Dear Friends,

We are excited to report to you about one of the recent research breakthroughs from our BMT team in this Bulletin. No scientific issue in the BMT field is more important than understanding the specific ways in which our immune systems eliminate cancer, and the Michigan team has taken a giant step forward in that understanding. I invite you to read more about this and other research news on our website. You can explore a variety of topics from the home page at this address: http://www.cancermed.umich.edu/clinic/bmtclinic.htm.

We also have some heart-warming stories of BMT survivors, families and supporters in this issue. Duncan, Gabby, and Morgan are also featured on our website.

Thank you to all who recently made donations to our microscope fund. We were very encouraged by the enthusiasm and generosity of our supporters.

Best wishes,

James Ferrara, MD
Director, Blood and Marrow Transplant Program
University of Michigan Comprehensive Cancer Center

**Research Breakthrough**

BMT researchers at the University of Michigan Comprehensive Cancer Center have discovered the secret weapon behind the most powerful form of cancer immunotherapy known to medicine. Scientists call this immunotherapy the “graft-versus-leukemia effect,” (GVL) and it occurs when new immune cells from donated bone marrow, called the graft, attack malignant cells in the patient and destroy them. This intense immune reaction between donor and host cells, which follows a bone marrow transplant from a healthy donor, has saved the lives of thousands of patients with leukemia, lymphoma and other types of blood and immune system cancers.

In a study published Oct. 16 in the advanced online edition of *Nature Medicine*, U-M scientists describe how antigen presenting cells (APCs) are the crucial weapon in graft-versus-leukemia’s cancer-killing effect. Pavan Reddy, MD, and James Ferrara, MD, were the primary authors of an article describing this breakthrough.

“We found that without functional APCs, there is no graft-versus-leukemia response, and the cancer is likely to return,” says Dr. Reddy. The research results suggest that manipulating the number and activity of APCs could improve the GVL response, while reducing the risk of a common post-transplant complication called graft-versus-host disease, or GVHD.

The discovery is significant because it could help make cellular immunotherapy safer, more effective and an option for more cancer patients – especially those for whom a donor is unavailable or those who cannot tolerate the procedure’s side-effects.

Excerpted from press release available online at: http://www.cancer.med.umich.edu/news/bmtimmunecell05.htm

**Walkathon for BMT**

Fourth grader Gabby Edmunds is a charming and energetic young lady. She and her older brother, Alex, and mom, Lana, are learning to cope with the death of her father, Arthur Edmunds, in the summer of 2004. Mr. Edmunds had Burkett’s lymphoma, a very rare form of cancer. As a memorial to her father, Gabby organized a walkathon with her family and friends to raise money for the Blood and Marrow Transplant Program. They raised a total of $4,125. At a special presentation ceremony in October, Dr. Ferrara and BMT staff expressed their appreciation and admiration for this fund-raising effort and generous gift.

**Supporters**

Duncan, Gabby, and Morgan are also featured on our website.

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Best wishes,

James Ferrara, MD
Director, Blood and Marrow Transplant Program
University of Michigan Comprehensive Cancer Center
**Patient Profiles**

**Doctors and Staff Share Personal Touch with Young Patients**

**DUNCAN DARNELL**

Duncan Darnell of Lansing, Mich., was 1 year old when he was diagnosed with a rare and deadly form of bone marrow cancer called juvenile myelomonocytic leukemia. His best chance for a cure was a bone marrow transplant, which he received at the University of Michigan C.S. Mott Children’s Hospital in September.

The bone marrow from Duncan’s identical twin brother, Craig, was a perfect genetic match, but it couldn’t be used because Craig’s immune system was unlikely to eliminate Duncan’s leukemia.

A suitable unrelated volunteer donor whose bone marrow was more likely to do the job was found, but the procedure was risky because it carries a high probability of graft versus host disease (GVHD), a potentially lethal complication. To increase his chances of success, Duncan participated in a clinical trial to prevent GVHD that is available only to University of Michigan patients. About six months have now passed since his transplant without any signs of GVHD – so far, so good!

Duncan’s mother, Ella, says that he enjoys the books in the playroom when he visits for his follow-up treatment. Duncan has also taken a real shining to several of his UM caregivers. “The doctors and staff definitely convey a personal touch during our visits,” says Ella. Bubbles are a big hit too!

**MORGAN FENTON**

Morgan Fenton is a bright, cheerful freckled-faced fourth grader from Brighton, Mich. She enjoys dancing, soccer, and school. She is healthy today because of a bone marrow transplant performed two years ago at the University of Michigan.

Just one month shy of her seventh birthday, Morgan was referred to the U-M Comprehensive Cancer Center for biopsies that led to a diagnosis of aplastic anemia. This condition happens when the bone marrow does not produce enough blood cells, resulting in higher risk of infections and uncontrolled bleeding. Morgan’s older sister Kelsey, now 14, became her marrow donor. Dr. John Levine was her primary doctor for treatment, and she has seen all of the pediatric team BMT doctors, including Drs. Cooke, Ferrara, Hutchinson, and Yanik, for follow-up care.

**Events**

**Carr’s Wash for Kids**

This year’s “Carr’s Wash for Kids” kicks off the morning of June 10 with a special ‘Breakfast with the Boys’ that includes an exterior car wash by Michigan football players, breakfast with coaches and players, pictures, autographs, and a silent auction.

**International Highlights**

Shin Mineishi, MD, served as chairman of the plenary session of the 28th Annual Meeting of the Japan Society of Hematopoietic Cell Transplantation, entitled “Complications of Hematopoietic Stem Cell Transplantation.” He presented a paper on the expression of natural killer receptors. Kenneth Cooke, MD, also presented a paper in that symposium entitled “Acute Lung Injury Following Hematopoietic Stem Cell Transplantation: From laboratory insights to novel treatment strategies.”

James Ferrara, MD, presented the keynote address, “Cytokine Modulation of Acute GVHD” at the 20th annual meeting of the French Society of Blood and Marrow Transplant at the Sorbonne in Paris last October. In January he presented studies from the University of Michigan BMT program regarding new insights into the immune cells responsible for graft versus leukemia effects at an International Symposium in Garmisch-Partenkirchen, Germany.

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For ticket information, visit the website: https://www.med.umich.edu/secure/mott/carrwash.html