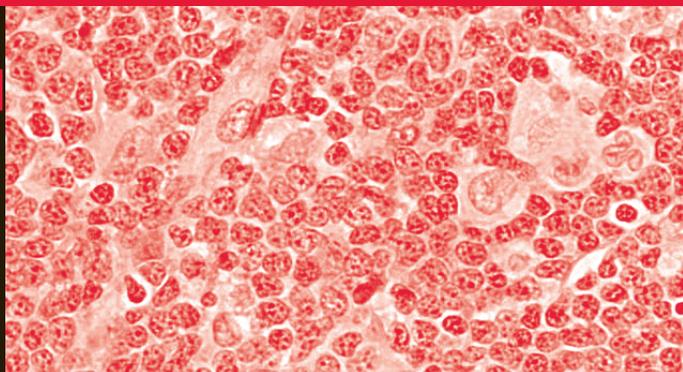


R E S E A R C H

Report



Lymphoma Research Foundation Welcomes New Scientific Leadership



SAB Chair Leo I. Gordon, MD, FACP, of Robert H. Lurie Comprehensive Cancer Center of Northwestern University, addresses the 2014 Lymphoma Research Foundation's Mantle Cell Lymphoma Workshop.

The Lymphoma Research Foundation (LRF) is pleased to announce the election of four new members to its Scientific Advisory Board (SAB), in addition to the appointment of a new Chair and Chair-Elect. The 45-member SAB is comprised of world-renowned lymphoma experts who provide guidance on LRF's research program. The SAB seeks out the most innovative and promising lymphoma research projects for support, and serve as scientific advisors in the development of research and education programs, patient

services, and public policy efforts.

Leo I. Gordon, MD, FACP, of Robert H. Lurie Comprehensive Cancer Center of Northwestern University, assumed the role of Chair of the SAB on July 1, 2015, with Thomas M. Habermann, MD of Mayo Clinic, Rochester Campus, succeeding Dr. Gordon as Chair-Elect. New general members Ash Alizadeh, MD, PhD of Stanford University, Kara Kelly, MD of Columbia University, Lindsay Morton, PhD of the National Cancer Institute, and Barbara Pro, MD of

Thomas Jefferson University, began their five-year terms on July 1. An interview with Dr. Gordon begins on page 3; profiles of the four new general members and Dr. Habermann begin on page 4.

Dr. Gordon succeeds John Leonard, MD of Weill Cornell Medical College, who will remain on the SAB as a general member. "I am honored to serve as Chair of the Lymphoma Research Foundation's prestigious Scientific Advisory Board, and I couldn't think of a more exciting way to begin my term than to welcome these four brilliant minds to the SAB," said Dr. Gordon. "I believe I speak for the new members and the entire SAB when I say that we are honored to continue the work of Dr. Leonard and his colleagues on the board."

This year's class of new members represents the SAB's ongoing commitment to expanding the diversity and expertise of

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"I couldn't think of a more exciting way to begin my term than to welcome these four brilliant minds to the SAB."



FEATURED IN THIS ISSUE: The Precision Medicine Initiative and LRF

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The Precision Medicine Initiative and its first major project, the NCI-MATCH trial, share the goals of several LRF-funded research projects in using our growing understanding of cancer genomics to better match patients with therapies targeted to their individual disease.

LETTER FROM THE CEO



Dear LRF Friends and Supporters,

The work being done today by the Lymphoma Research Foundation (LRF) is transforming the way lymphoma is studied and treated across the country. But as you'll see in this edition of *Research Report*, this work is not only about the Foundation, but the many people who support our shared mission.

It has been a busy summer in oncology research, with numerous scientific meetings highlighting the progress made in lymphoma and CLL research. The annual meeting of the American Society of Clinical Oncology (ASCO), one of the most prominent oncology conferences in the world, was held in June. It was with tremendous pride that we noted numerous LRF grantees and scientific advisors presenting important research findings during the meeting. Highlights from the ASCO meeting begin on page 9.

We are also pleased to welcome our new SAB Chair, Chair-Elect, and recently-elected members to our Scientific Advisory Board (SAB). We could not ask for a more dedicated and motivated group of advisors. An interview with new SAB Chair Dr. Leo Gordon may be found on page 3; profiles of the new members, including their areas of expertise and ongoing research, begin on page 4.

Many SAB members will serve as faculty during LRF's 20th annual North American Education Forum on Lymphoma. This year's program will be held October 2-4 in Brooklyn, NY and features updates on new treatments as well as special symposia on emerging therapies and topics of high priority to patients and caregivers. A preview of the program may be found on page 10; we encourage you to join us for this extraordinary patient conference.

As we make progress toward achieving our mission, LRF's donors, volunteers, patients and caregivers continue to inspire us to fight harder. The programs and research featured in these pages are possible because of their efforts and generosity. Thank you for everything you do in support the Foundation's vital work.

Sincerely,

A handwritten signature in black ink that reads "Meghan Gutierrez". The signature is fluid and cursive.

Meghan Gutierrez
Chief Executive Officer

LRF Welcomes New SAB Members

[CONTINUED FROM PAGE 1]

the Board and encompass a wider variety of expertise in lymphoma research, with the addition of members specializing in epidemiology, pediatric and adolescent/young adult lymphomas, T-cell lymphomas, and new technologies for diagnosis/prognosis. The new class also raises the representation of women on the SAB to 11, its highest total to date.

"Under the leadership and guidance of our new and existing SAB members, the next few years will be an exhilarating time of

accelerating hope for the lymphoma community," said Meghan Gutierrez, LRF Chief Executive Officer. "The Foundation's Scientific Advisory Board is a critically important part of LRF's mission, guiding our research investments and ensuring that our materials are accurate and up-to-date for patients and their loved ones. I look forward to working with the entire SAB on advancing our mission to eradicate lymphoma and serve those touched by this disease."

Leo I. Gordon, MD, FACP Assumes Chair of Foundation SAB



Dr. Gordon is the Abby and John Friend Professor of Cancer Research, Professor in Medicine and Director of the Lymphoma Program at the Northwestern University Feinberg School of Medicine and the Robert H. Lurie Comprehensive Cancer Centre of Northwestern University. A long-time member of the Lymphoma Research Foundation's Scientific Advisory Board (SAB), Dr. Gordon was elected Chair-Elect in 2012, assuming the role of Chair in July 2015.

Dr. Gordon cites the recent developments in basic science research and increased understanding of the human genome as progress that gives him hope for the future of lymphoma treatment. "The pathways that drive B-cell growth were unknown a short time ago, and now we have treatments that are rational, that work and that are changing the way we think, not only about lymphoma, but about cancer," Dr. Gordon says. "In my time on the SAB, both as a general member and as Chair-Elect I've been very proud of what LRF and the Board have contributed to both advancing lymphoma research and providing support and education to those affected by lymphoma. I am looking forward to the opportunity to continue LRF's work funding innovative research, mentoring young investigators, and interacting with patients who use LRF as an anchor for dealing with their disease."

Dr. Gordon received his medical degree with distinction from the University of Cincinnati and is a member of Alpha

Omega Alpha. He completed an internship and residency at the University of Chicago and a fellowship in hematology and medical oncology at the University of Minnesota and University of Chicago. During his residency, Dr. Gordon worked with Drs. John Ultmann and Edgar Moran, both pioneers in lymphoma research. His research interests encompass both Hodgkin and non-Hodgkin lymphoma, including translational research investigating novel signaling pathways in lymphoma; clinical research interests include the study of novel immune stimulatory strategies following stem cell transplant, and the development of new treatment paradigms based on the results of his research.

Dr. Gordon says that as his career in lymphoma research evolved, he became aware of LRF as an organization devoted to lymphoma education and research. "Then I saw the SAB roster and I knew I could learn from the people who were on it. I was right about that, as it turned out." Dr. Gordon's leadership has also been instrumental in the continued success of LRF's Mantle Cell Lymphoma Consortium (MCLC), a group of laboratory and clinical scientists focusing their research efforts on mantle cell lymphoma. Dr. Gordon has been a member of the MCLC's Executive Committee since 2009, and served as its Chair from 2010 to 2014. "I think the meetings we had at the MCL Consortium were some of the best scientific meetings I have attended," Dr. Gordon says. "The meetings were collaborative, all about the science, and there was a sense of common purpose."

As SAB Chair, Dr. Gordon says he would like to extend the reach of LRF in both funding research and "as an educational vehicle for both patients and health care workers." Dr. Gordon is already an active participant in LRF's patient education initiatives, serving as Co-Chair of the 2014 and 2015 North American Educational Forum on Lymphoma, as well as and faculty for regional and local programs including the Chicago Lymphoma Workshop, and Ask the Doctor programs. Dr. Gordon considers the patient education events one of LRF's most important contributions to the field. "They draw huge crowds and serve a very important function that speaks directly to patients," he notes. In addition to these activities, Dr. Gordon has served on the steering committee of Chicago Lymphoma Rounds, a continuing medical education (CME) program, since its inauguration in 2008, and was visiting faculty for the 2015 Lymphoma Clinical Research Mentoring Program (LCRMP).



Ash Alizadeh, MD, PhD
Stanford University School of Medicine

Dr. Alizadeh is an Assistant Professor of Medicine - Oncology at Stanford University, where he is a member of the Stanford Cancer Institute, the Child Health Research Institute, and Bio-X, an interdisciplinary biosciences research institute. His research focuses on translating the cancer genome for use in the diagnosis, prognosis, and therapy of lymphoma, particularly follicular lymphoma, diffuse large B-cell lymphoma, and mantle cell lymphoma. A 2012 recipient of LRF's Follicular Lymphoma Pathways Grant, Dr. Alizadeh notes that the research he is most proud of is developing the molecular framework for the classification of lymphomas from gene expression profiles, work which was a key step in the current landscape of personalized medicine and targeted therapies.

Dr. Alizadeh received his MD, as well as a PhD in biophysics, from Stanford, where he also completed his residency and fellowship. He credits two lectures he heard as a first year medical student, from Drs. Irv Weissman and former SAB member Ron Levy, both world-renowned in the field, for his interest in lymphoma research. A participant in several LRF initiatives, including as faculty in the Lymphoma Clinical Research Mentoring Program (LCRMP), Dr. Alizadeh notes he is looking forward to working closely with leaders in the field through the SAB, which he hopes can impact the broader lymphoma research agenda "by defining the important areas for research and raising funding."

Dr. Alizadeh notes that improving survival rates across lymphoma gives him hope that these successes can be built upon in the future. "We cure more patients with lymphomas, even in advanced stages, than nearly any other cancer," he says. "This serves to teach us about how to cure the patients in whom our current therapies fail by studying in whom these therapies succeed."



Kara Kelly, MD
Columbia University Medical Center

Dr. Kelly is James A. Wolff Professor of Pediatrics and Associate Division Director, Pediatric Hematology/Oncology/Stem Cell Transplantation at Columbia University Medical Center. Since 2011, she has been chair of the Hodgkin Lymphoma committee for the Children's Oncology Group (COG), the cooperative group in the National Cancer Institute (NCI) system that oversees pediatric and adolescent clinical trials in oncology. She is particularly proud of her work leading a COG trial that evaluated a dose intensive treatment approach followed by de-escalation of therapy for advanced stage Hodgkin patients, the results of which have become a benchmark which subsequent trials for this subgroup seek to match or exceed in proving their effectiveness.

After completing her MD at the State University of New York at Buffalo, Dr. Kelly completed a residency and fellowship at the Children's Hospital of Philadelphia in Pennsylvania, with an additional exchange fellowship at the Hospital for Sick Children in London. A member of LRF's Adolescent and Young Adult (AYA) Lymphoma Initiative Advisory Committee, she is excited to continue work with her fellow SAB members, particularly in AYA lymphomas. "Our groups operated in relative silos in the past ... by working together through the LRF, I only see our collaborations strengthen." Dr. Kelly adds that the SAB's capacity to advocate for enhanced research and education in lymphoma is also much needed. "Without the activities of the LRF SAB, there is a risk of lymphoma being under prioritized, especially with research funding cuts globally."

It is these research advances that give Dr. Kelly hope for the future of lymphoma research. "I am very encouraged by the incorporation of targeted therapies in clinical practice and believe that more of these advances will be realized soon. I am also encouraged by the recognition that there are opportunities for collaboration between pediatric and adult lymphoma investigators and look forward to these studies in the near future."



Lindsay Morton, PhD
National Cancer Institute

Dr. Morton is an Investigator in the Division of Cancer Epidemiology and Genetics (DCEG) at the National Cancer Institute (NCI), part of the National Institutes of Health (NIH). As an epidemiologist, she works with scientists and clinicians around the world to understand the causes of cancer, a critical factor in preventing new cases in the future. Dr. Morton's research has two major elements. First, she studies new malignancies that can occur among lymphoma survivors, attempting to identify the risk factors that contribute to these malignancies. "We can improve the long-term health of lymphoma survivors by identifying individuals who would benefit from additional screening or perhaps intervene to prevent new malignancies from occurring."

Dr. Morton also conducts research to identify the causes of lymphoma. A member of the International Lymphoma Epidemiology Consortium (InterLymph), she recently led a 5-year project investigating the roles of medical history, family history of cancer, lifestyle factors, and occupations in causing lymphomas. "Because there are so many different types of lymphoma, we all had to work together and share our research," she says. It is this type of collaborative research that she finds most exciting. "Having individuals with many different types of expertise working together, we are most likely to be able to make the biggest difference in preventing future lymphomas from occurring and doing the most to improve the long-term health of lymphoma survivors."

Dr. Morton received her PhD in epidemiology, with a focus on cancer epidemiology, from Yale University before joining NCI and the DCEG as a Post-Doctoral Fellow, later progressing to Research Fellow and Investigator. She is excited to join the SAB because it "represents a passionate, interdisciplinary group of experts paired with a highly motivated group of patients." As befits a researcher who touts the importance of collaboration, she adds, "This combination of energy, commitment, and expertise is most likely to have a positive impact on lymphomas survivors."



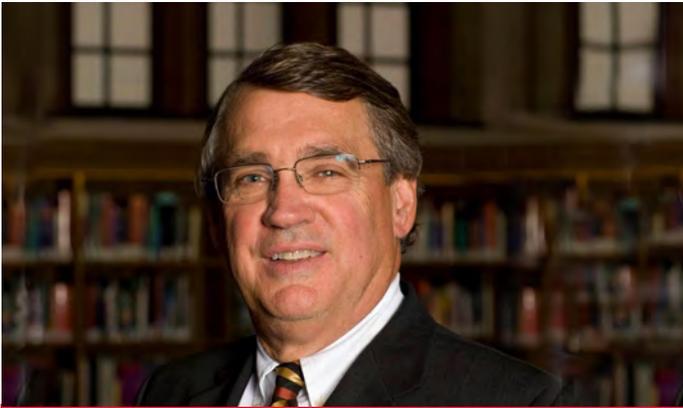
Barbara Pro, MD
Thomas Jefferson University

Dr. Pro is Professor of Medical Oncology at Thomas Jefferson University, where she is also Chief of the Lymphoma Section and Director of the Multidisciplinary Cutaneous Lymphoma Clinic. Though she has clinical and research experience across Hodgkin and non-Hodgkin lymphoma, her current research focuses primarily on investigating new therapies in T-cell lymphomas. One of her proudest research accomplishments is demonstrating the effectiveness of brentuximab vedotin (Adcetris) in anaplastic large cell lymphoma (ALCL), which she noted "has had a tremendous impact in a disease historically with a very poor outcome."

Dr. Pro received her MD from the University of Rome in her native Italy before coming to the United States to complete a residency at The Mount Sinai School of Medicine (Cabrini) Program in New York and her fellowship at MD Anderson Cancer Center. She became interested in lymphoma research through her MD Anderson mentor, Dr. Fernando Cabanillas. Unsurprisingly for a researcher who is interested in therapies for more uncommon subtypes of lymphoma, Dr. Pro considers targeted non-chemotherapy agents the most exciting current development in lymphoma research.

Prior to her election to the LRF Scientific Advisory Board, Dr. Pro worked extensively with LRF's professional education programs, including serving as Chair of the Philadelphia Lymphoma Rounds steering committee, as well as faculty for LRF's recent Lymphoma Symposium in Puerto Rico, where she spoke alongside her mentor Dr. Cabanillas. As an SAB member, she is looking forward to using her expertise and experience to improve and expand research in lymphoma and hopes the SAB can impact the broader lymphoma research agenda by supporting novel ideas and treatments which would otherwise not receive funding.

NEW SAB CHAIR-ELECT



Thomas M. Habermann, MD
Mayo Clinic, Rochester
SAB Chair-Elect

The Foundation is pleased to announce the election of Thomas M. Habermann, MD as SAB Chair-Elect. Dr. Habermann is Professor of Medicine at the Mayo Clinic, Rochester. He received his MD from Creighton University before completing his residency and fellowship at the Mayo Graduate School of Medicine. He is a member of the University of Iowa/Mayo Clinic Lymphoma Specialized Program of Research Excellence (SPORE) grant and has previously served as chair of the Mayo Clinic Lymphoma Group.

A long-time member of the Scientific Advisory Board, Dr. Habermann is Chair of the Foundation's annual Minnesota Lymphoma Workshop, a one-day patient education program which serves over 300 patients each year, and has served as faculty for a number of LRF's national patient education programs. He is also a member of LRF's Mantle Cell Lymphoma (MCL) Consortium, and received an MCL Clinical Studies Correlative Research Grant from LRF in 2007. Dr. Habermann has been involved in many aspects of research in lymphoma with collaborations that include clinical trials, epidemiology, risk factors, new risk predictive models, and genomic studies. Dr. Habermann will serve a two-year term as Chair Elect before assuming the Chair in 2017.

"I am honored to be selected as Chair-Elect for the Lymphoma Research Foundation Scientific Advisory Board," Dr. Habermann says. "I have tremendous respect for the Foundation and its work and am excited and intrigued to serve in this new capacity. I look forward to working with Dr. Gordon and the rest of the extremely accomplished Scientific Advisory Board members to continue advancing LRF's mission. I would hope that over the next four years that we can further increase awareness of lymphoma, to continue to advance our understanding of multiple facets of lymphoma for patients and families affected by these disorders, and to aid in the further development of fellows and junior faculty."



LRF Thanks John Leonard, MD for His Service as SAB Chair

The Lymphoma Research Foundation and the Scientific Advisory Board extend their thanks to outgoing SAB chair John Leonard, MD of Weill Cornell Medical College for his outstanding leadership and service. Dr. Leonard assumed Chair of the SAB in 2012 after being elected Chair-Elect in 2010. Under his leadership, LRF has awarded 45 grants totaling more than \$5.5 million. Dr. Leonard oversaw the creation of the Lymphoma Clinical Research Mentoring Program (LCRMP), a mentoring and training program for early-career lymphoma researchers. Fourteen Scholars have participated in the first two classes of the two-year program; the first class will graduate in fall 2015.

Dr. Leonard has also provided instrumental support in the creation of the Adolescent/Young Adult Lymphoma Initiative (AYAI). The Initiative, launched in 2014, 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 AYAI's research component included the launch of the AYA Lymphoma Cooperative Group Correlative Grant, which awarded its first research grant in early 2015.

"Dr. Leonard's leadership of the Scientific Advisory Board has been crucial to the continued success of our research program," said Steven J. Prince, Chairman, LRF Board of Directors. "His guidance has made it possible not only to launch new programs, such as the AYA Initiative and the Lymphoma Clinical Research Mentoring Program, but to continue funding high quality research in lymphoma."

With the conclusion of his term as Chair, Dr. Leonard will remain on the SAB as a general member.

Precision Medicine Initiative, NCI-MATCH Goals Echoed in LRF-Supported Research

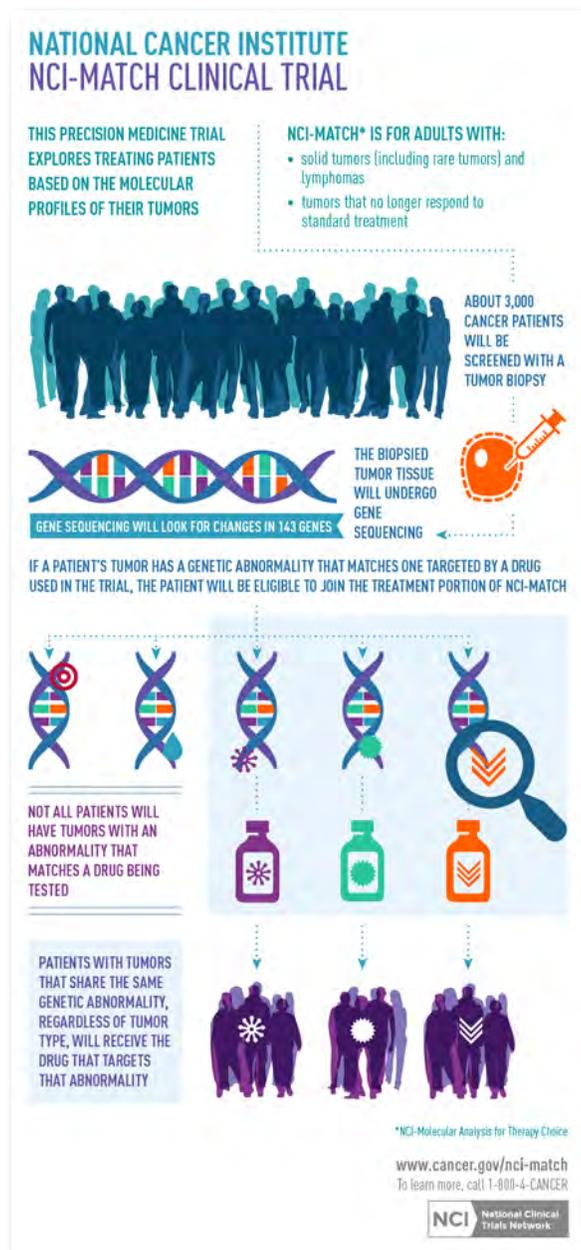
In January 2015, President Obama included in his State of the Union address the announcement of a \$215 million research initiative designed to fund new efforts to identify the genetic drivers of disease and move away from the “one size fits all” approach to diagnosis and treatment of severe and/or chronic diseases. The announcement of the Precision Medicine Initiative was welcomed across the oncology research field, both as a crucial step towards restoring federal funding levels for medical research, and as a reflection of the growing body of research across all cancers demonstrating that a patient’s individual genetic markers can influence their prognosis and the effectiveness of certain therapies. Many of the NIH’s stated goals for the Initiative are reflected in research already underway across oncology, but particularly in lymphoma and CLL. As of July 2015, the Lymphoma Research Foundation (LRF) is funding 40 active grantees who are researching molecular targets and/or the development of targeted therapies, an investment of over \$7.2 million.

The Precision Medicine Initiative charges the National Institutes of Health (NIH), the Food and Drug Administration (FDA), and the Office of the National Coordinator for Health Information Technology (ONC) with developing the components of this program, including a specific allocation of \$70 million to the National Cancer Institute (NCI) to scale up efforts to identify genomic drivers in cancer and translate that knowledge to the development of more effective approaches to cancer treatment. On June 24, 2015, the first clinical trial supported by the Precision Medicine Initiative was announced by the NCI.

The NCI- Molecular Analysis for Therapy Choice Program (NCI-MATCH) will screen as many as 3,000 patients from across all cancers, using an advanced DNA sequencing test to detect genetic abnormalities, or mutations, which may be driving tumor growth. If the sequencing detects a mutation that is targeted by one of the drugs in the NCI-MATCH trial, the patient may be eligible to enroll in that substudy.

The trial began enrolling in July with ten targeted agents, currently largely approved in lung cancers, melanoma, breast cancer, and pancreatic cancers, but patients do not need to be diagnosed with one of these cancers to participate. In fact, researchers are hoping at least 25 percent of the 1,000 patients they hope to enroll in the treatment arms of the cancer will have a rare cancer – a cancer that occurs in either a rare location (such as the eye or pituitary gland) or which is considered rare because the primary location of the tumor could not be determined. The low occurrence of rare cancers makes it difficult to conduct clinical trials on targeted agents; NCI-MATCH’s design, prioritizing mutations over tumor type, offers an opportunity to obtain needed clinical data on these diseases.

The first ten arms of NCI-MATCH do not currently include targeted agents or genetic abnormalities common to lymphoma, although the NCI does



Source: National Cancer Institute

expect to expand the trial as enrollment progresses. However, this does not mean lymphoma patients are being left out of the movement towards personalized medicine. Current lymphoma research, including a number of LRF-funded projects, are already pursuing research with aims similar to that espoused by the Personalized Medicine Initiative and the NCI-MATCH trial. A number

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NCI-MATCH

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of LRF's Young Investigator grantees are among these researchers, including Lorena Fontan Gabas, PhD, a Postdoctoral Fellowship grantee at Weill Cornell Medical College who has identified a new pathway (MALT1) which contributes to the progression of activated B-cell like diffuse large B-cell lymphoma (ABC-DLBCL), a subtype of DLBCL that has proved particularly resistant to existing therapies. Although her original project focused on DLBCL, Dr. Fontan Gabas has discovered inhibition of MALT1 may be an effective treatment in many B-cell subtypes including marginal zone, mantle cell, and follicular lymphomas.

Meanwhile Anita Kumar, MD, of Memorial Sloan-Kettering Cancer Center, is using her Clinical Investigator Career Development Award to test ibrutinib (Imbruvica) in peripheral T-cell lymphoma and cutaneous T-cell lymphoma. Research has demonstrated that ibrutinib, already approved for treatment in various B-cell lymphomas (where it inhibits the Burton's tyrosine kinase, or BTK, protein), may also inhibit the interleukin-2-inducible T-cell kinase (ITK), a protein which contributes to T-cell lymphoma growth much as BTK contributes to B-cell lymphomas. Much like the goals of the NCI-MATCH trial, Dr. Kumar's research seeks to demonstrate that a therapy developed for one type of cancer may be effective across a broader range of the disease.

One of the additional short term goals of the Personalized Medicine Initiative is to understand and address the biologic causes of drug resistance, when a patient either fails to respond to a given therapy or initially responds but has a decreasing

response over time. LRF grantee and Mantle Cell Lymphoma Consortium member Selina Chen-Kiang, PhD, of Weill Cornell Medical College, and her colleagues have made significant advances in understanding resistance to ibrutinib in mantle cell lymphoma (MCL), research which has also generated a new potential combination therapy. Her LRF funding has allowed her to identify a genetic mutation in BTK, the protein targeted by ibrutinib, which occurs in MCL patients who develop resistance to the therapy after an initial response. Dr. Chen-Kiang's research also demonstrates that palbociclib, an inhibitor of the protein PI3K, makes MCL tumor cells sensitive to ibrutinib, suggesting that a combination of the two could be effective in overcoming

LRF is funding 40 active grantees who are researching molecular targets or targeted therapies, an investment of over \$7.2 million.

ibrutinib resistance. Early results of this research were published online at *Cancer Discovery* in July 2014, and aided Dr. Chen-Kiang and her colleagues in obtaining funding from NCI to open a clinical trial of palbociclib plus ibrutinib.

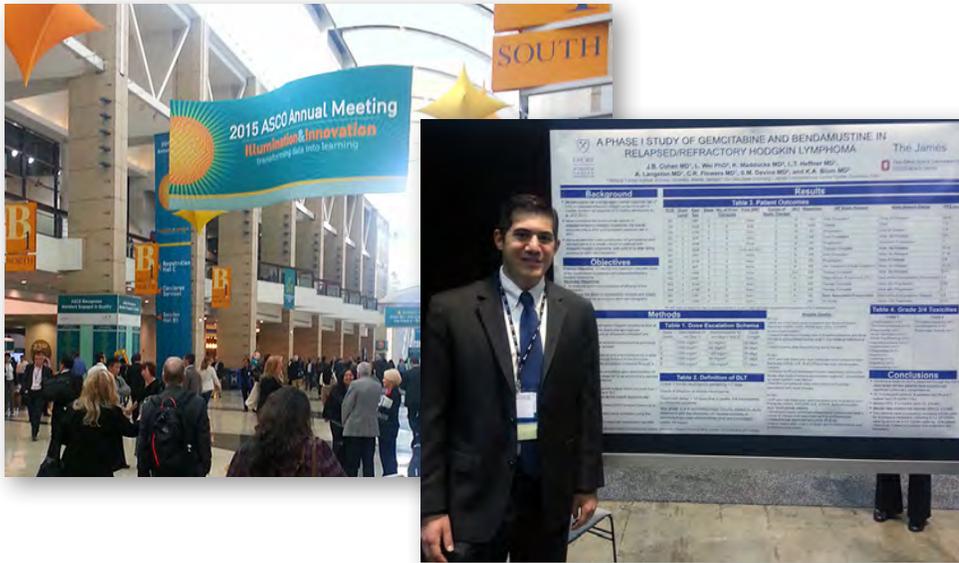
The Initiative also seeks to further develop the knowledge system that supports precision medicine. Existing NIH programs such as the Cancer Genome Atlas project have already provided the backbone of such knowledge by mapping whole tumor genomes in common cancers such as lung, breast, and melanoma. Though TCGA did not map lymphoma tumors, researchers are undertaking those efforts independent of the NIH. MCL Consortium member Elias Campo,

MD, PhD, of the Hospital Clinic of the University of Barcelona, published the first complete genome in MCL in 2013, an effort funded in part by LRF. John Chan, PhD, an LRF Scientific Advisory Board member, has also received LRF funding to underwrite his efforts to discover the genetic markers in follicular lymphoma (FL), particularly those that will indicate when the indolent form of FL is likely to transform into a more aggressive form. Research projects like these have been crucial to identifying genetic abnormalities that might be targeted with new therapies, abnormalities that could be candidates in a future expansion of NCI-MATCH or in a smaller trial working across lymphoma subtypes.

"The federal precision medicine initiative aims to provide physicians and researchers with tools to better understand and treat a patient's condition and to determine which therapies will be most effective," said Meghan Gutierrez, LRF Chief Executive Officer. "It will be important that the necessary resources be made available to the investigators conducting this work, to ensure that they have the support necessary to realize the initiative's full potential."

LRF provides a Clinical Trials Information Service to increase awareness about investigational treatments for lymphoma being evaluated at cancer treatment centers nationwide. For assistance identifying clinical trials available to lymphoma patients contact the Helpline at 800-500-9976 or helpline@lymphoma.org.

News from the Field: ASCO 2015



The 2015 Annual Meeting of the American Society for Clinical Oncology (ASCO), was held on May 31-June 2 in Chicago. More than 37,000 attendees visited this year's meeting, during which over 2,300 abstracts were presented to an audience of academic and industry researchers, advocacy groups, and other stakeholders. The size of the meeting makes ASCO a critical venue for sharing and discussing important developments in oncology research. Among the highlights of the lymphoma studies presented were several by LRF-funded researchers and Scientific Advisory Board (SAB) members.

LRF Scholars, participants in the Lymphoma Clinical Research Mentoring Program (LCRMP) Joshua Brody, MD of Icahn School of Medicine at Mount Sinai, Jonathon Cohen, MD (pictured) of Winship Cancer Institute, Emory University, Catherine Lai, MD of the National Cancer Institute (NCI) and David Kurtz, MD, of Stanford University presented posters discussing clinical trials in a variety of lymphoma subtypes, including Dr. Brody's trial of an experimental in situ vaccine for indolent NHL, a version of which was developed

at the 2014 LCRMP Workshop. 2012 Career Development Awardee (CDA) Paul Barr, MD of the University of Rochester as well as 2014 CDA recipient Catherine Diefenbach, MD of New York University also contributed to several studies each in both poster and oral abstract sessions, including as first authors on results from respective Hodgkin lymphoma trials, an important step in the early stages of a researcher's career.

SAB Member Nathan Fowler, MD of MD Anderson Cancer Center presented early clinical results evaluating the safety and efficacy of a chemotherapy free triplet in high risk CLL and B-cell NHL. The therapy, composed of ublituximab, ibrutinib (Imbruvica), and a compound designated TGR-1202, was administered to 16 patients with relapsed or refractory lymphoma, poor prognostic scores and an unlimited number of prior treatments. Patients received escalating doses of TGR-1202, with consistent doses of ublituximab and ibrutinib. At the time of reporting, Dr. Fowler and his colleague have found no toxicity or adverse effects severe enough to limit TGR-1202, although data from the largest dose is still being evaluated. In

addition, all but three of the 16 patients responded to treatment (69 percent), with one complete response and five partial responses at week 8 of treatment. The researchers plan to expand the study to further explore its potential in B-cell lymphoma patients for whom traditional chemotherapy fails.

Among the epidemiology and quality of life research presented at ASCO was a study analyzing the impact of aerobic exercise on the quality of life of survivors of aggressive lymphoma. The study utilized the University of Iowa/Mayo Clinic SPORE Molecular Epidemiology Resource to follow 625 newly diagnosed patients with aggressive non-Hodgkin lymphomas from. Three years after diagnosis, patients who no longer had active disease were asked to report exercise patterns and complete a standard questionnaire to assess their quality of life. The researchers, including SAB members Tom Habermann, MD, Stephen Ansell MD, PhD, and Tom Witzig, MD, all of Mayo Clinic, Rochester, and Brian Link, MD, of the University of Iowa, found that patients who already met CDC recommendations on daily exercise or increased their exercise levels after diagnosis reported a significantly higher quality of life than those who did not. The researchers recommended that lymphoma patients be counseled on the benefits of exercise, and advocated for studies analyzing the efficacy and outcomes of such counseling.

Researchers from the Follicular Lymphoma Analysis of Surrogacy Hypothesis (FLASH) project, an analysis of over 3,800 follicular lymphoma patients, presented data confirming 30 months as a surrogate endpoint for progression free survival (PFS) in first-line FL trials. FL clinical trials commonly use PFS (the length of time during and after treatment

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ASCO Highlights

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that a patient's disease does not progress) to determine when a clinical trial can be concluded, but it can often take years to know when that point is reached. The FLASH researchers, including SAB members Nathan Fowler and Christopher Flowers, used the large volume of FLASH data to identify 30 months after therapy as the earliest point at which the percent of patients at PFS correlates with the ultimate PFS rate, regardless of the type of therapy the patient received. Researchers hope using 30 months CR as a standard endpoint in future FL clinical trials will allow those trials to be concluded

and analyzed faster, expediting the development of new therapies for FL.

Several studies at ASCO presented further data on chimeric antigen receptor (CAR) T-cells, a treatment by which T-cells are genetically modified to attack a patient's lymphoma cells, essentially training a patient's immune system to heal itself. One of these studies, presented by Philadelphia Lymphoma Rounds Chair Stephen Schuster, MD and including contributions from LRF grantee Mariusz Wasik, MD, both of the University of Pennsylvania, administered CART-cells

following chemotherapy to patients with CD19 positive B-cell lymphomas (FL, DLBCL, and MCL) with an anticipated survival of less than 2 years. Early data on 18 evaluable patients shows six month progression free survival at 59 percent, with all 7 of the FL patients achieving that marker. This trial is still enrolling, and may be found at clinicaltrials.gov under NCT02030834.

For more research news, visit lymphoma.org/researchnews.

North American Educational Forum To Celebrate 20th Anniversary



2014 Ed Forum Chair Nancy Bartlett, MD of Washington University in St. Louis welcomes last year's attendees.

This year marks the 20th Anniversary of the North American Educational Forum on Lymphoma, LRF's largest patient conference and the most comprehensive lymphoma-specific educational program in North America. The 2-½ day annual meeting provides critical information on treatment options, patient support issues, clinical trials and the latest advances in lymphoma research to people with lymphoma and their loved ones. Over the past two decades, the program has been able to provide information, guidance, and most importantly hope, to thousands of people touched by the disease.

The 2015 North American Educational Forum will return to the East Coast October 2-4, 2015 in Brooklyn, NY. In honor of the Forum's 20th year, the Lymphoma Research Foundation has convened a national Educational Forum honorary co-chair body comprised of current and former Scientific Advisory Board Chairs, who have worked diligently over the course of the years in support of the lymphoma community and the Foundation.

This year's co-chairs include Joseph R. Bertino, MD – Rutgers Cancer Institute of New Jersey; Bruce D. Cheson, MD,

FACP – FAAAS Georgetown University Hospital, Lombardi Comprehensive Cancer Center; Richard I. Fisher, MD – Fox Chase Cancer Center, Temple University School of Medicine; Leo I. Gordon, MD, FACP – Robert H. Lurie Comprehensive Cancer Center of Northwestern University; John P. Leonard, MD – New York Presbyterian Hospital, Weill Cornell Medical Center; and Oliver Press, MD, PhD – Fred Hutchinson Cancer Research Center, University of Washington Medical Center.

In addition to subtype-specific education sessions, this year's Forum will include a number of symposia focused on the latest trends in lymphoma research and care. Topics include transplantation, adolescent and young adult lymphomas, maintenance therapy, and targeted lymphoma and CLL treatments. Also new to this year's program, for the first time LRF grantees will present on their research projects, allowing attendees to see first-hand the impact the Foundation is making in the field of lymphoma research.

For more information and to register to attend, please visit lymphoma.org/edforum.

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.

Leo I. Gordon, MD, FACP

Chair
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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

Wendy S. Harpham, MD, FACP of Richardson, TX has been supporting LRF annually via the Dallas Lymphoma Walk since the inaugural event in 2004. In 2015, she raised \$11,500, bringing her lifetime Walk fundraising to over \$81,000. Additional funding has been raised through her Walk team, Wendy's Eagles. In 1993, after her second recurrence of indolent NHL, Dr. Harpham enrolled in one of the first trials of rituximab (Rituxan). That trial, along with subsequent treatment, helped her achieve remission multiple times; her last treatment was in November 2007, making this her longest remission. "Research will lead to more effective, less toxic therapies, but only if it is well-funded," Dr. Harpham notes. Still actively involved with LRF's events in Dallas, Dr. Harpham enjoys the opportunity to "work with people in my own backyard toward a shared mission of helping all lymphoma patients experience the hope and progress of research."

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New SAB Chair Leo I. Gordon, MD, FACP

LRF's new Scientific Advisory Board Chair discusses his goals for the future.

Full details on [Page 3](#).

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