

August 25, 2010

LCDR 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[®]

Reference: Grant Award #N00014-10-1-0204 between the Office of Naval Research and the National Marrow Donor Program

Dear Cdr. Montcalm-Smith:

Enclosed is subject document which provides the performance activity for each statement of work task item of the above reference for the period of March 1, 2010 to June 30, 2010.

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 (612-362-3403 or at cabler@nmdp.org).

Sincerely,



Carla Abler-Erickson, MA
Sr. Contracts Representative

Enclosure: Quarterly Report with SF298

- C: D. Ivery – ACO (ONR-Chicago), letter and enclosure
- Dr. Robert J. Hartzman, CAPT, MC, USN (Ret): letter and enclosure
- Jennifer Ng, PhD – C.W. Bill Young Marrow Donor Recruitment and Research Program, letter and enclosure
- J. Rike - DTIC (Ste 0944): letter and enclosure
- NRL (Code 5227): letter and enclosure
- Dennis Confer, MD, Chief Medical Officer, NMDP, letter only
- Michelle Setterholm, NMDP letter only

REPORT DOCUMENTATION PAGE

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14. ABSTRACT <p>1. <u>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.</p> <p>2. <u>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.</p> <p>3. <u>Immunogenetic Studies</u>: Increase understanding of the immunologic factors important in HSC transplantation.</p> <p>4. <u>Clinical Research in Transplantation</u>: Create a platform that facilitates multicenter collaboration and data management.</p>					
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NATIONAL MARROW DONOR PROGRAM®

Creating Connections. Saving Lives.™

Grant Award N00014-10-1-0204

QUARTERLY
PERFORMANCE / TECHNICAL REPORT
FOR
MARCH 01, 2010 to JUNE 30, 2010
PERIOD 1

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
March 01, 2010 through June 30, 2010

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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

IIA.1 Task 1: Secure Interest of Transplant Physicians	Period 1 Activity: <ul style="list-style-type: none"> • Coordinated logistics and training of RITN center staff at the Radiation Emergency Assistance Center/Training Site (REAC/TS) in Oakridge, TN for Advanced Radiation Medical Emergency training • Basic Radiation Training: since its' creation in 2006 – 2,092 RITN center staff have successfully completed Basic Radiation Training; this is a passing rate of 96%
IIA.1 Task 2: GCSF in Radiation Exposure	Period 1 Activity: <ul style="list-style-type: none"> • No activity this period.
IIA.1 Task 3: Patient Assessment Guidelines and System Enhancements	Period 1 Activity: Donor Management tool application efforts were focused on required features and enhancements for the Navy Contingency project. The tool provides the ability to electronically contact the donors via email and allow them to update their contact information and complete an online Health History Questionnaire (HHQ) from the Do It Yourself donor online platform. Information provided by the donor is securely transferred to the donor's record in the tool used to manage Donor Activity; facilitating reporting, storage and review of this information in established donor management systems. Project Outcomes, related to the new versions of the tools used to manage Donor Activity, continue to show favorable results and strong user feedback: <ul style="list-style-type: none"> ○ Donors continue to be responsive to online tools. New Online Health History Questionnaire functionality resulted in: (between 10/1/09 – 6/30/10) 4948 "Completed" HHQs ○ 239 "In Process" HHQs

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- Overall time Savings.
 - 1,113 staff hours saved for completed HHQs
 - 50% reduction in processing time per Online HHQ

Navy Contingency Project Pilot Release 2

Work continues on creating an Event Portal Workflow Management Application to manage contingency events, *initially for preliminary search event.*

Key features included in this Release:

- Ability to track preliminary event donors in a central screen, for purposes of donor management.
- Ability to import the preliminary event donors, as identified through the preliminary event daily report.
- Ability to export the preliminary event donors for purpose of supporting address validations, manual mail merges or automated letter merges.

Key statistics gathered to date for the 4 donor centers in the pilot:

- 620 HHQs completed
- 211 preliminary search donors activated
- 6 day average close date on an HHQ

The General Release of Event Portal is scheduled for end of July 2010, and will be available to all Domestic NMDP Network donor centers, excluding the DoD, DKMS Americas, Gift of Life Registry and Caitlyn Raymond Registry. Overall feedback and processing metrics will be monitored and reported.

Adding the Event Portal Workflow Management functionality will continue to add to the productivity gains of donors screened using this method. It is expected that NMDP will gain:

- The capability to double the capacity to process an HHQ using the same number of staff resources.
- The ability to scale for a contingency event requiring confirmation of the availability and suitability of a large number of donors.

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IIA.1 Task 4: National Data Collection Model	Period 1 Activity: <ul style="list-style-type: none"> • 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.	
IIA.2 Task 1: Contingency Response Network	Period 1 Activity: <ul style="list-style-type: none"> • Exercises: <ul style="list-style-type: none"> ○ NMDP staff attended 2010 RITN Tabletop Exercises to observe and provide support as requested; centers visited include: <ul style="list-style-type: none"> ▪ University of Minnesota, Fairview (April 2, 2010) ▪ City of Hope, LA (June 9, 2010) ▪ Seattle, WA TC, DC and CBB joint exercise (June 17, 2010) ▪ Wake Forest, NC (May 5, 2010) (travel funded through Navy 1207 grant) ○ Participated in National Level Exercise 2010 (NLE 2010) on May 18, 2010 <ul style="list-style-type: none"> ▪ During this exercise RITN centers were notified, via email, of an incident of national impact involving the detonation of an Improvised Nuclear Device ▪ Confirmed activation of RITN to Department of Health and Human Service-Assistant Secretary for Preparedness and Response (DHHS-ASPR) ▪ Requested submission Capabilities Report from RITN centers through web based software WebEOC ▪ Received capabilities report from 36 RITN centers ▪ Reported RITN capabilities to DHHS-ASPR ○ Evaluator Exchange Program: <ul style="list-style-type: none"> ▪ Continued to plan for and coordinate the Evaluator Exchange Program, where RITN transplant centers will evaluate each other's preparedness level. ▪ Checklists were reviewed by RITN center staff that volunteered to be evaluators

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- Training for the evaluators was drafted
- Meetings/conferences:
 - Held conference call with RITN Medical Director and National Security Council staff to discuss NSC expressed interest in RITN capabilities and ongoing activities
 - As a result of this call a two year strategic plan was drafted for RITN potential expansion with additional funding to meet anticipated number of victims that may require treatment provided by RITN centers
 - Attended the Memorial Sloan Kettering Cancer Center (MSKCC) RITN Overview presentation to the New York City Department of Health Hospital Emergency Preparedness Program (HEPP) on March 25, 2010
 - Staff attended the NDMS annual Preparedness Summit Conference from June 2-4, 2010
 - Staff attended the Emergency Management Summit conference in DC from March 3-5, 2010
 - Staff attended the National Council on Radiation Protection Annual conference in DC from March 8-9, 2010
 - Presented an overview of RITN to the Canadian National Mass Casualties Capabilities Review workshop in Ottawa May 19- 21, 2010
 - The workshop provided Canadian government with a summary of existing capabilities and anticipated gaps in casualty management consistent with the Community Emergency Response requirements
 - RITN was presented as a best practice implemented in the US as a consideration for Canadian future development
 - Conducted three (3) Monthly RITN Conference Calls for center contacts to discuss issues related to the completion of tasks at their centers with the intent of sharing best practices between centers.
 - Created and distributed three “Radiation In the News” radiation event summary reports for distribution to RITN center staff to keep them abreast of radiological related incidents

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	<p>occurring around the globe.</p> <ul style="list-style-type: none"> ○ Held four RITN Executive Committee conference calls ● Education: <ul style="list-style-type: none"> ○ Coordinated the development of scope and learning objectives for a webinar about Memorial Sloan Kettering Cancer Center (MSKCC) successful implementation of RITN at their center titled: RITN Case Study - MSKCC
IIA.2 Task 2: Sibling Typing Standard Operating Procedures	<p>Period 1 Activity:</p> <ul style="list-style-type: none"> ● Conducted a meeting of all key departments that will be involved with the definition of detailed process steps necessary to implement an integrated related typing process.
IIA. Contingency Preparedness – Objective 3: NMDP's critical information technology infrastructure must remain operational during contingency situations that directly affect the Coordinating Center.	
IIA.3 Task 1: I.S. Disaster Recovery	<p>Period 1 Activity:</p> <ul style="list-style-type: none"> ● No activity this period.
IIA.3 Task 2: Critical Facility and Staff Related Functions	<p>Period 1 Activity:</p> <ul style="list-style-type: none"> ● Coordinated the department development of appropriate detailed tasks to be tested at a remote (non-NMDP controlled) location for the 2010 Business Continuity Exercise (BCPeX-2010). ● A variety of communication exercises were conducted by the NMDP to validate current procedures: <ul style="list-style-type: none"> ○ A test of the Coordinating Center public address system from both the receptionist desk as well as from another work area within the Coordinating Center. ○ A satellite telephone test to ensure RITN partners were familiar with the new Iridium satellite telephones and to validate accountability. ○ A mass emergency notification telephonic system test (recorded voice and TTY) to notify NMDP staff and Network Centers of incidents impacting NMDP operations and validate emergency contact phone numbers.

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	<ul style="list-style-type: none"> ○ Government Emergency Telecommunications Service (GETS) calling cards were tested to validate the ability of RITN centers and selected NMDP staff to establish telephone contact during times of high telephone line congestion and validate card accountability. ○ NMDP Network Communication Drill was conducted using an NMDP proprietary tool; the drill involved sending an email to all Network Centers then tracks the time taken to respond by logging into the NMDP Network website.
<p>IIB. Rapid Identification of Matched Donors – Objective 1: Increasing the resolution and quality of the HLA testing of volunteers on the registry will speed donor selection.</p>	
<p>IIB.1 Task 1: Increase Registry Diversity</p>	<p>Period 1 Activity:</p> <p>Five contracted HLA testing laboratories performed HLA-A, B, DRB1 typing, one laboratory performed HLA-A, B, C, DRB1 typing, on a total of 117,697 newly recruited donors.</p> <ul style="list-style-type: none"> • Blind quality control testing error rate was 0.11%, meeting the project requirement of $\leq 2.0\%$. • On-time testing completion rate was 98.5%, meeting the project requirement of a minimum of 90% of typing results reported within 14 days of shipment of samples. <p>The NMDP maintains lists of rare alleles as a service to the American Society for Histocompatibility & Immunogenetics (ASHI). These lists are derived from HLA allele level typings of patients, adult volunteers, and cord blood units in the NMDP Registry. Careful review of the rare alleles reported to the NMDP on adult volunteer samples revealed typings that were suspicious and may have been incorrectly reported due to various reasons including:</p> <ul style="list-style-type: none"> • Typing methodologies used to report the rare allele were problematic resulting in a correction of some of the rare allele results. • Rare allele was typed more than 4 years ago and the allele has not been reported since. • Presence of two rare alleles in a donor typing. • Primary data interpretation doesn't match the rare allele reported. • Rare allele was typed on the same day more than once with no haplotype to indicate the donors are possibly related.

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	<p>During the past quarter 95 additional donors with rare alleles were identified and retyped. To date, 366 samples have been sent to a contract laboratory for high resolution typing at A, B, or DRB1. After retyping, 291 results (80%) changed from the previously reported rare allele. This project is ongoing with more samples to be shipped for resolution of a reported rare allele. An abstract summarizing the data to date was submitted and accepted for poster presentation at the ASHI annual meeting in Sept. 2010.</p> <ul style="list-style-type: none"> An example of a mistyped rare allele evaluated in the project is DRB1*16:08. The allele was described in 1996 but has not been reported on an adult volunteer sample in the Be The Match registry since 2001. 197 donors with DRB1*16:08 reported and with a stored sample at the Be The Match repository were retyped at intermediate resolution DRB1 to determine if these samples truly carried DRB1*16:08. 100% of the samples came back as a different DRB1 allele, specifically DRB1*15:01, DRB1*15:02, DRB1*15:03, or DRB1*16:01. <p>In addition the following activities were performed:</p> <ul style="list-style-type: none"> To successfully serve all patients in need of cellular transplantation, the NMDP continues to focus on increasing awareness, education and engagement among target audiences to help add diverse and committed potential donors to Be The Match Registry ®. For the March – June 2010 time period, we produced or reprinted key educational materials primarily used by our operated and contract recruitment centers, including the following: New Registry Member Exit Card which reinforces key messages regarding the commitment one has made after they join the registry; Myths and Facts sell page which serves to dispel key myths about the donation process; Take the First Step brochure, the primary educational tool which gives an overview of our life-saving mission, spotlights donor and recipient stories and provides key information about joining the registry and other ways to help by making a contribution to Be The Match Foundation^(R) or volunteering time.
<p>IIB.1 Task 2: Evaluate HLA-DRB1 High Res typing</p>	<p>Period 1 Activity:</p> <ul style="list-style-type: none"> This task is closed.

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IIB.1 Task 3: Evaluate HLA-C Typing of Donors	Period 1 Activity: <ul style="list-style-type: none"> This task is closed.
IIB.1 Task 4: Evaluate Buccal Swabs	Period 1 Activity: <ul style="list-style-type: none"> No activity this period.
IIB.1 Task 5: Enhancing HLA Data for Selected Donors	Period 1 Activity: <p>This aim consists of registry-based typing projects, which have the potential to strategically identify and improve the HLA typing and availability of donors most likely to match searching patients from domestic TCs. All strategies being evaluated are extensions of the previous Back-up Donor and Optimal Donor typing projects.</p> <ul style="list-style-type: none"> In previous reporting periods we performed an additional 565 donor selections for prospective HLA typing using our Optimal Donor selection strategies. Follow-up of these prospectively typed donors, revealed the selection of 14 donors for CT requests on behalf of 9 different patients. Two of these donors went on to donate stem cell products. The activated donors had been on the registry from 0.7 - 10.2 years prior to selection for HLA typing upgrade through the project. The donors were activated for new patients within an average of 210 days from the date upgraded HLA typing was made available. 13 of the 565 prospectively typed donors were requested within the first 315 days.
IIB.1 Task 6: Maintain a Quality Control Program	Period 1 Activity: <ul style="list-style-type: none"> This task is closed.
IIB. Rapid Identification of Matched Donors – Objective 2: Primary DNA typing data can be used within the registry to improve the quality and resolution of volunteer donor HLA assignments.	
IIB.2 Task 1: Collection of Primary Data	Period 1 Activity: <ul style="list-style-type: none"> No activity this period.
IIB.2 Task 2: Validation of Logic of Primary Data	Period 1 Activity: <ul style="list-style-type: none"> This task is closed.

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IIB.2 Task 3: Reinterpretation of Primary Data	Period 1 Activity: <ul style="list-style-type: none"> • This task is closed.
IIB.2 Task 4: Genotype Lists & Matching Algorithm	Period 1 Activity: <ul style="list-style-type: none"> • No activity this period.
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.	
IIB.3 Task 1: Phase I of EM Haplotype Logic	Period 1 Activity: <ul style="list-style-type: none"> • No activity this period.
IIB.3 Task 2: Enhancement of EM Algorithm	Period 1 Activity: <ul style="list-style-type: none"> • No activity this period.
IIB.3 Task 3: Optimal Registry Size Analysis	Period 1 Activity: <ul style="list-style-type: none"> • No activity this period.
IIB.3 Task 4: Target Under- Represented Phenotypes	Period 1 Activity: <ul style="list-style-type: none"> • No activity this period.
IIB.3 Task 5: Bioinformatics Web Site	Period 1 Activity: <ul style="list-style-type: none"> • This task is closed.
IIB.3 Task 6: Consultants to Improve Algorithm	Period 1 Activity: <ul style="list-style-type: none"> • This task is closed.
IIB.3 Task 7: Population Genetics	Period 1 Activity: <ul style="list-style-type: none"> • This task is closed.

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IIB.3 Task 8: Haplotype Matching	Period 1 Activity: <ul style="list-style-type: none"> This task is closed.
IIB.3 Task 9: Global Haplotype/Benchmark	Period 1 Activity: <ul style="list-style-type: none"> This task is closed.
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	Period 1 Activity: Extended the B2B Gateway and Business Services to support the new alleles that can only be described using the new WHO nomenclature. Also, provided: <ul style="list-style-type: none"> Support for G codes. Support WMDA approved codes – XXXX, NNNN, UUUU, NEW. NMDP collaborated with five Pilot Registries on the EMDIS cord project. We defined: <ul style="list-style-type: none"> Business requirements for the fields that will be exchanged. EMDIS Cord Data Dictionary based on the business requirements. NMDP worked with both FGM and IBMDR (two EMDIS cord project pilot registries) to prepare for paired exchange of inventory: <ul style="list-style-type: none"> Documented fields that each will be sending in the inventory exchange. Shared house rules for searching based on CBU status, no differences or concerns. Agreed that since ownership of data resides with the source registry, the mirroring registry will only update a CBU's search antigens when a CBU change is received from the source registry; the search antigens will not be updated when lab results are received. A registry's minimum and maximum limits for some fields are "tighter" than the EMDIS Cord approved ranges. An agreement has been reached to accept the others' cords as long the EMDIS

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	<p>Cord approved ranges are met.</p> <ul style="list-style-type: none"> Resolved reporting of IDM's where policies are different. Have agreed on a high-level implementation plan including testing scope and approach. <p>NMDP worked on its own implementation of the Cord inventory exchange model and completed:</p> <ul style="list-style-type: none"> Business analysis Systems analysis High Level Design Identified key development resources to staff project
IIB.4 Task 2: Central Contingency Management	<p>Period 1 Activity:</p> <ul style="list-style-type: none"> No activity this period.
IIB.4 Task 3: Benchmarking Analysis	<p>Period 1 Activity:</p> <ul style="list-style-type: none"> This task is closed.
IIB.4 Task 4: Expand Capabilities of Collection and Apheresis Centers	<p>Period 1 Activity:</p> <ul style="list-style-type: none"> This task is closed.
<p>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.</p>	
IIC.1 Task 1: Donor Recipient Pair Project	<p>Period 1 Activity:</p> <ul style="list-style-type: none"> No activity this period.

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IIC. Immunogenetic Studies – Objective 2: Even when patient and donor are HLA matched, GVHD occurs so other loci may play a role.

<p>IIC.2 Task 1: Analysis of non-HLA loci</p>	<p>Period 1 Activity:</p> <p>KIR</p> <p>In 2005 a pilot study to perform high resolution KIR gene typing was launched. The primary objectives of the study were to move technology forward from the current practice of locus level typing to high resolution typing, disseminate information and protocols in an open source mechanism and develop reference lines for use in individual laboratories.</p> <ul style="list-style-type: none"> • All 46 novel alleles have been submitted and names received. Publication of the new IPD database containing these alleles is expected within the next year. A publication is in development to describe the typing of the new alleles. • Preparation continued on the KIR Typing Project manuscript. • To date over 2000 pairs from the Donor/Recipient pair's project have been typed for presence/absence of 14 KIR loci (2DL1-5, 2DS1-5, 3DL1-3 and 3DS1) and another 1180 donors have been enrolled. • Discrepancy analysis of the KIR presence/absence typing on samples from SG25 was completed. • Inclusion of 163 more donor/recipient pairs and 1180 more donors were added in SG26.
<p>IIC.2 Task 2: Related Pairs Research Repository</p>	<p>Period 1 Activity:</p> <ul style="list-style-type: none"> • Related transplant research sample collection continued with a pilot project initiated at seven TCs in December 2007. As of the end of this reporting period, six TCs had submitted 1,193 samples (530 donor/recipient pairs) to the Repository. Development continues on the Research Sample Repository Tools suite to facilitate management of samples.
<p>IIC.2 Task 3: CIBMTR Integration</p>	<p>Period 1 Activity:</p> <ul style="list-style-type: none"> • This task is closed.

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IID. Clinical Research in Transplantation – Objective 1: Clinical research in transplantation improves transplant outcomes and supports preparedness for a contingency response.

<p>IID.1 Task 1: Observational Research, Clinical Trials and NIH Transplant Center</p>	<p>Period 1 Activity:</p> <p>Cord Blood Research</p> <ul style="list-style-type: none"> • The Duke and MD Anderson laboratory staff continued work on validating the assay methodologies to ensure consistent results were generated at both testing sites for the study investigating biomarkers associated with cord blood engraftment. <ul style="list-style-type: none"> ○ Initial statistical analysis of the validation testing results shows poor inter-lab methodology reliability for all assays performed. ○ The study team has held a conference call to discuss the possible areas in which variation could have been introduced into the assays protocols. • Work continued on the observational study of single versus double cord blood transplants in adults. Further analyses were requested and completed. The principal investigator, EJ Shpall, MD, presented the results at the NMDP Cord Blood Advisory Group meeting in June. A draft manuscript is in process. • Maternal samples and HLA typing data were collected from participating CBBs to gather the necessary maternal HLA typing information for the NIMA study. Samples will be tested during the next quarter. • Work continued on the development of a white paper detailing recommendations/guidelines for the assessment of new assays (potency or other assays) relevant to cord blood banking and/or transplantation. A draft of the paper was completed and reviewed at the June 2010 Cord Blood Committee meeting. Further edits are being made based on the comments from the Cord Blood Committee.
<p>IID.1 Task 2: Research with NMDP Donors</p>	<p>Period 1 Activity:</p> <ul style="list-style-type: none"> • This task is closed.

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IID.1 Task 3: Expand Immuno- biology Research

Period 1 Activity:

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

- The scientific director and biostatistician participated in the preparation of two grant applications to support IBWC studies
 - Reza Abdi: RO1 - *Role of variants in immunoregulatory genes in the pathogenesis of acute GVHD.*
 - Mukta Arora: RO1 - *Genetic Polymorphisms as Biomarkers of Hematopoietic Cell Transplant Outcomes.*
- One manuscript was accepted for publication:
 - Cooley, et al., *Donor selection for natural killer cell receptor genes leads to superior survival after unrelated transplantation for acute myelogenous leukemia.* Blood 2010 June 25 [Epub ahead of print]
- Five manuscripts were submitted for publication:
 - Ann Woolfrey, et al., *HLA-C antigen mismatches are associated with worse outcomes in unrelated donor peripheral blood stem cell transplantation.* Rejected by Blood. Submitted to BBMT.
 - Peter Shaw, et al., *Outcomes of pediatric BMT for leukemia and myelodysplasia using matched sibling, mismatched related or matched unrelated donors.* Submitted to Blood.
 - David Valcarcel, et al., *One antigen mismatched related vs. HLA-matched unrelated donor HCT in adults with acute leukemia: CIBMTR results in the era of molecular typing.* Submitted to BBMT.
 - Lujia Dong, et al., *The outcomes of family haploidentical hematopoietic stem cell transplantation in hematological malignancies are not associated with patient age.* Submitted to Blood.
 - Susana Marino, et al., *Identification by random forest method of HLA class I amino acid substitutions associated with lower survival at day 100 in unrelated donor HCT.* Submitted to BMT.

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ACRONYM LIST

AABB	American Association of Blood Banks	IBWC	Immunobiology Working Committee
AFA	African American	IDM	Infectious Disease Markers
AGNIS	A Growable Network Information System	IHWG	International Histocompatibility Working Group
AML	Acute Myelogenous Leukemia	IPR	Immunobiology Project Results
ABD	Antigen Binding Domain	ICRHER	International Consortium for Research on Health Effects of Radiation
API	Asian Pacific Islander	IND	Investigational New Drug
ARS	Acute Radiation Syndrome (also known as Acute Radiation Sickness)	IS	Information Services
ASBMT	American Society for Blood and Marrow Transplantation	IT	Information Technology
ASHI	American Society for Histocompatibility and Immunogenetics	IRB	Institutional Review Board
B-LCLs	B-Lymphoblastoid Cell Lines	JCAHO	Joint Commission on Accreditation of Healthcare Organizations
BARDA	Biomedical Advanced Research and Development Authority	KIR	Killer Immunoglobulin-like Receptor
BCPeX	Business Continuity Exercise	MDACC	MD Anderson Cancer Center
BBMT	Biology of Blood and Marrow Transplant	MDS	Myelodysplastic Syndrome
BMT	Bone Marrow Transplantation	MHC	Major Histocompatibility Complex
BMT CTN	Blood and Marrow Transplant - Clinical Trials Network	MICA	MHC Class I-Like Molecule, Chain A
BRT	Basic Radiation Training	MICB	MHC Class I-Like Molecule, Chain B
C&A	Certification and Accreditation	MKE	Milwaukee
CAU	Caucasian	MSKCC	Memorial Sloan-Kettering Cancer Center
CBMTG	Canadian Blood and Marrow Transplant Group	MSP	Minneapolis
CBB	Cord Blood Bank	MUD	Matched Unrelated Donor
CBC	Congressional Black Caucus	NCBM	National Conference of Black Mayors
CBS	Canadian Blood Service	NCI	National Cancer Institute
CBU	Cord Blood Unit	NEMO	N-locus Expectation-Maximization using

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			Oligonucleotide typing data
CHTC	Certified Hematopoietic Transplant Coordinator	NHLBI	National Heart Lung and Blood Institute
CIBMTR	Center for International Blood & Marrow Transplant Research	NIH	National Institutes of Health
CIT	CIBMTR Information Technology	NIMS	National Incident Management System
CLIA	Clinical Laboratory Improvement Amendment	NK	Natural Killer
CME	Continuing Medical Education	NLE	National Level Exercise
CMF	Community Matching Funds	NMDP	National Marrow Donor Program
COG	Children's Oncology Group	NRP	National Response Plan
CREG	Cross Reactive Groups	NST	Non-myeloablative Allogeneic Stem Cell Transplantation
CSS	Center Support Services	OCR/ICR	Optical Character Recognition/Intelligent Character Recognition
CT	Confirmatory Testing	OIT	Office of Information Technology
CTA	Clinical Trial Application	OMB	Office of Management and Budget
DC	Donor Center	ONR	Office of Naval Research
DHHS-ASPR	Department of Health and Human Service – Assistant Secretary Preparedness and Response	P2P	Peer-to-Peer
DIY	Do it yourself	PBMC	Peripheral Blood Mononuclear Cells
DKMS	Deutsche Knochenmarkspenderdatei	PBSC	Peripheral Blood Stem Cell
DMSO	Dimethylsulphoxide	PCR	Polymerase Chain Reaction
DoD	Department of Defense	PSA	Public Service Announcement
DNA	Deoxyribonucleic Acid	QC	Quality control
D/R	Donor/Recipient	RCC	Renal Cell Carcinoma
EBMT	European Group for Blood and Marrow Transplantation	RCI BMT	Resource for Clinical Investigations in Blood and Marrow Transplantation
EM	Expectation Maximization	REAC/TS	Radiation Emergency Assistance Center/Training Site
EMDIS	European Marrow Donor Information System	RFP	Request for Proposal
ENS	Emergency Notification System	RFQ	Request for Quotation
ERSI	Environment Remote Sensing Institute	RG	Recruitment Group
FBI	Federal Bureau of Investigation	RITN	Radiation Injury Treatment Network

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FDA	Food and Drug Administration	SBT	Sequence Based Typing
FDR	Fund Drive Request	SCTOD	Stem Cell Therapeutics Outcome Database
Fst	Fixation Index	SG	Sample Group
GETS	Government Emergency Telecommunications Service	SLW	STAR Link® Web
GCSF	Granulocyte-Colony Stimulating Factor (also known as filgrastim)	SSA	Search Strategy Advice
GIS	Geographic Information System	SSO	Sequence Specific Oligonucleotides
GvHD	Graft vs Host Disease	SSP	Sequence Specific Primers
HCT	Hematopoietic Cell Transplantation	SSOP	Sequence Specific Oligonucleotide Probes
HEPP	Hospital Emergency Preparedness Program	STAR®	Search, Tracking and Registry
HHQ	Health History Questionnaire	TC	Transplant Center
HHS	Health and Human Services	TED	Transplant Essential Data
HIPAA	Health Insurance Portability and Accountability Act	TNC	Total Nucleated Cell
HIS	Hispanic	TSA	Transportation Security Agency
HLA	Human Leukocyte Antigen	UI	User Interface
HML	Histoimmunogenetics Mark-up Language	URD	Unrelated Donor
HR	High Resolution	WGA	Whole Genome Amplification
HRSA	Health Resources and Services Administration	WMDA	World Marrow Donor Association
HSC	Hematopoietic Stem Cell	WU	Work-up