

Brief Biography of Prof. Pranela Rameshwar

Dr. Pranela Rameshwar is a professor of Medicine, Division of Hematology and Oncology at the Rutgers New Jersey Medical School. She received a B.S. degree in medical microbiology from the University of Wisconsin at Madison and a Ph.D. in biology from Rutgers University, New Jersey. Dr. Rameshwar continued her training as a postdoctoral fellow in hematopoiesis at New Jersey Medical School. Thereafter, she became a faculty member in the same department.

Dr. Rameshwar's main research interest is to translate the research findings on stem cell and cancer (breast and brain) to patients. Her lab is involved in developing methods to use adult stem cells for drug delivery, including treatment of glioblastoma. The laboratory also studies breast cancer dormancy in bone marrow, focusing on cancer stem cells and exosomes; neural regulation of hematopoiesis and the immunology of adult human mesenchymal stem cells. Current therapies for breast cancer do not target the 'sleeping' cancer cells in the bone marrow because the therapeutic dose was established to ensure hematopoietic stem cell protection, which is a tremendous advantage to the dormant cancer cells. Dr. Rameshwar's goal is to identify new targets that safely eliminate dormant cancer cells in bone marrow.

A major area of research in the Rameshwar group is to develop safe methods to reverse the aging bone marrow. The purpose is to reverse the incompetent immune system to one of competence. This will allow the aged to respond efficiently to vaccines, infection and to surveil for emerging cancer cells. The aging research has application to the evolving and exciting area of immune therapy.

Dr. Rameshwar has authored >200 publications, which include original articles, reviews, editorials and book chapters. She has also edited books. Dr. Rameshwar is also involved in teaching. She initiated a certificate program in Stem Cell Biology and, directs four graduate level courses in stem cell biology. Dr. Rameshwar is also a university Master Educator. Dr. Rameshwar has mentored several doctoral students, including those in the physician scientist track and junior faculty. She is an active member of several grant review panels both nationally and internationally. She has given numerous invited seminars at national and international forum. Dr. Rameshwar is editor in chief, associate editor and editorial board member of several journals.