

Stanford



Rajni Agarwal-Hashmi

Associate Professor of Pediatrics (Stem Cell Transplantation) at the Lucile Salter Packard Children's Hospital

Pediatrics - Stem Cell Transplantation

CLINICAL OFFICES

- **Pediatric Stem Cell Transplantation**

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ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

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Bio

CLINICAL FOCUS

- Blood and Marrow Transplantation, Pediatric
- Pediatric Hematology-Oncology
- Cell and Gene therapy

ACADEMIC APPOINTMENTS

- Associate Professor - Med Center Line, Pediatrics - Stem Cell Transplantation
- Member, Stanford Cancer Institute

ADMINISTRATIVE APPOINTMENTS

- Clinical Director, Pediatric Stem Cell Transplant, (2008- present)
- Section chief, Pediatric Stem Cell Transplantation, (2010- present)

HONORS AND AWARDS

- DISTINGUISHED SERVICE AWARD, STANFORD CHILDREN'S HEALTH/LUCILE PACKARD CHILDRENS HOSPITAL (MAY14, 2018)
- President's award, Best Woman Candidate in India in Medical School Examinations (1979)

PROFESSIONAL EDUCATION

- Residency: Cincinnati Children's Hospital Medical Center Pediatric Residency (1995) OH
- Board Certification: Pediatrics, American Board of Pediatrics (1996)
- Residency: MGM Medical College (1983) India
- Medical Education: MGM Medical College (1983) India
- Internship: MGM Medical College (1981) India
- MD, Indore University , Pediatrics (1983)
- M.B.B.S, Indore University (1980)

COMMUNITY AND INTERNATIONAL WORK

- volunteer donor recruitment for bone marrow transplants

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

I trained extensively in India as a pediatric Hematologist-Oncologist. Due to a strong interest in pursuing translational research in the field I chose to come to USA. During my stay at children's hospital medical center (CHMC) in Cincinnati, Ohio I developed a strong interest in the field of stem cell biology and transplantation. My experience in this field also included extensive training and expertise obtained at the hospital for sick children, Toronto, Canada and National Institutes of Health (NIH), USA. At the hospital for sick children I learned and developed stem cell assays and in vivo models of human hematopoiesis that were critical in understanding of stem cell biology and its clinical applications. At the NIH I spent Two years with Drs. Nienhuis and Cynthia Dunbar and developed gene transfer assays in Hematopoietic cells. At the NIH I also worked on developing the mammalian models for in vivo gene transfer in hematopoietic cells. During this time we also published our work on chronic myeloid leukemia addressing the role of interaction of stromal cells with hematopoietic cells in the bone marrow. This publication defined conditions to favor the growth of benign hematopoietic cells in patients with chronic myeloid leukemia.

At CHMC, Cincinnati, I established the stem cell biology laboratory to further investigate the field of Hematopoietic stem cells specifically involving the umbilical cord blood. I started the clinical Umbilical cord blood transplant program at CHMC. Through my research efforts we were able to develop a sterile system for collection and use of cord blood cells. This endeavor later contributed in establishing methods to collect and store cord blood for clinical use. In the laboratory we were able to set up the assays to identify and collect highly purified hematopoietic cells from the cord blood. The engraftment and expansion potential of the cord blood derived hematopoietic cells was studied in the immune deficient mice. Also these models were then used to develop assays for gene transfer in Fanconi Anemia. Currently, at Stanford my focus is to develop clinical research protocols to reduce toxicity from high doses of chemotherapy and radiation therapy, cellular therapies to reduce graft vs host disease, Graft manipulation to reduce complications from graft vs. host disease in patients who receive mismatched donor stem cells and develop cellular therapies to treat viral infections post transplant.

Throughout my academic career, I have maintained my interest and commitment in providing not only excellent patient care but to provide clinical research data which can be utilized to improve patient care at the end.

CLINICAL TRIALS

- Long Term Effects On Recipients of Hematopoietic Stem Cell Transplantation, Recruiting
- A Multicenter, Open-label Study of CMX001 Treatment of Serious Diseases or Conditions Caused by dsDNA Viruses, Not Recruiting
- Donor Umbilical Cord Blood Transplant With or Without Ex-vivo Expanded Cord Blood Progenitor Cells in Treating Patients With Acute Myeloid Leukemia, Acute Lymphoblastic Leukemia, Chronic Myelogenous Leukemia, or Myelodysplastic Syndromes, Not Recruiting
- Expanded Access Protocol to Provide Brincidofovir for the Treatment of Serious Adenovirus Infection or Disease, Not Recruiting
- Sirolimus and Mycophenolate Mofetil in Preventing GVHD in Patients With Hematologic Malignancies Undergoing HSCT, Not Recruiting

Publications

PUBLICATIONS

- **Invasive Fungal Disease in Pediatric Patients Undergoing Allogeneic Hematopoietic Stem Cell Transplant** *JOURNAL OF PEDIATRIC HEMATOLOGY ONCOLOGY*
Aftandilian, C., Weinberg, K., Willert, J., Kharbanda, S., Porteus, M., Maldonado, Y., Agarwal, R.
2016; 38 (7): 574-580
- **A Pediatric Case of T-Cell Prolymphocytic Leukemia** *PEDIATRIC BLOOD & CANCER*
Mitton, B., Coutre, S., Willert, J., Schlis, K., Porteus, M., Kharbanda, S., Agarwal-Hashmi, R.
2015; 62 (6): 1061-1062

- **A Reduced-Toxicity Regimen Is Associated with Durable Engraftment and Clinical Cure of Nonmalignant Genetic Diseases among Children Undergoing Blood and Marrow Transplantation with an HLA-Matched Related Donor.** *Biology of blood and marrow transplantation*
Mahadeo, K. M., Weinberg, K. I., Abdel-Azim, H., Miklos, D. B., Killen, R., Kohn, D., Crooks, G. M., Shah, A. J., Kharbanda, S., Agarwal, R., Kapoor, N.
2015; 21 (3): 440-444
- **Improved outcomes after autologous bone marrow transplantation for children with relapsed or refractory hodgkin lymphoma: twenty years experience at a single institution.** *Biology of blood and marrow transplantation*
Garfin, P. M., Link, M. P., Donaldson, S. S., Advani, R. H., Luna-Fineman, S., Kharbanda, S., Porteus, M., Weinberg, K. I., Agarwal-Hashmi, R.
2015; 21 (2): 326-334
- **A Multidisciplinary Care Team Perspective on Children's Emotional Experience in Isolation for Stem Cell Transplantation** *2015 BMT Tandem Meetings*
Savig, E. S., Gurevitch, J. H., Jackson, J. E., Malinowski, A., Ju, W. G., Leifer, L. J., Cohen, H. J., Sourkes, B. M., Agarwal-Hashmi, R.
2015: S180
- **Survival and neurocognitive outcomes after cranial or craniospinal irradiation plus total-body irradiation before stem cell transplantation in pediatric leukemia patients with central nervous system involvement.** *International journal of radiation oncology, biology, physics*
Hiniker, S. M., Agarwal, R., Modlin, L. A., Gray, C. C., Harris, J. P., Million, L., Kiamanesh, E. F., Donaldson, S. S.
2014; 89 (1): 67-74
- **Unrelated donor allogeneic hematopoietic stem cell transplantation for patients with hemoglobinopathies using a reduced-intensity conditioning regimen and third-party mesenchymal stromal cells.** *Biology of blood and marrow transplantation*
Kharbanda, S., Smith, A. R., Hutchinson, S. K., McKenna, D. H., Ball, J. B., Lamb, L. S., Agarwal, R., Weinberg, K. I., Wagner, J. E.
2014; 20 (4): 581-586
- **Cytokine and chemokine patterns across 100 days after hematopoietic stem cell transplantation in children.** *Biology of blood and marrow transplantation*
DiCarlo, J., Agarwal-Hashmi, R., Shah, A., Kim, P., Craveiro, L., Killen, R., Rosenberg-Hasson, Y., Maecker, H.
2014; 20 (3): 361-369
- **Newborn screening for severe combined immunodeficiency and T-cell lymphopenia in California: Results of the first 2 years** *JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY*
Kwan, A., Church, J. A., Cowan, M. J., Agarwal, R., Kapoor, N., Kohn, D. B., Lewis, D. B., McGhee, S. A., Moore, T. B., Stiehm, E. R., Porteus, M., Aznar, C. P., Currier, et al
2013; 132 (1): 140-U245
- **Pathological evidence of Wolman's disease following hematopoietic stem cell transplantation despite correction of lysosomal acid lipase activity** *BONE MARROW TRANSPLANTATION*
Gramatges, M. M., Dvorak, C. C., Regula, D. P., Enns, G. M., Weinberg, K., Agarwal, R.
2009; 44 (7): 449-450
- **Nontuberculous Mycobacteria Infections in Immunocompromised Patients Single Institution Experience** *JOURNAL OF PEDIATRIC HEMATOLOGY ONCOLOGY*
Wei, M. C., Banaei, N., Yakrus, M. A., Stoll, T., Gutierrez, K. M., Agarwal, R.
2009; 31 (8): 556-560
- **High-dose chemotherapy followed by stem cell rescue for high-risk germ cell tumors: the Stanford experience** *BONE MARROW TRANSPLANTATION*
Agarwal, R., Dvorak, C. C., Stockerl-Goldstein, K. E., Johnston, L., Srinivas, S.
2009; 43 (7): 547-552
- **Hematopoietic stem cell transplant for pediatric acute promyelocytic leukemia** *BIOLOGY OF BLOOD AND MARROW TRANSPLANTATION*
Dvorak, C. C., Agarwal, R., Dahl, G. V., Gregory, J. J., Feusner, J. H.
2008; 14 (7): 824-830
- **SAFETY OF HEMATOPOIETIC STEM CELL TRANSPLANTATION IN CHILDREN LESS THAN THREE YEARS OF AGE** *PEDIATRIC HEMATOLOGY AND ONCOLOGY*
Dvorak, C. C., Wright, N. B., Wong, W. B., Kristovich, K. M., Matthews, E. W., Weinberg, K. I., Amylon, M. D., Agarwal, R.
2008; 25 (8): 705-722
- **Optimization of conditioning for marrow transplantation from unrelated donors for patients with aplastic anemia after failure of immunosuppressive therapy** *BLOOD*
Deeg, H. J., O'Donnell, M., Tolar, J., Agarwal, R., Harris, R. E., Feig, S. A., Territo, M. C., Collins, R. H., McSweeney, P. A., Copelan, E. A., Khan, S. P., Woolfrey, A., Storer, et al

2006; 108 (5): 1485-1491

- **Use of intravenous mycophenolate mofetil for graft-versus-host disease prophylaxis in an allogeneic hematopoietic stem cell transplant recipient with an allergic reaction to cyclosporine and tacrolimus** *BONE MARROW TRANSPLANTATION*
Dvorak, C. C., Callard, E., Agarwal, R.
2006; 38 (3): 253-254
- **Risks and outcomes of invasive fungal infections in pediatric patients undergoing allogeneic hematopoietic cell transplantation** *BONE MARROW TRANSPLANTATION*
Dvorak, C. C., Steinbach, W. J., Brown, J. M., Agarwal, R.
2005; 36 (7): 621-629
- **High-dose therapy and autologous hematopoietic stem-cell transplantation for recurrent or refractory pediatric Hodgkin's disease: Results and prognostic indices** *45th Annual Meeting of the American-Society-for-Therapeutic-Radiology-and-Oncology (ASTRO)*
Lieskovsky, Y. E., Donaldson, S. S., Torres, M. A., Wong, R. M., Amylon, M. D., Link, M. P., Agarwal, R.
AMER SOC CLINICAL ONCOLOGY.2004: 4532-40
- **Continuous veno-venous hemofiltration may improve survival from acute respiratory distress syndrome after bone marrow transplantation or chemotherapy** *JOURNAL OF PEDIATRIC HEMATOLOGY ONCOLOGY*
DiCarlo, J. V., Alexander, S. R., Agarwal, R., Schiffman, J. D.
2003; 25 (10): 801-805
- **Antithrombin-III for the treatment of chemotherapy-induced organ dysfunction following bone marrow transplantation** *BONE MARROW TRANSPLANTATION*
Morris, J. D., Harris, R. E., Hashmi, R., SAMBRANO, J. E., Gruppo, R. A., Becker, A. T., Morris, C. L.
1997; 20 (10): 871-878
- **Retroviral transduction of CD34-enriched hematopoietic progenitor cells under serum-free conditions** *HUMAN GENE THERAPY*
Sekhar, M., Kotani, H., Doren, S., Agarwal, R., McGarrity, G., DUNBAR, C. E.
1996; 7 (1): 33-38
- **LONG-TERM CULTURE OF CHRONIC MYELOGENOUS LEUKEMIA MARROW-CELLS ON STEM-CELL FACTOR-DEFICIENT STROMA FAVORS BENIGN PROGENITORS** *BLOOD*
Agarwal, R., Doren, S., Hicks, B., DUNBAR, C. E.
1995; 85 (5): 1306-1312
- **SPLenic AND HEPATIC PELIOSIS - MR FINDINGS** *AMERICAN JOURNAL OF ROENTGENOLOGY*
MAVES, C. K., CARON, K. H., Bisset, G. S., Agarwal, R.
1992; 158 (1): 75-76