <li>• Worked on Audit Tool and Audit Report.</li> </ul>                                                                                                                                                                          |
| <b>IIC.2 Task 2:</b> Related Pairs Research Repository – This task is closed.                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>IIC.2 Task 3:</b> CIBMTR Integration – This task is closed.                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>IID. Clinical Research in Transplantation – Objective 1:</b> Clinical research in transplantation improves transplant outcomes and supports preparedness for a contingency response. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>IID.1 Task 1:</b><br>Observational Research, Clinical Trials and NIH Transplant Center                                                                                               | <p><b>Period 3 Activity:</b></p> <ul style="list-style-type: none"> <li>• Monitoring activities continued at for the Double Cord Blood clinical trial during this quarter. A total of four monitoring trips occurred at four separate sites.</li> <li>• Amended documents associated with the long-term donor follow up study were translated to Spanish.</li> </ul>                                                                                                                                                                                                                                                              |

## QUARTER PROGRESS REPORT

## Development of Medical Technology for Contingency Response to Marrow Toxic Agents

July 01, 2012 through September 30, 2012

**IID.1 Task 2:** Research with NMDP Donors – This task is closed.**IID.1 Task 3:**  
Expand Immuno-  
biology Research**Period 3 Activity:**

The CIBMTR IBWC met monthly during the quarter to discuss progress on ongoing research studies

- Three abstracts were submitted:
  - Joseph Pidala, et al., *Amino acid substitution at peptide-binding pockets of HLA Class I molecules adversely impacts hematopoietic cell transplantation outcomes*. Oral presentation 2012 ASH annual meeting
  - Fabio Giglio, et al., *Donor KIR3DL1 and HLA-B allotypes control leukemia relapse after allogeneic hematopoietic stem cell transplantation*. Oral presentation 2012 ASH annual meeting
  - Susana Marino, et al., *Identification of high risk HLA Class I amino acid substitution in hematopoietic stem cell transplantation*. Poster presentation 2012 ASH annual meeting.
- Three manuscripts were submitted:
  - Christiane Dobbstein, et. al, *Birth order and transplant outcome in HLA-identical sibling stem cell transplantation – an analysis on behalf of the CIBMTR*. Submitted to Haematologica
  - Effie Petersdorf, et al., *Increasing the safety of HLA-mismatched unrelated donor hematopoietic transplantation*. Submitted to PNAS.
  - Fabio Giglio, et. al., *Donor KIR3DL1 and HLA-B subtypes and leukemia control in HLA-compatible allogeneic hematopoietic stem cell transplantation*. Submitted to Nature Genetics.
- One manuscript was accepted:
  - Lawrence Petz, et al., *The cure of HIV infections using cord blood transplantation*. Submitted BBMT.

## QUARTER PROGRESS REPORT

Development of Medical Technology for Contingency Response to Marrow Toxic Agents

July 01, 2012 through September 30, 2012

- |  |                                                                                                                                                                                                                                                                                                                                                                                   |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"><li>• One manuscript was published:<ul style="list-style-type: none"><li>○ Vanderson Rocha et al., <i>Effect of HLA-matching recipient to donor non-inherited maternal antigens on outcomes after mismatched umbilical cord blood transplantation for hematologic malignancy</i>. BBMT. 2012 July 17. [Epub ahead of print]</li></ul></li></ul> |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**QUARTER PROGRESS REPORT****Development of Medical Technology for Contingency Response to Marrow Toxic Agents****July 01, 2012 through September 30, 2012****ACRONYM LIST**

|         |                                                                   |        |                                                                      |
|---------|-------------------------------------------------------------------|--------|----------------------------------------------------------------------|
| AABB    | American Association of Blood Banks                               | HSC    | Hematopoietic Stem Cell                                              |
| ABD     | Antigen Binding Domain                                            | IBWC   | Immunobiology Working Committee                                      |
| AFA     | African American                                                  | ICRHER | International Consortium for Research on Health Effects of Radiation |
| AGNIS   | A Growable Network Information System                             | IDAWG  | Immunogenomics Data Analysis Working Group                           |
| AML     | Acute Myelogenous Leukemia                                        | IDM    | Infectious Disease Markers                                           |
|         |                                                                   | IHIW   | International Histocompatibility and Immunogenetics                  |
| API     | Asian Pacific Islander                                            | IHWG   | International Histocompatibility Working Group                       |
| AQP     | Ancestry Questionnaire Pilot                                      | IPR    | Immunobiology Project Results                                        |
| ARS     | Acute Radiation Syndrome (also known as Acute Radiation Sickness) | ICRHER | International Consortium for Research on Health Effects of Radiation |
| ASBMT   | American Society for Blood and Marrow Transplantation             | IND    | Investigational New Drug                                             |
| ASHI    | American Society for Histocompatibility and Immunogenetics        | IS     | Information Services                                                 |
| ATF     | Activating Transcription Factor                                   | IT     | Information Technology                                               |
| B-LCLs  | B-Lymphoblastoid Cell Lines                                       | IRB    | Institutional Review Board                                           |
| BARDA   | Biomedical Advanced Research and Development Authority            | JCAHO  | Joint Commission on Accreditation of Healthcare Organizations        |
| BBMT    | Biology of Blood and Marrow Transplant                            | KG     | Thousand Genomes                                                     |
|         |                                                                   | KIR    | Killer Immunoglobulin-like Receptor                                  |
| BCP     | Business Continuity Plan                                          | LGPL   | Lesser General Public License                                        |
|         |                                                                   | LMS    | Learning Management System                                           |
| BCPeX   | Business Continuity Plan Exercise                                 | MDACC  | MD Anderson Cancer Center                                            |
| BMCC    | Bone Marrow Coordinating Center                                   | MDHT   | Model Driven Health Tools                                            |
| BMDW    | Bone Marrow Donors Worldwide                                      | MDS    | Myelodysplastic Syndrome                                             |
| BMT     | Bone Marrow Transplantation                                       | MHC    | Major Histocompatibility Complex                                     |
| BMT CTN | Blood and Marrow Transplant - Clinical Trials Network             | MIBBI  | Minimum Information for Biological and Biomedical Investigations     |
| BODI    | Business Objects Data Integrator                                  | MICA   | MHC Class I-Like Molecule, Chain A                                   |



## QUARTER PROGRESS REPORT

## Development of Medical Technology for Contingency Response to Marrow Toxic Agents

July 01, 2012 through September 30, 2012

|           |                                                             |         |                                                                    |
|-----------|-------------------------------------------------------------|---------|--------------------------------------------------------------------|
| BRT       | Basic Radiation Training                                    | MICB    | MHC Class I-Like Molecule, Chain B                                 |
| C&A       | Certification and Accreditation                             | MIRIGE  | Minimum Information for Reporting Immunogenomic Experiments        |
| CAU       | Caucasian                                                   | MKE     | Milwaukee                                                          |
| CBMTG     | Canadian Blood and Marrow Transplant Group                  | MRD     | Minimal Residual Disease                                           |
| CBB       | Cord Blood Bank                                             | MSKCC   | Memorial Sloan-Kettering Cancer Center                             |
| CBC       | Congressional Black Caucus                                  | MSP     | Minneapolis                                                        |
| CBS       | Canadian Blood Service                                      | MUD     | Matched Unrelated Donor                                            |
| CBU       | Cord Blood Unit                                             | NAC     | Nuclear Accident Committee                                         |
| CDA       | Clinical Document Architecture                              | NCBI    | National Center for Biotechnology Information                      |
| CFU       | Colony Forming Units                                        | NCBM    | National Conference of Black Mayors                                |
| CGI       | Common Gateway Interface                                    | NCI     | National Cancer Institute                                          |
| CHORI     | Children's Hospital Oakland Research Institute              | NGS     | Next Generation Sequencing                                         |
| CHTC      | Certified Hematopoietic Transplant Coordinator              | NEMO    | N-locus Expectation-Maximization using Oligonucleotide typing data |
| CIBMTR    | Center for International Blood & Marrow Transplant Research | NHLBI   | National Heart Lung and Blood Institute                            |
| CIT       | CIBMTR Information Technology                               | NIH     | National Institutes of Health                                      |
| CLIA      | Clinical Laboratory Improvement Amendment                   | NIMA    | Non-Inherited Maternal Allele/Antigen                              |
| CME       | Continuing Medical Education                                | NIMS    | National Incident Management System                                |
| CMF       | Community Matching Funds                                    | NK      | Natural Killer                                                     |
| COG       | Children's Oncology Group                                   | NLE     | National Level Exercise                                            |
| CREG      | Cross Reactive Groups                                       | NMDP    | National Marrow Donor Program                                      |
| CSS       | Center Support Services                                     | NRP     | National Response Plan                                             |
| CT        | Confirmatory Testing                                        | NST     | Non-myeloablative Allogeneic Stem Cell Transplantation             |
| CTA       | Clinical Trial Application                                  | OCR/ICR | Optical Character Recognition/Intelligent Character Recognition    |
| CTMS      | Clinical Trial Management System                            | OIT     | Office of Information Technology                                   |
| DC        | Donor Center                                                | OMB     | Office of Management and Budget                                    |
| DHHS-ASPR | Department of Health and Human Service –                    | ONR     | Office of Naval Research                                           |

## QUARTER PROGRESS REPORT

## Development of Medical Technology for Contingency Response to Marrow Toxic Agents

July 01, 2012 through September 30, 2012

|           |                                                                                             |         |                                                                          |
|-----------|---------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------|
|           | Assistant Secretary Preparedness and Response                                               |         |                                                                          |
| DIY       | Do it yourself                                                                              | P2P     | Peer-to-Peer                                                             |
| DKMS      | Deutsche Knochenmarkspenderdatei                                                            | PBMC    | Peripheral Blood Mononuclear Cells                                       |
| DMSO      | Dimethylsulphoxide                                                                          | PBSC    | Peripheral Blood Stem Cell                                               |
| DoD       | Department of Defense                                                                       | PCR     | Polymerase Chain Reaction                                                |
| DHHS-ASPR | Department of Health and Human Services – Assistant Secretary for Preparedness and Response | PSA     | Public Service Announcement                                              |
| DNA       | Deoxyribonucleic Acid                                                                       | QC      | Quality control                                                          |
| DR        | Disaster Recovery                                                                           | RCC     | Renal Cell Carcinoma                                                     |
| D/R       | Donor/Recipient                                                                             | RCI BMT | Resource for Clinical Investigations in Blood and Marrow Transplantation |
| DRB       | Design Review Board                                                                         | REAC/TS | Radiation Emergency Assistance Center/Training Site                      |
| EBMT      | European Group for Blood and Marrow Transplantation                                         | REST    | Representational State Transfer                                          |
| EDC       | Electronic Data Capture                                                                     | RFP     | Request for Proposal                                                     |
| EFI       | European Federation of Immunogenetics                                                       | RFQ     | Request for Quotation                                                    |
| EM        | Expectation Maximization                                                                    | RG      | Recruitment Group                                                        |
| EMDIS     | European Marrow Donor Information System                                                    | RITN    | Radiation Injury Treatment Network                                       |
| ENS       | Emergency Notification System                                                               | SBT     | Sequence Based Typing                                                    |
| ERSI      | Environment Remote Sensing Institute                                                        | SCTOD   | Stem Cell Therapeutics Outcome Database                                  |
| FBI       | Federal Bureau of Investigation                                                             | SG      | Sample Group                                                             |
| FDA       | Food and Drug Administration                                                                | SIRE    | Self Identified Race and Ethnicity                                       |
| FDR       | Fund Drive Request                                                                          | SLCBB   | St. Louis Cord Blood Bank                                                |
| FLOCK     | Flow Cytometry Analysis Component                                                           | SLW     | STAR Link® Web                                                           |
| Fst       | Fixation Index                                                                              | SNP     | Single Nucleotide Polymorphism                                           |
| GETS      | Government Emergency Telecommunications Service                                             | SRG     | Survey Research Group                                                    |
| GCSF      | Granulocyte-Colony Stimulating Factor (also known as filgrastim)                            | SSA     | Search Strategy Advice                                                   |
| GIS       | Geographic Information System                                                               | SSO     | Sequence Specific Oligonucleotides                                       |

**QUARTER PROGRESS REPORT****Development of Medical Technology for Contingency Response to Marrow Toxic Agents****July 01, 2012 through September 30, 2012**

|       |                                                     |       |                                                     |
|-------|-----------------------------------------------------|-------|-----------------------------------------------------|
| GL    | Genotype List                                       | SSP   | Sequence Specific Primers                           |
| GNU   | GNU's Not Unix                                      | SSOP  | Sequence Specific Oligonucleotide Probes            |
| GTR   | Genetic Testing Registry                            | SSRS  | Sample Storage Research Study                       |
| GvHD  | Graft vs Host Disease                               | STAR® | Search, Tracking and Registry                       |
| HCS   | HealthCare Standard                                 | TC    | Transplant Center                                   |
| HCT   | Hematopoietic Cell Transplantation                  | TED   | Transplant Essential Data                           |
| HEPP  | Hospital Emergency Preparedness Program             | TIDES | Toolkit for Immunogenomic Data Exchange and Storage |
| HGDP  | Human Genome Diversity Panel                        | TNC   | Total Nucleated Cell                                |
| HHQ   | Health History Questionnaire                        | TSA   | Transportation Security Agency                      |
| HHS   | Health and Human Services                           | UI    | User Interface                                      |
| HIPAA | Health Insurance Portability and Accountability Act | UML   | Unified Modeling Language                           |
| HIS   | Hispanic                                            | URD   | Unrelated Donor                                     |
| HLA   | Human Leukocyte Antigen                             | WGA   | Whole Genome Amplification                          |
| HML   | Histoimmunogenetics Mark-up Language                | WMDA  | World Marrow Donor Association                      |
| HR    | High Resolution                                     | WU    | Work-up                                             |
| HRSA  | Health Resources and Services Administration        |       |                                                     |