Fueling a Revolution Driving Research Forward

Melanoma Research Alliance

> 2019-2020 Annual Report

Melanoma Research Alliance

20000

Our Mission

The mission of the Melanoma Research Alliance (MRA) is to end suffering and death due to melanoma by collaborating with all stakeholders to accelerate powerful research, advance cures for all patients, and prevent more melanomas.

> Founded in 2007 with the generous support of Debra and Leon Black, MRA is the largest nonprofit funder of melanoma research. To date, MRA has awarded \$123 million to 339 research programs. Thanks to the generous support of our founders, 100% of all donations to MRA go directly to research.

MRA Board Member & Scientific Advisory Panel Chair Suzanne Topalian, MD (right) and MRA Board Chair and Co-Founder Debra Black (left).

Letter from the Chair and CEO





At the Melanoma Research Alliance, advancing transformational science is core to who we are. Since MRA's founding in 2007, we have committed more than \$123 million to melanoma research – more than any other non-profit worldwide. By funding groundbreaking research, fostering collaboration, and putting patients at the center of everything we do, we are fueling a revolution that will one day end melanoma as we know it.

And the revolution is already underway. This decade alone 13 new treatment options have earned FDA approval, including the FDA's first approval of an innovative 'triplet' that combines the power of PD-L1 checkpoint therapy with BRAF/MEK inhibition. This is just the latest example of the melanoma research community leading the way for all of oncology.

But it isn't all good news. Together, we face unprecedented times with the global COVID-19 pandemic upending our very way of life. With a staggering death count, thousands of new cases, economic fissures that are just starting to emerge, and no clear end in sight – it's easy to feel overwhelmed.

In our community alone, 2020 has seen patient care delayed or canceled altogether, clinics ordered closed, clinical trials slowed, and access to labs restricted. While the work slowed, it hasn't stopped, and we are all learning how to navigate our new reality. We won't be daunted. The same spirit of determined innovation that has transformed melanoma treatment will help researchers create new treatments and vaccines for COVID-19 that will lead us into the future.

Throughout the pandemic, we are learning critical lessons that make us faster, stronger, and even more pioneering in our approach to achieving our mission.

This report features some of our key achievements from the past year and several examples of how MRA works every day to fuel the melanoma research revolution.

We remain deeply grateful to many donors, organizations, government officials, and corporations who have joined us in our shared mission to eradicate melanoma.

Our work would not be possible without you.

Ditra Rhand

Debra Black Chair and Co-founder

M/h m

Michael Kaplan President and CEO

MRA Responds to COVID-19

COVID-19 has created unprecedented challenges to melanoma patients, researchers, and clinicians. To address these impacts, MRA has:

- Transitioned all staff, grant reviews, and scientific meetings to virtual only through mid-2021.
- Held a listening session for FDA with patients and researchers about the impact of COVID-19 on melanoma patient care and ongoing research.
- Surveyed melanoma researchers and conducted virtual site visits to assess impact of COVID-19 and explore ways in which MRA can better support the field.
- Supported funded investigators by granting no-cost extensions, budget carryovers, and extending reporting deadlines.
- Issued \$11 million in new grants during close-downs so that researchers have the support they need to hit the ground running.





Table of Contents

MRA By the Numbers.....9

Fueling a Revolution: Driving Research Forward......11

Relentless in the Fight	12
A New Treatment Approach in the Arsenal:	
Neoadjuvent Therapy	16
Why We're Fighting: A Patient's Perspective	20
New Recruits in the Fight	22
Putting Patients First	24

2020 MRA Research Awards

Team Science Awards	30
Pilot Awards	31
Young Investigator Awards	32
Dermatology Fellows Awards	33

2019 Donors & Supporters35

About MRA

Board of Directors	41
MRA Staff	41
Scientific Advisory Panel	42
Medical Advisory Panel	42
Dermatology Council	43
Grant Review Committee	44
Melanoma > Exchange Community Leaders	45
2019 Honor and Memorials	46

Financial	S	48
------------------	---	----

MRA by the Numbers

33





research awards granted

\$319 million in leveraged funds

more than 3200 donors

people have used our clinical trial navigator to find personalized clinical trial results in their community

152 institutions in 18 countries funded

146 different agents for treatment of melanoma investigated

corporate partners who've raised **\$52.4 million** to support melanoma research of all domations go directly to research— no admin, development, or other fees

The revolution is here.

Fueling a Revolution Driving Research Forward

MRA is powering a revolution in melanoma research. A revolution that is not only benefiting patients with melanoma but also impacting the field of oncology at large.

MRA's investment and power as a convener have paved the way for research advancements, scientific collaborations, and breakthroughs that are improving health outcomes every day for melanoma patients.

Over the years there have been FDA treatment approvals – 13 and counting – as well as improved strategies for detection, a broader array of treatment options, and increased survivorship for many patients.

There has been constant innovation, and a continual assessment of lessons learned to help inform future strategies.

The field has advanced checkpoint immune therapy, targeted kinase inhibitors, and microbiome research.

Despite immense progress and an expanded arsenal of treatments, there are still too many patients who are not yet benefiting from even the latest advancements. To address this and better understand why some melanomas resist treatment altogether — and to prevent melanoma in the first place — MRA has also been investing in research to identify biomarkers for prognosis (to help determine which early-stage patients are at high risk), innovative telemedicine models of care, and big data and artificial intelligence to help move the field ahead, no matter how high the bar.

Relentless in the Fight

Taking the Brakes Off

Every revolution needs trailblazers—people who restlessly and relentlessly search for paths forward. At MRA, we're fortunate to partner with innovative trailblazers who are guiding the entire field of melanoma further, in areas such as the application of artificial intelligence in early detection of melanoma, the tumor microenvironment, and the microbiome.

One such trailblazer, in the area of bringing immunotherapies to patients, is two-time MRA-funded investigator Dr. F. Stephen Hodi, Professor of

Medicine at Harvard Medical School and Director of the Center for Immuno-Oncology and at the Melanoma Center at Dana-Farber Cancer Institute.

Stephen Hodi, MI

The son of an engineer, Hodi grew up in Ashland, Massachusetts intrigued with solving puzzles and excited about biology. He was no stranger to hard work—or compassionate care—his days were filled with school, then hockey practice, and finally home to care for his elderly grandparents.

¹Piana R. An early interest in cancer immunology inspires a life's work in melanoma: F. Stephen Hodi, MD. June 3, 2020. The ASCO Post. Available at: www.ascopost.com/issues/june-3-2020-narratives-special-issue/an-early-interest-in-cancer-immunology-inspires-a-life-s-work-in-melanoma/

These early exposures helped lay the groundwork for Hodi's decision to attend medical school.¹

At medical school and beyond, Hodi has taken the path less traveled—a path that often requires curiosity and unfettered persistence. At the start of his career, immunology was a much sparser field—taken less seriously than other areas of oncology. There were also just two primary diseases studied—kidney cancer and melanoma—whose tumors were believed to be *immunogenic*, meaning that they elicited an immune response. Moreover, the research and treatment landscape for melanoma, and particularly metastatic melanoma, was bleak.

But no good fight is easy.

Hodi found both a clinical and laboratory mentor in melanoma, and "dove right in," he recalls.

By the early 2000s, treatment for metastatic melanoma was primarily chemotherapy and high-dose IL-2. Survival was just 6-to-18 months. Then came MRA-funded investigator and Scientific Advisory Panel Member Dr. Jim Allison's Nobel Prize-winning work. "It changed the way of thinking in how we can manipulate the immune system by taking the brakes off," says Hodi.

T cells are "soldiers," helping the immune system fight viruses and abnormal cells like cancer. "Brakes," otherwise known as the protein CTLA-4, turn T cells off once they have successfully killed off an attacking pathogen. Allison's breakthrough work discovered how to "release these breaks" to overcome the immune system's reluctance to attack tumors.²

The drug Allison designed was ipilimumab (Yervoy[®]), which blocks the CTLA-4 checkpoint.



Dr. Jim Allison at MRA's 2019 Scientific Retreat

Hodi went on to run one of the first clinical trials with ipilimumab, then known as MDX-010, and later led the phase III registration trial. This pivotal trial demonstrated a survival advantage and led to the FDA approval of ipilimumab —the first checkpoint inhibitor approved globally. With "the breaks off," hundreds of millions of T cells are released to attack cancer tumors, and once turned on, the cells stay that way—working even after treatment has stopped.

"It took a whole group of clinical investigators and concepts to come together to bring that first proof of principle to fruition," says Hodi, "but that opened up the door for other investigators and industry to get interested in the field." This includes research on other immune system "breaks," such as PD-1 and PD-L1.

Since Hodi began that first trial of ipilimumab in 2004, there is now an entire class of checkpoint inhibitors. These breakthroughs in melanoma have also had an impact on patients with other cancers in a really short period. "The

² Merville S. Immunotherapy innovator Jim Allison's Nobel purpose. University of Texas MD Anderson Cancer Center. Fall 2018 Available at: www.mdanderson.org/publications/conquest/immunotherapy-innovator-jim-allisons-nobel-purpose. h36-1592202.html

first proof of principle came out of melanoma, but the biology showed that it was generalizable to other cancers. Now you have impact in lung cancer, kidney cancer, Hodgkin's disease, neck cancer, liver cancer, and breast cancer among others. We now understand immunology better in patients and tumor immunology because of this," explains Hodi.

The melanoma treatment landscape has since expanded to include:

- Anti-CTLA-4 checkpoint immunotherapy
- PD-1 checkpoint immunotherapy
- Combination immunotherapy
- Targeted combination BRAF/MEK kinase inhibitors
- Triplet combination therapy, combining PD-L1 checkpoint immunotherapy with BRAF/MEK inhibition

"For melanoma now, with combination, approximately 50% of patients can do well long-term. We're still collecting data, but it's a tremendous feat compared to where we were just a few years ago. Patients can live with their cancer and can even have complete responses," says Hodi.

Indeed, significant progress has been made but Hodi emphasizes that there is still work to do. "It's not helping everyone, and we're trying to understand why and trying to figure out novel, newer pathways, newer targets, newer understanding of the tumor and tumor environment. A big part is understanding not just the tumor cell but the cells that surround it and how they interact with one another. Understanding how those interactions occur will, hopefully, help develop better and newer treatments in the future."

This will include the study of nearby tumor cells, such as

- macrophages—specialized cells that support the detection of harmful organisms, support production of antibodies, and the activation of other cells, and
- NKs (natural killers)—cells that help contain viral infections while the immune system response takes effect.

"There are a handful of tools that exist to try our best to turn this into a chronic disease, at least, and prolong patients' lives that didn't exist a mere 10 years ago.

In the span of drug development, it seems like lightspeed for quality development."

-Dr. F. Stephen Hodi

Hodi, in particular, is interested in learning how these cells may be manipulated in future therapies.

"I think we've made great advances," he says. "In some areas, things may have plateaued a bit, but I remain hopeful in the current world we're living in of big data, of artificial intelligence, foundational knowledge, that though the hurdles may be a bit higher, we can still make tremendous impacts in the future by bringing things together and continuing to work as a community."

As the largest non-profit funder of melanoma research worldwide, MRA is committed to searching out and supporting current and future melanoma research trailblazers such as Dr. Hodi. Learn more about MRA's pioneering research awards at **CureMelanoma.org/Grants**.

Evan Lipson, MD

The revolution is here.



-

TOTA

sidual viable tumor



used by wable tumor/Total area where tumor used to be x 100



A New Treatment Approach in the Arsenal: Neoadjuvent Therapy

Janis Taube, MD, Marc Theoret, MD, Caroline Robert, MD, PhD, and Jennifer Wargo, MD

Community is an essential ingredient to a successful revolution and is particularly critical when fighting advanced melanoma.

Surgery is the backbone of melanoma treatment and is curative for the vast majority of patients with localized melanoma. However, even if surgery successfully removes all detectible traces of tumor tissue, some patients will still experience a melanoma relapse.

That's because, in some patients, residual cancer cells remain even though they can't be found by blood draws, scans, or other tests. These microscopic melanoma cells lurk, hidden in the body, and wait. It is like going to war with an invisible enemy who is playing hide and seek. Harder still, doctors and researchers don't know which patients this enemy may be hiding in until it comes back.

This is why knowledge sharing among allies is paramount. Revolutions can't be won without strong partnerships. This is why in its quest to end suffering and death due to melanoma, MRA has been steadfast in its commitment to bring all stakeholders to the table to ask tough questions and to share lessons learned broadly. "There's the dangerous tendency, not just in the melanoma field but in the cancer field broadly, for 'camps' to form among researchers. Camps quickly become divisive and in my view are an intolerable state in the field," warns Dr. Keith T. Flaherty, Director for Targeted Therapy and Clinical Research at Massachusetts General Hospital and a Professor of Medicine at Harvard Medical School.

Flaherty says this is why the convening work that MRA does is so critical. "You do not want people trying to divide up cancer biology into distinct domains and losing focus on the reality that there is effectively cross talk between every aspect, every molecular aspect and feature of cancer with every other," says Flaherty. "They work in concert to create the problem and then similarly on the therapeutic side we have to unravel the problem by maintaining that same mindset."

What the field is seeing now is that the same therapies that are having an impact in advanced

melanoma are having a comparable impact in eradicating microscopic deposits of residual disease. Flaherty points to neoadjuvant therapy with BRAF inhibitors and immune checkpoint therapy and to MRA for helping shift the focus towards this promising approach.

Neoadjuvant therapy is a presurgical approach. Patients with clinically detectable stage III melanoma, for example, may seek neoadjuvant therapy because their melanoma has signs that indicate a higher risk of recurrence, such as lymph node involvement or melanoma lesions deeper than 4mm. Early results from clinical trials indicate that this approach decreases the risk of recurrence of melanoma in patients. To help explore this groundbreaking area, the MRA co-hosted a public workshop with the Food and Drug Administration (FDA) on November 6, 2019. The workshop focused on identifying, discussing, and addressing key issues, challenges, and opportunities in pursuit of neoadjuvant therapies for patients with surgically resectable melanoma.

Treatment Paths for Adjuvant Versus Neo-Adjuvant Therapy



MRA's Neoadjuvant Therapy Funding

Beyond the MRA-FDA co-sponsored meetings, MRA is helping advance neoadjuvant research through two large Team Science Awards:

- Overcoming upfront resistance to neoadjuvant CTLA-4 plus PD-1 blockade MRA Team Science Award with Young Investigator supported by Amanda and Jonathan Eilian Christian Blank, MD, PhD, Netherlands Cancer Institute
- Predictors of response to neoadjuvant therapy in melanoma

RTFCCR-MRA Team Science Award Rodabe Amaria, MD, University of Texas MD Anderson Cancer Center

"One of MRA's key roles is bringing all the stakeholders together and it's really part of our mission to collaborate with everyone to advance the field of melanoma," says Dr. Marc Hurlbert, Chief Science Officer at MRA. "Having a topic that was important to melanoma science and the regulatory agency was critical. The fact that we had this joint area that we wanted to work on and then to hold this public workshop where we could have broader dialogue was great," he adds.

The planning for and involvement in the meeting involved a vast—and multidisciplinary—group: the FDA, MRA, volunteer advisors, and MRA's Scientific Advisory Panel. It tapped experts from other cancer types including those who study breast and lung cancer specifically. The public workshop brought together pioneers in neoadjuvant therapy as well as clinicians and physicians new to this therapeutic approach. Attendees included oncologists, surgeons, patients, epidemiologists, biotech, pharmaceutical companies, caregivers, and advocates. In addition to the FDA, members from the National Cancer Institute (NCI) and National Institutes of Health (NIH) were also present.

The FDA-MRA workshop coalesced into three thought-provoking discussion panels with an opportunity for discussion amongst speakers and audience members alike. The workshop sessions were recorded and are now available **online**. Next up is a peer-reviewed journal article. "Now the goal is to get this information out to thousands of clinicians and clinical trialists all over the world," says Hurlbert.

Flaherty adds,

"The FDA will never tell the cancer field how to operate differently. Drug companies will never tell the cancer field how to operate differently in terms of how we think about the conduct of clinical trials, who we should be targeting in those clinical trials. Yes, we academics pose those questions

or make those statements, but we can't make them individually. That's not effective. We need to be able to come together. There'll be inherent disagreements in those areas, so we need to work through those and find the areas of common ground or consensus. That's exactly what the MRA has done. They're helping us to understand what the barriers to its adoption in clinical trials are and, ultimately, in clinical practice."

The more we can understand this, the more we can help patients. And the more we help patients, the more we can drive this revolution forward.



CureMelanoma.org/NeoAdjuvantWorkshop



Dr. Keith T. Flaherty.

"To bring together the stakeholders and essentially create a blank slate in terms of agenda and who's trying to accomplish what, for what purpose, that is what a group like MRA can uniquely do and they are the ones who've uniquely done it."

– Dr. Keith T. Flaherty



Why We're Fighting: A Patient's Perspective

After 14 years working in a Las Vegas hospital, and an additional five at NIH, Robert "Bob" Hill knew the importance of putting patients first—a philosophy he applied to his melanoma journey. After being diagnosed with Stage 3 melanoma, Bob chose to enroll in a clinical trial at Georgetown University, comparing the effectiveness of treating melanoma with pembrolizumab before or after surgery, what doctors call neo-adjuvant and adjuvant therapy, respectively.

It all started in January 2019 when Bob showed his primary care doctor a mole on his arm. He'd noticed it about a year before but had become increasingly concerned as it seemed to be slowly growing. His doctor referred him to Dr. Henshaw, a surgeon, who ordered further testing.

Eventually, Bob's growing mole was diagnosed as Stage 3 melanoma. He quickly found himself, with his daughter by his side, in the office of medical oncologist Dr. Suthee Rapisuwon.

For Bob, he was in the right place at the right time.

"Dr. Rapisuwon presented me with the concept of a clinical trial where they would give me infusions of a drug before surgery," recalls Bob. "While nothing is guaranteed, Dr. Rapisuwon was very hopeful that this might be the best option for me."

After carefully considering all options, Bob and his daughter agreed. Bob enrolled in the trial and received his first infusion of pembrolizumab on June 27, 2019.

As part of the trial, he would receive a total of three infusions – each three weeks apart – before surgery. Then, after he'd healed from the surgery, he'd continue receiving pembrolizumab for an additional 15 cycles.

and that findings from this study would help other people in the future. That hit home for me."

After three rounds of pembrolizumab infusions, Bob could tell that the immunotherapy was working. "I could feel the tumors on my arm just shrink away," says Bob. ^O

From left: Steven Lemery, MD, Christian Blank, MD, Laleh Amiri-Kordestani, MD, Charlotte Ariyan, MD, PhD, Robert Hill, and Michael Atkins, MD

Navigating Clincal Trials

Researchers would then compare how Bob and other patients who were on the 'neoadjuvant' arm of the trial compared to a group of patients who would receive the same drug for 18 cycles but only

"I'm lucky, my daughter has a PhD in microbiology and had even run clinical trials before, so I benefited from her experience and knew that clinical trials are often the best choice for patients," says Bob. "I also was glad that in some way, this is bigger than me –

after surgery.

At MRA, we know that many patients don't have the benefit of a family member already well versed in clinical trials when they are making their own treatment decisions. That's why we've built a series of resources to help patients understand what clinical trials are and how they may be right for them.

Learn more: CureMelanoma.org/ClinicalTrials



Match to clinical trials in

60 seconds

Know your options



New Recruits in the Fight

Two-time MRA-funded investigator Hensin Tsao, MD

Dermatologists can play a critical role in prevention and early detection and can help to fill research gaps that also remain in the fight against melanoma.

To address this, MRA launched the Dermatology Fellowship Award pilot program in 2019. The pilot funded nine fellows from the seven institutions represented by MRA's Dermatology Council. In 2020, the program was expanded to include all institutions in the United States with an established pigmented lesion clinic/program.

The research grants focus on one of two areas:

- 1) prevention or
- 2) detection, diagnosis, staging, and early intervention treatments.

Through this work, MRA is helping to bring forth a new cohort of dermatology researchers to pick up their torches and blaze new trails. This funding—a rarity for young researchers at this stage of their careers—creates a pipeline of promising scientists specialized in melanoma and supports not only the next generation of researchers but also promises to improve detection and prevention outcomes in melanoma.

"The new MRA Dermatology Fellows Program will provide critical support for young scientists and dermatologists to explore new avenues of investigation, providing financial backing not generally available at this point in their careers."

Denise Kellen, MRA Board Member, Melanoma Survivor, & Generous Funder of Melanoma Dermatology Fellows with her Husband Michael



















Prevention + NextGen Melanoma Fighters

MRA launched the first-ever Dermatology Fellows program to train the next generation of researchers explore prevention research and early treatment.

Download the Report





2019 Dermatology Fellows

From Left:

Shirin Bajaj, New York University School of Medicine Development of an enhanced telemedicine-based melanoma diagnostic platform

Maria Graciela Cascio, Joan & Sanford I. Weill Medical College of Cornell University Dependence of metastasizing melanoma cells on different NAD kinase isoforms

Sixue Liu, University of California, Los Angeles Metastatic origin and adjuvant therapeutic efficacy of stage III melanoma

Enrica Quattrocchi, Mayo Clinic Melanoma staging by artificial intelligence

Ofer Reiter Agar, Memorial Sloan Kettering Cancer Center Differentiating change over time in melanoma as compared to benign nevi

Aditi Sahu, Memorial Sloan Kettering Cancer Center Exploring differential PARP1 expression for non-invasive melanoma diagnosis

Qi Sun, New York University School of Medicine Transcriptional profiling and marker identification of early stage melanoma

Matthew Vesely, Yale University Determining the immune inhibitory landscape in melanoma

Carl Winge, Stanford University School of Medicine Rac-1-interacting proteins as diagnostic biomarkers for melanoma

As this report was being finalized, MRA awarded funding for 13 Dermatology Fellows in year two of the program. Today more than **600** melanoma clinical trials are actively recruiting patients.

Putting Patients First

Today, due to critical advances in melanoma research, patients have more treatment options than ever before. In fact, 13 new therapeutic approaches have earned FDA approval in the last decade.

This drumbeat of progress continues to accelerate; today more than 600 melanoma clinical trials are actively recruiting patients! This is unheard of progress in oncology and serves as a testament to the tenacity and perseverance of researchers, clinicians, and patients alike.

From a patient's perspective, this progress is awe-inspiring; but it can also be overwhelming to make sense of as you fight for your life. On the flip side, researchers can't do it alone. They need active and informed patients who are ready to partner with them to tackle remaining questions and unmet needs with melanoma.

Dr. Rizwan Hag and

In recognition of this, MRA works to leverage its deep scientific and clinical reach to provide resources for patients and their loved ones — helping them to not only navigate both approved and emerging treatments but also to contribute to the next iteration or treatment breakthrough.

Patient Resources

The MRA website is a library of resources for patients wherever they are on their journey. Broken down by topics from: Just Diagnosed, Melanoma Treatment, Clinical Trials, Patient Resources (including a glossary), and more — patients are armed with information and prepared for battle.

CureMelanoma.org



Finding the Right Information

When you or someone you love is facing melanoma, you want information that is accurate and current to help inform your decision making. MRA has patientfriendly resources on melanoma staging (including Breslow Depth and Clark Level), tools for patients who have been recently diagnosed, current and emerging treatment options, and more that is easily accessible to patients.

In 2019 more than 350,000 people accessed online resources from MRA.





Building Community

Finding a group – or a person – that has firsthand knowledge of what it's like to be diagnosed with and treated for melanoma can be very helpful. That's why MRA partnered with Inspire to create the Melanoma > Exchange. The vibrant online community is led by patients and caregivers with firsthand understanding of melanoma and clinical trials, and experts from the MRA staff. Whether specific to melanoma or cancer broadly, tapping into a supportive community can help you throughout your melanoma journey.

Since launch, over 3,400 people have become active members of the Melanoma>Exchange.

CureMelanoma.org/Community





Demystifying Clinical Trials

Patients are looking for trials, and trials are looking for patients (over 600 melanoma clinical trials are currently enrolling patients), but with strict eligibility requirements, it can be difficult to find a match. That's why in late 2017 MRA launched its Clinical Trial Navigator in partnership with Antidote.

By answering a few simple questions, patients get a curated list of clinical trials that may be a good match for them and their melanoma. They can print the list and use it as a basis of a conversation with their doctor OR contact study contacts directly.

Since launch, over 10,000 people have used the tool.

CureMelanoma.org/ClinicalTrials

Together on the Front Lines

Lara Porzak, a three-time melanoma survivor, and photographer worked with MRA on "Facing Melanoma Together: Portraits of Patients, Loved Ones, & Researchers Together on the Front Lines." The series, taken in black and white, across five cities in the United States, celebrates the power of research and the roles we all play in advancing this work together.

CureMelanoma.org/Together

"We've made some real progress, and that's great, but we aren't there yet. My kids now have a history of this, too, and I'm also doing this for them.

Discoveries don't happen by accident; we have to be willing to invest in them." – Amanda Eilian



MRA Board Member Amanda Eilian tours Sohail Tavazoie, PhD's laboratory



Brandon Barniea and his family with William Sharfman, MD

"Research means continuous improvement.

As a survivor, it is uplifting to know there is a community of professionals dedicating their time and energy to provide people like me with better outcomes. They mean so much to me. People who are caring, civic minded, and dedicated to the mission of a brighter future. Not only for melanoma patients, but cancer patients everywhere."

- Brandon Barniea



"Research really is amazing.

The progress that has been made is so encouraging and it takes us all that much closer to a cure."

- Christine Eddy

F. Stephen Hodi, MD with his patient Christine Eddy

MRA's Charge

For patients for whom treatments and outcomes have been less certain and less successful, for researchers with big ideas that provide promise but need piloting, for cross-industry and cross-discipline projects that could change the landscape as we know it, MRA is here championing for you each step of the way. Together, we are fueling a revolution.

2020 MRA Research Awards

A complete listing of all MRA grant awards, along with abstracts, can be accessed online at **CureMelanoma.org/Grants**

Team Science Award

MRA Team Science Awards are the centerpiece of the MRA research funding portfolio. This program fulfills one of MRA's primary goals: to foster a collaborative research process. Multidisciplinary teams consist of Principal Investigators with complementary expertise who may be from the same institution, inter-institutional, and/or international institutions. Team science projects promote transformational melanoma research advances with the potential for rapid clinical translation.

Predictors of Response to Neoadjuvant Therapy in Melanoma

Aims to inform mechanisms of treatment response and resistance to BRAF targeted therapy and identify risk factors of central nervous system metastasis formation.

RTFCCR-MRA Team Science Award

Rodabe Amaria, MD, University of Texas MD Anderson Cancer Center

Genomic Instability in Acral Melanoma as A Therapeutic Vulnerability

Will analyze human acral melanoma samples and cell lines to identify defective DNA repair pathways to develop targeted therapies for acral melanomas.

The Black Family-MRA Team Science Award in Acral Melanoma Boris Bastian, MD, PhD, The University of California, San Francisco

Overcoming Upfront Resistance to Neoadjuvant CTLA-4 Plus PD-1 Blockade

Aims to identify baseline biomarkers to identify patients who are in need of alternative or escalated neoadjuvant treatment schemes and identifying new treatment combinations for those patients.

MRA Team Science Award with Young Investigator Supported by Amanda and Jonathan Eilian Christian Blank, MD, PhD, Netherlands Cancer Institute

Evolution of Metabolic and Immune Dysfunction in In-Transit Melanoma

Comparing how tumor cell metabolism and immune function change as the individual tumors move away from the original site.

The Black Family-MRA Team Science Award in In-Transit Melanoma Greg Delgoffe, PhD, University of Pittsburgh

Germline Biomarkers of Melanoma Immunotherapy: An International Consortium

Will perform genetic analysis testing on a large pool of metastatic melanoma patients treated with immunotherapy for the identification of inherited markers that predict immunotherapy success and toxicity.

Leveraged Finance Fights Melanoma-MRA Team Science Award Tomas Kirchhoff, PhD, New York University

AI-Augmented Melanoma Triage and Diagnosis: A Prospective Multi-Site Study

Seeks to improve melanoma diagnostic capability while increasing vital access to care, using an algorithm as a teledermatology triage tool for rapid lesion evaluation.

L'Oréal Dermatological Beauty Brands-MRA Team Science Award Roberto Novoa, MD, Stanford University

IL13Ra2 Chimeric Antigen Receptor (CAR) T Cells for Metastatic Melanoma

Proposing a clinical trial using CAR T cells that can recognize and kill melanoma cells that express a protein called IL13Ra, in patients with advanced melanoma that is not responsive to existing treatments.

The Black Family-MRA Team Science Award, with Young Investigator Generously Supported by The Sokoloff Family Antoni Ribas, MD, PhD, The University of California, Los Angeles

Effective Therapies for Patients with High Risk In-Transit Disease

Uses genetic and immune based tests to identify melanoma patients with in-transit metastases who require additional drug and surgical treatments to enable clinicians to select the treatment most likely to cure each patient's disease.

MRA Team Science Award, with Generous Support from The Helman Family Richard Scolyer, MD, Melanoma Institute Australia

Next-Generation Computational Biomarker Development For PD-(L)1 Efficacy

Uses machine learning to better understand the spatial organization of multiple immune factors in melanoma to allow for improved patient selection for anti-PD-1 as well as the rational combination of anti-PD-1 with other therapeutic agents.

BJ's Wholesale Club-MRA Team Science Award Janis Taube, MD, Johns Hopkins University

Investigating Melanoma Metastases

Understanding how and when primary melanomas change to give rise to different metastases, and how metastatic tumors escape from the immune system and become resistant to drug therapy.

MRA Team Science Award, Generously Supported by Rosetrees Trust Samra Turajlic, PhD, The Francis Crick Institute

The Effects of Age on Tumor Dormancy

Understanding the normal changes in both the immune system and other normal cells that occur during aging that awaken dormant tumors and how to target those processes for therapeutics.

MRA Team Science Award, Collaboratively Funded by Johns Hopkins University and Icahn School of Medicine at Mount Sinai

Ashani Weeraratna, PhD, Johns Hopkins University

Targeting Persister Cell States That Drive Drug Resistance and Metastasis

Developing a better molecular understanding of recurrent cancer cells that grow and spread to new locations, to develop new and effective therapies to target them.

Anna-Maria and Stephen Kellen Foundation – MRA Team Science Award Richard White, MD, PhD, Memorial Sloan Kettering Cancer Center

Pilot Awards

MRA Pilot Awards test potentially transformative ideas that do not have extensive preliminary data but articulate a clear hypothesis and translational goals. Resources for such "high-risk, high-reward" projects are important to establish proof-of-concept, which may then leverage additional funding through more traditional avenues.

Sensitizing Melanoma to Immunotherapy with Novel DNA Hypermethylating Drugs

Investigates the possibility of using an inhibitor of the molecule TDG to make non-responsive melanomas respond to immunotherapy.

MRA Pilot Award

Alfonso Bellacosa, MD, PhD, The Research Institute of Fox Chase Cancer Center

Histone Variant Regulation of The Melanoma Microenvironment

Characterizing how loss of the histone molecule, macroH2A, in melanoma cells renders them invisible to immune cell killing, and how macroH2A contributes to the proper training of immune cells to mount an effective response against tumor cells.

Hess Foundation – MRA Pilot Award Emily Bernstein, PhD, Icahn School of Medicine at Mount Sinai

Targeting Immune Inhibitory Gene Transcription to Reverse T Cell Exhaustion

Investigating the potential of the molecule VISTA, a potent inhibitor of T cells, as a novel therapeutic target to promote patient responses to melanoma.

MRA Pilot Award

Linda Bradley, PhD, Sanford Burnham Prebys Medical Discovery Institute

Tandem Cytokine Delivery with Non-Replicating Herpes Viral Vectors

Aims to make a virus that produces IL-12 and blocks negative feedback mechanisms in melanoma cells, to allow for regression of local lesions and clearance of lesions throughout the body.

MRA Pilot Award Stephanie Dougan, PhD, Dana-Farber Cancer Institute



Uncovering Nodes of Convergence of Targeted and Immune Therapy in Melanoma

Identify signaling nodes in which targeted and immune therapy approaches converge to both maximally suppress oncogenic signaling in the tumor and enhance anti-tumor immune response.

Hess Foundation – MRA Pilot Award Poulikos Poulikakos, PhD, Icahn School of Medicine at Mount Sinai

Young Investigator Awards

MRA Young Investigator Awards aim to attract early career scientists with novel ideas into melanoma research, thereby recruiting and supporting the next generation of melanoma researchers. Young Investigators are scientists within four years of their first academic faculty appointment. A mentorship commitment from a senior investigator is required.

Loss of CD226 In T Cells Drives Resistance to Melanoma Immunotherapy

Aims to understand CD226 signaling and function in immune cells to improve melanoma immunotherapy.

Bristol-Myers Squibb – MRA Young Investigator Award Tobias Bald, PhD, University of Bonn



Identification of Druggable Transcriptional Drivers in Melanoma

Will develop chemical tools to target two key drivers responsible for melanoma growth and identify new mechanisms to inhibit melanoma growth.

MRA Young Investigator Award, Collaboratively Funded by Massachusetts General Hospital

Liron Bar-Peled, PhD, Massachusetts General Hospital

Understanding Immunotherapy-Tolerant Melanoma Persister Cells

Will characterize immunotherapy-tolerant persister cells, identify their therapeutically targetable vulnerabilities, and evaluate the findings in preclinical models.

Bristol-Myers Squibb – MRA Young Investigator Award Matthew Hangauer, PhD, University of California San Diego

Activating dsRNA Sensing in Melanoma to Overcome Immunotherapy Resistance

Aims to define the mechanism by which targeting the ADAR1 molecule overcomes resistance to immunotherapy and to identify the patients that will benefit from this new approach.

Bristol-Myers Squibb – MRA Young Investigator Award Jeffrey Ishizuka, MD, PhD, Yale University

Targeting Interactions Between Melanoma Metabolism and Radiation Therapy

Aims to understand the fundamental response of melanoma metabolism to radiation therapy, and will combine drug therapy and radiation therapy with the goal of improving radiation response.

MRA Young Investigator Award, Collaboratively Funded by Emory University Aparna Kesarwala, MD, PhD, Emory University

Examining the Role of Blebs in Melanoma Metastasis

Aims to understand the molecular mechanisms used in melanoma cells undergoing fast amoeboid migration, with the goal to provide new therapeutics for metastatic melanoma.

MRA Young Investigator Award in Memory of Leon Sapsuzian, Jr. Jeremy Logue, PhD, Albany Medical College

Microenvironmental Regulators of Melanoma Brain Metastases

Will investigate the contribution of microenvironmental regulators to melanoma brain metastasis progression and response to immunocheckpoint inhibitors.

The Jo Carole and Ronald S. Lauder - MRA Young Investigator Award Berta Lopez Sanchez-Laorden, PhD, Universidad Miguel Hernandez de Elche

Targeting 1-Carbon Metabolism in Melanoma Brain Metastases:

Identifying the metabolic adaptations that cancer cells need to survive and proliferate in the brain, and develop therapeutics to target these metabolic vulnerabilities.

Tara Miller Melanoma Foundation – MRA Young Investigator Award Michael Pacold, MD, PhD, New York University

Ablative Radiotherapy as Consolidation for Oligoprogressive Melanoma

Aims to understand the variability between multiple sites of melanoma in individual people and the extent to which radiation targeted to one area of cancer can affect other areas of cancer in the body that are not being targeted with radiation.

ASTRO-MRA Young Investigator Award in Radiation Oncology Reid Thompson, MD, PhD, Oregon Health & Science University

The Impact of Tumor Progression Trajectory on Immunotherapy Treatment

Aims to build a better prediction model for melanoma immunotherapy and to improve treatment regimens.

Michael and Jacqueline Ferro Family Foundation - MRA Young Investigator Award Lixing Yang, PhD, The University of Chicago

Dermatology Fellow Awards

MRA Dermatology Fellowship Awards are designed to drive greater interest in the prevention, detection, diagnosis and early intervention of melanoma among dermatologists by investing in post-docs and medical residents focused on dermatology.

Shirin Bajaj, New York University School of Medicine Development of an enhanced telemedicine-based melanoma diagnostic platform

Marcia Graciela Cascio, Joan & Sanford I. Weill Medical College of Cornell University Dependence of metastasizing melanoma cells on different NAD kinase isoforms

Sixue Liu, University of California, Los Angeles *Metastatic origin and adjuvant therapeutic efficacy of stage III melanoma*

Erica Quattrocchi, Mayo Clinic *Melanoma staging by artificial intelligence*



Ofer Reiter Agar, Memorial Sloan Kettering Cancer Center Differentiating change over time in melanoma as compared to benign nevi

Aditi Sahu, Memorial Sloan Kettering Cancer Center Exploring differential PARP1 expression for non-invasive melanoma diagnosis

Qi Sun, New York University School of Medicine *Transcriptional profiling and marker identification of early stage melanoma*

Matthew Vesely, Yale University Determining the immune inhibitory landscape in melanoma

Carl Winge, Stanford University School of Medicine Rac-1-Interacting Proteins as Diagnostic Biomarkers for melanoma

Recognition Lists

*

2019 Donors & Supporters

\$1,000,000+

Bank of America Private Bank Debra and Leon Black Jami Gertz & Tony Ressler Anna-Maria and Stephen Kellen Foundation Paul, Weiss, Rifkind, Wharton & Garrison LLP The Stewart J. Rahr Foundation Alison and Richard Ressler

\$500,000-\$999,999

Bristol-Myers Squibb Company Michael and Jacqueline Ferro Family Foundation Goldman Sachs & Co. Daisy Helman Kirkland & Ellis LLP

\$250,000-\$499,999

Akin Gump Strauss Hauer & Feld LLP Barclay's BJ's Wholesale Club Caryl Englander Gagosian Gallery Susan and John Hess Elias Kefalidis The Ronald & Jo Carole Lauder Foundation Nancy and Howard Marks Mary Jo and Brian Rogers Estate of Leon Sapsuzian Sidley Austin LLP Sokoloff Family Trust Sotheby's

\$100,000-\$249,999

Anonymous The Carson Family Charitable Trust Citi Credit Suisse Deloitte Amanda and Jonathan Eilian Larry Gagosian Hauser & Wirth Denise and Michael Kellen Foundation Latham & Watkins LLP L'Oreal Paris Merck & Co., Inc. Eyal & Marilyn Ofer Family Foundation Sean Parker Foundation James O. Robbins Family Trust Francine and Jeffrey Rowbottom Saban Family Foundation Ian Schuman Simpson Thacher & Bartlett LLP Tara Miller Melanoma Foundation Ann Tenenbaum and Thomas Lee Veritas Capital Management, Inc.

\$50,000-\$99,999

Paul Abecassis Amgen, Inc. Aon Apollo|MidCap Jill and Jay Bernstein Ben Black Bloomberg LP Brownstein, Hyatt, Farber & Schreck Cahill Gordon & Reindel LLP

Ellen and Gary Davis Foundation **Fitch Ratings** Lisa Fox Audrey and Martin Gruss Misha and Michael Hess IHS Markit Marisa Kefalidis Jacqueline Finkelstein-LeBow and Bennett LeBow Dominique Levy Christina Minnis Julie and Edward Minskoff Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. Novartis Corporation O'Melveny & Myers LLP **PSP** Investments The Baiff Foundation Paul E. Singer Foundation Phillip Graham Steele

The Wayne Stinchcomb Big Orange Foundation UBS Financial Services Vinson & Elkins LLP Wachtell, Lipton, Rosen & Katz

\$25,000-\$49,999

Allen & Overy Anonymous Array Biopharma Debbie and Mark Attanasio Jessica and Natan Bibliowicz Ronnie Heyman and Ward Blum The Brown Foundation of Houston The Carlyle Group Connolly's Irish Pub Davis Polk & Wardwell The James and Judith K. Dimon Foundation



Jessica and Natan Bibliowicz, MRA Board Member Denise Kellen, and MRA President & CEO Michael Kaplan

Joshua Easterly Genentech. Inc. Golub Capital Jennifer Corwin and Lee Grinberg Catarina Heil Hellman & Friedman LLC The Ronnie F. Heyman Foundation LLC HPS Investment Partners, LLC Hudson Advisors I P Johnson & Johnson Kohlberg Kravis Roberts & Co. Karen Mack and Russell Goldsmith Sharon and Gregory Maffei Milbank LLP Debbie and George Miller Mizuho Securities USA. Inc. Kate and John Morris **Nektar Therapeutics** New Mountain Finance Corporation Newlink Genetics **Oaktree Capital Management** Polka Dot Mama Melanoma Foundation Proskauer Rose I I P Carolyn and Marc Rowan

Carol and Lawrence Saper Shearman & Sterling LLP Sigal Family Fund of the Princeton Area Community Foundation Silver Lake Skadden, Arps, Slate, Meagher & Flom LLP Society for Immunotherapy of Cancer T. Rowe Price Thoma Bravo Alice and Thomas Tisch TPG Sixth Street Partners Vista Equity Partners Teri and Trevor Watt Weil, Gotshal & Manges LLP Wells Fargo Bank

\$10,000-\$24,999

Advent International Corporation Ares Management LLC Clare Bailhé Bank of America Merrill Lynch Vivek Bantwal Renee and Richard Barasch Barclays Capital



The Miller Family

Susan and Evan Bayh Foundation Inc. The Bell Family Foundation, Inc. Carole Black Blackstone Group LP **BMO** Capital Markets Castle Biosciences. Inc. Celgene Checkmate Pharmaceuticals Clavton, Dubilier & Rice LLC Cleary Gottlieb Steen & Hamilton Joyce and Barry Cohen Thomas Connolly Frank Courtney Gayle and James Cramer Cravath, Swaine & Moore LLP Debevoise & Plimpton LLP Deutsche Bank DermTech International Eva and Brendan Dillon Beth and Ronald Dozoretz Peggy and Millard Drexler Foundation Dynavax Eisai, Inc. Thomas Flden EMD Serono, Inc. Scot French Fried, Frank, Harris, Shriver & Jacobson LLP Mary Ann Fribourg **Guggenheim Partners** Mimi and Peter Haas Fund Ashley Leeds and Christopher M. Harland HSBC Bank Idera Pharmaceuticals **Iovance Biotherapeutics** J.P. Morgan Chase & Co. Jefferies Financial Group Mark Jenkins George W. and Elizabeth W. Kelly Foundation, Inc. King & Spalding David L. Klein, Jr. Foundation



Jeff Ferranti, Tracy Callahan, Mary Grinberg, Skip Grinberg

I CD/Standard & Poor's LSTA/Loan Syndications & Trading Association Macquarie Group Madison Dearborn Partners Mayer Brown LLP Medimmune/AstraZeneca MJX Asset Management LLC Morgan Stanley Dorrit Moussaieff **Mvriad Genetics** Patty Newburger and Brad Wechsler Nomura Securities Oak Hill Advisors, LP Oak Hill Capital Management OncoSec Medical **Owl Rock Capital Partners LP** PhRMA Cynthia and Leon Polsky Ken Prince Radimmune Therapeutics, Inc. Rgenix Ropes & Gray LLP Jason Rowe

Royal Bank of Canada/RBC Kimberly and Perry Schwachman Silver Rock Financial Sony Music Entertainment **Beatrice Stern** Stone Canyon Industries Sullivan & Cromwell LLP SunTrust Robinson Humphrey Suvretta Capital Management Synthorx Stephanie Teicher Olivier Thym Dawn Levy-Weinstein and Adam Weinstein White & Case LLP WindMIL Therapeutics Winston & Strawn LLP Barbara Wood Samantha and Jordan Standish Zmijewski

\$5,000-\$9,999

American Industrial Partners American Securities Advisors LLC Angel Island Capital Angelo Gordon & Co. Antares Capital LLP Apax Partners **Bain Capital BC** Partners Fabiola Beracasa Beckman and Jason Beckman **Birds Nest Productions** Block Communications, Inc. CapitalOne Bank Amy Cappellazzo CIFC Asset Management LLC Clarion Capital Partners, LLC Thomas Cole **Crescent Capital Group CVC** Capital Partners

Beatrice Del Favero Kerry Dolan and Alexander Byers Evelo Biosciences, Inc. Susan and Peter Evensen Fieldbrook Advisors Kurt Florian Foundation Medicine, Inc. GoldenTree Asset Management, LP Todd Goodwin Charitable Trust Lauren Hanrahan Rhonda and Statton Heath Charitable Fund Joui and James Hexter Holland & Knight Houlihan Lokey Irving Harris Foundation Tracy and Marc Jaffe William Janetschek Katten Muchin Rosenman Melanie Kefalidis and Joseph Rassow Kantor John Kilgallon Mitchell Kline **KPMG11P** The LaForge/McCabe Charitable Trust Judy and Leonard Lauder Simone and David Levinson Lindsay Goldberg LLC Loan Ecosystems Online Laurie and Peter Maglathlin Matthew Middleton Suzy, Nancy and Carol Minkoff Charitable Fund Marcia Rolfe-Mishaan and Richard Mishaan Natixis Network Financial Printing, Inc. Neuberger Berman **Onex Credit Partners** Orchard First Source Asset Management, Inc. Paul Hastings LLP



MRA Board Member Ben Black raises paddle at MRA's Sotheby's Gala.

PIMCO

Precision for Medicine Replimune **Fllen and Bruce Ressler** Avis and Bruce Richards Rijalda and Matthew Savino Shenkman Capital Management, Inc. Siris Capital Group LLC Kevin Sterling Dana and Andrew Stone Stone Point Capital Sumitomo Mitsui Banking Corporation Syndax Tempus Fern and Lenard Tessler Blair Tyson Utay Family Foundation James Walsh Warburg Pincus LLC Erika Weinberg and Matt Nord Jeremiah Whiddon Tracy Williams

Tyler Zachem Vivian and James Zelter

\$1,000-\$4,999

Anonymous Lida and Brandon Barniea The Benevity Community Impact Fund Gregoire Billault James Bonetti Dale Bottoms and John Ciesielka **Timothy Broadbent** Melanie and Stephen Brody Vanessa Brown Richard Brown and Nancy Risman Bryn Mawr Hospital - Pathology Cherniak Family Foundation Judith Cohen Adam Cohn Sally Courtney Steve Curwin Jennifer Daly



Jedd Wolchok, MD, PhD and Mary Elizabeth Williams.

Alan Daum

Jennifer and Gary Daum The Geaton and Joann Decesaris Family Foundation, Inc. Angelina Drahi and Daniel Bassiri Deborah Dwyer Ziv Ehrenfeld Kira Faiman First Aid Beauty Steven Fischer Paul Fossati Keith Fox and Tom Keyes Rondi and David Frieder Robert Fullerton Tamara Gold and Craig Bernstein Gould Rouvelas Family Fund Rini and Brent Greenfield Jeffrey Greenip Mary and Meyer Grinberg GTCR Nancy and Jeffrey Haber Roger Heflin Kevin Hogan Alexandra and W. Todd Holleman

IBM Employee Services Center Adam Katz Joseph Kieffer Robert King Jay Kriegel Lankenau Hospital Medical Staff Emma Laramie Darien Leung **Brian Lindley** State of Maryland Kathleen McCabe Matthew McGill Dean Mihas Jon Morgan George Mueller **Charlotte Muellers MUFG** Securities Antoine Munfakh **Eric Neubert** Kevin Nickelberry Mark Oline Kimberly O'Malley Barbara Pettit **Derrick Queen**

Reorg Jonathan Ressler Rothenberg Ludden Trust Sampling Associates International David Scudellari Pattie Sellers Susan Drossman and Adam Sokoloff Christopher Solomon Deby and James Staley Lindsay and Peter Stavros Amanda Taitz Laura and Fred Tanne William Thompson Michael Urschel U.S. Bank Foundation Carol and Michael Weisman Welsh, Carson, Anderson & Stowe Ryan White Howard Widra Eric Wolf Brian Wolfe



MRA Chief Science Officer Marc Hurlbert, PhD, speaking at the 2019 Scientific Retreat.

The list of donors who generously contributed \$999 or less in 2019 can be found on the MRA website.

Click here to view



About MRA

MRA Board of Directors

Organizational Affiliations and Titles are included to identify individuals, however, all individuals listed serve in a personal capacity, and not as a representative of the organization to which they are employed.

Debra Black, Chair

Co-Founder & Chair, MRA

Leon Black Co-Founder, MRA Chairman & CEO, Apollo Management LLC

Ben Black Portfolio Manager, Knowledge Universe

Margaret Anderson Secretary, MRA Board Managing Director, Deloitte Consulting LLP

Maria Bell Television Writer and Producer

Ellen Davis Principal, Makana Beverages

Amanda Eilian Partner, __able Partners

Jason Daniel Federici Art Director

Jami Gertz Television and Film Actress Atlanta Hawks Owner

Daisy Helman CEO and Founder, Garden Collage

Susan Hess Vice Chairman, Whitney Museum

Denise Kellen Patient Advocate Philanthropist

Michael L. Klowden CEO, Milken Institute

Nancy Marks

Michael Milken Chairman, The Milken Institute

Richard Ressler

Founder & President of Orchard Capital Corporation and CIM Group

Mary Jo Rogers

Melanoma Patient Melanoma Advocate

Jeffrey Rowbottom Partner, Iron Park Capital

Elliott Sigal, MD, PhD Senior Advisor/Venture Partner New Enterprise Associate

Jonathan W. Simons, MD President and CEO Prostate Cancer Foundation

Jonathan Sokoloff Managing Partner, Leonard Green & Partners

Elizabeth Stanton

Suzanne Topalian, MD Professor, Surgery and Oncology Johns Hopkins Medicine

Officers (non-Director):

Michael Kaplan President and CEO Melanoma Research Alliance

John Hunter Treasurer, MRA Board Executive Vice President and CFO The Milken Institute



MRA President & CEO Michael Kaplan

MRA Staff

Michael Kaplan President and Chief Executive Officer

Marc Hurlbert, PhD Chief Science Officer

Kristen Mueller, PhD Senior Director, Scientific Program

Cody Barnett Director of Communications

Carolyn Ricci Director of Development Janine Rauscher Associate Director, Development & Information Management

Tyler Brown Senior Associate, Patient Engagement and Operations

Rachel Fischer, PhD Senior Associate, Scientific Program and Grants Administration

Renee Orcione Development Associate

Melanoma Research Alliance

730 15th Street NW Washington, DC 20005 Phone: (202) 336-8935 Fax: (202) 336-8900 Email: info@curemelanoma.org

MRA Scientific Advisory Panel 2020-2021

Organizational Affiliations and Titles are included to identify individuals, however, all individuals listed serve in a personal capacity, and not as a representative of the organization to which they are employed.

Suzanne Topalian, MD – Chair

Professor, Surgery and Oncology Director, Melanoma Program Associate Director, Bloomberg-Kimmel Institute for Cancer Immunotherapy Johns Hopkins Medicine

James Allison, PhD

Regental Professor & Chair, Department of Immunology Olga Keith Wiess Distinguished University Chair for Cancer Research Director, Parker Institute for Cancer Immunotherapy Executive Director, Immunotherapy Platform Deputy Director, David H. Koch Center for Applied Research of Genitourinary Cancers The University of Texas, MD Anderson Cancer Center

Boris Bastian, MD

Professor, Dermatology and Pathology Gerson and Barbara Bass Bakar Distinguished Professor, Cancer Research University of California, San Francisco

Gideon Bollag, PhD

Chief Executive Officer Plexxikon, Inc.

Glenn Dranoff, MD

Global Head of Immuno-Oncology Novartis Institutes for Biomedical Research

Gregory Friberg, MD

Vice President & Therapeutic Area Head Hematology/Oncology Global Development Amgen, Inc.

Levi Garraway, MD, PhD

Chief Medical Officer and Executive Vice President Head of Global Product Development Roche & Genentech

Allan C. Halpern, MD

Chief, Dermatology Service Associate Chair, Promotions Advisory Committee, Department of Medicine Memorial Sloan Kettering Cancer Center

Nageatte Ibrahim, MD

Associate Vice President, Oncology Clinical Research Merck Research Laboratories

Howard Kaufman, MD

Head of Research and Development, Immuneering Lecturer, Surgery, Harvard Medical School

Jeffrey Legos, PhD

Senior Vice President, Global Head of Oncology Development Novartis Pharmaceuticals Corporation

Richard Marais, PhD, FMedSci Director

Cancer Research UK Manchester Institute

Grant McArthur, PhD, FRACP

Fellow, Royal Australasian College of Physicians Executive Director, Victorian Comprehensive Cancer Centre Inaugural Lorenzo Galli Chair of Melanoma and Skin Cancers, University of Melbourne Senior Principal Research Fellow, National Health & Medical Research Council Head, Molecular Oncology Laboratory and Cancer Therapeutics Program, Cancer Research

Senior Consultant Medical Oncologist, Cancer Medicine, Peter MacCallum Cancer Centre

Ira Mellman, PhD

Vice President, Cancer Immunology Genentech

Tim Reilly, PhD

Senior VP and Early Development Program Leadership, Research & Early Development Bristol-Myers Squibb

Caroline Robert, MD, PhD

Head, Dermatology Unit Co-Director, Melanoma Research Unit Professor, Dermatology Institute Gustave Roussy

Neal Rosen, MD, PhD

Enid A. Haupt Chair in Medical Oncology Memorial Sloan Kettering Cancer Center

Steven Rosenberg, MD

Chief, Surgery Branch National Cancer Institute

David Solit, MD

Geoffrey Beene Chair Director, Marie-Josée & Henry R. Kravis Center for Molecular Oncology Memorial Sloan Kettering Cancer Center

Tara Withington

Executive Director Society for Immunotherapy of Cancer

MRA Medical Advisory Panel 2020-2021

Organizational Affiliations and Titles are included to identify individuals, however, all individuals listed serve in a personal capacity, and not as a representative of the organization to which they are employed.

MEDICAL ONCOLOGY

Michael Atkins, MD - Chair

Deputy Director, Georgetown-Lombardi Comprehensive Cancer Center Scholl Professor and Vice Chair, Medical Oncology, Georgetown University Medical Center

Paul Chapman, MD

Attending Physician, Melanoma and Immunotherapeutics Service Professor of Medicine, Weill Cornell Medical College Memorial Sloan Kettering Cancer Center

Keith Flaherty, MD

Professor, Medicine Harvard Medical School Director, Henri and Belinda Termeer Center for Targeted Therapies, Cancer Center Director, Clinical Research, Cancer Center Massachusetts General Hospital

Thomas Gajewski, MD, PhD

AbbVie Foundation Professor of Cancer Immunotherapy, of Pathology Professor of Ben May Department of Cancer Research Professor of Medicine, University of Chicago

F. Stephen Hodi, MD

Professor, Medicine, Harvard Medical School Professor, Medical Oncology Sharon Crowley Martin Chair, Melanoma Director, Melanoma Center Director, Center for Immuno-Oncology Dana-Farber Cancer Institute

Patrick Hwu, MD

Division Head, Cancer Medicine Department Chair, Sarcoma Medical Oncology Co-Director, Center for Cancer Immunology Research Distinguished Chair, Sheikh Mohammed Bin Zayed Al Nahyan Professor, Melanoma Medical Oncology, Sarcoma Medical Oncology The University of Texas MD Anderson Cancer Center

Kim Margolin, MD

Clinical Professor, Department of Medical Oncology & Therapeutics Research Medical Oncologist City of Hope Comprehensive Cancer Center



Antoni Ribas, MD, PhD

Professor, Medicine Professor, Surgery Professor, Molecular and Medical Pharmacology Director, Tumor Immunology Program, Jonsson Comprehensive Cancer Center Chair, Melanoma Committee, SWOG University of California, Los Angeles

Lynn Schuchter, MD

Chief, Division of Hematology-Oncology C. Willard Robinson Professor, Hematology-Oncology Director, Tara Miller Melanoma Center, Abramson Cancer Center University of Pennsylvania, Penn Medicine

Jeffrey S. Weber, MD, PhD

Deputy Director, Perlmutter Cancer Center Co-Director, Melanoma Research Program Laura and Isaac Perlmutter Professor of Oncology, Department of Medicine NYU Grossman School of Medicine

Jedd Wolchok, MD, PhD

Lloyd J. Old/Virginia and Daniel K. Ludwig Chair, Clinical Investigation Chief, Immuno-Oncology Service Director, Parker Institute for Cancer Immunotherapy Associate Director, Ludwig Center for Cancer Immunotherapy Memorial Sloan Kettering Cancer Center

SURGICAL ONCOLOGY

Charlotte Ariyan, MD, PhD

Associate Attending, Gastric & Mixed Tumor Service Surgeon, Surgical Oncology Memorial Sloan Kettering Cancer Center

Jeffrey Gershenwald, MD

Professor, Department of Surgical Oncology University of Texas, MD Anderson Cancer Center

Suzanne Topalian, MD

Professor, Surgery and Oncology Director, Melanoma Program Associate Director, Bloomberg-Kimmel Institute for Cancer Immunotherapy Johns Hopkins Medicine

DERMATOLOGY

David Fisher, MD, PhD

Chief, Dermatology Service Director, Melanoma Program, MGH Cancer Center Director, Cutaneous Biology Research Center Massachusetts General Hospital

Sancy Leachman, MD, PhD

Chair, Department of Dermatology, Oregon Health & Science University (OHSU) Inaugural Recipient, John D. Gray Endowed Chair in Melanoma Research Director, Melanoma Research Program, OHSU Knight Cancer Institute

Roger Lo, MD, PhD

Director, Melanoma Clinic in Dermatology Director, Dermatology STAR Residency Program Professor, Medicine Associate Chief and Professor, Dermatology Professor, Molecular & Medical Pharmacology University of California, Los Angeles, David Geffen School of Medicine

David Polsky, MD, PhD

Alfred W. Kopf, MD Professor of Dermatologic Oncology, Ronald O. Perelman Department of Dermatology Professor, Department of Pathology Director, Pigmented Lesion Service NYU Grossman School of Medicine

Susan Swetter, MD

Professor, Dermatology Assistant Chief, Dermatology Service Director, Pigmented Lesion & Melanoma Program Physician Leader, Cancer Care Program in Cutaneous Oncology Stanford University Medical Center & Cancer Institute

MRA Dermatology Council

Organizational Affiliations and Titles are included to identify individuals, however, all individuals listed serve in a personal capacity, and not as a representative of the organization to which they are employed.

Denise Kellen (Co-Chair)

Patient Advocate

Philanthropist

Daisy Helman (Co-Chair) CEO and Founder Garden Collage

Jean Bolognia, MD

Professor of Dermatology Vice Chair, Clinical Affairs Yale School of Medicine

Mark Denis P. Davis, MD

Consultant, Department of Dermatology Chair, Department of Dermatology Professor of Dermatology Mayo Clinic

Richard D. Granstein, MD

George W. Hambrick, Jr. Professor of Dermatology Chairman, Department of Dermatology Weill Cornell Medicine

Allan C. Halpern, MD

Chief, Dermatology Service Associate Chair, Promotions Advisory Committee, Department of Medicine Memorial Sloan Kettering Cancer Center

Roger Lo, MD, PhD

Director, Melanoma Clinic in Dermatology Director, Dermatology STAR Residency Program Professor, Medicine Associate Chief and Professor, Dermatology Professor, Molecular & Medical Pharmacology University of California, Los Angeles, David Geffen School of Medicine

David Polsky, MD, PhD

Alfred W. Kopf, MD Professor of Dermatologic Oncology, Ronald O. Perelman Department of Dermatology Professor, Department of Pathology Director, Pigmented Lesion Service NYU Grossman School of Medicine

Susan Swetter, MD

Professor, Dermatology Assistant Chief, Dermatology Service Director, Pigmented Lesion & Melanoma Program Physician Leader, Cancer Care Program in Cutaneous Oncology Stanford University Medical Center & Cancer Institute



43

MRA Grant Review Committee

Organizational Affiliations and Titles are included to identify individuals, however, all individuals listed serve in a personal capacity, and not as a representative of the organization to which they are employed.

Caroline Robert, MD, PhD – Chair

Head, Dermatology Unit Co-Director, Melanoma Research Unit Professor, Dermatology Institute Gustave Roussy

Boris Bastian, MD, PhD - Co-Chair

Professor, Dermatology and Pathology Gerson and Barbara Bass Bakar Distinguished Professor, Cancer Research University of California, San Francisco

Ana Carrizosa Anderson, PhD

Associate Professor, Neurology Harvard Medical School Associate Scientist, Neurology Brigham and Women's Hospital

Andrew Aplin, PhD

Associate Director, Basic Research Program Leader, Cancer Cell Biology & Signaling, NCI-designated Sidney Kimmel Cancer Center Professor, Department of Cancer Biology Thomas Jefferson University

Emily Bernstein, PhD

Professor, Oncological Sciences Professor, Dermatology Ichan School of Medicine at Mount Sinai



Paul Chapman, MD

Nina Bhardwaj, MD, PhD

Professor of Medicine and Urology Director of Immunotherapy Medical Director of the Vaccine and Cell Therapy Laboratory Co-Director of the Cancer Immunology Program, The Tisch Cancer Institute Icahn School of Medicine at Mount Sinai

Marcus Bosenberg, MD, PhD

Professor of Dermatology, Pathology, and Immunobiology Co-Leader, Genetics, Genomics and Epigenetics, Yale Cancer Center Interim Director, Yale Center for Immuno-Oncology Director, Yale SPORE in Skin Cancer Yale School of Medicine

Paul Chapman, MD

Attending Physician, Melanoma and Immunotherapeutics Service Professor of Medicine, Weill Cornell Medical College Memorial Sloan Kettering Cancer Center

Tanja de Gruijl, PhD

Professor, Medical Oncology Laboratory Professor, Amsterdam Infection and Immunity - Cancer Immunology Professor, Cancer Center Amsterdam - Cancer Biology and Immunology, Imaging and Biomarkers, Treatment and Quality of Life Vrije Universiteit, Amsterdam

David Fisher, MD, PhD

Chief, Dermatology Service Director, Melanoma Program, MGH Cancer Center Director, Cutaneous Biology Research Center Massachusetts General Hospital

Keith Flaherty, MD

Professor, Medicine Harvard Medical School Director, Henri and Belinda Termeer Center for Targeted Therapies, Cancer Center Director, Clinical Research, Cancer Center Massachusetts General Hospital

Thomas Gajewski, MD, PhD

AbbVie Foundation Professor of Cancer Immunotherapy, of Pathology Professor of Ben May Department of Cancer Research Professor of Medicine University of Chicago

Jeffrey Gershenwald, MD

Professor, Department of Surgical Oncology The University of Texas MD Anderson Cancer Center

J. William Harbour, MD

Professor, Ophthalmology Mark J. Daily Chair in Ophthalmology Professor, Biochemistry and Molecular Biology Vice Chairman, Translational Research Director, Ocular Oncology Eye Cancer Site Disease Group Leader Sylvester Comprehensive Cancer Center Associate Director, Basic Research Bascom Palmer Eye Institute, University of Miami

Thomas Hornyak, MD, PhD

Chief, Dermatology, VA Maryland Health Care System Associate Professor, Dermatology and Biochemistry and Molecular Biology University of Maryland School of Medicine Associate Chief of Staff, Research & Development VA Maryland Health Care System

Roger Lo, MD, PhD

Director, Melanoma Clinic in Dermatology Director, Dermatology STAR Residency Program Professor, Medicine Associate Chief and Professor, Dermatology Professor, Molecular & Medical Pharmacology University of California, Los Angeles, David Geffen School of Medicine

David Lombard, MD, PhD

Associate Professor, Pathology Research Associate Professor, Institute of Gerontology Associate Director, Cancer Biology Doctoral Program University of Michigan

Michal Lotem, MD

Head, Center for Melanoma and Cancer Immunotherapy Hadassah Hebrew University Medical Center

Glenn Merlino, PhD

Senior Investigator, Laboratory of Cancer Biology and Genetics Head, Cancer Modeling Section CCR Scientific Director for Basic Research National Cancer Institute



Jennifer Wargo, MD, MMSc

Drew Pardoll, MD, PhD

Professor of Oncology, Medicine, Otolaryngology, Pathology Martin D. Abeloff Professor of Cancer Research Director, Bloomberg-Kimmel Institute for Cancer Immunotherapy Co-Director, Cancer Immunology and Hematopoiesis Program The Johns Hopkins University School of Medicine

Antoni Ribas MD, PhD

Professor, Medicine Professor, Surgery Professor, Molecular and Medical Pharmacology Director, Tumor Immunology Program, Jonsson Comprehensive Cancer Center Chair, Melanoma Committee, SWOG University of California, Los Angeles

Jonathan Simons, MD

CEO and President David H. Koch Chair Prostate Cancer Foundation

Craig Slingluff, MD

Joseph Helms Farrow Professor, Surgery Vice Chair, Research, Department of Surgery Director, UVA Cancer Center Human Immune Therapy Center Co-Chair, Melanoma Committee of ECOG The University of Virginia

Marisol Soengas, PhD

Leader, Melanoma Group Professor Spanish National Cancer Research Center

David Solit, MD

Geoffrey Beene Chair Director, Marie-Josée & Henry R. Kravis Center for Molecular Oncology Memorial Sloan Kettering Cancer Center

Susan Swetter, MD

Professor, Dermatology Assistant Chief, Dermatology Service Director, Pigmented Lesion & Melanoma Program Physician Leader, Cancer Care Program in Cutaneous Oncology Stanford University Medical Center & Cancer Institute

Jennifer Wargo, MD, MMSc

Professor, Genomic Medicine Professor, Surgical Oncology The University of Texas MD Anderson Cancer Center

Ashani Weeraratna, PhD

Chair, Biochemistry and Molecular Biology Bloomberg Distinguished Professor Johns Hopkins University, Bloomberg School of Public Health

Jeffrey S. Weber, MD, PhD

Deputy Director, Perlmutter Cancer Center Co-Director, Melanoma Research Program Laura and Isaac Perlmutter Professor of Oncology, Department of Medicine NYU Grossman School of Medicine

Jedd Wolchok, MD, PhD

Lloyd J. Old/Virginia and Daniel K. Ludwig Chair, Clinical Investigation Chief, Immuno-Oncology Service Director, Parker Institute for Cancer Immunotherapy Associate Director, Ludwig Center for Cancer Immunotherapy Memorial Sloan Kettering Cancer Center

Xu Wu, PhD

Associate Investigator, Cutaneous Biology Research Center, Massachusetts General Hospital Associate Professor, Dermatology, Harvard Medical School Affiliate Faculty, Harvard Stem Cell Institute

Kai Wucherpfennig, MD, PhD

Chair, Cancer Immunology and Virology Director, Center for Cancer Immunotherapy Research Dana-Farber Cancer Institute Professor, Neurology, Brigham and Women's Hospital and Harvard Medical School Associate Member, Broad Institute of MIT and Harvard

Melanoma > Exchange

The Melanoma > Exchange, available at **CureMelanoma.org/Community** is a vibrant online community led by patients and caregivers with firsthand understanding of melanoma and clinical trials and experts from the MRA staff.

Community Leaders

Tracy Callahan T.J. Sharpe Jamie Troil Goldfarb Cheryl Adams



Lisa Simms Booth, Sapna Patel, MD, and T.J. Sharpe



Melanoma > Exchange

Melanoma > Exchange

2019 Honor and Memorials

In 2019, gifts were made in tribute to the following individuals:

Memorial Gifts

Lanette Andrews Bertice "Bert" Baker Brian Baldwin Sharon Bateman Marianne Baudler **Rick Becker** Thomas Brown Frank Browne Rusty Cline Marjorie Conaster Gary Daum, MD Barbara Davis Dick Elden Luke Nicholas Gallagher Gregory Michael Gerling Geoff Gibson Ronald Gilbert Deane Goldmann Anna Gordanier Gilbert Lee Gordon, MD Louise Gunn Thomas Lamar Hancock John Hartley Lynn Heath Judith Ann Howard Gordon Hudson Laurie Jane Kelchner Jackie King Robert J. Klumpp Lisa Lais

Ken Lewin Brian Lewis Madeline Lewis Fric Lindroth Michael MacAdams Paul Michaelson, MD Matthew Duncan Moore David Russell Mynning Elmer Nelson **Ronald Osborne** Donald Parr. Sr. **Michael Peoples** James Roberts-Metzler James "Jamie" Robertson Michelle Rutson Lillian Ryan Carl Skibell David Sohm Belle Davis Sokoloff **Donald Stewart** Ray Stromski Yanina Svirsky Kristin Wood Taccogna **Phillip Teicher Richard Thole** Mary and John Titus Madeline Tully Anne Fay Walke Terry Whiddon Thomas Eugene White, Jr. William H. "Billy" Woolbright, Jr.

Tribute Gifts

Kimberly Smith Albertson Charlotte Ariyan, MD, PhD Brandon Barniea Kristina Baum Debra Black Leon and Debra Black April Burke Frank Courtney Phil Devlin Marjorie Edelstein Jamie Troil Goldfarb Lauren Goodwyn Lee Grinbera Meyer "Skip" Grinberg Jimmy Hexter Marc Hurlbert Michael J. Kaplan Meghan S. Liel, MD Linda Lord Michael Moskal Kevin Patrick O'Brien Derrick Queen **Kimberly Rosen** Jeff Rowbottom Lori and David Schlanger Lynn Schuchter, MD Igal Sharret Stephanie Teicher Gina and Stephen Thelen Linda Tishler

Jeff Weagel Grace Wenzel Renee Wohlenhaus



MRA Co-Founder and Board Chair Debra Black

2019 Financials



Statement of Financial Position

Assets	Total 2019	Total 2018
Cash and Cash Equivalents	\$12,481,416	\$13,299,317
Investments	\$10,857,778	\$10,187,383
Contributions Receivable (Net)	\$19,744,931	\$13,734,662
Prepaid Expenses and Other Assets	\$108,594	\$51,403
TOTAL ASSETS	\$43,192,719	\$37,272,765

Liabilities	Total 2019	Total 2018
Accounts Payable	\$139,414	\$65,314
Grants Payable (Net)	\$12,248,645	\$17,294,177
Deferred Revenue	\$285,000	\$280,000
Due to Affiliate	\$137,174	\$109,159
TOTAL LIABILITIES	\$12,810,233	\$17,748,650

Net Assets	Total 2019	Total 2018
Unrestricted	\$17,045,668	\$5,789,453
Temporarily Restricted	\$13,336,818	\$13,734,662
TOTAL NET ASSETS	\$30,382,486	\$19,524,115
TOTAL LIABILITIES AND NET ASSETS	\$43,192,719	\$37,272,765

Statement of Activities

Revenue & Expense Statement

Revenue	Total 2019	Total 2018
Contributions (Collectible Net)	\$2,562,352	\$2,895,365
Special Events (Net)	\$18,753,320	\$2,038,435
Sponsorship	\$490,000	\$514,710
Interest/Investment	\$820,089	\$114,094
In Kind Contributions	\$399,679	\$0
Other Income	\$32,061	_
TOTAL REVENUES	\$23,057,501	\$5,562,604

Expenses	Total 2019	Total 2018
Research Grants	\$9,265,006	\$13,525,762
Personnel Costs	\$1,592,119	\$1,588,653
Travel & Entertainment	\$384,245	\$350,487
Other Expenses	\$364,228	\$354,131
Meetings & Conferences	\$253,609	\$277,208
Professional Fees	\$171,928	\$163,814
Occupancy	\$167,995	\$144,917
TOTAL EXPENSES	\$12,199,130	\$16,404,972
NET INCOME/(LOSS)	\$10,858,371	(\$10,842,368)

MRA Functional Expenses



Financial presentation based on MRA's 2019 externally audited financials. Full audit and IRS 990 are available online at curemelanoma.org/about-mra/financials/

As the largest non-profit funder of melanoma research, MRA has dedicated \$123 million to date for life saving research in the fight against melanoma.



curemelanoma.org



Melanoma Research Alliance 730 15th Street, NW Fourth Floor Washington DC, 20005