



Interview with Scott Lowe, Chair of the Geoffrey Beene Cancer Research Center

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Message from the Chief Executive, Geoffrey Beene Foundation



I could not be more proud of the enormous progress in cancer research that has been made at the Geoffrey Beene Cancer Research Center. This year I am honored to welcome Dr. Scott Lowe as our new Chair and to congratulate the newly appointed Junior Faculty Chair, Dr. Ping Chi.

I am pleased to report that the total value of combined funding to the Geoffrey Beene Cancer Research Center, from Geoffrey Beene, now exceeds \$120 million since its creation at Memorial Sloan-Kettering Cancer Center in 2006. In addition, for every dollar awarded by Geoffrey Beene Cancer Research Center, grant recipients have received an additional \$1.64 in follow-up funding. This equates to a 64% return on the investment (ROI) on these innovative research initiatives, directly attributed to funding from Geoffrey Beene. Through 2011 there have been 53 initial-stage research grants and seven shared resource awards benefiting research across the MSKCC community.

The outstanding presentations at the 2011 Geoffrey Beene Cancer Research Center Retreat and the Geoffrey Beene Cancer Research Center Symposium were an inspirational showcase and tribute to the dedication of our doctors, scientists, and lab members who continue to make cancer a more manageable and survivable disease.

Every year, we are heartened by the breakthroughs at the Geoffrey Beene Cancer Research Center. You are all to be congratulated on your shared research vision made possible by your expertise, passion, and persistence to end suffering across all cancers.

Thank you.

G. Thompson Hutton



How did you become interested in scientific research?

I was always interested in science throughout school. During college I was inspired by classes in biochemistry and genetics and was fortunate to do research in a lab focusing on hypercholesterolemia. My advisor gave me the opportunity to design and conduct my own experiments, and the experience made me sure I wanted to be a researcher addressing problems of medical relevance.

Tell me about your lab and the current projects you are focusing on.

Broadly, my laboratory focuses on cancer biology and genetics, with specific focus on how genetic alteration in cancer cells influences the process of malignant transformation, or how normal cells become cancer cells. We are most interested in a class of genes known as tumor suppressors, which when functioning normally can prevent cell proliferation through apoptosis (cell suicide) or senescence (a permanent arrested state) but becomes disabled in cancer. We also study genes required for tumor maintenance – that is, genes that are necessary for the proliferation and survival of cancer cells. If a tumor maintenance gene is inhibited, the cancer cell dies or stops proliferating. These genes encode molecules that are potential drug targets.

How important is the continued support of the Geoffrey Beene Foundation to your projects, as well as to the goals of the institution?

The keys to modern research are flexibility and interaction. Funds from the Foundation go a long way to advance research at MSKCC by addressing these

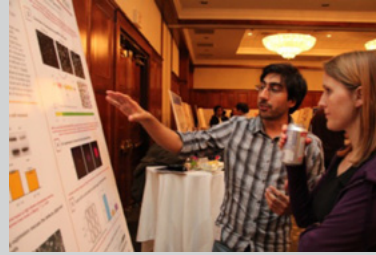
needs. For example, they give MSKCC investigators the opportunity to test innovative ideas quickly, at an early stage when traditional grant support would be difficult to obtain. In my own laboratory, these funds have helped us develop more-rapid ways to functionally characterize cancer genes. In addition, through its grants program, symposium, and retreat, the Foundation helps facilitate interactions between groups – which is crucial in the modern age where it is impossible for any one lab to be expert in everything. For my own research, Beene Foundation support has enabled us to develop new approaches for identifying cancer drug targets; it will also allow us to disseminate a technology for studying gene function, called RNA interference, throughout the institute.

What were some highlights of the 2011 Geoffrey Beene Cancer Research Center Retreat?

The retreat brought faculty, clinicians, students, and postdocs together for one and a half days of science and interaction and, in my view, was an enormous success. Highlights include outstanding presentations from MSKCC investigators, including a session on new imaging approaches. Jacqueline Lees of the Koch Institute at MIT gave a well-received presentation regarding tumor suppressor mutations. Charles Sawyers and Larry Norton had a good-natured debate on the topic of drug development. There was also time for posters and socializing, with new collaborations initiated and ideas generated.

How has being the Chair of the Geoffrey Beene Cancer Research Center affected your experience here at MSKCC?

The Beene Center provided me with an avenue to get to know MSKCC scientists and clinicians shortly after my arrival. These interactions have enabled me to learn about the science and resources at MSKCC quickly and to initiate collaborations in new areas. This has been very exciting. Also, it has been rewarding to have some small part in facilitating the broader research goals of the institution.



During 2011, the Geoffrey Beene Cancer Research Center (GBCRC) hosted multiple events that invited researchers from the MSKCC community and outside institutions to engage in meaningful collaborations that would translate into new and exciting research proposals. The annual Geoffrey Beene Cancer Research Retreat was held in mid-May at the scenic Skytop Lodge in Skytop, PA. More than 180 researchers gathered to collaborate and review results from the most current and compelling experiments taking place at MSKCC. In addition to the numerous presenters at the two-day retreat, the GBCRC was proud to host Jacqueline Lees, PhD, of the Koch Institute as a guest speaker.

The 2011 Geoffrey Beene Cancer Research Symposium, held on October 12th, hosted three leaders in the field of epigenome. Michelle Barton, PhD, James Bradner, MD, and Peter Laird, PhD, gave well-received presentations followed by Q&A sessions. Prior to the start of the event, Tom Kelly presented three graduate students — Jenny Karo, Gregory Mazo, and Robert Bowman — with Geoffrey Beene Graduate Fellowships, which will provide full stipends during the course of their studies. We were delighted to have the new chair of the Geoffrey Beene Cancer Research Center, Scott Lowe, on hand at both the Symposium and Annual Retreat.





Robert Klein, PhD
Project: Transcriptional Regulatory SNPs as a Mechanism for Prostate Cancer Risk Loci



Andrea Ventura, MD, PhD
Project: Investigating the miR-34 Family of Tumor Suppressor MicroRNAs



Michael Berger, PhD
Project: High-Throughput Profiling of Genomic Alterations in Clinical Tumor Specimens



Marcel van den Brink, PhD
Project: Endothelial Precursor Cells in Allogeneic Bone Marrow Transplant during Graft-versus-Host Disease and Graft-versus-Tumor Activity



Jason Lewis, PhD
Project: Development of 89Zr-5A10 for the Measurement of AR Signaling in Advanced Prostate Cancer with Positron Emission Tomography



Simon Powell, MD, PhD
Project: Genomic Determinants of Radiosensitivity



Moritz Kircher, MD, PhD
Project: Combined Pre- and Intraoperative Brain Tumor Imaging Using a Novel Dual-Modality Raman-MRI Nanoparticle Probe



Eric Holland, MD, PhD
Project: Understanding Clonal Evolution and Heterogeneity of the Therapeutic Response by Lineage Tracing in Mouse Models of Glioma



Paul Paik, MD
Project: Squamous Cell Carcinoma of the Lung Mutation Analysis Program (SQC-MAP)



Sarat Chandralapaty, MD, PhD
Project: Targeting AKT Inhibitor-Induced Feedback Signaling in Breast Cancer

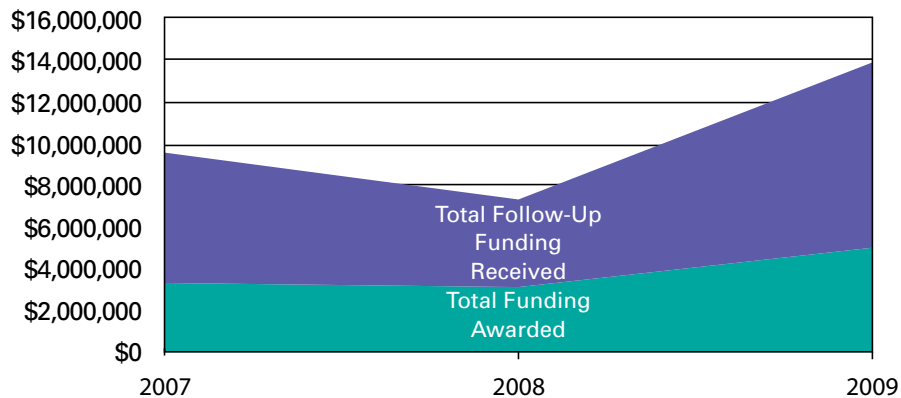


Xuejun Jiang, PhD
Project: Mechanism and Therapeutic Potential of PTEN Regulation upon Hypoxia

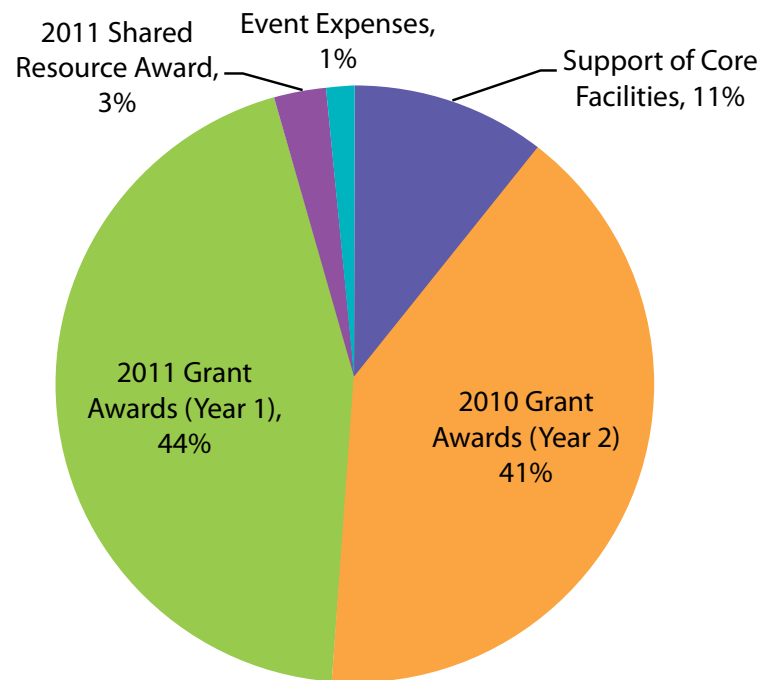
To learn more about a researcher, click his picture

Each year the Geoffrey Beene Cancer Research Center’s Executive Committee reviews submissions of innovative research proposals, which consist of projects that generally do not qualify for other sources of funding. This highly competitive review process awards grants to the most compelling and profound ideas proposed by researchers from the MSKCC community. After completion of the funded project, grant recipients have gone on to develop their novel ideas and apply for further grants from external sources. Since 2007, for every dollar of direct support from the GBCRC, grant awardees received an additional \$1.64 in follow-up funding from external sources based on the early-stage ideas supported by the GBCRC.

Follow-Up Funding Received from GBCRC Grant Recipients



2011 GBCRC Operating Expenses



With the continued support from the Estate of Geoffrey Beene the GBCRC funded a total of 12 new research grants in 2011. In total more than 85% of the GBCRC’s 2011 operational expenses funded the grant award program. The GBCRC continues to support the Geoffrey Beene Translational Oncology Core Facility, which focuses on the genomic analysis of clinical materials by using cutting-edge profiling technologies. In the effort to bring novel technologies to MSKCC, the GBCRC continues to fund annual shared resource awards; these awards give investigators access to utilize the most-advanced technologies needed for their research.



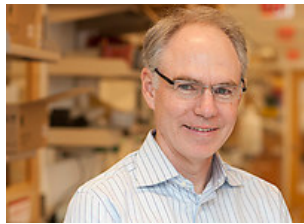
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Chair, Geoffrey Beene Cancer Research Center



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Deputy Physician-in-Chief, Breast Cancer Programs



Craig B. Thompson, MD
President, Memorial Sloan-Kettering Cancer Center



Charles L. Sawyers, MD
Chair, Human Oncology and Pathogenesis Program



James P. Allison, PhD
Immunology Program, Sloan-Kettering Institute



David A. Scheinberg, MD, PhD
Chair, Molecular Pharmacology and Chemistry Program



Thomas J. Kelly, MD, PhD
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Robert E. Wittes, MD
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To learn more about a member, click their picture