



Pediatric Blood and Marrow Transplant Fellowship



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Rolla Abu-Arja, MD
Director, Pediatric Blood and
Marrow Transplant Fellowship

We're building the future of pediatric medicine. Join us.

The Pediatric Blood and Marrow Transplant Program at Nationwide Children's Hospital offers a one-year BMT fellowship for qualified physicians who completed a basic 3-year program in pediatric hematology/oncology and who wish to pursue further training in pediatric blood and marrow transplantation.

Graduates will be competent in the use of transplantation and cellular therapy for the treatment of malignant or non-malignant diseases. Specifically, the program trains physicians in indications for transplant; pre-transplant patient evaluation; identification and selection of stem cell sources; use of donor registries; methodologies of HLA typing; marrow cryopreservation; management of ABO incompatible cell products; administration of high-dose chemotherapy; management of neutropenic fever; management of bacterial/viral/fungal diseases in immunocompromised patients, management of bleeding diathesis, diagnosis and management of regimen related toxicities, diagnosis and management of acute and chronic graft-versus-host disease, late complications of marrow transplantation; terminal care; as well as training in documentation and reporting for patients being treated on investigational trials.

Trainees gain experience in bone marrow harvest; stem cell apheresis; stem cell product infusions; and advanced cell processing techniques. Trainees are also encouraged to participate in protocol design and development and complete a clinical research project related to transplantation during the course of their training.

The fellowship meets all criteria for clinical training in BMT as identified by the American Society of Bone Marrow Transplantation (ASBMT) and the Federation for Accreditation of Cell Therapy (FACT). Candidates interested in laboratory research have the option to spend additional time working in one of the center's basic or translational research programs.



Program Timeline

The fellowship position is available beginning July 1, but other accommodations may be possible for qualified individuals. The fellowship extends over 12 months, and the fellow rotates through the inpatient and outpatient units, the Cell Processing facility, the apheresis center and the HLA tissue-typing laboratory.

To learn more about the program timeline, visit NationwideChildrens.org/BMT-Fellowship.

Duration	Description
	47 weeks, half-day BMT Continuity Clinic
12 weeks	BMT (Inpatient/Consultations)
12 weeks	Clinic Rotations/Consultations
4 (+4) weeks	Clinical and laboratory electives (Intramural and Extramural)
20 (-4) weeks	Research Project (≤ 4 weeks may be used for additional electives after Fellowship Director approval)
3 weeks	Vacation
1 week	Professional time (Attend and present at regional, national and international meetings)
3 weeks	Sick leave, per Nationwide Children's policy
52 weeks	TOTAL

Developed Competencies

At the end of the program, the fellow will have demonstrated competency in:

- Clinical care of patients undergoing BMT
- Principles of hematopoietic cell transplantation, including indications for autologous and allogeneic stem cell transplantation; differences between the different stem cell sources, including marrow, peripheral blood, and cord blood; basic principles of human leukocyte antigens (HLA) and histocompatibility testing; basic principles of pre-transplant conditioning regimens and post-transplant immune suppression
- Management of the major complications associated with stem cell transplantation, including the pathophysiology, clinical features, prevention and treatment of graft-versus-host disease, graft rejection, organ toxicities, infectious complications, post-transplant immune reconstitution and relapse post-transplant
- Management of early and late complications of BMT
- Review of stem cell transplant research protocols
- Management of long term complications post-transplant
- Role of cell therapies to prevent and to treat post-transplant complications including malignant disease relapse, infection and graft-versus-host disease
- Understanding of graft manipulation including ex vivo T-cell depletion and CD34 selection
- Stem cell transplant procedures, including bone marrow biopsies, lumbar puncture, bone marrow harvests and hematopoietic cell mobilization and apheresis
- Multi-disciplinary management of patients undergoing bone marrow transplant by coordinating care
- Clinical trial development as it pertains to both therapeutic and non-therapeutic studies

Program Structure

As part of the fellowship program, fellows will also:

- Participate in a scholarly activity to include participation in the Institutional Review Process, grant application process (if indicated), completion of the defined laboratory or clinical research project, abstract submission, and manuscript preparation.
- Develop skills in teaching bone marrow transplant to medical students, residents, fellows and peers through participation in daily teaching rounds, providing formal lectures and leading BMT journal club and tumor board.
- Demonstrate expertise in professional communication through written records, written and verbal communication with primary care physicians and consultants, and interactions with patients, families, and ancillary staff members.

Choose Nationwide Children's Hospital

At Nationwide Children's, we are creating the future of pediatric health care. We are more than a hospital. We are America's largest pediatric health care and research centers delivering care for more than 1.2 million patient visits each year.

Located in Columbus, OH, Nationwide Children's is a 470-bed pediatric hospital with 140 beds available off-site. The Hematology/Oncology/Bone Marrow Transplant Ward on campus has 42 beds including 12 BMT-designated beds, 1 Comfort Care suite and 1 MIBG suite. The outpatient clinic has 14 Hem/Onc exam rooms, 14 infusion rooms, 1 procedure suite, 6 BMT exam rooms and 4 apheresis rooms.

The Research Institute at Nationwide Children's is ranked in the top 10 nationally in research funding for freestanding children's hospitals, and includes three separate research facilities housing independent laboratories, research support areas and an animal facility. Specifically, the Center for Childhood Cancer and Blood Diseases is an independent research center within the Research Institute. In addition, the BMT program is affiliated with the NCI-designated The Ohio State University Comprehensive Cancer Center and has active collaborations with The James Blood and Marrow Transplant Program.

Facilities

- Inpatient tower with approximately 75,000 square feet dedicated for Hematology, Oncology and Bone Marrow Transplant
- Chemotherapy pharmacy on the unit
- Lead-lined room for administration of therapeutic MIBG
- Procedure rooms on the unit
- Family kitchen, dining and laundry areas on the unit
- Family lounge area with books, TV and VCR, telephone, Internet, computer and printer
- Inpatient classroom and tutors available for patients
- Electronic Medical Records

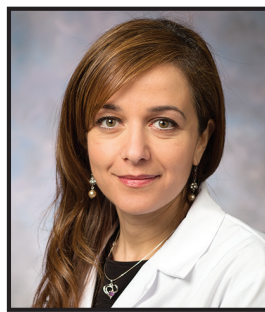
Faculty

Faculty clinical and research interests include cellular therapy, infection in immunocompromised patients, non-malignant diseases (hemoglobinopathy and primary immunodeficiency), organ toxicity (graft-versus-host disease, veno-occlusive disease) and survivorship.

Our faculty members have leadership roles and actively participate in the American Society of Blood and Marrow Transplantation (ASBMT), Center for International Blood and Marrow Transplant Research (CIBMTR), Children's Oncology Group (COG), International Society of Cellular Therapy (ISCT), Pediatric Acute Lung Injury and Sepsis Initiative (PALISI) and Pediatric Blood and Marrow Transplant Consortium (PBMTC).



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Edwin M. Horwitz, MD, PhD



Hema Rangarajan, MD



How To Apply

Eligible physicians will have completed a fellowship in pediatric hematology/oncology and have an interest in further training in BMT. Candidates must be board certified in general pediatrics and board certified/eligible in Pediatric Hematology/Oncology in the United States or Canada upon matriculation. All candidates must also have an active Ohio Medical License and be U.S. citizen or hold a valid J-1 visa.

Interested applicants should provide the following information to the program coordinator:

- Bone Marrow Transplant Fellowship Application
- Curriculum Vitae
- Personal Statement
- 3-5 Letters of Recommendation
- USMLE or COMLEX scores
- Transcript
- Medical Student Performance Evaluation (MSPE)
- ECFMG status report (*include copy of certificate*)
*if applicable
- Photo



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