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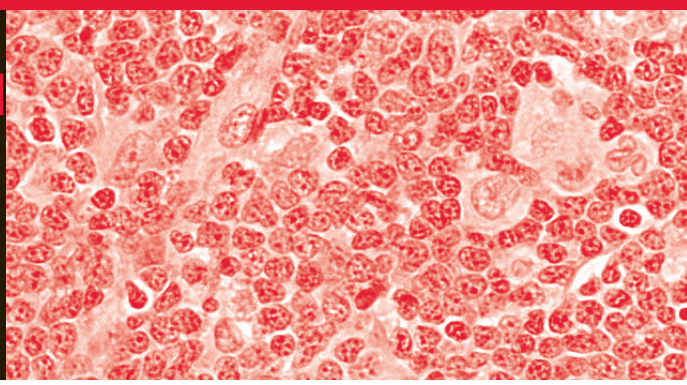
RESEARCH Report



LRF Awards 1.3 Million in Research and Training Grants

LRF Clinical Research Mentoring Program (LCRMP) faculty and LRF Scholars attend the 2015 LCRMP Workshop in Scottsdale, Arizona.

The Lymphoma Research Foundation (LRF) recently announced its 2015 grant class, encompassing seventeen grants in research and training, totaling $1.3 million. The 2015 class includes grantees in LRF's established Young Investigator Grants program as well as the inaugural grant in a new Disease Focus-Area program for research focusing on adolescent and young adult lymphomas.

"The Lymphoma Research Foundation is dedicated to eradicating lymphoma through our robust research portfolio; we are proud that we not only attract the best lymphoma investigators, but that we are able to fund them and accelerate their careers toward discovering improved therapies," said Meghan Gutierrez, Chief Executive Officer of the Lymphoma Research Foundation. "Just as critical to the total funding amount is the breadth of focus towards which we are now able to dedicate resources; our focus remains on providing hope to patients, families, and caregivers, and with this grant funding, we are able to do just that."

Adolescent/Young Adult Lymphoma Cooperative Group Correlative Studies Grant

LRF's inaugural Disease Focus-Area grant in Adolescent and Young Adult (AYA) lymphoma supports research adjunct to major clinical trials from the National Cancer Institute (NCI) Cooperative Groups. Although these trials frequently include patients in the AYA population (defined as ages 15-39), basic funding often does not allow for correlative studies to focus specifically on this population, which has been understudied compared to children and older adults. The AYA Cooperative Group Correlative Studies Grant awards $100,000 over two years to David Scott, MBChB, PhD, of the British Columbia Cancer Agency, who is leading a correlative study derived from a multi-institutional clinical trial in Hodgkin lymphoma. For more on Dr. Scott, his project, and LRF's multi-faceted AYA Initiative, see page 3.

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"The Lymphoma Research Foundation is dedicated to eradicating lymphoma through our robust research portfolio."

FEATURED IN THIS ISSUE: Profiles of LRF's Newest Grantees Page 3

LRF's 2015 grantees, including David Scott, MBChB, PhD, the inaugural recipient of the Adolescent/Young Adult Lymphoma Cooperative Group Correlative Studies Grant, discuss their LRF-funded projects and commitment to lymphoma research.

LETTER FROM THE CEO

Dear LRF Friends and Supporters,

We are pleased to bring you the first issue of our redesigned Research Report. The new format increases our focus on the Lymphoma Research Foundation's (LRF) research and scientific programs, contributions to the field made by LRF grantees and scientific advisors, and the impact made by our supporters. Every edition of Research Report will be available online at lymphoma.org/researchreport; I encourage you to share it with others who would be interested in this publication. I also welcome your thoughts on this redesign, and what you would like to see in future issues. Please email me at mgutierrez@lymphoma.org with your ideas.

This edition of Research Report introduces us to LRF's 2015 research grantees, including our largest ever class of Clinical Investigator Career Development Award (CDA) recipients and our first senior investigator award in Adolescent and Young Adult (AYA) lymphoma. Profiles of our AYA, CDA, and Fellowship grantees may be found throughout this issue, beginning on page 3. The second year of our LRF Clinical Research Mentoring Program (LCRMP) began with a comprehensive, weeklong training workshop in Scottsdale, Arizona. The workshop has already proven to be an inspiring and energizing event for all involved; coverage of the workshop begins on page 8.

The grant programs and scientific progress highlighted in the pages of this issue would not be possible without your support. We are continually grateful for the efforts of our donors, volunteers, and scientific advisors. Thank you for everything you do to support our shared mission, to eradicate lymphoma and serve those touched by this disease.

Sincerely,

Meghan Gutierrez
Chief Executive Officer

LRF Research and Training Grants

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Young Investigator Grants

A cornerstone of LRF's grants portfolio, the Young Investigator Grants have supported early career scientists since the organization's founding in the form of Postdoctoral Fellowship Grants. In 2002 the Clinical Investigator Career Development Award (CDA) was added to the Young Investigator portfolio, and in 2014 the portfolio expanded to a training component with the LRF Clinical Research Mentoring Program (LCRMP), which provides hands-on career development and networking opportunities to early career scientists. In a funding environment where funding for junior research positions is increasingly scarce, the salary support provided by the Career Development Awards and Postdoctoral Fellowships is vital to many of these recipients, while the guidance provided through the Clinical Research Mentoring Program will help its participants launch their careers as independent researchers with a strong support network and crucial professional skills.

Clinical Investigator CDAs were awarded to Anita Kumar, MD of Memorial Sloan Kettering Cancer Center, Kami Maddocks, MD of The Ohio State University Comprehensive Cancer Center, and Rayne Rouce, MD of Texas Children's Cancer and Hematology Centers and Baylor College of Medicine. The CDA seeks to support clinical researchers within five years of the completion of their postdoctoral training. Grantees must spend at least 35 percent of their time in independent clinical research and receive $225,000 over three years for salary support, professional development, and research expenses. This year's three awardees mark the largest class of CDA recipients in LRF's history. Profiles of these investigators begin on page 4.

Five Postdoctoral Fellowships were awarded to Andrea Rabellino, PhD of University of Texas Southwestern Medical Center, Martin Rivas, PhD of Weill Cornell Medical College, Eric Smith, MD, PhD of

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David Scott, MBChB, PhD
British Columbia Cancer Agency
Vancouver, Canada
AYA

Classical Hodgkin lymphoma (c-HL) is one of the most common cancers in adolescents and young adults. Currently there are two main chemotherapy regimens used to treat patients, the standard chemotherapy ABVD (doxorubicin, bleomycin, vinblastine, and dacarbazine) and the more intense alternative escBEACOPP (escalated doses of bleomycin, etoposide, doxorubicin, cyclophosphamide, vincristine, procarbazine, and prednisone). Though most patients will be cured with ABVD, 25-30 percent of patients will relapse and require further treatment. Meanwhile, escBEACOPP cures a higher rate of patients but also has greater side effects, including infertility. Clinical trials are testing an approach that will evaluate patients with a PET scan after two cycles of ABVD to identify patients that may benefit from switching to escBEACOPP – a "response-adapted" approach. "With the expectation that the majority of patients are cured, it is important to minimize the short- and long-term side effects of treatment in this age group," Dr. Scott says. Dr. Scott and his colleagues will determine whether decisions about switching to more aggressive therapies can be brought forward to the time of diagnosis. "This project will provide tests at diagnosis to tailor treatment, allowing the avoidance of the increased side effects in the majority of patients, while identifying those patients where more aggressive chemotherapy is required to effect a cure."

Dr. Scott is the first grantee in LRF's Adolescent/Young Adult (AYA) Lymphoma Cooperative Group Correlative Grant program, part of a multi-faceted AYA Initiative the Foundation launched in 2014 which aims to assist young lymphoma patients in addressing the medical challenges, psychosocial needs and access issues they may encounter by providing expert materials and programs, while emphasizing the need for accurate and timely diagnosis. The grant is supported by the Initiative's founding sponsor, The Paul Foundation. National sponsors for the entire AYA Initiative include The Ferriday Fund Charitable Trust, Genentech, and Teva Oncology. Dr. Scott notes that the LRF grant "is providing the crucial support and funding that will allow this research to be performed and the findings presented to other researchers and clinicians."

Dr. Scott is currently a clinician-scientist at the British Columbia (BC) Cancer Agency and an Assistant Professor at the University of British Columbia. His interest in medical research began at a young age "where I saw that I could combine my interest with science with caring for patients." Though his studies for his PhD from the University of Auckland, New Zealand, focused on diabetes research, Dr. Scott found himself drawn to "the challenge" of researching better treatments for lymphoma, completing fellowships with the Royal College of Pathologists of Australasia (FRCPA) and Royal Australasian College of Physicians (FRACP) in hematology before moving to British Columbia. "Unbelievably, after this decision (to study lymphoma), my older brother was diagnosed and eventually succumbed to an aggressive form of T-cell lymphoma," Dr. Scott says. "The combination of these experiences provides powerful motivation to make a positive impact on the lives of patients with lymphoma."

LRF Research and Training Grants

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Memorial Sloan Kettering Cancer Center, Matthew Walker, PhD of the University of North Carolina at Chapel Hill, and Jiyuan Zhang, PhD of Columbia University Medical Center. Fellowship grants support investigators in the last years of their fellowships and first two years of their first faculty positions who spend at least 80 percent of their time in research. Grantees receive $105,000 over two years for salary support, professional development, and research expenses for projects that study lymphoma in either the clinic or laboratory. Profiles of these investigators begin on page 5.

The second class of the LCRMP includes eight LRF Scholars who will receive grants of $10,000 over two years in addition to hands on mentoring and professional development opportunities. This year's class includes Scholars from three institutions – Rush University, the University of Virginia, and Virginia Commonwealth University – receiving their first ever grant from LRF. The Scholars participated in a week-long training workshop the last week of February; for more on this program see page 8.

"The Lymphoma Research Foundation's Scientific Advisory Board was pleased to see the scale and scope represented by this year's grant applications," said Dr. John P. Leonard, Chair of LRF's Scientific Advisory Board and the Richard T. Silver Distinguished Professor of Hematology and Medical Oncology and Associate Dean for Clinical Research at Weill Cornell Medical College. "The Foundation's commitment to lymphoma research has helped to significantly advance the field and the knowledge that is sure to come out of this year's recent round of funding has untold potential for impact on the lymphoma community going forward."

NEW GRANTEE PROFILES

Anita Kumar, MD
Memorial Sloan Kettering Cancer Center
CDA

The oral targeted agent ibrutinib (Imbruvica), approved by the U.S. Food and Drug Administration (FDA) in several B-cell lymphomas over the last 18 months, continues to intrigue researchers in other lymphoma subtypes. Meanwhile, existing treatments for relapsed and refractory peripheral T-cell lymphoma (PTCL) have only moderate 20-40 percent overall survival rates. "These are unacceptably poor survival rates despite existing therapies, and there remains an urgent need for new treatments in [relapsed/refractory PTCL]," Dr. Kumar says. Her LRF-funded project is a phase I study of ibrutinib in this patient group, seeking to both establish an optimal dose level and measure preliminary effectiveness. "In addition, the study will improve our understanding of T-cell lymphoma biology by characterizing the impact of ibrutinib on the immune environment and the T-cell receptor pathway, an important pathway for the growth and activation of T-cells."

Dr. Kumar, currently an Assistant Attending Oncologist at Memorial Sloan Kettering Cancer Center (MSKCC) and an Instructor at Weill Cornell Medical College, received her MD from the Feinberg School of Medicine at Northwestern University before completing her internship and residency at Brigham and Woman's Hospital in Boston. Initially intending to become a cardiologist, Dr. Kumar says, "during my first oncology rotation, I was awed by the courage, resilience, and kindness of the patients on the inpatient service and found it deeply rewarding and humbling to be able to contribute to their care." Her attending during that first rotation was Dr. Ann LaCasce, herself an LRF CDA winner and now a member of LRF's Scientific Advisory Board, which helped draw Dr. Kumar's interest toward lymphoma research, an interest that developed further when she began her fellowship under Dr. Craig Moskowitz (also an LRF SAB member) at MSKCC. "Both Drs. LaCasce and Moskowitz showed me compelling examples of careers that juxtapose the care of patients with clinical research," Dr. Kumar says.

In 2014, Dr. Kumar was a member of the inaugural class of the LRF Clinical Research Mentoring Program (LCRMP), which she credits with strengthening her research and professional development. "[Participating in] LCRMP has facilitated ongoing research collaborations and mentoring with leaders in lymphoma research across the country," she says. She hopes the protected time afforded her by her CDA will help her transition to a career as an

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Kami Maddocks, MD
The Ohio State University Comprehensive Cancer Center
CDA

The possibility of chemotherapy-free treatment regimens, particularly in B-cell lymphomas, is a fast-growing area of clinical research. Dr. Maddocks' project seeks to compare a regimen of chemotherapy agents with targeted therapy called BRI – bendamustine, rituximab (Rituxan), and ibrutinib (Imbruvica) – to a non-chemotherapeutic regimen of lenalidomide (Revlimid) with rituximab and ibrutinib (LRI), followed by maintenance therapy with rituximab and ibrutinib for patients with mantle cell lymphoma (MCL). The standard of care for this patient population is currently a more aggressive chemotherapy regimen followed by autologous stem cell transplant. "The goal is to see if these newer, less intensive, less toxic therapies can achieve similar outcomes to those more aggressive (and toxic) therapies," Dr. Maddocks says, "I am also looking at biologic factors associated with response to therapy and mutations associated with patients who don't respond to therapy or progress on therapy."

Dr. Maddocks is an Assistant Professor of Clinical Internal Medicine at The Ohio State University. She received her MD from the University of South Dakota in Sioux Falls before completing her residency at the Mayo Clinic in Minnesota and her fellowship at Ohio State. She became interested in lymphoma while on a hematology inpatient rotation as a resident; while in her fellowship, she became specifically interested in MCL after witnessing the number of patients who relapsed following then standard treatments. "Research to further improve the outcomes of the treatment of this disease became of interest to me, especially given the potential improved outcomes in other lymphomas," Dr. Maddocks says. She notes that her CDA will allow her to pursue her desired research in MCL. "The support of LRF will allow me some of the time and resources necessary to pursue this clinical trial and the studies associated with it."

Dr. Maddocks credits both her mentor, LRF Scientific Advisory Board member Dr. Kristie Blum, and her patients with inspiring her research. "My patients provide my daily inspiration to continue my research in developing clinical trials to treat lymphoma with newer targeted therapies that are effective and less toxic," she says. She notes that newly diagnosed patients should make sure they look into the therapies and recommendations for their specific subtype. "You cannot always apply what you hear from others or read about to your type of lymphoma," she says, adding, "many of the different lymphomas

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Rayne Rouce, MD
Texas Children's Cancer and Hematology Centers/ Baylor College of Medicine
CDA

The Epstein-Barr virus (EBV), is an immune disorder that can lead to the development of lymphoma. Approximately 30 percent of Hodgkin and non-Hodgkin lymphoma patients have tumors infected with EBV, expressing proteins of the virus on the tumor surface. Dr. Rouce and her colleagues have developed a method of "training" a patients' own T cells (a crucial part of the human immune system) to target these viral proteins, thus killing the lymphoma tumors. "However," Dr. Rouce notes, "the manufacture of these T cells is lengthy, costly, and very complex, and sometimes impossible in patients who have received chemotherapy." In order to circumvent these problems, Dr. Rouce and her colleagues seek to create a bank of third party "trained" T cells acquired from healthy individuals, which can then be administered to ill patients in a more efficient, cost-effective method. "We have the potential to revolutionize the treatment of lymphoma, since this strategy is simple, inexpensive and could ultimately be used up front [as an alternative to more toxic front-line therapies]," she says.

Currently an Instructor of Pediatric Hematology/Oncology at Baylor College of Medicine and Texas Children's Cancer and Hematology Centers, Dr. Rouce received her MD from the University of Texas Medical Branch in Galveston, where she also completed her residency before beginning her fellowship at Baylor. As a third year medical student, Dr. Rouce encountered her first patient with Hodgkin lymphoma, and learned that, though effective, the treatment itself could result in a number of secondary side effects. "From that moment on, I decided that there was no better career choice for me than oncology," Dr. Rouce says, "and that I would specifically work to find more effective, less toxic therapies for patients with lymphoma." During her fellowship, she became interested in immunotherapies and the resistance some patients develop to these treatments. "I therefore set out to create an immunotherapy option that would be made available to any patient with EBV + lymphoma for use at essentially any time."

Dr. Rouce adds that her CDA provides "instrumental" support for her research. "This protected time will also allow me to continue to optimize the translational aspects of my project, which could potentially be used in the design of numerous other therapeutic models for treatment of lymphoma." She further notes that her patients provide her with inspiration to keep working. "Not a day

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Andrea Rabellino, PhD
University of Texas Southwestern Medical Center
FELLOWSHIP

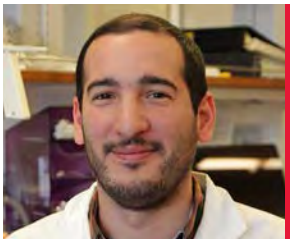
The regulator gene c-MYC plays an important role in cell cycle progression but, when overexpressed, has been found to be overactive in several types of cancers, including B-cell lymphomas. This overexpression can help lymphoma cells to avoid cell death and continue to grow. Dr. Rabellino and his colleagues have identified a protein, PIAS1, which has a cooperative relationship with c-MYC and may be responsible for its deregulation. For his LRF-funded fellowship, Dr. Rabellino will study the mechanism by which PIAS1 regulates c-MYC activity in hopes of better understanding how the relationship contributes to lymphoma growth. Moreover, since his preliminary studies have shown that PIAS1 inhibition slows cell growth and replication in *in vitro* models of B-cell lymphomas including diffuse large B-cell lymphoma (DLBCL) and Burkitt's lymphoma, it is possible this line of research may lead to additional targeted therapies.

Currently an Assistant Instructor at the University of Texas (UT) Southwestern Medical Center in Dallas, Dr. Rabellino received an MS in molecular biology and biochemistry and a PhD in tumor biology from the University of Genoa in Italy before coming to UT Southwestern to begin his postdoctoral work. Although he worked on other types of cancers during his studies, Dr. Rabellino was drawn to lymphoma research because of the poor survival rates and incurable nature of many lymphoma subtypes. "I think we need to improve the treatment in order to fight back this devastating disease," he says.

Dr. Rabellino notes that his LRF fellowship grant will allow him to finish his studies on the role of PIAS1 in c-MYC activation, as well as contribute to the development of new therapies for B-cell lymphomas. "My career goal is to contribute to the understanding of the mechanisms that lead to lymphoma development and to harness them for the development of innovative anti-cancer strategies," he says. "The Lymphoma Research Foundation fellowship grant will give me the fantastic opportunity to pursue cutting edge in cancer research and greatly contribute to reaching my goals."

"The LRF fellowship grant will give me the fantastic opportunity to pursue cutting edge cancer research."

NEW GRANTEE PROFILES



Martin Rivas, PhD
Weill Cornell Medical College
FELLOWSHIP

Chromosomal topology, the way chromosomes bend and interact with each other, is critical to the normal growth of B lymphocytes. These chromosomal interactions take place with the help of cohesin complex proteins. In diffuse large B-cell lymphoma (DLBCL) and follicular lymphoma (FL), these proteins are often found to be altered, suggesting that their mutation may contribute to the transformation from a normal B-lymphocyte to a lymphoma cell. Dr. Rivas' LRF fellowship project studies how cohesin complex proteins affect DLBCL and FL development. "We think it can provide novel explanations and a different level of understanding… that have the potential to result in absolutely new strategies to treat and cure patients suffering from this disease," Dr. Rivas says.

Currently a postdoctoral associate at Weill Cornell Medical College, Dr. Rivas' interest in cancer biology began during his undergraduate studies in his native Argentina, where he studied breast cancer. After completing his MSc in biology and his PhD in biological chemistry at the University of Buenos Aires, Dr. Rivas did postdoctoral work at the Institute of Biology and Experimental Medicine in Argentina and Vall d'Hebron Institute of Oncology in Spain, where he worked in biomarker identification and experimental therapeutics. After becoming interested in lymphomagenesis and epigenetics, Dr. Rivas joined the lab of Dr. Ari Melnick (an LRF SAB member) at Weill Cornell. He credits Dr. Melnick as a role model and inspiration for his work, along with his undergraduate mentor Dr. Roxana Schillaci. "Another source of inspiration and commitment for me is the memory of many beloved people who suffered because of cancer," he adds.

Dr. Rivas notes that the LRF fellowship will provide crucial support to his research and career. "One of the most important –and perhaps difficult– parts of becoming an academic researcher is being able to get funding to support our research and develop our ideas," he says. "I plan to transition into an independent position in the next five years and to achieve that, it is critical to distinguish myself at this early career stage by having a strong publication record and proving that I am able to get funding to fuel my ideas." He advises newly diagnosed patients to have hope. "There are many passionate and talented people thinking day and night how to beat this disease. There are new treatments under clinical trials continuously… There is always something happening and the answer may be around the corner."

Eric Smith, MD, PhD
Memorial Sloan Kettering Cancer Center
FELLOWSHIP

Chimeric Antigen Receptor (CAR) T-cell therapy is a new form of therapy in which a patient's own T-cells are modified in order to target them to a specific form of cancer. It is being tested in a variety of B-cell lymphomas with some success, however, relapse after CAR T-cell therapy still occurs too commonly. Dr. Smith's project investigates both expanding CAR T-cell therapy to Waldenström Macroglobulinemia patients as well as adjusting the CAR T-cells themselves to secrete the gene IL12, which he and his colleagues have previously demonstrated may make the therapy's effects persist longer. "The work proposed in this grant will help answer key questions regarding improving CAR T-cell therapy," Dr. Smith says.

A medical oncology fellow at Memorial Sloan Kettering Cancer Center (MSKCC), Dr. Smith received his MD and PhD in biomedical sciences from Mount Sinai School of Medicine, where he also completed his residency, before moving to MSKCC for his fellowship. During his studies, he found himself particularly drawn to cellular therapies. "Pursuing the study of cellular therapy as a treatment for cancer, I could really be part of a team working on a paradigm shifting new treatment modality with tremendous promise," he says. "The progress we make in the lab to optimize this therapy and expand its use to other diseases, especially other blood cancers such as lymphoma and myeloma can have a huge impact and is rapidly translatable to the clinic."

Noting that it is "without question the patients that have been in my care that are my inspiration for my commitment and work," Dr. Smith advises newly diagnosed patients to remember that they are not going through their fight against lymphoma alone. "In addition to your family and friends, other patients and especially your care providers are here to support you." He plans to follow his interest in cellular immunotherapy for cancer as he pursues his goal of becoming a principle investigator in his own laboratory, a goal for which the LRF fellowship will be helpful. "The funding and recognition provided by this award will help me transition from a research fellow to an independent investigator."

"One of the most important – and perhaps difficult – parts of becoming an academic researcher is being able to get funding."

Matthew Walker, PhD
The University of North Carolina at Chapel Hill
FELLOWSHIP

The protein FOXP1, which regulates the growth and progression of cells, is commonly overexpressed in diffuse large B-cell lymphoma (DLBCL), allowing the lymphoma cells to grow and multiply. Using a novel screening approach, Dr. Walker has already found that FOXP1 may work by activating the pathway WNT. For his LRF project, he seeks to establish a firm link between FOXP1, the WNT pathway, and DLBCL growth, as well as test WNT inhibitors in a preclinical laboratory setting. "If successful," Dr. Walker says, "we hope that WNT inhibition will become a viable therapeutic target for a subset of DLBCL patients and decrease the need or dose of toxic chemotherapies."

A postdoctoral research associate at the University of North Carolina-Chapel Hill, Dr. Walker completed his PhD in cancer biology at the University of Chicago, where he also did some initial postdoctoral work before moving to North Carolina. Noting that his mother was an oncologist, Dr. Walker says, "you could say I grew up around cancer." His childhood experiences interacting with cancer patients and survivors by volunteering at his mother's hospital, as well as mixing chemotherapy agents during a job at a hospital pharmacy made him aware of the toll chemotherapy can have on patients and gave him a desire to "do something to help patients battle cancer." Initially focusing on the WNT pathway in epithelial tumors, Dr. Walker's discovery that FOXP1 increases the effect of WNT signaling and its relationship to DLBCL turned his focus toward lymphoma. "This project is the next step towards taking my initial basic science discovery and turning it into a therapeutic option for patients," he says. He is grateful to his grant sponsor and mentor, Dr. Ben Major, as well as the lymphoma specialists and other experts who have guided him during the development of his project. "My team of collaborators and mentors has been instrumental in my growth as a scientist and will provide all of the necessary skills needed to complete this grant."

Dr. Walker notes that his LRF fellowship will help further the development of both this specific research and his newly discovered career path in lymphoma research. "LRF will give me the opportunity to continue my work on FOXP1 and give me more flexibility in the design of my experiments," he says. "On a more cerebral level, I feel this grant validates me as a lymphoma researcher, something I did not envision for myself when I started my postdoc."

Jiyuan Zhang, PhD
Columbia University Medical Center
FELLOWSHIP

In 30 percent of diffuse large B-cell lymphomas (DLBCL) and 80 percent of follicular lymphomas (FL), the gene MLL2 is mutated and deregulated, suggesting to researchers like Dr. Zhang and his colleagues that there is a relationship between MLL2 deregulation and lymphoma. "However," Dr. Zhang notes, "the function of MLL2 in normal germinal centers, i.e. the structures from which most lymphomas originate, and in the malignant transformation process remains a mystery." Dr. Zhang's fellowship project seeks to better understand not only how MLL2 mutation affects DLBCL and FL formation, but to explore the network of genes regulated by MLL2 in search of additional biomarkers. "We believe that understanding the function of MLL2 will help identifying novel markers for improved diagnosis and prognosis," he says. "Findings in the MLL2 regulated gene network could also lead to the discovery of new targets for more rational therapies for DLBCL and FL."

Dr. Zhang is a postdoctoral fellow at the Institute for Cancer Genetics in Columbia University's Herbert Irving Comprehensive Cancer Center. Before coming to New York, he completed his PhD in human medical genetics at Fudan University in Shanghai, during which time he also spent a year as a visiting scholar at the University of Naples Federico II. His interest in the growing branch of epigenetics (the study of factors other than DNA that control genes) developed as a PhD candidate, which in turn brought him to this project in the lab of Dr. Laura Pasqualucci (an LRF Scientific Advisory Board member). "Lymphoma remains a clinical challenge while extensive effort has been spent on standard chemotherapy," Dr. Zhang says, "So further studies on the formation and maintenance of malignant cells is needed to develop more personal and effective treatment."

Dr. Zhang hopes to become an independent researcher studying epigenetic modifications as a tool to understand B-cell lymphoma growth and progression, a goal he believes will be aided by the LRF Fellowship. "It is not only a financial support, but also a great encouragement to further commitment on lymphoma research as my career goal. Meanwhile, the existence of LRF may facilitate my interaction and cooperation with other researchers in the lymphoma research community, which is vital for more effective research," he says. He encourages newly diagnosed patients to seek out care at specialized centers and

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Second LCRMP Workshop Provides Eight Early Career Clinicians with Career and Research Mentoring

(L to R): Susan Geyer, MD of the University of South Florida, LRF Scholar Danielle Brander, MD of Duke University, Ann LaCasce, MD of Dana-Farber Cancer Center, Thomas Witzig, MD of Mayo Clinic, and LRF Scholar Craig Portell, MD of University of Virginia participate in small group discussions.

The second class of the Lymphoma Research Foundation's (LRF) Clinical Research Mentoring Program (LCRMP) convened for the 2015 LCRMP Workshop on February 24-28 in Scottsdale, Arizona. The LCRMP is an education and mentoring program for fellows and junior faculty with a focus in clinical research in the field of non-Hodgkin and Hodgkin lymphoma. Program participants, called LRF Scholars, attend and participate in intensive introductory workshop and follow-up programming intended to enhance the ability of the LRF Scholars to successfully design and administer clinical research studies and successfully apply for future grant funding. Scholars also receive a grant of $10,000 total over two years to support professional development expenses such as travel to conferences, tuition, and equipment.

In 2015, eight early career clinical researchers were named LRF Scholars: Danielle Brander, MD of Duke University Medical Center, Carla Casulo, MD of University of Rochester, Solomon Graf, MD of University of Washington, Reem Karmali, MD of Rush University Medical Center, David Kurtz, MD of Stanford University, Craig Portell, MD of University of Virginia, Jason Westin, MD of University of Texas MD Anderson Cancer Center, and Victor Yazbeck, MD of Virginia Commonwealth University Massey Cancer Center. Drs. Karmali, Portell, and Yazbeck represent the first LRF grantees of any kind at their respective institutions. The LCRMP Workshop is the centerpiece of the mentoring program, bringing LRF Scholars together with a faculty composed of expert clinical researchers, statisticians, and pathologists specializing in lymphoma. The Scholars present a proposed clinical research project to the faculty at the beginning of the workshop, then work with faculty in daily small group sessions to receive feedback on the practical design of their projects as well as the underlying science. The Scholars conclude the program by presenting revised versions of their projects with aims for future grant submissions.

The program also features faculty presentations on a variety of topics, including tips on writing trial protocols and overseeing clinical trials, working within the National Cancer Institute Cooperative Group structure, building a multidisciplinary team for implementing a clinical protocol, and navigating conflict of interest issues. Other presentations feature career development advice for successful grant applications, academic publications, and maintaining work-life balance.

LCRMP Co-Chair Kristie Blum, MD of The Ohio State University said, "The first two years of the LCRMP workshop have demonstrated the interest and value of a mentoring program focused specifically on lymphoma research. It's exciting to see how the Scholars' research ideas evolve throughout the week, and it's rewarding to see working and mentoring relationships develop between the Scholars and faculty members." Co-Chair Christopher Flowers, MD of Winship Cancer Center at Emory University, added, "We hope the Scholars identified new opportunities for collaborations and clarified the next steps in their career development path. Hopefully, they gained as much as the faculty did from this experience."

As part of the LCRMP curriculum, LRF Scholars attend two follow-up meetings

LRF Scholar David Kurtz, MD of Stanford University and Edie Weller, PhD of Harvard University Medical School enjoy a break between sessions.

in the two years following the workshop, participating in various development activities including observing an LRF grant review meeting. In the immediate future, the Scholars will return to their home institutions to implement their revised protocols.

"It was a true pleasure to participate [in the workshop]," said LRF Scholar Carla Casulo, MD of the University of Rochester. "I hope that through the changes that were made [to my project] and continued collaboration, this will contribute to the field and patient care." Fellow Scholar Danielle Brander, MD of Duke University, agreed. "I sincerely appreciate the organizers of LRF for recognizing the need for early career investigators to gain additional training for successful clinical research in lymphoma, and the entire LCRMP faculty and staff who will give their valuable time over the next two years (and hopefully beyond)… for no other reason than to improve our research endeavors, career development, and hopefully outcomes for patients."

Randy Gascoyne, MD, PhD of BC Cancer Agency (far right), asks a question of LRF Scholar Carla Casulo, MD of University of Rochester, regarding her research project.

The application for the 2016 LCRMP will be available in June 2015; email researchgrants@lymphoma.org to be added to the grant announcement list.

Profiles of individual LRF Scholars and their projects are available on the LRF website at lymphoma.org/LCRMP2015.

LCRMP 2015 Workshop Faculty

- Kristie A. Blum, MD, Ohio State University (LCRMP Co-Chair)
- Catherine Diefenbach, MD, New York University
- Andrew Evens, DO, MSc, Tufts University
- Christopher R. Flowers, MD, MS, Emory University (LCRMP Co-Chair)
- Randy Gascoyne, MD, PhD, British Columbia Cancer Agency
- Susan Geyer, PhD, University of South Florida
- Anne S. LaCasce, MD, Dana-Farber Cancer Institute
- John P. Leonard, MD, Weill Cornell Medical College
- Peter Martin, MD, Weill Cornell Medical College
- Donna S. Neuberg, ScD, Dana-Farber Cancer Institute, Harvard School of Public Health
- Edie Weller, PhD, Dana-Farber Cancer Institute, Harvard School of Public Health
- Thomas E. Witzig, MD, Mayo Clinic

Visiting Faculty

- Sandeep Dave, MD, MS, Duke University
- Leo I. Gordon, MD, FACP, Northwestern University Medical Center
- Brad S. Kahl, MD, University of Wisconsin

Anita Kumar

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independent clinical investigator. "I hope to contribute to a future vision of personalized cancer therapy, selecting patients based on their unique tumor biology who will respond to targeted treatments, such as ibrutinib," Dr. Kumar says. "In addition, I hope to continue to develop my clinical expertise in the field of lymphoma and provide evidence-based, vanguard, and always compassionate care to patients with lymphoma."

Kami Maddocks

[CONTINUED FROM PAGE 4]

have effective therapies and there are several new and exciting therapies being studied that show very promising results in improving outcomes in lymphoma with less severe toxicities."

Rayne Rouce

[CONTINUED FROM PAGE 5]

goes by that I don't learn something from a patient I cared for. Simultaneously, not a day goes by that I don't learn something in the laboratory that encourages me to think about the clinical applicability in patients… Until there is a cure for 100 percent of cancers, 100 percent of the time, I will not be satisfied."

Jiyuan Zhang

[CONTINUED FROM PAGE 7]

be open to new therapies. "There are a lot of new therapies [and] trials available for patients currently. An open mind [to clinical trials] will not only improve the disease outcome and life quality, but also contribute to the whole society."

LRF Launches *Frontline* to Expand Reach of Professional Education Programs

In its ongoing efforts to expand its education opportunities for healthcare professionals, the Lymphoma Research Foundation (LRF) will launch its first issue of *Frontline*, a new publication featuring case studies from the Foundation's signature Continuing Medical Education (CME) program, Lymphoma Rounds. Lymphoma Rounds serves as a forum for lymphoma medical professionals in six U.S. cities to discuss patient cases in an interactive and institutionally collaborative environment. The cases featured in the publication are selected across all lymphoma subtypes by leading experts in lymphoma clinical care and research.

"Having been involved with Chicago Lymphoma Rounds since its inception, and then moving to New England, provided an outstanding opportunity to offer this collaborative, case-based learning model to a new set of institutions and professionals," says Andrew Evens, DO, Director of Tufts Cancer Center and a long-time member of Lymphoma Rounds Steering Committees in both locations. "I believe *Frontline* demonstrates how Lymphoma Rounds partnerships not only potentially lead to improved clinical care, but also lend an opportunity to network and form new and fruitful research collaborations."

Frontline's target audience is healthcare professionals such as hematologists, oncologists, pathologists, fellows and nurses, particularly those who are unable to attend a Lymphoma Rounds program in person. *Frontline* will be available in both print and digital formats.

The first issue of *Frontline*, released in April 2015, includes three case studies presented at previous Lymphoma Rounds programs:

- An angioimmunoblastic T-cell lymphoma (AITL) case presenting with very high-risk prognosis. Lymphoma Rounds attendees discussed the diagnostic challenges in T-cell lymphoma and strategies for assisting patients with high-risk prognosis in weighing realistic treatment outcomes against the toxicity of available treatments.
- A case of atypical small lymphocytic lymphoma (SLL) initially occuring in the nasal cavity, with multiple relapses over several years. Discussion focused on how atypical presentation can impact a patient's treatment options, including the availability of clinical trials and the effect of newer targeted therapies.
- A case of germinal center B-cell (GCB)-type diffuse large B-cell lymphoma (DLBCL) that included an early asymptomatic relapse discovered during imaging. Discussion focused on issues surrounding the diagnosis and management of DLBCL patients, including strategies to confirm a positive PET/CT finding, and salvage treatment options for patients who relapse.

"LRF's *Frontline* publication will capture and relay key clinical learning points offered by LRF's Lymphoma Rounds program to lymphoma specialists beyond the activity setting," notes Max Mulcahy, LRF Director of Clinical and Scientific Programs. "With over 30 cancer centers and countless lymphoma professionals across the United States actively involved, *Frontline* brings various clinical approaches together to treat lymphoma cases both common and uncommon. We are thrilled this publication will serve as a written and digital reflection of this unique learning experience."

A digital version of Frontline is available at lymphoma.org/FRONTLINE. To register for Lymphoma Rounds or view LRF's other professional education programs, visit lymphoma.org/ProfessionalED.

SCIENTIFIC ADVISORY BOARD

The Lymphoma Research Foundation's volunteer Scientific Advisory Board, comprised of 45 world-renowned lymphoma experts, guides the Foundation's research activities, seeking out the most innovative and promising lymphoma research projects for support.

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About the Research Report

Research Report is a publication of the Lymphoma Research Foundation, providing the latest updates on our grantees and their progress, as well as on the work of the Foundation. The Lymphoma Research Foundation is the nation's largest non-profit organization devoted to funding innovative lymphoma research and serving the lymphoma community through a comprehensive series of education programs, outreach initiatives, and patient services.

Donor Spotlight

Ronald and Darlene Springman of Cincinnati, Ohio have been supporting LRF for 13 years with monthly gifts, recently passing a lifetime total of $7,500. Their son, Ron Jr., was diagnosed with non-Hodgkin lymphoma (NHL) in 2002; he is currently doing well after receiving rituximab with CHOP chemotherapy. The success of Ron Jr.'s treatment, new for NHL patients at the time of his diagnosis, inspired the Springmans to support LRF. "We wanted to contribute in what small way we could to help with research in non-Hodgkin lymphoma," Ronald Springman says. "Whatever we can do to help the research and help him or anyone else in the future – that keeps us motivated." LRF thanks the Springmans and all of those who support the Foundation's ongoing efforts to fund lymphoma research and provide expanded, improved treatment options for patients with this disease.

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LRF Launches *Frontline*

The first publication from LRF's acclaimed Lymphoma Rounds program is now available.

Full details on Page 10.