Actionable Insights
How we’re finding them faster and acting on them sooner.

- Record-breaking Research Presentations from CoMMpass Study at ASH
- Realizing the Promise of Precision Medicine
- Minimal Residual Disease: Faster Detection, Better Outcomes

Plus: The Latest News on Clinical Trials
Dear Friends,

This has been another remarkable year for the MMRF, marked by progress, innovation and leadership. We continue to advance our end-to-end precision medicine model — the only one in oncology — to drive new, more effective treatments for the patients we serve.

A good example of our precision medicine model is the research into the BRAF mutation. Identified as a multiple myeloma therapeutic target through our Multiple Myeloma Genomics Initiative (MMGI), a number of Phase 2 clinical trials of Vemurafenib, a BRAF inhibitor, are now underway.

Finding actionable insights happens fast when data is publicly available for everyone to use. This year, the MMRF contributed the largest genomic data set of any cancer to the National Cancer Institute’s Genomic Data Commons (GDC). Through the GDC, all of our data from the groundbreaking MMRF CoMMpass Study® is available for researchers to study multiple myeloma. The MMRF is the first nonprofit to place data into the GDC, and we hope our leadership will inspire others to join us.

As therapies for multiple myeloma continue to improve, being able to detect any surviving multiple myeloma cells after therapy is critically important. We are working with our pharmaceutical partners, researchers and the FDA to utilize Minimal Residual Disease (MRD) screening for clinical use. MRD allows detection of a relapse earlier and is a potential surrogate endpoint for clinical trials. The sooner we can see how well a treatment is working, and for how long, the sooner we can make important clinical and research decisions.

The MMRF always has a laser-like focus on making a difference in the lives of multiple myeloma patients. While we have made enormous progress, we still have much to do.

We cannot continue to do our great research without your financial support, so please contribute to the MMRF. Thank you for everything you have done and continue to do as we work together to find a cure.

With warm regards,

Paul Giusti
President and Chief Executive Officer, MMRF
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**SPONSORS**  We thank our sponsors for their support of *Accelerator, The Magazine of the Multiple Myeloma Research Foundation.*
The CoMMpass data is becoming the data set of choice for researchers across the globe, validating the importance of publically available data, championed by the MMRF. This collaborative research effort is accelerating actionable insights and the pace of drug discovery and development. The CoMMpass Study data is already yielding insights into new targets and pathways for drug development, as well as new ways to identify and potentially treat high-risk patients.

Which multiple myeloma patients are at “high risk” for early relapse?

Determining which patients relapse quickly (less than 18 months) after starting their first line of therapy will allow doctors to follow these patients closely so that they can receive the appropriate treatment. Three research groups have identified sets of genes and pathways that are associated with an increased chance of early disease progression following treatment. Some of these gene defects could be treated with drugs currently being used for other cancers, while others are new targets for the next generation of anti-myeloma drugs. Because the identification of high-risk patients is so important, the MMRF highlighted at ASH the initiation of two crowdsourcing initiatives, HBS/Top Coders and SAGE/Dream, which will seek input from researchers around the globe to answer this very question. These initiatives will use the CoMMpass data to identify common characteristics among patients who are high risk so that more tailored treatment strategies can be pursued.
The latest readouts from eight MMRC trials across different stages of disease reported promising results and highlighted four new drugs for multiple myeloma.

For patients with smoldering myeloma:
- A phase II trial reported that high-risk patients with smoldering myeloma treated with a combination of Empliciti, Revlimid and dexamethasone showed benefit in delaying progression to active multiple myeloma.

For newly diagnosed patients:
- A phase II study evaluating extended treatment of patients undergoing autologous stem cell transplant with the combination of Kyprolis, Revlimid and dexamethasone showed improvements in disease progression and survival.

For relapsed/refractory myeloma:
- Five early-phase studies evaluated four new compounds, all showing promising efficacy in patients that had previously received many lines of therapy. These studies underscore the MMRF’s commitment to ensuring that patients always have treatment options.

Drugs advanced in MMRC trials showing promise in early trials for relapsed/refractory multiple myeloma:
- **Selinexor**, an inhibitor of CRM1, which works in heavily relapsed patients
- **Isatuximab**, an antibody against CD-38 like Darzalex
- **Marizomib**, a novel proteasome inhibitor
- **Venetoclax**, an inhibitor of BCL-2, works best in patients who have t(11;14)

Together, these findings validate the progress of the MMRF’s Precision Medicine Model and the importance of patient’s willingness to donate their tissues to accelerate research. At the MMRF, collaboration is a priority. These advances would not have been possible without the individuals who enrolled in CoMMpass and those who funded this effort. These presentations demonstrate data sharing in action through CoMMpass, the largest genomic dataset in oncology — it simply could not have been accomplished without data sharing at all levels.

This has been a truly exceptional year for CoMMpass from a scientific perspective, and the future is bright for our patients, with so many important insights coming out of this study.

—Daniel Auclair, PhD, Senior Vice President of Research, MMRF

For more information about the results that were reported at ASH, go to MMRF’s coverage of the latest data at themmrf.org/ASH
Making Strides with Immunotherapy Approaches

**IMMUNOTHERAPY AIMS TO HARNESS** the power of a patient’s own immune system to identify and attack cancer cells. The MMRF is working to rapidly advance the understanding of novel immunotherapy approaches by conducting and funding innovative research to quickly and safely bring the most promising treatments into the clinic.

Examining cancer cell–host cell communication

The MMRF has been at the forefront of precision medicine and is moving forward to analyze the interaction between cancer cells and different types of immune cells from the patient. Using banked patient tissues, including blood and bone marrow from MMRF’s CoMMpass Study, cutting edge immune monitoring tests can be performed to examine the relationship between immune markers and patient responses to therapy. Ultimately, this approach can reveal novel immune biomarkers associated with clinical outcomes.

**MMRF funding supports promising immunotherapy research**

- **Stephen Forman, MD, of City of Hope** is conducting preclinical testing of different types of CAR T cells engineered to target myeloma cells in combination with immunomodulatory drugs such as Revlimid, to explore combination approaches of immune oncology drugs that could rapidly advance to the clinic.

- **Bin Liu, PhD, of the University of California San Francisco** is studying novel antibody-drug conjugates that target and kill myeloma cells, ultimately leading to a new type of antibody approach for clinical development.

- The MMRF is supporting clinical research conducted in Dr. David Avigan’s laboratory at Beth Israel Deaconess Medical Center to understand patients’ immune cell responses who are enrolled in the Bone Marrow Transplant Clinical Trials Network dendritic vaccine trial. This nationwide trial in newly diagnosed patients is evaluating personalized vaccines made with a patient’s own myeloma cells and dendritic cells to elicit a targeted immune response against the tumor.

- **In collaboration with the Cancer Research Institute and Ludwig Cancer Institute**, the MMRF is supporting a Phase I trial testing two immune checkpoint antibodies — tremelimunumab and Durvalumab — that work by reducing immune suppression and allowing a patient’s T cells to recognize and attack myeloma cells. The antibodies are being tested in conjunction with autologous stem cell transplants in relapsed patients, and the trial is being conducted by investigators Hearn Cho, MD, PhD, from Mount Sinai and Alexander Lesokhin, MD, from Memorial Sloan Kettering Cancer Center.

*To learn more or identify possible clinical trials, visit: MMRFCommunityGateway.org*
Realizing the Promise of Precision Medicine

In 2005, the MMRF took a progressive approach of spearheading novel genomics research in myeloma with the creation of the Multiple Myeloma Genomics Initiative (MMGI), along with the Broad Institute of MIT and the Translational Genomics Institute (TGen). The goal of sequencing the multiple myeloma genome from banked patient samples collected by the Multiple Myeloma Research Consortium (MMRC) came to fruition with the MMRF’s publication of the first multiple myeloma genome sequence in 2011.

Identifying BRAF mutations

This 2011 publication focused on the sequence analysis of 38 multiple myeloma genetic mutations — including the discovery of the V600E mutation in the BRAF gene. These BRAF mutations had been successfully treated with targeted therapies in other cancers, such as melanoma. These results have now prompted the investigation of the use of these targeted therapies for multiple myeloma patients with the BRAF mutation.

From sequencing to tailored treatment

In 2012, a small, early-phase clinical trial was conducted to study a BRAF-targeted therapy, vemurafenib, in myeloma patients with BRAF V600E mutations. Today Phase 2 trials are ongoing to discover if we can more effectively block mutant BRAF and the molecular pathway that is part of this gene. The MMRC has opened a new trial designed to test two different drugs targeting this pathway in patients carrying BRAF mutations. The hope is that this drug combination will be more effective and active against BRAF mutant myeloma.

The sequencing of 203 myeloma genomes along with data from over 1,000 patients in the MMRF CoMMpass Study has identified additional mutations that could serve as drug targets. Mutations in the FGFR3 gene that were identified through sequencing will be targeted with a specific drug in an upcoming MMRC trial. These initiatives offer the possibility of tailored, personalized treatments based on the genomics of a patient’s myeloma cells.

The MMRF has played a key role and had a profound impact on the implementation of precision medicine. Our initiatives have included sequencing the first genome, identifying gene mutations that can be targeted with a specific drug, and conducting studies to determine clinical efficacy — the realization of precision medicine is giving great hopes for patients — and moving us closer to a cure.

To learn more about the MMRF’s Precision Medicine Initiative, visit: themmrf.org/precision-medicine.
As therapies for multiple myeloma continue to improve, being able to detect any surviving multiple myeloma cells after therapy is critically important. Undergoing therapy often kills the vast majority of myeloma cells, but a few may remain. Those remaining cells, called minimal residual disease (MRD), may eventually go on to grow and divide, causing a relapse. MRD measurement allows for the detection of a single myeloma cell among a million other cells, just like finding a “needle in a haystack.”

Initial studies suggest that MRD monitoring can detect changes in disease status, such as relapse, up to a year before the current tests — based on laboratory parameters like the M-protein that can be detected through blood or urine. This would enable treatments to be started earlier. MRD may ultimately prove to be a better gauge for stopping or changing therapy as patients achieve no evidence of MRD.

The MMRF has been a relentless advocate of MRD testing in myeloma. MRD could also allow clinical trials to proceed faster, cutting costs and potentially speeding new treatments to patients. The MMRF has catalyzed conversations with the FDA, the NCI, key opinion leaders, and members of the biotechnology and pharmaceutical industry to lay out a path to advance MRD in myeloma. From these efforts, a consensus document was produced that will serve as a roadmap to guide the next steps. This white paper will be published in early 2017.
Well-designed studies are needed to further confirm the importance of MRD for new myeloma drug development and eventually in routine patient care. The MMRF has several efforts underway:

- The MMRF is collaborating with Adaptive Biotechnologies, the University of Torino, and Amgen on a groundbreaking clinical trial, the mINimal reSIidual DiseasE in Multiple Myeloma-1 (INSIDE MM-1) study. Through INSIDE MM-1, a state-of-the-art evaluation of MRD is being performed on hundreds of myeloma patients over the next five years to evaluate how MRD levels change in response to treatment and as the disease evolves. This will help to further assess the reliability and accuracy of the methods employed. Through a partnership with Memorial Sloan Kettering Cancer Center on a new clinical trial, “Carfilzomib, lenalidomide, dexamethasone in newly diagnosed multiple myeloma: a translational MRD study,” MMRF and its collaborators are going beyond just counting the number of cells to learn more about the “D” in MRD. “Understanding which genes might predict sustained MRD negativity may allow researchers to quickly determine which treatments are effective,” said Dr. Ola Landgren MD, PhD, a pioneer in the field of MRD who is leading this trial with his colleague, Dr. Neha Korde.

- Current MRD approaches are based mostly on bone marrow aspirations (BMAs). Frequent BMAs to measure MRD can prove to be extremely challenging for patients and clinicians, and at times impractical. In recent years, the MMRF has invested heavily in developing innovative, minimally invasive new blood-based technologies for MRD testing. Last month, MMRF 2014 Fellow awardee Dr. Jens Lohr from Dana-Farber Cancer Institute published groundbreaking MMRF-supported work demonstrating the feasibility of better characterizing MRD from even only one myeloma cell in the blood of a myeloma patient. The MMRF, together with partners, is speeding the approval of this test in order to get the most sensitive method of disease detection into routine clinical practice and ultimately provide answers for treatment options.

"The goals are to reach a sustained MRD negativity in as many patients as possible, and to understand mechanisms of MRD in those who have residual disease so we can eradicate the last tumor cells."

— Dr. Ola Landgren

For more information about the latest MRD news, visit
The MMRF Blog: themmrf.org/news-and-views/the-mmrfd-blog
**IN THE CLINIC**

**NEW AND ONGOING STUDIES**

The Clinic is the arm of the MMRF Precision Medicine Model that aims to accelerate clinical trials to rapidly bring new treatments to patients. The Multiple Myeloma Research Consortium (MMRC), a unique collaborative model of 22 centers in the United States and Canada, evaluates novel agents and combinations for their safety, efficacy and feasibility in phase 1 and 2 clinical trials.

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<thead>
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<th>2016 Active Clinical Trials</th>
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*This study is currently being conducted at two different sites: Washington University and University of Chicago.*
THE PATIENT JOURNEY

BOB AND SHELAGH BRODERSEN

Bob Brodersen was a graduate student when he met Shelagh. He eventually went on to become a professor and entrepreneur and she a speech pathologist. From the start, both were avid outdoor enthusiasts. Hiking together led to long (often two to four week) backpacking adventures and eventually years criss-crossing the globe on months-long bicycle trips. It was a biking accident in 2012 that eventually led to a multiple myeloma diagnosis for Bob some six months later. Shortly after his diagnosis, Bob and Shelagh began researching multiple myeloma. That’s when they learned about the MMRF and decided to back the organization.

“Bob wanted to do what he could to help provide research into a cure — if not for himself, then for the future. The MMRF seemed like the best organization to support.”

In the clinic, follow patient blogs, find a ‘buddy’ who can listen and, most of all, find a doctor that specializes in treating multiple myeloma. Make sure they’re up to date on what’s going on. There is so much being done and everything is changing very rapidly.”

Bob and Shelagh’s first trip after Bob’s stem cell transplant this year was a flight across the country to New York City for Bob to receive the distinguished 2016 IEEE Edison Medal “for contributions to integrated systems for wired and wireless communications, including wireless connectivity of personal devices.” Congrats Bob and Shelagh!

HIGHLIGHTS

■ A Study of Atezolizumab (Anti-Programmed Death-Ligand 1 [PD-L1] Antibody) Alone or in Combination with an Immunomodulatory Drug and/or Darzalex (Daratumumab) in Participants With Multiple Myeloma

Clinical trial identifier: NCT02431208

Key information: This nationwide trial evaluating atezolizumab (atezo) has recently expanded to include three additional arms: atezo and Darzalex (dara); atezo, dara, and Revlimid (lenalidomide); and atezo, dara, and pomalidomide. Atezolizumab is an antibody against PD-L1 (programmed death ligand 1) and helps T-cells recognize cancer cells, so they can be killed. For more information about immunotherapy, go to page 5.

Target: Patients with relapsed or refractory multiple myeloma who have received up to three lines of prior therapy.

■ Phase 1/2 Trial of Idasanutlin in Combination with Ninlaro (Ixazomib) and Dexamethasone in Patients with 17p Deleted, Relapsed Multiple Myeloma

Clinical trial identifier: NCT02633059

Key information: This dose-finding trial is being conducted at sites in California, Michigan and Minnesota for patients with 17p deleted, relapsed MM to evaluate the safety of the combination of idasanutlin, an oral inhibitor of MDM2, and Ninlaro (ixazomib), a second-generation proteasome inhibitor, along with dexamethasone. Idasanutlin may work to cause cells to undergo self-destruction.

Target: Patients identified with a 17p deletion and who have relapsed.

■ A Phase II Study of IRD (Ninlaro [Ixazomib], Revlimid [Lenalidomide] and Dexamethasone) for Consolidation Therapy Post Autologous Stem Cell Transplantation Followed by Maintenance Ninlaro (Ixazomib) or Lenalidomide for Multiple Myeloma

Clinical trial identifier: NCT02253316

Key information: This multi-site study is evaluating minimal residual disease (MRD) following autologous stem cell transplant and treatment with IRD, a three-drug regimen consisting of Ninlaro (ixazomib), Revlimid (lenalidomide) and dexamethasone and randomization to maintenance therapy with either Ninlaro (ixazomib) or Revlimid (lenalidomide).

The purpose of this trial is to study the safety and efficacy of this combination therapy in an effort to prolong the amount of time patients remain disease-free after receiving a transplant.

Target: Post-transplant.

Question about clinical trials? Please call our MMRF Nurse Specialists at 1.800.603.6628. To search for clinical trials, visit MMRFClinicalTrials.org
DATA BANK and LEARNING NETWORK

CONFERENCE ROUNDUP

The MMRF has been active in key myeloma research conferences. Here’s a quick summary of the latest happenings.

Advances in Minimal Residual Disease (MRD) Testing in Myeloma Meeting, June

To speed FDA approval of MRD testing as an indicator of treatment efficacy, the MMRF helped to organize a meeting in conjunction with Memorial Sloan Kettering Cancer Center to facilitate collaboration between clinicians, the FDA, the National Cancer Institute, and members of the biotech and pharmaceutical industries. “I feel we are getting closer and closer to make MRD an end point for myeloma drug approval,” said Dr Ola Landgren. To learn more about MRD, please see pages 8 and 9 of this issue.

For more information about the meeting, visit themmrf.org/mrd.

C. Ola Landgren, MD, PhD, Chief, Myeloma Service, Memorial Sloan Kettering Cancer Center

Big Data in Precision Medicine Conference, November

Executives from more than 160 organizations from 16 countries met in Washington, D.C., to discuss successful strategies relating to sharing and mining vast data sets generated by precision medicine research, such as the MMRF CoMMpass Study. Senior Vice President of Research, Dr Daniel Auclair, represented the MMRF during an expert panel discussion of data integration efforts to deliver on the promise of precision medicine.

For more information, visit bigdataleadersforum.com.

58th American Society of Hematology Annual Meeting, December

The world’s largest professional society of clinicians and scientists working to conquer blood diseases will meet in San Diego to present the latest hematology research. As the brightest minds in multiple myeloma gather for ASH, the MMRF will meet with CoMMpass collaborators from around the globe to discuss the exciting CoMMpass results and to share new and ongoing research efforts to mine the growing CoMMpass data set for additional insights. To learn more about the data presented this year, please see pages 4 and 5 of this issue.

For live updates from this year’s meeting, visit themmrf.org/ASH.

C. Ola Landgren, MD, PhD, Chief, Myeloma Service, Memorial Sloan Kettering Cancer Center
BE THE FIRST TO HEAR THE LATEST.

Learn about new research, trials and treatments.

Attend a MMRF Multiple Myeloma Patient Summit.

Get an in-depth look at the leading edge of myeloma research. You’ll hear from the world’s most esteemed myeloma experts on promising new discoveries, recent advancements, new trials and emerging treatments. Our Patient Summits are complimentary, but space is limited, so register today.

February 11, 2017
West Palm Beach, FL
Program Chair:
Melissa Alsina, MD

February 25, 2017
Denver, CO
Program Chair:
Robert Rifkin, MD, FACP

To find Patient Summits in your area or to register, visit themmrf.org/patient

A special thank you to our 2016 Patient Summit chairs, presenting faculty, and patient speakers:

San Francisco, CA: Co-Chairs: Tom Martin, MD and Jeffrey Wolf, MD, UCSF; Presenting Faculty: Caitlin Costello, MD, UCSD Moores Cancer Center; Jonathan Keats, PhD, TGEN; Gabe Mannis, MD, UCSF; Nina Shah, MD, MD Anderson; Myeloma Patient Speaker: Jack Aiello

Chicago IL: Co-Chairs: Andrzej Jakubowiak, MD, PhD and Todd Zimmerman, MD, University of Chicago Medical Center; Presenting Faculty: Craig Cole, MD University of Michigan Comprehensive Cancer Center; Saad Usmani, MD The University of North Carolina at Chapel Hill; Brittany Wolfe, MMS, PA-C University of Chicago Medical Center; Jeffrey Zonder, MD Karmanos Cancer Center; Myeloma Patient Speaker: Cindi McNair

Hackensack, NJ: Co-Chairs: David Siegel, MD, PhD and David Vesole MD, PhD, FACP John Theurer Cancer Center; Presenting Faculty: Suzanne Lentzsch, MD, PhD New York Presbyterian Hospital/ Columbia University Medical Center; Amy Pierre, RN, MSN, APN John Theurer Cancer Center; Joshua Richter, MD Institute John Theurer Cancer Center; Pieter Sonneveld, MD, PhD Erasmus MC Cancer Institute, Edward Stadtmauer, MD Hospital of the University of Pennsylvania; Myeloma Patient Speaker: Carmen Phaneuf

Supported by:
I cannot overstate the value of the data that the MMRF is providing – not only genomic data but also full clinical data as well.

~ Doug Lowy, MD
Acting Director, National Cancer Institute

MMRF's model is powerful because it is disruptive; they are not trying to fit into the existing methodologies.

~ Harlan Stone
CEO, Halstead International, and Patient

The MMRF has done a good job of pushing the idea that as soon as you get a piece of information, you should be sharing that. It’s the difference of a cycle time that might be a year to a cycle time that might be weeks.

~ Eric Lander, PhD
President, Broad Institute of MIT/Harvard

There is more hope now than ever.

~ Jeanie Dreyer
Multiple Myeloma Patient

The MMRF not only raises funds for research, they design the studies to drive research and drugs to clinical trials.

~ Bill McHugh
Multiple Myeloma Patient

The MMRF does so much for us and I am living proof. I am so grateful!

~ Amy Webb
Multiple Myeloma Patient

CoMMpass is not where we are starting all of our answers, it’s where we are starting all of our questions, and that's what having a deep database allows us to do.

~ Larry Boise, PhD
Vice Chair of Basic Research, Emory University

The MMRF has done a good job of ensuring for someone you love and ensuring that they stay on the right path as they courageously fight their battle.

~ Bill McHugh
Multiple Myeloma Patient
The results speak for themselves.

What happens next is something we can all have a say in.

Ten new drugs. Over seventy clinical trials. The largest genomic database of any cancer. Your support has made all of this possible and there's still much to do. If myeloma has touched your life, now is the time to make your voice heard.

Support the MMRF by donating today at LACC.TheMMRF.org

All donations are tax-deductible and contributions made by 12/31/16 will be matched.
MyMMRF RESOURCES

Be among the first to know.

When there’s progress, news or a trial for you, learn about it at themmrf.org/mymmrf.

Attend a Multiple Myeloma Patient Summit

Learn about standard and emerging therapies including stem cell transplant, promising clinical trials, and more for optimal disease management. Attend a complimentary symposium for all the information you need to make well-informed decisions about your treatment and care.

To register, view past summits and the complete calendar, visit: themmrf.org/patient

Upcoming Multiple Myeloma Patient Summits near you:

West Palm Beach, FL
February 11, 2017

Denver, CO
February 25, 2017

View Past Programs On Demand

Access our archive of recorded Patient Summit symposia and webcasts. Hear expert perspectives on key clinical research and the rapidly evolving myeloma treatment landscape.

All available online, and free, at: themmrf.org/education

Featured titles include:
Navigating Myeloma Therapy Choices in the Rapidly Changing Treatment Landscape

Part I: Newly Approved Drugs

Part II: Clinical Trial Participation

Part III: Prolonging the Treatment Response

Contact an MMRF Nurse Specialist for Support

Our Registered Oncology Nurses are available to help answer your many questions.

Let us help you navigate:

- Clinical trials and understanding the process
- Available resources
- Finding a treatment center

Monday – Friday: 9am – 7pm ET

Phone: 1-866-603-6628

Email: patientnavigator@themmrf.org

Multiple Myeloma Patient Summit:
San Francisco, CA  ■  August 6, 2016

Left to Right: David Siegel, MD, PhD, Joshua Richter, MD, Michele Donato, MD, David Vesole, MD, PhD, FACP, Amy Pierre, RN, MSN, APN (John Theurer Cancer Center), Edward Stadtmauer, MD (Hospital of the University of Pennsylvania).

Multiple Myeloma Patient Summit:
Hackensack, NJ  ■  October 1, 2016

Supported by:
Join the MMRF CoMMunity Gateway

Share your journey. Learn from others.

Get connected to an active community of fellow patients, caregivers and myeloma experts. As a member you can:

- Gain access to helpful resources and critical myeloma information.
- Find support from fellow patients with similar profiles, status or symptoms.
- Discover trials that might be right for you.

As a member, you'll be advocating on your behalf while advancing the promise of precision medicine.

Go online and join today.

MMRFCommunityGateway.org
TARA LIPINSKI APPOINTED TO HONORARY BOARD

As the youngest individual Gold Medalist in Olympic Winter Games history, Tara Lipinski has inspired countless athletes to relentlessly pursue their dreams. Now a sports commentator for NBC, she is the network’s prime time figure skating TV analyst and has also covered events like the Kentucky Derby and Super Bowl. When Ms. Lipinski’s uncle was diagnosed with multiple myeloma, she found in the MMRF an organization aligned with her own drive to tirelessly work on behalf of her uncle and myeloma patients worldwide.

Meet the entire leadership team at themmrf.org/mmrf-leadership.

TARA LIPINSKI
Olympic Gold Medalist and Sports Commentator

2016 LEADERSHIP CIRCLE SUMMIT

This year’s Leadership Summit was held in Greenwich, CT, on September 22 and included some of the foremost experts in myeloma research. A few of the panel discussions that took place were Immune Therapy, Next Generation Treatments and Fueling the MMRF Precision Medicine Model. This event is a way to provide those that have supported the MMRF at the highest level the opportunity to hear from thought leaders in myeloma and cancer research.

To read more about this event, visit themmrf.org/investor-resources.
MMRF CANCER FIGHTERS

Meet the MMRF staff members moving us closer to curing cancer every day...

KAREN DIETZ
In-house Legal Counsel

Charged with ensuring patient data remains secure, providing the legal backbone for the MMRF’s numerous collaborations and protecting the MMRF’s intellectual property, Karen finds great gratification knowing that her work helps patients receive new treatments faster. She spends much of her workday managing compliance-related matters, corporate governance for the Foundation and handling legal contract negotiations. Asked what makes her most optimistic about the future, she said, “We’ve now identified several multiple myeloma subtypes and with our precision medicine model we’re learning more every day on how to get the right treatment to the right patients at the right time.”

ANDREA KIRCHHOFF
Associate Director of Finance

With experience in financial services and job costing, Andrea is well suited for her role ensuring that the MMRF grants and donations find their way from the contributors to the various research and education initiatives the MMRF undertakes on behalf of myeloma patients. With a keen knowledge of how the various departments and groups within the MMRF participate in the research process, Andrea enjoys watching the integrated efforts of the organization drive progress. “There’s so much exciting work going on right now. Between immunotherapy and novel mechanisms, rethinking — and speeding up — the entire trials process, and providing more tools and opportunities for patients to take an active role in their cancer journey, we find ourselves very busy and very optimistic about the future.”

KILEY TAYLOR
MMRF Signature Events Manager

With a background in public relations, Kiley is one of the managers of the MMRF’s three big fundraising events that together raise over $4M. This money is used to fund the Foundation’s many research initiatives. Watching her grandmother battle five different cancers and knowing her grandfather died from multiple myeloma, Kiley understands firsthand the importance of the work the MMRF is doing. She is particularly proud of the speed at which the MMRF has been able to bring drugs to market. “I keep every email, every card and every letter than is sent to me as a reminder of how important the work we are doing is. It’s the people we are able to help that motivate me to work harder and to bring my best self to the office every day.”

KAREN WOOLEY
Clinical Operations Manager

Having spent 20 years in clinical research at such esteemed entities as the Sloan Kettering Cancer Center, Forrest Labs and Pfizer, Karen brings the right experience to her role as clinical operations manager. At the MMRF, she works daily to ensure strong collaborative relationships between the MMRF’s consortium sites and our pharma partners, assisting in the opening of new trials and managing the ongoing ones. “Accelerating drug development is a big part of our mission. Improving the efficiency of this process — from opening to completion — is how we get that done,” she says. “I’m particularly excited about our larger umbrella trials that test multiple drugs at one time. It’s a far more efficient way of conducting clinical work.”
MRF Honorary board member and boxing legend Sugar Ray Leonard joined forces with the Multiple Myeloma Research Foundation (MMRF) at the Annual Fall Gala on Saturday, October 29, 2016, at the Hyatt Regency Greenwich. That same night, Motown icon Smokey Robinson was presented with the MMRF Courage and Commitment Award in recognition of his countless achievements throughout his legendary career and the hope he’s inspired through his work. His music was celebrated in a tribute concert, headlined by the amazingly talented, Grammy Award-Winning singer and songwriter, CeeLo Green.

The MMRF also honored philanthropists (and Greenwich residents) Anne and David Ogilvy with the 2016 Spirit of Hope Award. The Ogilvys are myeloma champions — exemplifying the true spirit of hope through their resilience, dedication and perseverance in sharing their personal journey and raising disease awareness.

“I am here today because the MMRF has revolutionized the way multiple myeloma is treated. The MMRF has disrupted a slow and siloed cancer research system to offer revolutionary treatments and therapies,” said David Ogilvy, president and owner of David Ogilvy & Associates Realtors.

“The MMRF is patient-founded and patient-focused,” added MMRF President and Chief Executive Officer, Paul Giusti, “and we are honored to celebrate patients and caregivers such as Anne and David Ogilvy who inspire us every day. Our end-to-end precision medicine model is heralded as best-in-class, and we remain steadfast in our mission to find a cure.”

The event included cocktails, dinner, a live and silent auction and dancing. Nearly 800 supporters, including partners, multiple myeloma patients and celebrity guests, attended this year’s event, raising over $1.6 million to fund critical research in multiple myeloma.

The MMRF extends special thanks to longstanding pharmaceutical company partners, including presenting sponsors Takeda Oncology and Janssen Oncology.

View more photos and learn more at themmrf.org/FallGala.
COME JOIN “THE GANG” at Cancer Blows: The Legends Return, Wednesday, May 10, 2017, at Dallas Symphony Hall in Dallas, TX, to help continue the music – and the fundraising mission.

In 2015, Cancer Blows launched what was expected to be a once-in-a-lifetime musical event, bringing together legendary trumpet players in a special concert and after-party. Trumpeters including Doc Severinsen from The Tonight Show, Lee Loughnane from the band Chicago, Arturo Sandoval, and former players from Canadian Brass gathered to perform at Morton H. Meyerson Symphony Center on March 4, 2015, to help Ryan Anthony, the Dallas Symphony Orchestra’s principal trumpet, raise money for cancer research. At the after-party, a smaller group of guests enjoyed desserts and drinks while being entertained by a select group of concert musicians in a relaxed and fun jam. The event sold out and raised over $1 million.

Due to popular demand, Cancer Blows will return to Dallas in May 2017. For the 2017 event, the MMRF is proud to be the sole recipient of funds from this amazing night of music and hope. Please join us!

For more information visit, cancerblows.com.

RYAN ANTHONY

Ryan Anthony is the creator of Cancer Blows. The Lead Trumpeter of the Dallas Symphony Orchestra since 2008, Ryan Anthony was diagnosed with multiple myeloma in 2012 after feeling some odd pains while performing.

When he was diagnosed, Ryan’s goal was to survive long enough to see his children, then just 6 and 11 years old, graduate from high school. He has undergone a stem cell transplant and thanks to aggressive treatment and the drugs that the MMRF has helped to bring to market, Ryan and Niki both dare to hope for more.

During his transplant, Ryan was overwhelmed with phone calls from trumpet players all over the world asking what they could do to help. Ryan joked, “We’ll all play a concert when I am healthy again, and we’ll call it ‘Cancer Blows.’” As the weeks went by, the joke solidified into a real event with an impressive guest list. Soon they realized the event could be more than just something for fun — it could be used to raise awareness and money to further the research that has helped give their family hope for a future.

SAVE THE DATE
MINGLE FOR MYELOMA
Loft 644 N. Orleans St.
Saturday, March 4, 2017
8:00 – 11:00 P.M.
ERIC GELBER – THE JOURNEY TOWARDS A CURE

September 16-18 was particularly special within Blood Cancer Awareness Month 2016. Ultramarathoneer and multiple myeloma advocate Eric Gelber made history by completing a record 200 miles around New York City’s Central Park, raising awareness and research dollars for the MMRF. Eric’s “Journey Towards a Cure” drew support from hundreds of donors, runners, and advocates who flocked to Central Park — and to the MMRF’s donation page — to help him cross the finish line, raising $300,000 in just two days and exceeding his overall fund-raising goal of $1 million.

Tribeca Studios captured it all as part of a documentary highlighting Eric and the MMRF’s innovative research efforts titled, “200 Miles Towards a Cure.” Eric’s journey with the MMRF began nine years ago when he decided to run his first marathon to raise research dollars in honor of his close friend of 20 years, Anita, who lost her life to myeloma. Inspired by the MMRF’s progress in advancing treatments, he began taking on longer distances and tougher fund-raising challenges. Eric, who has completed six marathons and over 20 ultramarathons, believes supporting MMRF research is the fastest way to achieve a cure for myeloma and to advance Anita’s legacy.

CONQUER THE CANYON INCA TRAIL AND MACHU PICCHU

The Moving Mountains for Multiple Myeloma program, which encompasses both national and international hiking endeavors, saw a team of 21 complete the Inca Trail to Machu Picchu in August 2016. This team, which included four multiple myeloma patients; nurses; a multiple myeloma-focused physician; and representatives from the MMRF, Cure magazine, and Takeda Oncology, hiked for nearly 10 hours to raise awareness and research dollars for the MMRF.

The Inca Trail in Peru features steep ascents and descents on narrow pathways, beginning along the Urubamba River. The team entered Machu Picchu through the Sun Gate, where only a mere 1% of visitors are permitted access. This momentous journey drew national attention and surpassed the fund-raising goal of $155,000. The team was followed by a film crew to capture the journey for a documentary, highlighting the inspirational moments that took place. To watch the video and learn more, visit themmrf.org/mm4mm.

IRONMAN® LAKE PLACID AND 70.3 LAKE PLACID

The MMRF has been the exclusive charity partner of IRONMAN Lake Placid since 2014. This year, IRONMAN announced a 70.3-mile (half IRONMAN distance) race to be held in Lake Placid on September 10, 2017. The success in fund-raising at Lake Placid positioned the MMRF to be the exclusive charity partner for IRONMAN 70.3 Lake Placid and to expand the program at this historic location.

IRONMAN has been established there for almost 20 years, leading to a flawless event for athletes. The 70.3-mile race elevates the MMRF endurance program to a new level of competition for our triathletes. Over 100 athletes will train and raise funds for myeloma research as they cross this famous finish line next September. To join the MMRF Team for Cures at this inaugural race, visit themmrf.org/IMLP703.
Honorary Race Chair:  
Dr. Shaji Kumar,  
Mayo Clinic

Attendees: ........................................1,135
Funds Raised: .......................................$216,000
Top Team:  
Sher’s Fab Fighters  .........................$28,688
Top Individual:  
Kathy Long .........................................$2,030
Caregiver Award:  
Nikki Vanmeveren

Spirit of Hope Honoree:  
Ken Port from Team Ken

Ken Port was diagnosed with myeloma in September, 2013. In January the following year, he had one of “those” conversations with his oncologist — he was out of treatment options, and he should get his affairs in order. However, Ken had a very resourceful spouse, Paula. She wouldn’t accept that answer and started doing research on the MMRF website. Shortly thereafter, Ken began treatment again. After three months, he was eligible for a stem cell transplant, which he underwent in June 2014. The stem cell transplant and maintenance therapy gave Ken two full years with minimal residual disease. In June 2016, Ken relapsed and as a result has started on a new treatment plan. Through it all, Ken has seen that there are some pretty special people in his life, in particular, his wife Paula and his sister Terri. To Ken, this award demonstrates recognition of his survival — and the amazing support he has received from his team — by the MMRF.
CHICAGO, 2016

Honorary Race Chairs:
Dr. Andrzej Jakubowiak and
Dr. Todd Zimmerman,
The University of Chicago Medicine

Attendees: ............................................1,736

Funds Raised: .................................$471,000

Top Team:
Team Tonya  .....................................$67,000

Top Individual:
Hal Anderson .................................$18,081

BMS Caregiver Award:
Hayley Holmes

Courage and Commitment Award:
Tonya Hillenbrand

Spirit of Hope Honorees:
The Campbell Family and
Baxter Credit Union

One of Baxter Credit Union’s first
employees and dear friend, Torrance
Campbell (TC), was diagnosed with
multiple myeloma in 1997 when he
was just 38 years old. BCU employees
became determined to learn more
about multiple myeloma and do their
part to contribute to a cure — which led
them to get involved with the MMRF
and the Team for Cures 5K Walk/
Run Program. Torrance passed away
in 2005, and shortly after his passing,
another multiple myeloma patient and
close friend of BCU suggested “Spirit
of Hope” as a name for their team.
So, beginning in 2006, the BCU Team
officially became “TC’s Spirit of Hope” to
honor Torrance’s memory — and embody
his hopeful attitude. 2016 marks the
10-year anniversary of the Spirit of Hope
award. Since its creation, the MMRF has
named over 250 Spirit of Hope Award
Honorees. Jennifer Campbell, Justin
Campbell, Evan Campbell, Lisa Baron,
the Campbell Family and Baxter Credit
Union employees continue to participate
in the MMRF Chicago 5K Walk/Run to
help raise awareness and funding for
those battling multiple myeloma — and in
memory of Torrance.

SPOTLIGHT: COURAGE AND COMMITMENT AWARD HONOREE

Tonya Hillenbrand

The Courage and Commitment Award
is given to individuals who inspire a
spirit of determination and dedication
during challenging times. Tonya
Hillenbrand was diagnosed just over a
year ago with multiple myeloma. For the
past year, she has been in a clinical trial
for multiple myeloma at The University
of Chicago Hospital. She underwent a
stem cell transplant last September and
continues on a chemotherapy regime.
Tonya is a certified fitness and nutrition
expert, a former national triathlete and
duathlon team member. She was World
Duathlon Champion in 1996 and World
Duathlon Silver Medalist in 1997. Tonya
continues to get up each day and take
care of her three beautiful children,
Olivia, John and Rose, with her husband
Dan. She tells herself and her family
each day to “have courage.” Tonya is a
member of the patient advisory board at
University of Chicago Hospital, making
positive changes in the day-to-day care
available to other patients.
Dear Friends,

Five years ago, we brought together our partners to discuss and solve a fundamental challenge slowing progress in multiple myeloma: the widespread lack of data and data sharing. Without access to a large number of patient tissue samples and critical health information, researchers did not have the resources needed to transform innovative ideas into breakthrough discoveries.

Today, that could not be farther from the case. More than 1,000 multiple myeloma patients enrolled in the MMRF CoMMpass StudySM, each of whom contributed to what is now the world’s largest genomic cancer dataset that can be accessed by the best and brightest researchers around the globe. Through CoMMpass, we are now learning how to more accurately characterize high-risk patients and most effectively use the treatment options available, as well as identify new targets and pathways for drug development.

The result is dozens of new research initiatives, including 19 presentations, that will be showcased this year at the American Society of Hematology’s (ASH) annual meeting (see p. 4). Importantly, these CoMMpass abstracts are in addition to others highlighting MMRC clinical trials, including those investigating four new treatments for the hardest to treat patients (see p. 5). Together, this research demonstrates that our commitment to collaboration and promise of generating data and placing it in the public domain leads to important insights and accelerated progress.

These advances would not have been possible without the centers and individuals who participated in CoMMpass and MMRC clinical trials and the individuals who funded these breakthrough research efforts. We look forward to sharing updates on these and other research initiatives in the months to come.

Best regards,

Kathy Giusti,  
Founder  
Multiple Myeloma Research Foundation

The MMRF has done a good job of pushing the idea that as soon as you get a piece of information, you should be sharing that. It’s the difference of a cycle time that might be a year to a cycle time that might be weeks.

— Eric Lander, PhD  
President and Founding Director  
Broad Institute of MIT/Harvard
**Calendar of Events**

**MMRF Signature Events**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Location</th>
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<tbody>
<tr>
<td>October 28, 2017</td>
<td>MMRF Annual Fall Gala</td>
<td>Greenwich, CT</td>
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<tr>
<td>May 2, 2017</td>
<td>MMRF Laugh for Life: New York</td>
<td>New York, NY</td>
</tr>
<tr>
<td>April 3, 2017</td>
<td>MMRF Chicago Awards Dinner</td>
<td>Chicago, IL</td>
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**MMRF Endurance Events**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Location</th>
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<tbody>
<tr>
<td>February 1, 2017</td>
<td>Empire State Building Run Up</td>
<td>Apply Online</td>
</tr>
<tr>
<td>February 17, 2017</td>
<td>2017 Mt. Kilimanjaro Trek</td>
<td>FULL</td>
</tr>
<tr>
<td>March 19, 2017</td>
<td>2017 United Airlines NYC Half</td>
<td>Register Online</td>
</tr>
<tr>
<td>April 17, 2017</td>
<td>Boston Marathon</td>
<td>FULL</td>
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<tr>
<td>April 23, 2017</td>
<td>Virgin Money London Marathon</td>
<td>FULL</td>
</tr>
<tr>
<td>May 4, 2017</td>
<td>Conquer the Canyon® Grand Canyon Trek</td>
<td>Apply Online</td>
</tr>
<tr>
<td>June 11, 2017</td>
<td>Escape from Alcatraz Triathlon</td>
<td>Register Online</td>
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<tr>
<td>July 23, 2017</td>
<td>IRONMAN® Lake Placid</td>
<td>Register Online</td>
</tr>
<tr>
<td>July, 2017</td>
<td>Mt. Fuji Trek</td>
<td>Apply Online</td>
</tr>
<tr>
<td>September 10, 2017</td>
<td>IRONMAN® 70.3 Lake Placid</td>
<td>Register Online</td>
</tr>
<tr>
<td>September 24, 2017</td>
<td>BMW Berlin Marathon</td>
<td>Register Online</td>
</tr>
<tr>
<td>October 8, 2017</td>
<td>Bank of America Chicago Marathon</td>
<td>Register Online</td>
</tr>
<tr>
<td>November 5, 2017</td>
<td>TCS NYC Marathon</td>
<td>Register Online</td>
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**MMRF 5K Walks/Runs**

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<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>February 12, 2017</td>
<td>West Palm Beach</td>
<td>West Palm Beach, FL</td>
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<tr>
<td>April 1, 2017</td>
<td>San Francisco</td>
<td>San Francisco, CA</td>
</tr>
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<td>April, 2017</td>
<td>Boston</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>April, 2017</td>
<td>Atlanta</td>
<td>Atlanta, GA</td>
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<tr>
<td>May 7, 2017</td>
<td>Dallas</td>
<td>Dallas, TX</td>
</tr>
<tr>
<td>June 11, 2017</td>
<td>Tri-State</td>
<td>New Canaan, CT</td>
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**MMRF Patient Summits**

<table>
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<tr>
<th>Date</th>
<th>Chair:</th>
<th>Location</th>
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<tbody>
<tr>
<td>February 11, 2017</td>
<td>Melissa Alsina, MD</td>
<td>West Palm Beach, FL</td>
</tr>
<tr>
<td>February 25, 2017</td>
<td>Robert Rifkin, MD, FACP</td>
<td>Denver, CO</td>
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Together we can find tomorrow’s actionable insights.

We’ve made a lot of progress in a short span of time, but there is much more to be done. MRD, immunotherapy, novel compounds and new multi-drug clinical trial formats all represent promising pathways to new treatments. When you contribute to the MMRF, you’re funding these initiatives as they drive progress forward and give hope to myeloma patients worldwide.

Donate now at LACC.TheMMRF.org

All contributions made by 12/31/16 will be matched.