MIB AGENTS MISSION STATEMENT

MIB Agents is a nationwide, 501(c)(3) non-profit organization dedicated to Making It Better for kids with Osteosarcoma, bone cancer. With love and hope, MIB Agents:

- **Pairs a child in treatment** with a survivor of their same cancer.
- **Provides items of comfort** and entertainment for their treatment and recovery.
- **Arranges end-of-life experiences** for a child when treatment options have been exhausted.
- **MIB Agents is dedicated to increasing research** for better treatments and outcomes for those with osteosarcoma through the annual MIB Agents FACTOR Osteosarcoma Research Conference and subsequent community voting for the initiative we fund.

MIB Agents Makes It Better by helping to increase the quality of comfort and life for kids with osteosarcoma with the help of our patient, physician, non-profit and researcher community of dedicated and passionate Agents.

**FAMILY AGENTS**
Family Agents offer support, love and hope to each other; Father-to-Father, Mother-to-Mother, Sibling-to-Sibling. Our journeys will be different, but there is a connection between those who have walked the osteosarcoma path that is strong and comforting, email: Liz@MIBagents.org

**MIB AMBASSADOR AGENTS**
MIB Ambassador Agents support OsteoWarriors in their geographic area who are in active treatment. Alert us if you wish to be an Ambassador Agent or Ambassador Supporting Agent by sponsoring a tote, email: Casey@MIBagents.org

**GAMER AGENTS**
MIB Agent GAMERS is an ongoing mission by Lead Chief Gamer Agent Matthew Allen. Qualifications to be a Gamer Agent are: be an OsteoWarrior and a Gamer. If you are in active treatment and need a partner to game with, contact ChiefGamer@MIBagents.org

Note: OsteoWarrior is an osteo survivor, patient, sibling, or OsteoAngel sibling

**PRAYER AGENTS**
Prayer Agents are essential to the Missions of MIB Agents. This elite team of Agents are called upon both in time of great need as well as regular monthly times of prayer across the country and the world. Whatever your spiritual practice, you are welcome to join this team in prayer; join us in supporting our Osteosarcoma Warriors who are doing battle and remembering our Osteosarcoma Angels who have passed fighting this beastly disease.

To join this elite team of Prayer Agents or have an intention you wish for us to pray for, contact Lead prayer Agent Wendi at PrayerAgents@MIBagents.org

To learn more about MIB Agents or to join the Mission, visit www.MIBagents.org or email info@mibagents.org
Dear Agents,

We are honored by your attendance at FACTOR 2019, our third annual conference focused on Making It Better for kids with osteosarcoma.

We at MIB Agents, believe that everyone can do something to Make It Better for kids with osteosarcoma. And together we do, with over 100 volunteers who raise money, run marathons, hold tournaments, bake sales, pub crawls, sell cookbooks and now, even socks! We do these things and more to support end-of-life missions, provide direct patient support, produce our annual FACTOR conference, and fund meaningful research. Everything we do is in service to patients, and in service to the doctors and researchers to support their tireless efforts.

In the history of the world, there has never been a better time for discovery, particularly for osteosarcoma. In 2018, there was more meaningful funding for osteosarcoma than in the long history of this disease. This funding will bring us the kinder treatments we have been longing for. Combine this funding with MIB Agents bringing a collaborative patient community to the table who have - and will continue to - contribute body parts, tumor samples, time, money, blood, sweat, and tears, to the mission of discovering better treatments and a cure.

We need you to continue to dare greatly to discover - to believe in the science of what we do know, and have humility in what we don’t, to believe in your radical idea that elephants, dogs, NK Cells, and more are the key to move this disease out of the dark ages.

As Buddha said, “the trouble is, you think you have time.” We do not have time to waste, I know this first-hand from my own disease, the kids in the fight, and soul-crushingly - from the kids who have passed away. Our time for discovery is now. Together We Will cure this disease. We are the ones we have been waiting for.

Thank you for sharing your valuable time and expertise with your colleagues and patient families. We are grateful for your dedicating your life to Make It Better for OsteoWarriors everywhere.

With Hope,

Ann Graham
Founder and President
MIB Agents
Target Audience: Pediatric Oncologists, Physicians, Nurses, Patients, and their Families

Objectives:
- Identify new targets and strategies for the treatment of osteosarcoma
- Identify targeted therapies with less toxicity
- Better understand osteosarcoma based on the work in dogs
- Understand the similarities and differences between cancers that have responded to immunotherapy and those that have not, e.g. osteosarcoma
- Identify the underpinnings of metastatic disease
- Learn what research needs funding and know about the advocacy groups that can help

FACULTY DISCLOSURE:
Speakers have indicated that they have no relevant financial relationship with commercial interests.

PLANNING COMMITTEE DISCLOSURE:
Drs Jonathan Trent and Matteo Trucco have indicated that they have no relevant financial relationship with commercial interests.

SPEAKERS' DISCLOSURES:
- Dr. Alex Y. Huang disclosed that he has financial research support from Biogen Idec.
- Dr. Nicola Mason disclosed that she has financial support and is a consultant with Advaxis, Inc.
- Dr. Steven Lipshultz disclosed that he is a consultant for Myokardia, AXIO Research, and Clinigen Group.
- Dr. H. Thomas Temple disclosed that he is a consultant for Stryker, Arthrex, Novastep, OrthoOnkos and has financial support from Vivotex-Royalty.

ACCREDITATION:
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education through the joint providership of the Dade County Medical Association and the Sylvester Comprehensive Cancer Center of the University of Miami. The Dade County Medical Association is accredited by the Florida Medical Association to provide continuing medical education for physicians.

CREDIT DESIGNATION:
The Dade County Medical Association designates this live activity for a maximum of 12 AMA PRA category 1 credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

NURSING CREDIT DESIGNATION:
Continuing education credits for a total of 12 nursing contact hours have been approved under Florida State Board of Nursing Provider No. 502900, UHMC Sylvester Nursing Education Department. CE will be awarded based on hours of attendance. The CE certificate will be emailed to attendees.
CONFERENCE NOTRES
To make this conference as comfortable, safe and productive as possible.

PRE-CONFERENCE

MIB AMBASSADORS
Available to assist you before and during the conference, just ask any agent wearing a blue lanyard.

CME CEU COORDINATOR
See Sarah Goobic at Registration for information.

MIB SPEAKER AGENT
Check in with Casey Crossan to submit your thumb drive or for any questions with regard to your presentation.

MIB FLOOR CHIEF
Questions for the Panel may be handed to Liz Vallejo, who will present the questions to the Panel on your behalf, anonymously if you wish. If you’d like to ask your questions directly, please raise your hand for Liz to bring the microphone to you. During the session please be specific and brief.

CONFERENCE

TIMELINE
Our timeline is extremely tight. Kindly arrive a few minutes before the session start time to ensure the meeting can begin promptly.

ETIQUETTE
Kindly refrain from requesting medical advice or to review a specific case in this venue.

NAME BADGES
Please visibly display your badge throughout the conference.

PHOTOGRAPHY AND VIDEO RECORDING
The conference will be photographed and video recorded. Please sign the photography and video release provided at registration. Images may be used in MIB Agents promotional materials.

ELECTRONICS
Turn off or silence cell phones, PDAs, and electronic devices before each session begins.

CHECK OUT
If you plan on checking out on Saturday, please do so in the morning and store your luggage with the Bell Captain. This will avert any delay in your departure plans and avoid any late-check out fees.

CME AND MIB AGENTS FACTOR SURVEY
Please complete enclosed FACTOR survey and leave on the table at the end of conference. CME surveys will be handed out Saturday afternoon. If departing early please leave check out with our registration desk. Your feedback helps us make improvements each year.

WE CAN’T SEE ALL MOMENTS DURING THE CONFERENCE, SO PLEASE HELP US CAPTURE THEM!
Tag all your FACTOR Conference social media posts with the hashtag #FACTOR2019

Thank you to our Hospitality Heroes whose donations have helped families attend this years event:

● Onkos Surgical ● Sarah Douglas ● Case Western University ● Crossan Family ●
● DeVelasco’s Family ● Nathan’s Story ● Katherine Lugar ●
AGENDA: THURSDAY, JANUARY 24TH

12:00 - 6:00 PM
REGISTRATION OPENS
Located in the hotel lobby

4:00 - 5:00 PM
MIB AGENTS FUND HOLDERS MEETING
By invitation only

6:00 - 7:00 PM
WELCOME RECEPTION
All registered FACTOR guests are welcome

6:30 PM
SHUTTLE DEPARTURE FOR SPEAKER DINNER
Meet in lobby

7:00 - 9:00 PM
SPEAKER DINNER
Off-site at Segal Home
AGENDA: FRIDAY, JANUARY 25TH

6:45 - 7:50 AM  BREAKFAST
Plan B is Plaza Ballroom

8:00 - 8:15 AM  OPENING REMARKS
Ann Graham, MIB Agents
Matteo Trucco, MD, MIB Agents, University of Miami, SCCC

8:15 - 8:25 AM  SESSION I: BIG DATA
TUMOR SHARING CHART
Christina Ip-Toma, MIB Agents

8:25 - 8:45 AM  GENOMIC LANDSCAPE OF OSTEOSARCOMA
Ching Lau, MD, PhD
Connecticut Children's/Jackson Labs

8:45 - 9:05 AM  MOLECULAR GUIDED THERAPY FOR RECURRENT/RESISTANT OS
Albert Cornelius, MD
DeVos Children's Hospital

9:05 - 9:25 AM  COUNT ME IN: PARTNERING WITH PATIENTS TO ACCELERATE CANCER RESEARCH
Corrie Painter, PhD
The Broad Institute of MIT and Harvard

9:25 - 9:45 AM  SYSTEMS BIOLOGY APPROACH TO OSTEOSARCOMA
Julia Glade Bender, MD
Memorial Sloan Kettering Cancer Center

9:45 - 10:05 AM  HIGH-THROUGHPUT DRUG SCREENING
Ines Lohse, PhD
University of Miami

10:05 - 10:25 AM  PANEL DISCUSSION
Moderator: Katie Janeway MD, Lau, Cornelius, Painter, Bender, Lohse

10:45 - 12:00 PM  SESSION II: SURVIVORSHIP
BEREAVED PARENTS SESSION
Lisa Merheb, LCSW
University of Miami

10:45 - 11:05 AM  GENERAL ASPECTS
Kate Greenzang, MD
Dana-Farber Cancer Center, Harvard Medical School

11:05 - 11:25 AM  CARDIOTOXICITY
Steven Lipshultz, MD
University at Buffalo

11:25 - 11:45 AM  REHABILITATION THROUGH SPORTS AFTER LIMB LOSS
John Horne
Independence Prosthetics-Orthotics

11:45 - 12:05 PM  PANEL DISCUSSION
Moderator: Greenzang, Lipshultz, Horne; OsteoWarriors: Starkey, Kuo, Johnson, Kennington

12:05 - 12:15 PM  GROUP PHOTO

12:15 - 1:15 PM  LUNCH
Plan B is Plaza Ballroom

12:15 - 1:15 PM  BEREAVED PARENTS LUNCH
Private Event

1:20 - 1:40 PM  SESSION III: IMMUNOTHERAPY
OLD TRICKS & NEW LEADS FOR DOGS WITH OS
Nicola Mason, PhD, BVet Med
University of Pennsylvania

1:40 - 2:00 PM  MAKING OSTEOSARCOMA THE HOT TUMOR FOR IMMUNOTHERAPY
Patrick Thompson, MD
University of North Carolina

2:00 - 2:20 PM  NK CELL THERAPY
Dean Lee, MD, PhD
Nationwide Children's Hospital

2:20 - 2:40 PM  PANEL DISCUSSION
Moderator: Mason, Thompson, Lee

2:40 - 3:00 PM  BREAK

3:00 - 4:00 PM  SESSION IV: ELEVATOR PITCHES
ELEVATOR PITCHES
Various Presenters

4:05 - 4:35 PM  SESSION V: BIOETHICS
TRUTH TELLING IN CHILDHOOD CANCER & DISCUSSION
Yoram Unguru, MD
Johns Hopkins, Berman Center for Bioethics
Moderator: Matteo Trucco, MD
University of Miami, Sylvester Comprehensive Cancer Center

4:35 - 4:40 PM  CLOSING REMARKS
Matteo Trucco, MD
University of Miami, Sylvester Comprehensive Cancer Center

5:00 - 6:30 PM  MIB AGENTS FAMILY AGENTS & AMBASSADORS TRAINING
Liz Vallejo and Casey Crossan

7:00 - 9:00 PM  DINNER
All registered FACTOR guests are welcome
AGENDA: SATURDAY, JANUARY 26TH

6:45 - 7:50 AM BREAKFAST
Plan B is Plaza Ballroom

8:00 - 8:05 AM MORNING REMARKS
Ann Graham
MIB Agents

8:05 - 8:35 AM DISULFIRAM PLUS CHEMO IN RELAPSED SARCOMAS
OUTSMARTING OSTEOSARCOMA 2018 WINNER
Matteo Trucco, MD
University of Miami, Sylvester Comprehensive Cancer Center

8:35 - 8:45 AM Q & A
Matteo Trucco, MD
University of Miami, Sylvester Comprehensive Cancer Center

8:50 - 9:10 AM SURGICAL ADVANCES IN OSTEOSARCOMA
H. Thomas Temple, MD
Nova Southeastern University

9:10 - 9:30 AM TIBIA TURNOUT SURGERY
Daniel Wurtz, MD
Indiana University

9:30 - 9:40 AM CLINICAL TRIAL OF SURGICAL TECHNIQUE
Richard Gorlick, MD
MD Anderson

9:40 - 9:50 AM SURGICAL MANAGEMENT OF PULMONARY METASTASES
John Doski, MD, FACS
UT Health

9:50 - 10:10 AM PANEL DISCUSSION
Moderator: Healey, Gorlick, Doski

10:10 - 10:30 AM BREAK

10:35 - 10:55 AM ADAPTIVE THERAPY
Damon Reed, MD
Moffitt Cancer Center

10:55 - 11:15 AM TARGETING MYELOID INTEGRIN SIGNALING IN METASTATIC PULMONARY OS
Alex Huang, MD, PhD
Case Western Reserve University/UH Rainbow Babies Hospital

11:15 - 11:35 AM IDO-1 INHIBITION AND OSTEOSARCOMA
Lars Wagner, MD
Duke University

11:35 - 11:55 AM UPDATE ON EP53
Joshua Schiffman, MD
Huntsman Cancer Institute

11:55 - 12:15 PM PANEL DISCUSSION
Moderator: Schiffman, Wagner, Huang, Reed

12:20 - 1:30 PM ST. BALDRICK’S FOUNDATION LUNCH
Plan B is Plaza Ballroom
Becky Weaver
St. Baldrick’s Foundation

1:40 - 2:00 PM UTILIZING PLASMA MIRNAS FOR BIOMARKERS IN OS
Wendy Allen-Rhoades, MD, BS
Baylor College of Medicine

2:00 - 2:20 PM CIRCULATING TUMOR CELL AND TUMOR DNA
Masanori Hayashi, MD
Children’s Hospital of Colorado

2:20 - 2:40 PM ENDOCANABINOIDS AND OSTEOSARCOMA
Aditi Das, PhD
University of Illinois

2:40 - 3:00 PM OSTEOSARCOMA OUTLIERS: LEARNING FROM “BETTER THAN EXPECTED”
Pete Anderson, MD, PhD
Cleveland Clinic

3:00 - 3:20 PM PANEL DISCUSSION
Moderator: Anderson, Das, Hayashi, Allen-Rhoades

3:25 - 3:35 PM TOGETHER WE WILL
Alexis Johnson, OsteoWarrior

3:35 - 3:40 PM CLOSING REMARKS
Ann Graham
MIB Agents

5:30 - 7:00 PM OUTRUNNING OSTEOSARCOMA MIAMI MARATHON TEAM DINNER
OutRunning Osteosarcoma Leaders
OutRunning Osteosarcoma Super Carb Dinner

OsteoWarriors HQ Happenings
(page 8)
AGENDA: SUNDAY, JANUARY 27TH

4:30 AM
OUTRUNNING OSTEOSARCOMA TEAM MEET IN LOBBY
All runners

9:30 - 1:30 PM
CHEERING SECTION
All are welcome, cheering section is in front of the Four Seasons

OSTEOWARRIOR HEADQUARTERS (HQ)
Located on the seventh floor, across from elevators

THURSDAY, JANUARY 24

5:00 PM
HQ Opens
Come and introduce Yourself and Make Some Friends!

6:30 PM
Dinner in HQ and Icebreakers

7:30 PM
Scavenger Hunt

FRIDAY, JANUARY 25

8:00 AM
HQ Opens

9:00 AM
Poster Making for Miami Marathon

10:00 AM
Cookie and Cake Decorating
with Pastry Chef Rebekah Brooks

11:00 AM
Swimming Fun

12:05 PM
Group Photo

12:45 PM
Lunch Poolside

2:00 PM
Arts and Crafts

5:00-7:00 PM
POOL PARTY!!

SATURDAY, JANUARY 26

7:00 PM
Magician and Game Night

8:00 AM
HQ Opens, Arts and Crafts, Video Games

10:00 AM
Come Meet the Adorable Therapy Dogs

11:00 AM
Pool Time

12:00 PM
Lunch Poolside

1:00 PM
Jewelry Making with Roberta

2:00 PM
Make-up and Photo Prep

3:00 PM
Professional Portraits

6:00 PM
OutRunning Dinner

7:00 PM
Dance Party Extravaganza featuring Entertainment, Talent Show, Henna Tattoos and More!

2:30 - 4:00 PM
MARATHONER’S AFTER PARTY
All Registered OutRunning Runners
Ritz Carlton Coconut Grove Pool
MIB AGENTS FACTOR GLOSSARY

Allogeneic: having different DNA. For example, if you get a bone marrow transplant from someone else, it is an “allogenic” transplant.

Apoptosis: programmed cell death. The process through which a cell dies in an orchestrated way.

Autologous: having the same DNA. For example, if your bone marrow is collected and stored, you get high-dose chemo, and then you get your own bone marrow back, this is called an “autologous” bone marrow transplant.

Autophagy: literally self-eating. A way cells consume themselves in order to survive or eventually die.

CAR T-cell: Chimeric Antigen Receptor T-cell, a subtype of white blood cells that are engineered to recognize and attach specific targets, ideally targets unique to a cancer.

Checkpoint: (a.k.a. Immune checkpoint) one of several protein cells have on their surface that tell the body’s defenses (immune system) not to attack them. Several cancers hijack these proteins as a way to avoid getting attacked by the immune system.

Checkpoint Inhibitor: an antibody (i.e. a sort of ‘heat seeking missile’ that the body makes that attach to specific proteins on infectious organisms or cells designed to specifically attach to immune checkpoint proteins so they don’t block the body’s defenses (immune system) from attacking cancer cells.

Cytotoxic: toxic to cells

En vivo: within a living being or organism (e.g. a drug tested in a patient is tested en vivo)

Ex vivo: outside of a living being or organism (e.g. taking a biopsy of a tumor and testing it against a drug in a petri dish or test tube is ex vivo testing of the drug)

Exomes: the part of DNA that is actively used by the cell. Large parts of the Genome, which is all of the DNA, are coiled up for storage and not active. The Exome is the part that is actively doing things driving the cells.

Heterogeneous: mixed, varied, not uniform.

Histological: related to how something looks under a microscope

Immunotherapy: treatments that use the body’s defenses (immune system) to fight cancer.

Lymphocyte: subtype of white blood cells. Part of the “adaptive immune system” that is able to learn and adapt to infections etc.

Macrophages: a subtype of white blood cells that help stimulate or suppress other white blood cells within the body.

Mesenchymal: related to the connective tissues in the body (bone, muscle, fat etc.)

Microenvironment: the microscopic environment around cells and tumors that includes the oxygen level, blood supply, acidity, and what other cells are located there.

NK cell: Natural Killer cell, a subtype of white blood cells that help fight infections and are believe to be important in removing abnormal cells such as cancer cells

Osteoid: the matrix cells lay down that is calcified to create bone

Osteoblastic: of or related to creating new bone

PDX Models: Patient Derived Xenograft models. A living model used to testing tumors and drugs created by taking a piece of the patient’s tumor and implanting it in an animal, typically a mouse, who has been engineered to allow the tumor to grow within that animal.

Precision medicine: techniques used to tailor therapy to a specific tumor based on mutations or sensitivities found within that specific tumor

Refractory: another word for resistant or not responding to treatment

Thoracotomy: surgery performed on the chest (a.k.a. thorax)

VATS: Video Assisted Thoracoscopic Surgery, surgery performed on the chest, using a small camera inserted through small openings made in the chest wall.

Matthew Lehrman Osteosarcoma Fund, Inc. is a 100% Volunteer, Non-profit Organization Pursuant to Section 501(c)(3) of the United States Internal Revenue Code.
Renowned Artist Kelsey Montague has again created an original piece of art for this, our third Annual FACTOR Conference. Each speaker will receive a framed print with our gratitude for their commitment to Making It Better for osteosarcoma patients everywhere. Kelsey has been creating large scale, interactive street murals around the world. Each piece provides an opportunity for people to become a living work of art. Participants are encouraged to post pictures with the work on social media under the hashtag #whatliftsyou. Her art has been featured by Entertainment Weekly, Instagram, Taylor Swift, The Wall Street Journal, Forbes, and MTV.

You can see her work right here in Miami on Lincoln Street!
This team of Runners is running the Miami Full or Half Marathon, walking the half, or crawling on Sunday to honor an OsteoWarrior or in memory of an OsteoAngel. Thank you Team - you have used your powers for good, and we are grateful.
MIB AGENTS FAMILY FUNDS

MIB Agents is an alliance of osteosarcoma friends and families who have committed to the improvement of osteosarcoma outcomes in a direct and impactful way. It is because of these families that we are able to accomplish missions great and small, and fund osteosarcoma research.

**ALLEN**

The Allen DeDon Osteosarcoma Research Fund is in honor and memory of Allen. MIB Agents everywhere worked on and contributed to MIB MISSION: ALLEN. His mission was to travel to the mountains of North Carolina to go White Water Rafting with his family. Agents everywhere delivered an experience that exceeded his expectations. Allen DeDon passed from this life on July 18, 2018, shortly after his MISSION was accomplished.

From Allen’s Family: Allen was amazing, he was a fighter and had a spirit for adventure, no tree was ever too high for Allen to climb and he loved playing sports. Allen fought osteosarcoma for 2 years and never once stopped smiling or joking, his favorite person to pick on was his mom, whom he regularly made jokes about. He enjoyed building things with his dad and no one could ever tell what the final result would be until it was finished. Allen had a light so bright everyone saw it when they met him and he was determined to make a difference in the world around him and in the lives of other children who are fighting the same fight he fought. One day no child will ever suffer because of Allen. #BecauseofAllen

**ANDREW**

From Andrew’s Family: Andrew was an active 12 year old boy when he was diagnosed with Osteosarcoma in November 2017. The cancer diagnosis completely stunned, then devastated us. Our only choice in that moment was to do everything in our power to save his life. But we quickly realized that every choice we had to make carried risks and consequences and the burden of each choice was overwhelming. Treatment choices were few and grueling: chemotherapy and limb salvaging surgery. Our struggle as parents was how to prevent cancer from defining Andrew. If we chose for it to define him, the cancer would have control. Instead, if we chose for it to REFINE him, Andrew would become a better version of himself and ultimately we would all grow into better versions of ourselves. Our Andrew is so much bigger than cancer. So much braver. So much stronger. With the help of our faith, family, friends, and community, we have chosen to have it refine us. One way we can make us better versions of ourselves is to help Make it Better for all those affected by this horrible cancer and encourage others to do the same. After 8 months of treatment, we are grateful that Andrew is NED however we are forever aware of the potential this disease has on his future. We are committed to raising much-needed money for research to study and improve treatments and outcomes. Every child deserves a future in which cancer, re-occurrence or death is NOT a part of it.

**BRIANA**

Briana Loeding passed from this life on August 17, 2018. This effervescent, giggly, sweet third grader mightily fought osteosarcoma for ten months with courage, grace and fortitude well beyond her 8 years. Her family, friends and whole school were all about bees in her honor, encouraging her with #BeeBrave and #BrianaBrave campaigns of hope and love. This osteosarcoma research fund has been set up in her honor and memory, which will directly fund desperately needed specific osteosarcoma research in her name, Briana Loeding. Please say her name and help us find a cure #BecauseOfBriana.

**CAMERON**

The Cameron Bottelberghe Osteosarcoma Research Fund was started after Cameron passed away from osteosarcoma of her right humerus in November 2017. The intention of this fund is to raise MUCH needed funds for osteosarcoma research, to help one day give osteosarcoma patients NEW drugs. Cameron, like every child diagnosed with osteosarcoma, received treatments that are over 40 years old. We need to do better for kids and young adults like Cameron, and give them a fighting chance at survival with updated treatments. We can only do this through meaningful and impactful research. Our hope and prayer is that we can increase survival for our children so they have a fighting chance. Our future IS our children. Cameron’s MIB mission was accomplished shortly before she passed away. Her wish was to spend Halloween with her friends. We added in a renowned chef and server who traveled to her friends home and prepared a multi-course candle-lit dinner and elegantly decorated the dining room.
In June of 2016 Chris went to the doctor for leg pain. An x-ray showed a tumor in his right femur. A week later, the biopsy confirmed the tumor was osteosarcoma. Chris went through several rounds of chemotherapy followed by a surgery to save his leg in October. He woke up from surgery with nerve damage to every limb and was unable to use his arms or legs. He was admitted to rehab where he spent the next 5 months learning to walk and use his arms and hands again. By April the following year it was found that Chris's cancer had spread to his lungs and he had 12 mets removed in a double thoracotomy. Despite 5 different chemotherapies, another double thoracotomy, a personalized cancer vaccine and immunotherapy the cancer continued to grow and spread throughout his body. Chris passed from this life on September 25, 2018. Chris wanted all money raised in his name to go towards research so that kinder more effective treatments can be found for kids in the future. #BecauseOfChris

On December 14, 2018, 13.1 million joined our livestream with game developer, CAPCOM to raise research funds in honor of Chris.

Cheyenne DeVelasco passed from this life on Sunday August 20th, 2017. She will surely rest peacefully knowing she was loved deeply, she loved greatly and gave of herself wholeheartedly until the very end of her life. She lived the life of a true superhero – having faced great adversity, she used her considerable powers for good, for all. Weeks before Chey passed away, when breathing was difficult, and she had every right to not engage with others, instead, she courageously shared her story with MIB Agents and their video production team. Her story, strength, faith and love will be shared with the world. More than a Warrior, Chey showed us all how to battle adversity with courage, hope and faith. Chey was an important part of MIB Agents from the start. She was a sustaining donor, sending a donation every month to help other kids and young adults suffering from her same disease, osteosarcoma. Her heartfelt desire was to Make It Better so that no other child should have to suffer as she did.

Christien Mikhail Quiles was an incredible young man who was filled with love and a passion for life and people. Simply put he was an absolute joy to be around, motivating everyone he came in contact with. Christien was a key factor to the establishment of the Teen Room at Scott and White McLane Children's Hospital in Temple, Texas. He was the co-President of the McLane Children's Hospital Teen Advisory Board advocating for the needs of children who are patients of McLane Children's Hospital. He was quite the philanthropist... individually raising thousands of dollars to purchase medical equipment for sick children through EXTRALIFE. On 27 April 2016 Christien was honored as one of Central Texas's Incredible Kids. He was recognized for his generosity, resilience and inspiring commitment and contributions to other patients and the Teen Advisory Board of McLane Children's Hospital. He was grateful for the honor and privilege to be recognized, but he remained humble. Whenever he was other patients heard Christien was in the hospital they would run towards him and want to spend time with him. Irregardless of what was going on with him Christien would smile and always give his attention to them. As his mom, I would grin and say... I have an Incredible Kid! I want to honor Christien's legacy by continuing the fight to help others through raising funds for the research and treatment of Osteosarcoma! There needs to be a change because the current treatment is NOT ENOUGH!

Clayton was diagnosed with osteosarcoma in December 2013. He suffered greatly from this disease and passed away in August 2016 after exhausting all treatment options. His heartfelt wish was that no one else should suffer as he had. Clayton asked that donations be made to the most promising osteosarcoma research happening now, a beautiful testament to how kind and thoughtful he was. As the Greek Proverb says, “A society grows great when old men plant trees in whose shade they know they shall never sit.” Clayton didn’t get the chance to grow old, but he wanted us to help ensure that other kids with this disease do get the chance to survive this aggressive pediatric cancer. Thank you for honoring Clayton’s memory and charitable spirit.

This adorable kid is Conner. He had osteosarcoma. He and his family want to Make It Better for other kids who have – and are yet to be diagnosed with – osteosarcoma. The Crossan Family have been active MIB Agents; having arranged a golf tournament, being the Appreciation Agents at FACTOR, working with our annual Macy's Shop For A Cause, running in the Miami Marathon with MIB Team OutRunning Osteosarcoma and volunteering at FACTOR, leading Ambassador Agents, organizing shopping events and an annual golf tournament. Every dollar raised for Conner Crossan's MIB Agents Osteosarcoma Research Fund goes as a whole dollar to fund OS research. Every donor receives a receipt for their taxes, and every cent gets us closer to better treatments and a cure for osteosarcoma kids.

If you would like to help #MakeItBetter #BecauseOfConner, please do.
We can beat this disease – #TogetherWeCan
From Mason's Mother: Mere minutes after hearing Mason may have cancer he said if he did, he was glad it was not us the parents or his little brothers or sisters. At that moment, I learned the heart of my firstborn son & the unconditional love he had for his family. I told him he is more valuable to us as he is our precious child & any parent would trade places without hesitation to spare their beloved child from any pain or suffering. He loved being a big brother more than anything. The leader they all looked up to. He enjoyed eating delicious foods, anything to do with cars, going out with his best friends, playing video games to connect with buddies, pro sports & Little League baseball, rare pets like his Sphynx cats & Alaskan Klee Kai dogs who brought him such joy. The photo is our most favorite, not because one could not tell he was sitting in his electric scooter, that he had an above the right knee amputation, or that his operated on right lung only had 60% capacity & an inoperable tumor growing inside it again & further disease progression throughout his body; but that throughout all of his journey with cancer, Mason kept a smile on his face & hope in his heart for a cure. “I’ll try whatever it takes until it works.” -Mason

He is the M in our MAGIC. Mason(19) 2-20-1999/11-7-2018
Alana(8)  Garrett(10)  Isabelle(6)  Connor(12)

Ian had been battling osteosarcoma (bone cancer) since April of 2015. It started with a bump on his shin that when removed was discovered to be malignant. After amputating his leg in June of 2015 and 8 grueling months of chemotherapy he was declared NED (no evidence of disease). Sadly 6 months later doctors found a new tumor at the base of his spine in his sacrum. He went back in chemotherapy and worked through pain issues as the tumor pressed up to his sciatic nerve which has caused a great deal of pain and loss of function of his remaining leg. When asked where he would like TEAM IAN fundraising efforts to be focused, Ian wanted fundraising to go toward further research so that we can OBLITERATE osteosarcoma. Ian passed in July 2018 from this life. His mom, Liz has been active MIB Agents; walking in the Miami Marathon with MIB Team OutRunning Osteosarcoma, volunteering at FACTOR, and leading the Family Agents program as well as co-authoring the book, Osteosarcoma: From Our Family to Yours. #BecauseofIan

Jack was diagnosed with osteosarcoma in his left tibia in April of 2017. When the diagnosis of osteosarcoma was finally made it forever changed the life of our family. Jack began with 3 months of chemo followed by Limb Salvage Surgery and then more chemo. He finished the last round of brutal chemo right before Christmas of 2017 all while still having a smile on his face. During the past 9 months of Jack’s treatment while learning more than we ever wanted to know about this beast called osteosarcoma, we were shocked to find out how underfunded research is for children’s cancers in this country. Even more astonishing is how very little has been done in research with osteosarcoma. To know that the protocol that these kids go through is pretty much the same as it was over 30 years ago is just astonishing. We MUST make it better for these kids and give them a fighting chance to beat this devastating disease. MIB Agents is the place where we think our fundraising efforts will have the biggest impact. 100% of your donation goes to actual research of finding a cure to osteosarcoma!

My name is Matthew Lehrman. I was diagnosed in June, 2015 with osteosarcoma, a devastating form of bone cancer. With the love and support of my family and friends, I fight daily to overcome this horrible illness. Osteosarcoma has been referred to as the “orphan cancer” because it is so rare, and therefore often overlooked by the medical field. Your generosity will facilitate the desperately needed funding for research that will ultimately result in a cure for osteosarcoma. Thank you so much for contributing to this monumental goal.

NOTE: Matthew fought this disease with courage and cheer. He raised money for research and we will fund research with 100% of the donations from his friends and family. He passed from this life on May 3rd, 2017. A cookbook, Matthew Eats, by celebrity chefs continues to raise funds in his honor for research.

Michael Heras passed from this life on May 25, 2018. He will always be remembered with love and admiration for his incredible courage and fortitude in battling osteosarcoma. He knew that this fight for his life required more from him than should be asked of any person. He faced more than 30 rounds of chemotherapy, limb salvage surgery, lung surgeries, clinical trials and amputation. His desire to help other young adults and children with this disease will be carried on in his name. Our desire is to carry out his hope to improve outcomes for osteosarcoma. We sincerely hope you will help us in honoring Michael’s wish. His parents continue to support MIB Agents missions, including being on team OutRunning Osteosarcoma.
Throughout Mohan Anand's life of service and his commitment and care of this osteosarcoma community, he demonstrated vision, fortitude and an unwavering loyalty to Making It Better. He made sure this conference happened knowing that what good may come of it would likely not benefit him directly. He is, and always will be an MIB Agent of the Highest Order. Mohan's legacy in service to those suffering with osteosarcoma will continue with the Mohan Anand Osteosarcoma Fund. Donations made to this fund will go directly to fund direct patient support and osteosarcoma research.

My son, Nicholas was diagnosed with osteosarcoma in December of 2014, at age 15. He started chemotherapy on New Years Eve of 2014. Over the next 6 months, Nick spent 18 weeks admitted into the hospital where he underwent 11 rounds of chemotherapy, a week of neutropenia (chemo induced fevers), a bout with c-diff and an above the knee amputation surgery. We had hoped and prayed that the amputation would remove any chance of the cancer spreading. Imagine having to explain to your 15 year old child that he is going to lose his leg, but trying to stay positive that he will go on to have a “normal” life. It was heart-breaking, but not as much as when we found out in June that none of the typical protocol chemotherapy treatments had worked and that the cancer had spread to Nick’s lymph nodes and his lungs. But unfortunately Nick’s cancer was too aggressive to be able to stop and on August 17th of 2015, we lost our beautiful boy, after a short 8 month battle with this beast.

The Sloane Dyer Osteosarcoma Fight Fund is in honor of this strong, amazing person who, in December 2016, was diagnosed with osteosarcoma in her right femur, after years of being incorrectly treated for leg pain. She was 12 years old. We were devastated.

Through her many months of treatment and surgeries we grew to understand just how brutal osteosarcoma is. It is a cancer that is uniquely agile, able to change and grow despite the harrowing treatments. Families live in fear of it's spread and possible return throughout the child’s lifetime. M.I.B. Agents innovative goals of inspiring collaboration between doctors and researchers, funding much-needed projects, and bringing together families for education and support in the fight against osteosarcoma is an incredible endeavor. We are so grateful to be able to be part of this amazing organization. THANK YOU for supporting this important work with us!” Sloane is an MIB Ambassador Agent.

Victoria was 13 years old, a competitive swimmer and in 7th grade when she complained of ankle pain early in December 2014. Our family was not prepared to hear the words “your daughter has cancer” just a few days later. We quickly learned that Victoria was one of only a few kids known to have both Down syndrome and Osteosarcoma. To complicate things even more, Victoria’s cancer had metastasized to her lungs. Osteosarcoma is just plain ugly. The reality is we will fight this disease forever. We just don't know how long forever will be for our kids. Selfishly we all want forever to be, well forever...years and years from now. But without research specifically designed to target osteosarcoma, the reality, unfortunately for too many families, is that this “forever” isn’t far enough in the future. Victoria created a poster during her first chemotherapy admission. This poster immediately became “her statement” – Let’s Kill the Cancer!

If you would like to start a fund in honor of your OsteoWarrior or OsteoAngel, contact Briana at Briana@MIBagents.org or visit www.MIBagents.org/family-funds
Dr. Wendy Allen-Rhoades is an Assistant Professor in the Department of Pediatrics, Section of Hematology & Oncology at Baylor College of Medicine. Her research is focused on discovering and developing non-invasive biomarkers for pediatric sarcomas to improve early detection rates, guide therapy choices, monitor response to therapy, and aid in the surveillance for recurrence. Dr. Allen-Rhoades has been awarded numerous honors for her research, including the American Society of Clinical Oncology Young Investigator Award, the Hyundai Hope on Wheels Young Investigator Award and the Baylor College of Medicine's Scholar of Excellence Award.

I completed my Pediatric Oncology fellowship at the Children's Hospital of Philadelphia, and was research faculty at the University of Iowa until I knew that my passion is treat families and children in the world of Pediatric Hematology/Oncology. I have been at Helen DeVos Children’s Hospital in Grand Rapids Michigan since 1995. I’m a clinician at heart who loves to come to work every day and offer hope to children and families who enter the world of pediatric hematology and oncology. I’m an Associate Professor of Pediatrics and Human Development at the Michigan State University College of Human Medicine, and have a strong interest in medical education. I'm the founding Program Director the Pediatric Hematology/Oncology Fellowship training program at Helen DeVos Children's Hospital. My research interests include discovering medical treatment for tumors associated with neurofibromatosis, improving the treatment of childhood brain tumors, and translational research that incorporates newer molecular and genetic tumor information in the treatment of all childhood cancer. I have the pleasure of working closely with Dr. Sholler and the Beat Childhood Cancer team to improve the treatment of resistant and recurrent tumors in children and young adults. Most of my publications come from my collaborative research with childhood brain tumors, and I was the lead author in a seminal paper describing the use of molecularly guided therapy (BCC team) that has a child with metastatic Choroid Plexus Carcinoma without the use of radiation.

Dr. Das is an Assistant Professor in the Department of Comparative Biosciences and Department of Biochemistry at the University of Illinois Urbana Champaign. She also has an affiliation with Division of Nutritional Sciences, Neuroscience, Bioengineering, Beckman Institute and Center for Biophysics. She received her Ph.D. in Chemistry at Princeton University and did her post-doctoral research at NSF-NSEC center at Northwestern University. Her research focus is on endocannabinoid/cannabinoid metabolism by cytochrome P450 and evaluation of the anti-inflammatory, anti-cancer properties of the endocannabinoid/cannabinoid lipid epoxides. Her laboratory has been funded by grants from AHA, NIH (R01, R03, and R21), Morris Animal Foundation and National Multiple Sclerosis Society. She received Outstanding researcher award at NSEC center, National Scientist Development Award from AHA, Editorial Board Member in ChemistrySelect, Moog Lecture Series HWI, FMC Corporation Graduate Fellowship at Princeton, Dean's List for Honorific Fellowship at Princeton, CSIR-JRF Fellowship.
John J. Doski grew up in New York, attended Case Western Reserve University receiving a degree in Chemistry, graduated from New York University School of Medicine, and completed a residency in General Surgery at SUNY Stony Brook. Following four years of active duty service with the US Air Force, he completed a Pediatric Surgery Fellowship at UT Southwestern and Children’s Medical Center Dallas. He was a founding surgeon of San Antonio Pediatric General Surgery Associates in 1999, which provides surgical care to all the pediatric institutions in San Antonio. The practice of 9 Pediatric Surgeons supports all levels of Pediatric Surgical Care, including neonatal, oncologic, and advanced minimally invasive surgery. He has faculty appointments as Clinical Adjunct Professor at UT Health San Antonio and Baylor College of Medicine and is the Chief of the Division of Pediatric Surgery with UT Health San Antonio. He is married to Deborah L. Mueller, MD, a trauma and critical care surgeon at UT Health San Antonio, and they have two girls.

Julia Glade Bender is the Vice Chairman for Clinical Research within the Department of Pediatrics at Memorial Sloan Kettering Cancer Center. She has 20 years of experience translating laboratory studies into clinical trials and provides leadership for highly productive Developmental Therapeutics and Precision Oncology programs. She contributes scientifically to early phase clinical trials sponsored by the NCI, the COG, as well as the pharmaceutical industry. In addition, she serves as a consultant to the Oncologic Drugs Advisory Committee of the FDA and sits on the Steering Committee for the Pediatric NCI-MATCH (Pediatric Molecular Analysis for Therapy Choice). She has chaired, co-chaired or vice-chaired 11 national phase 1/2 trials and serves as the new agent liaison to the COG Bone Sarcoma Steering Committee. She is the first grantee of the 2.5 million-dollar Hyundai Hope on Wheels Quantum Collaboration Award to study master regulator dependencies in high-risk osteosarcoma.

Dr. Gorlick is Division Head and Department Chair of Pediatrics at The University of Texas MD Anderson Cancer Center. He came to MD Anderson in December 2016 from Albert Einstein College of Medicine in New York City, where he was professor of Pediatrics and Molecular Pharmacology. He also was division chief of Pediatric Hematology-Oncology and vice chairman of Pediatrics at The Children’s Hospital at Montefiore. Dr. Gorlick received his medical degree from the State University of New York Downstate College of Medicine. He completed his training at New York-Presbyterian Morgan Stanley Children’s Hospital and Memorial Sloan Kettering Cancer Center, where he began his sarcoma research laboratory. After establishing a study focused on osteosarcoma, his lab became the founding Bone Tumor Resource Laboratory for the study of this disease and has grown into the world’s largest osteosarcoma tissue bank. His laboratory works to identify targeted therapies and new drugs for childhood cancers as well as to understand the mechanisms behind the development and progression of osteosarcoma, the most common form of childhood bone cancer. He is chair of the Bone Tumor Disease Committee of the Children’s Oncology Group and the pediatric representative for the Clinical Research Committee of the Sarcoma Alliance for Research Through Collaboration. He has served on the National Cancer Institute Preclinical Testing Consortium and is past president of the Connective Tissue Oncology Society.

Ann is the founder and President of MIB Agents Osteosarcoma Alliance. At age 43, Ann was diagnosed with osteosarcoma and was treated in the Pediatric Center at Memorial Sloan Kettering Cancer Center. She was in awe of the courage of her fellow patients. Like most, she was unaware of how little funding pediatric cancers receive, and that osteosarcoma patients lose limbs, fertility, hearing, organ function and too often, their lives. She knew there had to be a way to Make It Better. She began MIB Agents, a nationwide 501c3 non-profit and the FACTOR Conference. Together with MIB Agents everywhere, they endeavor to Make It Better for osteosarcoma patients. She is an Advocate with the A2A Alliance, The Mighty, and a member of CAC2.
I have decades of experience diagnosing and treating sarcomas and benign tumors of the bones and soft tissue. I am an expert in surgery to remove tumors while preserving limbs, and I rebuild functional bones and joints with joint replacements and bone transplants. I also have a special interest in treating children who have bone cancers (osteosarcoma and Ewing sarcoma). As we continue to make progress in curing these cancers, it becomes even more important to be able to reconstruct limbs to provide patients with optimal long-term function. While our goal is always to cure the cancer, we strive to understand each patient's activities and help them achieve their individual goals while maintaining hope for the future. My research involves understanding the molecular biology of sarcoma, developing new ways to deliver chemotherapy to tumors, and improving the durability and function of joint replacements. I have invented and developed four different joint replacement systems and have patented several methods to deliver drugs to tumors and to study cancers in the laboratory. In addition to my role as Chief of the Orthopaedic Service at Memorial Sloan-Kettering, I'm a Professor of Orthopaedic Surgery at Weill Cornell Medical College. Nationally, I have served as Chair of the Children's Oncology Group Orthopaedics Section, as President of the International Society of Limb Salvage, President of the Association of Bone and Joint Surgeons, and on the boards of several musculo-skeletal and orthopedic organizations.
Masanori Hayashi, MD  
Children’s Hospital of Colorado

Dr. Mas Hayashi is a physician-scientist at the University of Colorado/Children’s Hospital Colorado leading a translationally focused laboratory research program in childhood sarcomas. His laboratory has been focused on the identification of novel anti-metastasis targets for sarcomas through the detection and interrogation of circulating tumor cells, which are cells that survive through the bloodstream to establish distant metastases. Combined with his expertise in developing novel blood tests of minimal residual disease through detection of circulating tumor DNA, his laboratory aims to change the current treatment paradigm by detecting metastasis early and treating metastasis differently to improve the cure rates of sarcomas. Dr. Hayashi is a graduate of Keio University School of Medicine in Tokyo and completed his pediatric residency training at Duke University, followed by his pediatric hematology/oncology training at the joint program of Johns Hopkins University and the National Cancer Institute.

Christina Ip-Toma  
MIB Agents  
MIB Agents Project: MIB Testing and Data Directory

Christina Ip-Toma lives in the San Francisco Bay Area with her husband Burt and their three sons. Her youngest son Dylan was diagnosed with osteosarcoma in January 2016 when he was nine years old. After three years of many drugs and several surgeries, Dylan is still battling like a superhero.

Christina is the Chief Agent in developing the Big Data chart initiative, which aims to help inform patient families of their choices in sharing this vital information.

Katherine Janeway, MD  
Dana-Farber Cancer Institute  
MIB Agents Project: MIB Testing and Data Directory

Dr. Janeway received her medical degree from Harvard Medical School in 2000. She subsequently completed her residency in Pediatrics at Children’s Hospital, Boston. She was a Chief Resident at Children’s Hospital, Boston, and then completed her fellowship in Pediatric Hematology-Oncology at Dana-Farber Cancer Institute / Children’s Hospital, Boston.

In 2007, Dr. Janeway joined the staff of Dana-Farber and Children’s Hospital, Boston, where she is a pediatric hematologist-oncologist and investigator with a research focus of pediatric sarcomas.

Alexis Johnson  
MIB Agents Mission Commander  
MIB Ambassador Agent  
OutRunning Osteosarcoma  
Organizing Team

Alexis is a 10-year Osteosarcoma survivor, amputee, and patient advocate. She graduated from MCPHS University and will be starting medical school in the Fall at the University of Arizona, in hopes of becoming a pediatric oncologist. Alexis is actively involved in MIB and serves as Mission Commander, collaborates on the MIB Agents Ambassador Program, and assists with an initiative between the Broad Institute and MIB Agents.
Ryan Kennington
MIB Agents

Ryan was a very active 17-year-old soccer player in his Senior year of High School at the time of his diagnosis in the Fall of 2014. Treated at the University of Pennsylvania, Ryan had Osteosarcoma in the head of his right femur and had to undergo limb salvaging surgery in order to save his leg. Unfortunately, 9 months after he finished Chemotherapy, the cancer had reappeared in his lungs. However, after removal of the single lung nodule, Ryan has been cancer-free ever since. Currently, Ryan is at the University of Delaware majoring in Biology and aspires a career in medicine.

Jarvis Kuo
MIB Agents

Jarvis is a 31-year osteosarcoma survivor. He has endured a leg amputation, and he is a heart transplant recipient. His uplifting story of long-term survivorship has been an inspiration to his fellow OsteoWarriors.

He works for the UP Center, whose mission is to protect children, strengthen families, empower people in crisis, and help maximize independence for those with disabilities. He is also a volunteer at Special Love, a nonprofit which provides quality programs and a network of support to AYA's with cancer and their families.

"Life has no smooth road for any us. As we go down it, we need to remember that happiness is a talent we develop, not an object we seek. It's the ability to bounce back from life's inevitable setbacks. Some people are crushed by misfortune. Others grow because of it."
--Patricia Neal

Ching Lau, MD, PhD
Connecticut Children's Hospital
Jackson Lab

Ching Lau, MD, PhD is a physician-scientist and is the Martin J. Gavin Endowed Chair and Chief of Pediatric Hematology/Oncology at Connecticut Children's Medical Center and Professor of Pediatrics at Jackson Laboratory for Genomic Medicine and University of Connecticut School of Medicine. Dr. Lau received his Ph.D. in Pharmacology, M.D. from Harvard Medical School and post-doctoral fellowship in Cancer Genetics at Dana-Farber Cancer Center. He completed his Pediatrics Residency and Pediatric Hematology-Oncology Fellowship at Texas Children's Hospital, Baylor College of Medicine. His research interests include the molecular biology of the pediatric brain and bone tumors and the clinical applications of genomic technologies. He is a strong advocate for team science research in academia and is experienced in leading NCI-funded multi-disciplinary teams of research including being the principal investigator of the Director's Challenge Project on osteosarcoma and a member of the Steering Committee of the NCI's Strategic Partnering to Evaluate Cancer Signatures (SPECS) Program and the NCI Therapeutically Applicable Research to Generate Effective Treatments (TARGET) Consortium. Dr. Lau has published more than 140 papers in prestigious peer-reviewed journals on cancer genetics and genomics and is a highly sought-after speaker who has given more than 115 invited lectures in international and national meetings.

Dean Lee, MD, PhD
 Nationwide Children's Hospital

Dr. Lee is Professor of Pediatrics and DiMarco Family Endowed Chair in Cell-Based Therapy at Nationwide Children's Hospital. He is the founding Director of the Cellular Therapy and Cancer Immunotherapy Program, a joint program of NCH and The Ohio State University. His laboratory research identified a crucial role for IL-21 and STAT3 signaling in NK cell function and proliferation, which enables large-scale propagation of NK cells for adoptive transfer. NK cells expanded with this approach have been infused into an adult and pediatric patients with leukemia, brain tumors, and solid tumors in investigator-initiated Phase I trials. Dr. Lee also serves as chair of the Cellular Therapy Strategy Group for the Pediatric Blood and Marrow Transplant Consortium and is a member of the NIH Recombinant DNA Advisory Committee.
Dr. Lipshultz is a graduate of the University of Pennsylvania graduate school program in molecular, cellular and developmental biology and then Dartmouth Medical School. He completed a residency in pediatrics at Rainbow Babies and Children’s Hospital/Case Western Reserve University School of Medicine and a fellowship in pediatric cardiology at Boston Children’s Hospital/Harvard Medical School. In November 2018, he began as Professor and Chair, Department of Pediatrics, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo, The State University of New York; A. Conger Goodyear Chair of Pediatrics; Chief of Service of Pediatrics, Kaleida Health; Medical Director, Pediatric Services Business Development, John R. Oishei Children's Hospital, and President, UBMD Pediatrics. Previously, he was the Schotanus Family Endowed Chair in Pediatrics, the Carman and Ann Adams Endowed Chair in Pediatric Research, and Professor in the Carman and Ann Adams Department of Pediatrics at the Wayne State University School of Medicine, and the Interim Director of the Children's Research Center of Michigan. His primary research interests are in the pediatric cardiomyopathies, especially those of genetic/metabolic, toxic (e.g., those associated with cancer and HIV therapy), or infections/inflammatory etiologies. Clinical research on determinants of outcome for children with cardiovascular disease has been a major focus of interest as well.

Dr. Lohse received her PhD from the University of Zurich in 2011. After postdoctoral fellowships at the Princess Margaret Cancer Center (Toronto) and the University of Michigan, Dr. Lohse moved to the University of Miami as an Assistant Scientist in the Department of Psychiatry in order to support the preclinical and clinical development of the Ex Vivo Drug Sensitivity Testing Platform for use in cancer patients. Dr. Lohse’s career has focused on the preclinical and early clinical development of novel technology and therapeutic options for cancer patients. The Ex Vivo Drug Sensitivity Testing Platform has been successfully tested in a pilot cohort of patients with relapsed AML and clinical trials in AML, sarcoma and ovarian cancer are currently in development in order to transition the platform to clinical routine.

Dr. Mason is a board-certified veterinary internist and immunologist with extensive experience in the performance of clinical trials using immunotherapy and evaluation of immunological responses in dogs with spontaneous cancer. She received her Bachelor of Veterinary Medicine from the Royal Veterinary College, University of London and completed her PhD at the School of Veterinary Medicine at the University of Pennsylvania. She performed her postdoctoral research in the laboratory of Dr. Carl June where she worked on developing the canine model for evaluating chimeric antigen receptor T cell therapies. Her work with Dr. Paterson, Professor of Microbiology at the UPenn School of Medicine, pioneering the translation of a live, recombinant HER2 targeting Listeria into dogs with spontaneous osteosarcoma earned them the inaugural One Health Award in 2013. She is the Principal Investigator of a multi-institutional clinical trial evaluating the safety and efficacy of a recombinant Listeria to delay/prevent metastatic disease in dogs with osteosarcoma. She is also leading the NIH/NCI funded Coordinating Center for Canine Cancer Immunotherapy Trials. Her lab has developed the spontaneous canine NHL “model” to evaluate adoptive T cell therapy using canine CD20-targeting Chimeric Antigen Receptors T cells (CD20 CARs) in dogs with relapsed disease and is currently performing the first-in-dog clinical trial in client-owned animals using ex-vivo expanded, genetically modified, CD20 targeting CAR T cells at the Veterinary Hospital of the University of Pennsylvania.

Lisa Merheb is the Director of Social Work at the University of Miami Sylvester Comprehensive Cancer Center and has been working with cancer patients and their families for the last seven years. She has presented at many conferences such as the GIST day of Learning, and the Sarcoma Foundation of America. She is Licensed in the State of Florida and has been practicing as a social worker for 18 years. Her Bachelor’s degree is in Music Therapy from the University of Miami and she has her Master’s degree in Social Work from Barry University. Lisa is very involved with the Sarcoma team at Sylvester and is passionate about helping people.
Zoe Starkey
MIB Agents

Zoe is an 11 year osteosarcoma survivor. After 10 years with a limb salvage device, she had an elective above knee amputation in June 2018. She is currently studying for a Master of Public Health with a special interest in health policy at Purdue University in Indiana.

“We’re all stories in the end. Just make it a good one.” -11th Doctor Who

Joshua Schiffman, MD
Huntsman Cancer Institute
University of Utah

Dr. Schiffman is the recipient of MIB Agents’ 2017 $100,000 OutSmartering Osteosarcoma Funding for his research on P53. Dr. Schiffman received his MD from Brown University School of Medicine, completed his Pediatric Residency, Pediatric Chief Residency, and Pediatric Hematology/Oncology Fellowship at Stanford University. He’s been an investigator at the Huntsman Cancer Institute since 2008, and on the faculty at The University of Utah since 2009. Dr. Schiffman is board-certified in Pediatrics and Pediatric Hematology/Oncology. Dr. Schiffman is also the Education Director for the Program in Personalized Health Care at the University of Utah.

Corrie Painter, PhD
The Broad Institute of MIT and Harvard
MIB Agents Project: MIB Testing and Data Directory

Corrie Painter is the associate director of operations and scientific outreach in the Cancer Program of the Broad Institute of MIT and Harvard. A trained cancer researcher with a Ph.D. in biochemistry, Painter serves as the associate director of Count Me In, which launches patient-driven research projects across multiple cancer types. In this role, she partners with advocacy groups and engages patients with metastatic breast cancer, angiosarcoma, and other cancers through social media in order to carry patient-driven genomic initiatives where patients can consent online to donate their stored tumor samples, saliva samples, medical records, and their voices in order to directly accelerate the pace of discovery. These efforts can be followed on Twitter @MBC_project, @ASCaProject, and @Corrie_Painter, and on Facebook, the Metastatic Breast Cancer Project and the Angiosarcoma Project Working Group. Prior to joining the Broad Institute in 2015, Painter was vice president and co-founder of Angiosarcoma Awareness Inc., a nonprofit devoted to fostering a collaborative atmosphere between researchers in order to generate data and reagents that can be shared by the sarcoma community as a whole. She continues in this role alongside her work at the Broad Institute. Painter obtained her Ph.D. in biochemistry from the University of Massachusetts Medical School and completed her postdoc in cancer immunology at UMass Medical School’s Cancer Research Institute.

Damon Reed, MD
Moffitt Cancer Center
MIB Agents Scientific Advisory Team

Dr. Reed is the Director of the Adolescent and Young Adult Program at Moffitt, an Associate Member of the Sarcoma Department at Moffitt Cancer Center and an Assistant Professor of Pediatrics at the University of South Florida. He is on staff as a specialty physician at All Children’s Hospital in St. Petersburg, FL and is also the Leader of the Pediatric Cancer Foundation’s pediatric phase I consortium, the Sunshine Project. Dr. Reed’s research interests include chemotherapeutic approaches to sarcoma in the pediatric, adolescent, and young adult population. He is interested in establishing relevant preclinical sarcoma models, establishing and testing biomarkers for targeted therapies and translating predictive testing and combinations of agents towards personalized medicine in sarcoma and other rare cancers. A graduate of Case Western Reserve University School of Medicine, Dr. Reed served a combined pediatric residency program at Boston Children’s Hospital-Harvard Medical School and Boston Medical Center-Boston University School of Medicine. He completed his fellowship training in pediatric hematology/oncology at St. Jude Children’s Research Hospital. He received the CWRU Medical Alumni Association Board of Trustees Award for Outstanding Service and Contributions to the School of Medicine. He is a member of several professional associations, including the American Association for Cancer Research, Connective Tissue Oncology Society and American Society of Clinical Oncology. He joined Moffitt in 2008.

Zoe is an 11 year osteosarcoma survivor. After 10 years with a limb salvage device, she had an elective above knee amputation in June 2018. She is currently studying for a Master of Public Health with a special interest in health policy at Purdue University in Indiana.

“We’re all stories in the end. Just make it a good one.” -11th Doctor Who
H. Thomas Temple, MD
Nova Southeastern University

H. Thomas Temple, M.D., is an Orthopaedic Oncologist and Surgeon specializing in musculoskeletal oncology with a strong clinical interest in regenerative medicine. He also holds the titles of Senior Vice President of Translation Research and Economic Development at Nova Southeastern University. Dr. Temple received his undergraduate degree from Harvard University, and his medical degree from Jefferson Medical College in Philadelphia. He completed an Internship in General Surgery and Residency in Orthopaedic Surgery at Walter Reed Army Medical Center in Washington, D.C. He trained in Orthopaedic Oncology at the Massachusetts General Hospital and Boston Children’s Hospital. Dr. Temple is a member of the American Academy of Orthopaedic Surgeons, the American Orthopaedic Association, the Musculoskeletal Tumor Society, the International Skeletal Society, the American Association of Tissue Banks, the Girdlestone Society and the American Orthopaedic Foot and Ankle Society. Dr. Temple's previous position was affiliated with University of Miami helping to train and mentor future surgeons. In addition to his teaching career, Dr. Temple has also authored over 200 scientific articles and book chapters. He is an Assistant Editor for Foot and Ankle International, a long-standing reviewer for Clinical Orthopaedics and Related Research and the Journal of Bone and Joint Surgery.

Patrick Thompson, MD
University of North Carolina

Patrick Thompson is an Associate Professor of Pediatrics at the University of North Carolina in the Division of Pediatric Hematology Oncology. Before becoming a physician Patrick was a chemical engineer earning his BSE from Princeton University and his MS from the University of Wisconsin. After 9 years as a practicing engineer, Patrick returned to school and earned his MD from Baylor College of Medicine. He then completed a pediatric residency and a fellowship in pediatric hematology-oncology at Baylor College of Medicine/Texas Children’s Hospital. Patrick is one of only a handful pediatric oncologists in the country to also be board certified in clinical pharmacology. His primary interest is in the development new agents for children with refractory solid tumors.

Matteo Trucco, MD
University of Miami-Miller School of Medicine, UM-Sylvester Comprehensive Cancer Center

Dr. Trucco is the recipient of MIB Agents’ 2018 $100,000 OutSmarting Osteosarcoma Funding. Dr. Matteo Trucco received his training in Pediatric Hematology/Oncology from Johns Hopkins University and the National Cancer Institute and has focused his career primarily on Pediatric Sarcomas and the development of new therapies. As the Director of the Pediatric Phase 1 Program at the University of Miami-Sylvester Comprehensive Cancer Center, he seeks to identify novel approaches to treating Pediatric Sarcomas, with a particular interest in targeting sarcomas’ metabolism, their hypoxic areas, and sarcoma stem cells. He jumped at the opportunity to help bring together researchers, clinicians, patients and advocates as part of the FACTOR conference to stimulate innovation and collaboration to advance the research and treatment of Osteosarcoma. Dr. Trucco was an important part of MIB Agent’s OutSmarting Osteosarcoma $100,000 funding initiative and is an integral part of the FACTOR Planning Team. Editor: Osteosarcoma: From Our Family to Yours

Yoram Unguru, MD, MS, MA
Johns Hopkins University Berman Center for Bioethics

Dr. Unguru is a pediatric hematologist/oncologist at the Children’s Hospital at Sinai and Core Faculty member, John Hopkins Berman Institute of Bioethics. He is also Assistant Professor in the Johns Hopkins School of Medicine. He completed his pediatric residency at the Children’s Hospital at Sinai, his pediatric hematology/oncology fellowship at Children’s National Medical Center, and was a postdoctoral Greenwall Fellow in Bioethics and Public Policy at Johns Hopkins University. Dr. Unguru’s research interests include clinical and research ethics. He has served as an ethics consultant to national organizations, including the AAP and AMA. He is on the Editorial Board of Pediatric Ethicscope and serves as a peer reviewer for leading academic medical journals. Dr. Unguru is a member of the Children's Oncology Group, Bioethics Steering Committee. Dr. Unguru is the Chairman of the Ethics Committee at Sinai Hospital of Baltimore where he implemented and directs a clinical ethics curriculum for the pediatric house-staff. He is a recipient of “Teacher of the Year” as chosen by the pediatric house staff at the Children's Hospital. Dr. Unguru leads a multidisciplinary, transnational working group examining the ethical and policy implications of chemotherapy shortages in childhood cancer.
Daniel Wurtz, MD  
Indiana University Hospital

Dr. Wurtz is a full-time faculty member and interim chairman of the Department of Orthopaedic Surgery. Additionally, he serves as the chief of musculoskeletal oncology at Indiana University School of Medicine. As a musculoskeletal oncology surgeon, he diagnoses and treats all the patients with musculoskeletal malignancies with the broad Indiana University Health Hospital system. These diagnoses include both sarcomas and metastatic carcinomas or myeloma involvement of the extremities. His team is a referral site for the entire State of Indiana and parts of the Midwest region. Dr. Wurtz is currently an investigator on IRB approved protocols for biospecimen banking and will expand this activity to include samples of metastatic disease and host muscle. Their goal is to investigate the effect of malignancy of a host on muscle function. Dr. Wurtz has held the following positions: Clinical Assistant Professor of Surgery, Uniformed Services University Health Sciences, Assistant Professor of Orthopaedic Surgery, University of Oklahoma Health Science Center, Clinical Associate Professor, Department of Orthopaedic, Indiana University Medicine, and Interim Chair, Department of Orthopaedic Surgery, Indiana University Medicine. His primary contributions to science have been in the field of musculoskeletal oncology. The primary focus for his research efforts have been in the area of diagnosis and treatment of primary and metastatic bone malignancies.

Lars Wagner, MD  
Duke Children’s Hospital and Health Center

After four years as a general pediatrician, I was drawn to the field of pediatric oncology by a desire to make a difference in the lives of children with cancer. I completed my fellowship at St. Jude Children’s Research Hospital in 2001, focusing on the care of children with solid tumors. Since then, I have served on the faculty at Primary Children’s Hospital Medical Center, Cincinnati Children’s Hospital Medical Center, Kentucky Children’s Hospital, and most recently at Duke Children’s Hospital, where I am the chief of pediatric hematology/oncology. My research interests remain in the area of pediatric solid tumors, and especially sarcomas.

OS THERAPIES

OS Therapies (OST) is a clinical stage therapeutic company focused on the identification, development and commercialization of treatments for Osteosarcoma (OS).

In conjunction with the Children’s Oncology Group, we hope to initiate in a Phllb clinical trial of recurred, resected osteosarcoma patients with ADXS31-164 Listeria monocytogenes. This is the compound discussed at previous MIB Agents meetings, and is provisionally approved in canines with osteosarcoma.

Anyone interested in assisting with funding is encouraged to reach out to:  
Paul Romness  
CEO, OS Therapies  
par@ostherapies  
703-541-9811  
www.ostherapies.com
THANK YOU

THE JEFFRIES FAMILY
The Jeffries Family contributes greatly to MIB Agents all year long and to the FACTOR Conference annually. Gigi serves on MIB Agents Board of Directors and executes the OsteoWarriors HQ with love and gusto. She has created a space where kids in treatment, survivors, siblings, and OsteoAngel siblings can hang out, play, sing and dance with their fellow Warriors who understand what each other have experienced and are going through. The HQ is at the top of the list of Important Things We Do. Because of Gigi and the entire Jeffries Family, this most important thing continues to create joy and connection for our warriors.

THE SEGAL FAMILY
Dr. & Mrs. Scott Segal's support of MIB Agents and the FACTOR conference since the beginning has been so meaningful. They are a part of our annual OutSmarting Osteosarcoma Funding for Osteosarcoma Research and contribute impactfully to important work in pediatric cancer as a whole. They are responsible for the complete and utter spoiling of our speakers every year - sweeping them off to their beautiful home for a delicious dinner and gracious hospitality at the start of each FACTOR conference.

THE VAN SCOTT FAMILY
There are Secret Special Agents among us, and they are the Van Scotts. They Make It Better literally every single day for MIB Agents and the missions we undertake. We have the confidence to move forward with various initiatives, great and small because of their support. How incredibly grateful we are to them for their trust, friendship, and support in our mission to Make It Better.

COMMANDER MOHAN ANAND
Simply “Mohan” to this community of patients and physicians who came to rely on him for his sage guidance through osteosarcoma. Mohan passed from osteosarcoma after a battle he silently fought while Project Manager for the first FACTOR Conference in 2017. He made sure that the conference was funded and a “go”. He is a part of every conference - in this program and honored by our signature “Mohanito” Cocktail at the Welcome Reception. He enjoyed our first Welcome Reception via FaceTime in 2017 from his hospital bed and passed a few days after FACTOR 2017. He is greatly missed by MIB Agents, his family, and friends.

LUKANA'S DREAM
There is a small shop in Bethel, Vermont who has a staff of volunteers who donate their time and talent to Make It Better. They sell everything from Thrift Store items to luxury goods and MIB Agents Merchandise. Their profits go to support MIB Agents Missions. Their luxury goods are auctioned on the 7th of every month starting at 7 am, going for 7 days until the 14th at 7 pm. Lukana’s Dream Team Makes It Better, and we are grateful.

FACTOR TEAM
The pursuit of any goal desires the hearts of many. The FACTOR Team has committed their varied and excellent talents and a lot of time to bring this conference to fruition. They are the doers. Thank you Team!

Ann Graham
FACTOR Founder & Co-Chair
MIB Agents Founder
President, Board of Directors

Matteo Trucco, MD, Co-Chair
Assistant Professor of Clinical Pediatrics,
Director of Phase 1 Pediatric Clinical Research Program,
Sylvester Comprehensive Cancer Center,
University of Miami Health Center
Division of Pediatric Hematology/Oncology
University of Miami-Miller School of Medicine
MIB Agents Board of Directors
Scientific Advisory Team
Editor: Osteosarcoma: From Our Family to Yours

Gigi Jeffries, PhD
MIB Agents FACTOR HQ Coordinator
MIB Agents Board of Directors

Sarah Goobic
MIB Agents Registration Agent
MIB Agents’ CME & CEU Coordinator,
OutRunning Osteosarcoma Team Member

Laura Faught
MIB Agents Board of Directors, Finance Manager,
FACTOR 2019

Briana Paronto
MIB Agents’ Command Central Agent
FACTOR Administrative Volunteer

Caryn Lubetsky
OutRunning Osteosarcoma Team,
MIB League of Extraordinary Miami Women,
OsteoWarriors HQ Team

John Graham
MIB Agents VP Board of Directors,
MIB Agents OutRunning Osteosarcoma Team,
Volunteer Coordinator

Ellen Louise Mitchell, MPA
Manager, Office of Education and Training,
Sheila and David Fuente Graduate Program in Cancer Biology,
Sylvester Comprehensive Cancer Center, University of Miami

Casey Crossan
MIB Agents OsteoAngel Coordinator
MIB Agents Ambassador Chief Agent

Liz Vallejo
MIB Agents Patient Advocate Group Coordinator
Family Agents Chief, Floor Manager
Co-Author, Osteosarcoma: From Our Family to Yours

MIB Agents’ League of Extraordinary Miami Women
a.k.a. Joey Chancis, Caryn Lubetsky,
Jenine Howard, and Gigi Jeffries

Linda Kennington
MIB Agents Photographer

Skye Reno
MIB Agents Video Producer

Rebecca Rogers
MIB Agents OutRunning Osteosarcoma Coordinator

Alexis Johnson
MIB Agents OutRunning Osteosarcoma Coordinator
MIB Agents Mission Commander

Mary Kedzie, CPA
MIB Agents Board of Directors and Treasurer

Cesar Peralta, Simple Works Media
MIB Agents videography team
and MIB Agent Volunteers Everywhere!
Foundation Medicine congratulates MIB Agents for its remarkable work on behalf of patients.

FOUNDATION MEDICINE is a molecular information company connecting patients to the latest cancer treatment options through biomarker testing.

The Planning is Part of the Fun

“Our deep gratitude to Jasper & Prudence for their ongoing support of MIB Agents and our missions all year long, and for making our FACTOR Conference beautiful every year!”

“Start by doing what’s necessary; then do what’s possible; and suddenly you are doing the impossible.”

– St. Francis of Assisi