Cancer Research & Treatment Fund, Inc.

CR&T™

CANCER SURVIVORS HALL OF FAME™

WINTER 2011

SMART DRUGS

USING NANOMATERIALS

by David Scheinberg, M.D., Ph.D.

The field of nanotechnology is now 50 years old and has begun to reach increasingly into the world of cancer diagnosis and therapy. Nanotechnology is the science of manipulating materials at the nanometer scale—that is 1 billionth of a meter. This is the scale at which the important enzymes, proteins and other biologic substances like DNA interact with each other within normal cells and cancer cells.

While nanomaterials have long been valued in the electronics industry in an effort to make ever smaller computer circuits, recognition that these novel materials might also be useful in the development of drugs has been more recent. In general, the nanomaterials, which may be composed of inorganic or organic materials such as metals, carbon or complex polymers, or which may be constructed from biologic materials such as lipids (fats), proteins or DNA, have been used as carriers of cancer diagnostic agents or therapeutic agents to confer new properties upon the agents. The new properties typically change where the drugs go inside a patient, thereby reducing toxicity.

There are already several FDA-approved anti-cancer agents that incorporate nano-materials. One example is Abraxane, for the treatment of breast cancer. Another is Doxil, for the treatment of ovarian cancer, myeloma and Karposi s sarcoma.

Because of the complexity of these new materials, some of them have new intrinsic properties which can be useful medically. For example, carbon nanotubes, which are long, thin, pure carbon rods, heat up when exposed to radiofrequencies and thus can be used to heat and kill tumors in this manner. Quantum dots, on the other hand, which are small spheres made of metal complexes, can be made to fluoresce with various different colors after exposure to light waves. In this way, these Q-dots can be used to diagnose different types of cancer cells in a pathology lab.

Metallic nano-particles have been constructed to enhance MRI scans of tumors. Still other materials are being constructed in various shapes and sizes to be used as cancer vaccines or to deliver gene therapies to cancer cells. One recent report used a polymeric nano-material that contained a protein that directed the nano-particle to the cancer cell and carry it inside, as well as a short stretch of RNA designed to shut down important genes within the cancer cell.

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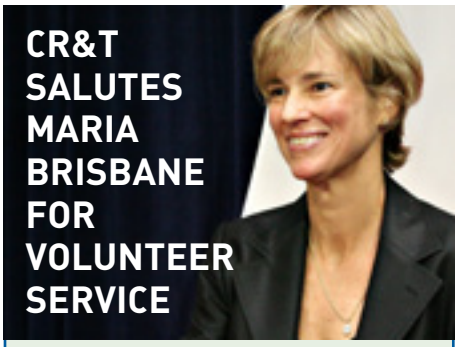


CR&T SALUTES MARIA BRISBANE FOR VOLUNTEER SERVICE

The Cancer Research & Treatment Fund is proud to recognize Maria Brisbane for her dedicated service in helping CR&T become a valuable resource in the fight against cancer. A board member for just a few short years, Maria has demonstrated her leadership in ensuring that CR&T continues to support state-of-the-art research that leads to effective treatments for cancer.

Most recently, Maria was co-chair of the Cancer Survivors Hall of Fame, our annual gala that provides funds for research that can lead to major breakthroughs not only in the future but today. A special thanks to Maria for helping make this event a wonderful success.

Maria is a Private Wealth Advisor at Merrill Lynch with over 20 years of experience in portfolio management. She also has extensive success in managing a specialized mutual fund for investment in biotechnology companies.

Maria resides in New York City with her husband, Wallace Henderson. They have a 12 year old daughter, Olivia, and a 9 year old son, Ian.

Please join us in recognizing Maria Brisbane for her commitment to our fight against cancer.

David Boule & Maria Brisbane
Dinner Co-Chairs

Ouidad
Cancer Survivor Honoree

Richard J. Rose
Humanitarian Honoree

Anne Moore, M.D.
Lifetime Achievement Honoree

CANCER SURVIVORS HALL OF FAME

CANCER RESEARCH & TREATMENT FUND held its 2010 Hall of Fame Dinner on November 16th at The Essex House where guests gathered to applaud the evening's honorees.

OUIDAD was inducted into the Cancer Survivors Hall of Fame. This award honored Ouidad because of her spirit and determination in conquering cancer and for inspiring those who struggle with their own disease. Ouidad "the Queen of Curl" is an internationally recognized stylist, salon owner, author, mother and a global educator who became a leader in the beauty industry all the while battling, treating and surviving cancer. Ouidad continues to support breast cancer research.

RICHARD J. ROSE was recognized as the 2010 Humanitarian Honoree. This award highlights an outstanding individual for charitable activities that significantly impact the lives of others and their community. Richard has served as a dedicated member of the Board of Directors of the Cancer Research & Treatment Fund for 17 years and as President of the Board from 1994 to 2008. During that time, Richard's extraordinary commitment of time and resources have been a driving force in fighting cancer.

ANNE MOORE, M.D., was honored with the Lifetime Achievement Award. Dr. Moore is Professor of Clinical Medicine and Medical Director of the Breast Oncology Program at Weill Cornell Medical College. At the Weill Cornell Breast Center, she continues her dedicated work in every aspect of breast cancer from research to risk factors, diagnosis and treatment of the disease. Dr. Moore's dedication to research, teaching and patient care were celebrated with this honor, and we are thankful for her ongoing and outstanding contributions to fighting cancer. Dr. Moore is a member of the CR&T Advisory Board.

The Hall of Fame celebrates unique individuals for their dedication and support and for moving us closer to a cure for cancer. A special thanks to our dinner co-chairs, **MARIA BRISBANE** and **DAVID BOULE** for making this evening a wonderful success.

Douglas McCormick, Richard Rose, Ouidad, Dr. Anne Moore & Dr. Richard T. Silver

Dr. Anne Moore accepting Lifetime Achievement Award

Ouidad, and Husband, Peter Wise

MC, Raphael Miranda, WNBC-TV

Kasia McCormick, CR&T Board, and Ann Hampton Callaway, Soloist

Dr. Silver presents Humanitarian Award to Richard Rose

Douglas McCormick, CR&T Board President

SAVE THE DATE

CANCER SURVIVORS HALL OF FAME™

Cancer Survivors Hall of Fame Dinner

Tuesday, November 15, 2011

Essex House
160 Central Park South,
New York City

SAVE THE DATE

6th International Patient Symposium on Myeloproliferative Diseases

NOVEMBER 2, 2011

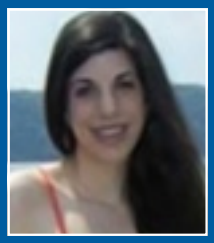
Location: The University Club
One West 54th Street
New York, NY 10019

Sponsored by:
Cancer Research & Treatment Fund and The MPD Foundation

RECOGNIZING CR&T RESEARCH PERSONNEL

Katherine Vandris, BA, is the Myeloproliferative Disorders (MPD) Program Specialist at New York Presbyterian Hospital-Weill Cornell Medical College (NYPH-WCMC) in the Department of Medicine and the Division of Hematology and Medical Oncology. Under the direction of Dr. Richard T. Silver, she serves as the primary MPD clinical research associate, collaborating with other departments and medical centers to provide detailed research analyses for publications and presentations involving the myeloproliferative disorders.

During her five years at NYPH-WCMC, Ms. Vandris has developed and maintained the MPD program database, has been involved in MPD clinical trial protocol development and management, and has been a co-author on several MPD publications. She also supervises and mentors other MPD clinical research associates, and coordinates the various activities of the MPD program. Ms. Vandris is currently pursuing post-baccalaureate pre-medical certification at Hunter College, CUNY, while working full-time, and is planning to apply to medical school in the near future.



William Chow recently graduated with a BS in biology from Carnegie Mellon University, and is the data control assistant in the Department of Medicine- Hematology/ Oncology at Weill Cornell Medical College.

William previously did research at the University of Pittsburgh Cancer Institute (UPCI) where he worked on Human Herpesvirus-8 (HHV-8). His project studied the effects of estrogen on HHV-8 to determine whether there was any hormonal regulation of this virus. William found two estrogen response elements (EREs) in the promoter region of a key regulatory gene.

William now works for the Leukemia and Myeloproliferative Center of Weill Cornell Medical Center. His recent project deals with improving the current criteria for diagnosing the different myeloproliferative diseases as suggested by the World Health Organization (WHO).

SMART DRUGS

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This latter example illustrates another feature of these new nanomaterial drugs: They are not simply small molecules that blindly distribute throughout the body killing both normal and cancer cells, but instead have multiple functions such as the ability to target the tumors, the ability to kill the tumors, and in some cases, simultaneously, the ability to report back via an imaging modality where the drug has gone (such as through a PET Scan or MRI scan).

The National Cancer Institute has recently awarded a large amount of funding to develop this generation of smart drugs based on nanomaterials and we expect over the next several years to see more of these agents enter human clinical trials. The Cancer Research & Treatment Fund has awarded Dr. Scheinberg a grant to continue this vital research.

Cancer Research & Treatment Fund Leadership

Cancer Research and Treatment Fund, Inc,
is a non-profit group of physicians, nurses, and other medical professionals dedicated to research for the treatment of cancer and other blood diseases.
Richard T. Silver, MD FACP founded CR&T in 1968.

Dr. Silver is Professor of Medicine and Director of the Leukemia and Myelpro - liferative Center at Weill Medical College at Cornell University. He is Attending Physician at New York Presbyterian Hospital/Weill-Cornell Medical Center.

Cancer Research & Treatment Fund
500 East 77th Street, Suite 1001
New York, NY 10162

Telephone: (212) 288-6604
Fax: (212) 288-7704

Web Site: www.crt.org

Richard T. Silver, MD FACP
Medical Director

Michael R. Wargo,
Vice President of Development