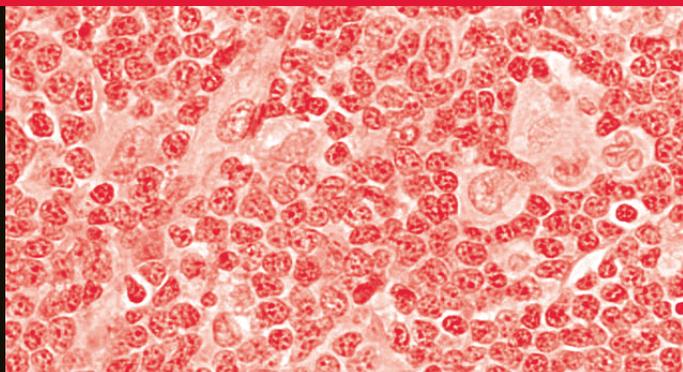


R E S E A R C H
Report



Foundation Scientific Advisory Board Welcomes New Leadership, Members



Scientific Advisory Board Chair Thomas M. Habermann, MD, of Mayo Clinic, Rochester, addressing the 2016 North American Educational Forum on Lymphoma.

In July 2017, the Lymphoma Research Foundation (LRF) announced the election of a new Chair, Chair-Elect, and four new members to its Scientific Advisory Board (SAB). The SAB is comprised of 45 world-renowned lymphoma experts who lend their perspective and expertise to evaluating the Foundation’s research grants portfolio, providing guidance to scientific, professional, and patient programming, and supporting advocacy efforts to

strengthen lymphoma research and patient care.

LRF’s new SAB Chair is Thomas Habermann, MD of Mayo Clinic, Rochester, where he is Professor of Medicine. Dr. Habermann has been a member of the SAB for over a decade, as well as an active participant in LRF programs, including the Minnesota Lymphoma Workshop, one of LRF’s premier regional patient education programs, which he has Chaired since its

inception. Dr. Habermann was also Chair of the 2016 North American Educational Forum on Lymphoma, and has lent his scientific expertise on a wide variety of topics from the development of LRF’s research grants portfolio, to scientific workshops, and educational materials. He will serve a two-year term as Chair. [An interview with Dr. Habermann begins on page 6.]

Joining Dr. Habermann in leadership of the LRF is the incoming Chair-Elect, Dr. Andrew Zelenetz, MD, PhD of Memorial Sloan Cancer Center, where he is Vice Chair of Medical Informatics at Memorial Sloan-Kettering and former Chief of its Lymphoma Service. He is also chairperson of the Non-Hodgkin Lymphoma Guidelines panel of the National Comprehensive Cancer Network and vice chairperson of the Lymphoma Core

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“I have been proud to serve as a member of LRF’s prestigious Scientific Advisory Board, and I now look forward to the opportunity to lead this extraordinary group of individuals in our shared pursuit of a cure.”



FEATURED IN THIS ISSUE: Profiles of LRF’s New Scientific Advisory Board Members Page 4

The Foundation’s newly elected Scientific Advisory Board members, including Catherine Bollard, MD, MBCChB, of Children’s National Medical Center (pictured, left), discuss their research interests and goals for their SAB tenure.



Dear LRF Friends and Supporters,

This issue of *Research Report* serves as an introduction to the new Chair and Chair-Elect of our Scientific Advisory Board (SAB), as well as our new general members. An interview with our new SAB Chair, Thomas M. Habermann, MD, of Mayo Clinic, Rochester, begins on page 6; profiles of the new general members begin on page 4. Our SAB provides invaluable guidance and insight to LRF's research portfolio, education materials, and programming, and we hope you enjoy getting to know them as much as we enjoy working with them.

In September, LRF marked Blood Cancer Awareness Month with a variety of activities. LRF was proud to announce our new partnership with the academic journal *Annals of Lymphoma*, which we anticipate will offer unique opportunities to promote LRF programs and funded research as well as confirm our commitment to publicly accessible research. More about this partnership may be found on page 7. Other highlights of our month-long campaign included over 100 build-ings worldwide participating in our Light It Red for Lymphoma campaign and our Childhood Cancer and Blood Cancer Awareness Month Twitter chat. In partnership with the National Cancer Institute (NCI) and featuring NCI faculty and pe-diatric/lymphoma experts Dr. Nirali Shah and Nita Seibel, the September 20 chat reached nearly 1.9 million Twitter users.

We're also pleased to announce the publication of a paper proceeding from our 2015 Adolescent/Young Adult (AYA) Lymphoma Symposium in *Blood Advances*. More about this paper, and other recent publications from our SAB members and grantees, may be found in News from the Field beginning on page 8.

Thank you for all you do on behalf of LRF's mission to fund innovative lymphoma research and serve those touched by this disease.

Sincerely,

A handwritten signature in black ink, appearing to read 'Meghan Gutierrez', written over a large, stylized circular flourish.

Meghan Gutierrez
Chief Executive Officer

New SAB

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Committee of the Cancer and Leukemia Group B. Prior to his election as Chair-Elect, Dr. Zelenetz served several years on the SAB's Executive Committee, and served as faculty at LRF patient education programs including Ask the Doctor programs, Lymphoma Workshops and the North American Educational Forum on Lymphoma. Dr. Zelenetz will serve a two-year term as Chair-Elect, assuming the role of Chair at the conclusion of Dr. Habermann's term in 2019.

"The Lymphoma Research Foundation is excited to see Dr. Habermann and Dr. Zelenetz assume leadership positions within our Scientific Advisory Board," said Meghan Gutierrez, LRF Chief Executive Officer. "Their long standing commitment to excellence in lymphoma research and patient care will aid

LRF in its own goals to fund innovative research and help those touched by this disease."

In addition to the new leadership team, the SAB welcomed four new general members: Catherine Bollard, MD, MBChB of Children's National Medical Center and George Washington University; Steven Horwitz, MD of Memorial Sloan Kettering Cancer Center; Kerry Savage, MD of British Columbia Cancer Agency; and Hans-Guido Wendel, MD, of Memorial Sloan Kettering Cancer Center. In addition to representing a variety of expertise in research and patient care, the four new members are all previous recipients of LRF research grants. Dr. Wendel has received two Follicular Pathways grants, and Drs. Bollard, Horwitz, and Savage all received early-career grants from LRF, bringing the number of current SAB members who received one of their first grants from LRF to eight.

NEW SAB

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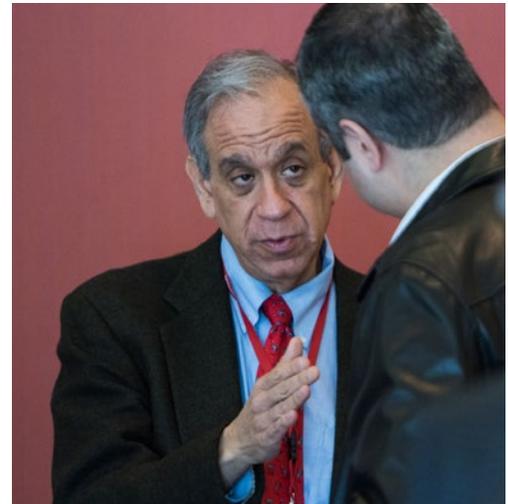
Dr. Habermann assumes the Chair from Leo I. Gordon, MD, FACP, of Robert H. Lurie Comprehensive Cancer Center of Northwestern University, who concludes a successful two-year term that oversaw LRF's first research grants and scientific programs devoted to adolescent/young adult lymphoma and the first North American Educational Forum held in the Midwest United States. Dr. Gordon will remain on the SAB as a general member.

"For years, I have been proud to serve as a member of LRF's prestigious Scientific Advisory Board, and I now look forward to the opportunity to lead this extraordinary group of individuals in our shared pursuit of a cure," said Dr. Habermann. "I'd like to thank Dr. Gordon for his visionary leadership in setting LRF on the forward edge of research, and hope to continue this

momentum as we accelerate our pursuit of new evidence-based approaches."

LRF also thanks four retiring SAB members for their work in service of the lymphoma community: John Chan, MD, of City of Hope; Nathan Fowler, MD, of MD Anderson Cancer Center; Neil Kay, MD of Mayo Clinic; and Louis M. Staudt, MD, PhD, of the National Cancer Institute.

"We thank all members of our Scientific Advisory Board for their enduring commitment to our mission of eradicating lymphoma and serving those impacted by this blood cancer," said Meghan Gutierrez, LRF Chief Executive Officer. "Dr. Habermann's innovative thinking and enthusiasm for collaboration will help usher in a new era of impactful biomedical research supported by LRF, and ultimately bring us closer to achieving our goals."



Chair-Elect Andrew D. Zelenetz, MD, PhD, of Memorial Sloan Kettering Cancer Center, discusses research with LRF grantee Victor Yazbeck, MD of Virginia Commonwealth University, at a recent symposium.

Profiles of the new general members begin on page 4.

LRF Thanks Outgoing Chair Leo I. Gordon, MD, FACP



Leo I. Gordon, MD, FACP, (L) receives a token of appreciation from LRF Board of Directors Chairman Michael Werner, at the 2016 North American Educational Forum on Lymphoma

The Lymphoma Research Foundation and the Scientific Advisory Board extend their thanks to outgoing SAB chair Leo I. Gordon, MD, FACP, of Robert H. Lurie Comprehensive Cancer Center of Northwestern University, for his outstanding leadership and service. Dr. Gordon assumed Chair of the SAB in 2015 after being elected Chair-Elect in 2010. Under his leadership, LRF has awarded 29 grants totaling more than \$2.5 million.

Under Dr. Gordon's leadership, the LRF SAB has initiated a number of scientific programs around important issues in lymphoma research and patient care, including LRF's first Adolescent/Young Adult (AYA) Lymphoma Symposium, as well as programs examining the use of oral therapies and checkpoint inhibitors in lymphoma. Several of

these programs have resulted in white papers or other publications, furthering the dialogue around the changing treatment landscape in lymphoma. The LRF also continued its support of its Mantle Cell Lymphoma Consortium, which was chaired by Dr. Gordon prior to his term as SAB Chair, with two research grants and the continuation of its long-running MCL Scientific Workshop.

"Dr. Gordon has brought an incredible depth and breadth of knowledge of lymphoma and an unwavering commitment to patients to his work as Chair of the Scientific Advisory Board," said LRF Chief Executive Officer Meghan Gutierrez. "We are grateful for his commitment to our mission and look forward to his continued work on the SAB and with our organization."

NEW SAB MEMBER PROFILES



Catherine Bollard, MD, MBChB

Children's National Medical Center, George Washington University

Dr. Bollard is Director of the Immunology Initiative- Sheikh Zayed Institute for Pediatric Surgical Innovation and Director for the Program for Cell Enhancement and Technologies for Immunotherapy at Children's National Medical Center; she also holds appointments as Professor of Immunology and Pediatrics at Baylor College of Medicine and Adjunct Professor of Pediatrics at George Washington University. She was drawn to lymphoma research, and pediatric and AYA lymphomas in particular, after losing her high school best friend, who survived a battle with Hodgkin lymphoma only to develop myelodysplastic syndrome and a secondary leukemia. "It was so cruel, and it became clear to me that we needed therapies that only kill the cancer cells and not healthy bystander cells," Dr. Bollard says. "As a result, I became interested in treating patients with lymphoma and developing new therapies that would target only the lymphoma cells and not cause devastating side effects like my friend suffered."

Dr. Bollard's research focuses on chimeric antigen receptor (CAR) T-cells and other T-cell based immunotherapies, as well as improving outcomes for patients after bone marrow transplant. She is currently involved in a number of clinical trials for these therapies, which are showing a promising effect on outcomes for patients while also reducing the toxicities they experience. "It's extremely exciting, but also very sad. If Diana had been diagnosed today, I believe her outcome would have been completely different."

Dr. Bollard received her MD from the University of Otago in her native New Zealand, before a fellowship at Texas Children's Hospital (Baylor University School of Medicine) brought her to the U.S. While at Baylor, one of her first grants was an LRF Postdoctoral Fellowship grant in 2003. "Receiving this award put me on my career trajectory as a physician scientist," she says. "Serving on the SAB is my small way of 'giving back' to the community who supported me so early in my career."



Steven M. Horwitz, MD

Memorial Sloan Kettering Cancer Center

Dr. Horwitz is a Medical Oncologist at Memorial Sloan Kettering Cancer Center. His primary research efforts are clinical trials looking at new treatments in T-cell lymphomas, with a particular focus on small pilot studies of new therapies. "We hope to find better treatments and better ways to match new treatments to the patients who are most likely to benefit from them," he says. As part of his work, he has helped assemble a partnership of T-cell researchers at multiple cancer centers. "We have a great group of enthusiastic, collaborative investigators, working together and efficiently testing many new ideas in clinical trials."

Dr. Horwitz received his medical degree from Case Western Reserve University, before a residency at the University of Rochester Medical School and a fellowship at Stanford University. Like Dr. Bollard and Dr. Savage, Dr. Horwitz received an early career grant from LRF in 1999. As an SAB member Dr. Horwitz hopes to encourage more support for collaborative research. "A focus on career development is critical, but facilitating more established investigators working together can accelerate discovery, especially for more rare lymphomas," he notes.

Dr. Horwitz has also been a frequent participant in LRF's educational programs, including the North American Educational Forum on Lymphoma and several regional Lymphoma Workshops. He finds these patient programs incredibly useful for his own patients. "You can meet others with your illness and see that many people really are okay," he says.

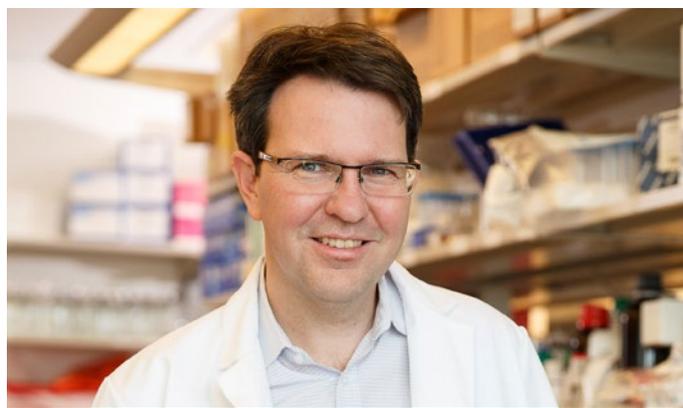


Kerry Savage, MD
British Columbia Cancer Agency

Dr. Savage is an Associate Professor at the University of British Columbia and a Medical Oncologist and Clinical Scientist in the Lymphoma Tumor Group at the British Columbia Cancer Agency (BCCA), in Vancouver, Canada. Her research interests include all of the lymphoid cancers, with recent publications on primary T-cell lymphomas (PTCL) and Hodgkin lymphoma as well as evaluating clinical and biomarker risk factors for central nervous relapse in diffuse large B-cell lymphoma (DLBCL). She is involved in multiple clinical trials as well as clinical and translational research using the expansive BCCA lymphoma database. In PTCL, Dr. Savage has worked on large collaborative research projects and locally evaluated the outcome in relapsed patients. She also helped develop a clinical risk model to predict central nervous system (CNS) lymphoma in DLBCL and has done extensive work detailing the unique biology and clinical outcome of primary mediastinal b-cell lymphoma (PMBCL) and nodular lymphocyte predominant Hodgkin lymphoma (NLPHL). "Some of this work has shaped our understanding of these diseases and guided management of treatment strategies," she notes.

Dr. Savage received her MD from the University of British Columbia (UBC) and completed a lymphoma fellowship at Dana-Farber Cancer Institute; she also holds an MSc in Epidemiology from Harvard School of Public Health. She also has a BSc in Biology (Genetics) from UBC. In 2001, while at Dana-Farber, Dr. Savage received an LRF Postdoctoral Fellowship Grant, one of eight current SAB members to have received an early career grant from LRF.

Dr. Savage is also interested in the training of new clinical fellows. In 2016, she served as a faculty member for LRF's Lymphoma Clinical Research Mentoring Program (LCRMP), and has plans to do so again in 2018. She is looking forward to the opportunity her Scientific Advisory Board membership offers to participate in additional LRF programs. "The SAB offers great networking and is very collegial," she says. "I've always enjoyed working with the LRF over the years."



Hans-Guido Wendel, MD
Memorial Sloan Kettering Cancer Center

Dr. Wendel is a Member of Memorial Sloan Kettering Cancer Center's Biology and Genetics Department. His research focuses on translational and basic discovery research in the genetic mechanisms that cause lymphoma. Some of this research has led to the development of new experimental therapies, such as his recent work on engineered T-cells, or "micro-pharmacies" that seek out malignant cells and deliver a protein called HVEM that can help inhibit lymphoma growth. Dr. Wendel's work on this project was partially funded by a LRF Follicular Pathways grant; more detail on this project can be found in the ASH 2016 issue of the *Research Report*.

Dr. Wendel is also excited about his lab's recent efforts to build inhibitors of an RNA helicase, a type of protein that can bind or remodel RNA, itself a crucial building block of both normal and malignant human cells, and which offers a potential new mechanism for stopping the development of lymphoma cells. "I think this is a very exciting new drug target that is completely different from all current cancer therapeutics," he says. Dr. Wendel's research has received a number of grants, including two LRF Follicular Pathways grants in 2013 and 2016.

Dr. Wendel received his MD from the Technical University of Aachen, Germany where he also completed his residency, before postdoctoral work at Cold Spring Harbor Laboratory. A frequent collaborator with current Scientific Advisory Board member Ari Melnick, MD, of Weill Cornell Medicine, Dr. Wendel is looking forward to the additional possibilities offered by his time on the SAB. "LRF can choose what kind of science it wishes to sponsor and thereby raise the level," Dr. Wendel notes. "I am happy to help LRF focus on the most exciting science."

An Interview with Thomas M. Habermann, MD



Dr. Habermann is Professor of Medicine at Mayo Clinic, Rochester. A long-time member of the Lymphoma Research Foundation's Scientific Advisory Board (SAB), Dr. Habermann was elected Chair-Elect in 2015, assuming the role of Chair in July 2017. He shares his thoughts on his experiences with LRF and his goals for his term as Chair below.

You are a long time member of the LRF SAB. How did you first get involved with LRF?

Interestingly, the daughter of a patient with mantle cell lymphoma, Heidi Dieter, contacted us in 2004 and wondered why we were not applying for grants from LRF. Her mother had mantle cell lymphoma. She and her mother spearheaded the start of the Minnesota state chapter meeting in Minneapolis, Minnesota. In 2017, we will once again have a Lymphoma Workshop in Minneapolis, Minnesota.

I was the Chair of the Mayo Clinic Lymphoma Disease Oriented Group for a number of years. We thought about which directions to go for a period of time. Our lymphoma group became involved with LRF in January of 2005, at which time I was leading our lymphoma group. We looked upon this as the best foundation to get involved in. Prior to that time, we had not been involved in foundations in our lymphoma group. I subsequently became a member of the Scientific Advisory Board in January of 2006 and later Chair of the Nominating Committee.

What do you hope to accomplish during your term as SAB Chair?

The LRF Scientific Advisory Board is composed of an extraordinarily remarkable group of individuals. They are extremely accomplished in the field of lymphoma. In addition, our past members are phenomenally accomplished. During this time we must review and sponsor top research. This will especially be essential in a time period where federal dollars for funding for lymphoma are decreasing and will likely continue to decrease. The technology era that we live in provides extraordinary opportunities. The first goal will be to continue to bring in lymphoma leaders in the country to the many facets of the LRF. The second goal will be to contribute and attempt to expand the educational mission of the LRF. The quality of this is already top-notch. The third area is with infrastructure. As the Chair-Elect of the SAB, I have been involved in restructuring different aspects of the LRF over the last two years. A few years ago, I never would have imagined that I would actually be reading and studying the 11th edition of Robert's Rules of Order to better define the committee structure of the LRF. Fourthly, the imperative is to raise more money for research. We are extraordinarily fortunate to have Michael Werner [Chairman, LRF Board of Directors] and his team on board. I will try to work very closely with him and other members of the Board of Directors.

What are the most important things LRF and the SAB do to impact lymphoma research?

The first impact is the recruitment of the genuine leaders in the country into the multifaceted aspects of the LRF. The second is the very key role that the LRF is taking in the development of fellows and junior faculty through the LRF Scholar Program, Postdoctoral Fellowship Grants, and the Clinical Investigator Career Development Awards. This role is so fundamental to fostering the early careers of individuals with an interest in lymphoproliferative disorders.

You have been involved with LRF's patient education events for many years, including chairing the Minnesota Lymphoma Workshop and the 2016 North American Educational Forum on Lymphoma. What prompts your commitment to patient education in general, and LRF's events in particular?

I have been involved in education since a first-year medical resident. I came to understand that the more that I teach,

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Foundation Announces Partnership with *Annals of Lymphoma*

In September 2017, the Lymphoma Research Foundation announced a unique partnership between the Foundation and *Annals of Lymphoma*, a new academic journal dedicated exclusively to publishing lymphoma research. This partnership furthers LRF's commitment to open access research while also increasing awareness of LRF funding opportunities, programs, and services among the international research community.

Annals of Lymphoma is an international peer-reviewed journal that publishes original research, reviews and perspectives on advances in basic and translational science, as well as clinical findings, focused exclusively on lymphoma. As an open access journal, *Annals of Lymphoma* will make all its published content freely available to the public upon publication, in the interest of supporting a greater exchange of knowledge. In partnering with an open access journal, LRF furthers its own commitment to publicly accessible research, in keeping with their Public Access policy for LRF grants, which requires publications proceeding from LRF-funded research since 2012 to be deposited in PubMed Central, a free full-text archive of biomedical and life sciences journal literature supported by the National Institutes of Health's (NIH) National Library of Medicine.

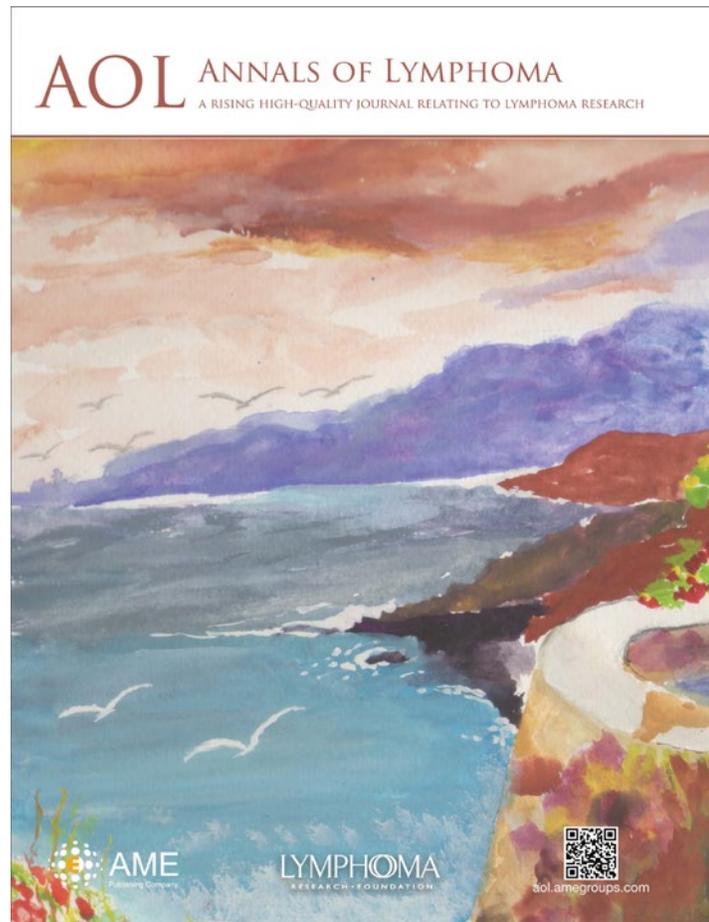
The partnership will also provide LRF with a venue for their own

publications, including white papers and proceedings from LRF-hosted scientific workshops, as well as opportunity for LRF to announce funding opportunities, upcoming programs, and available services for patients and healthcare professionals.

In an announcement of the partnership appearing on the *Annals of Lymphoma* website, Bruce D. Cheson, MD FAACP, of Lombardi Cancer Center, Georgetown University, Editor-in-Chief of the journal and a member of the LRF Scientific Advisory Board, and LRF Chief Executive Officer Meghan

Gutierrez noted "for those who have dedicated their lives to the study of lymphoma or to advocating on behalf of patients, we understand that we must continually innovate to develop new therapies and treat patients not just their disease... Through this partnership, we aim to establish more direct lines of communication between the patient and research communities, a connection which will serve to strengthen the entire lymphoma community for the benefit of all."

The full announcement and the inaugural issue of Annals of Lymphoma may be viewed at aol.amegroups.com.



News from the Field

A study by the Lunenburg Lymphoma Biomarker Consortium has produced a comprehensive analysis of how the genetic markers of follicular lymphoma (FL) patients with extremely poor outcomes compare to the markers of those who reach a prolonged remission. The study sought to evaluate existing published prognostic biomarkers in FL in the rituximab-chemotherapy era, examining 96 patients from international trials treated with the standard therapy who either experienced early failure, progression, or lymphoma-related death less than two years after initial treatment or who had a progression-free response lasting longer than five years.

The study verified some known common biomarkers, such as wild-type EZH2 status, the gain of chromosome 18, or low percentages of CD8+ and CD163+ cells, as strong predictors of early treatment failure, while noting that other biomarkers common to FL appear across both the poor outcome and long-term remission groups, and thus lack prognostic value. Contributions to the study and its August 2017 publication in *Haematologica* included LRF SAB members Ranjana Advani, MD of Stanford University, Laurie Sehn of British Columbia Cancer Agency (BCCA), former SAB member Randy Gascoyne, MD, also of BCCA, and MCL Consortium members Gilles Salles, MD, PhD of Claude Bernard University of Lyon, France, Andreas Rosenwald of University of Wuerzburg, Germany, and John Gribben of the University of London.

Targeting the gene CD30 with monoclonal antibodies in Hodgkin lymphoma (HL) and anaplastic large cell lymphoma (ALCL) has been clinically successful, but many patients suffer adverse events caused primarily by the

toxin component of the conjugated antibodies, leading to discontinuation of treatment. An August 2017 *Journal of Clinical Investigation* paper examines the prospect of targeting CD30 via chimeric antigen receptor (CAR) T-cells (by comparison, the CART-cell treatment recently approved by the FDA targets gene CD19). The small scale study tested the safety of the CD30 CAR T-cells in nine patients with relapsed/refractory HL or ALCL, seven of whom had been refractory to brentuximab vedotin (Adcetris). Two of the seven Hodgkin patients reported a complete response (one of more than 2.5 years) and three additional Hodgkin patients had a short duration of stable disease (disease neither growing nor shrinking). One of the two ALCL patients also reported a complete response of nine months. The researchers, including LRF SAB member Catherine Bollard, MD of Children's National Medical Center, suggest that further study of CD30 CAR T-cells in these subtypes, which are particularly common in adolescent and young adult patients, is warranted.

A retrospective study of diffuse large B-cell lymphoma (DLBCL) patients has shown further evidence that patients whose disease is refractory (unresponsive to treatment) at any point in their treatment have similarly poor outcomes. The SCHOLAR-1 study, published in *Blood* in August, studied 636 patient records from two large clinical trials and three patient databases, analyzing outcomes and overall survival for DLBCL patients whose disease was initially refractory, refractory after a second line therapy, or who relapsed after initial response to therapy. The study found only 26 percent of these patients achieved a response to therapy at any point in their treatment, with only seven

percent achieving a complete remission; similarly, only 20 percent of patients survived to two years post-diagnosis. The authors of the study, including SAB member Brian Link, MD of the University of Iowa and 2015 LRF Scholars Jason Westin, MD of MD Anderson Cancer Center, noted that their findings not only demonstrate the urgent need for better therapies for refractory DLBCL patients, but provide a benchmark by which new therapies for this population can be better measured.

Finding effective new combinations of therapies can be expensive and time consuming. A group of researchers at Weill Cornell Medicine has been testing the potential for artificial intelligence (AI) to predict effective combinations. Working across disciplines, the researchers, including LRF SAB member Ari Melnick, MD and 2016 Follicular Lymphoma Pathways grantee Leandro Cerchietti, PhD, used existing data on effective combination therapies to teach their AI model to predict new combinations, with one model using melanoma data and one using B-cell lymphoma data. Researchers then tested the models' predictions in the lab, and found them to be largely accurate as to which combinations were most likely to be effective. Researchers hope that this model will help narrow down the daunting number of options for potential combination therapies and help researchers focus their lab and clinical tests on the most promising combinations. The results of both studies were published in January, with the lymphoma model's results appearing in the journal *Cancer Research*.

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Patients with double-hit lymphoma — a particularly aggressive lymphoma in which a patient’s malignant cells show two mutated biomarkers, rather than one— do not need stem cell transplant if they receive a more intensive chemotherapy up front, a recent study has noted. The study, published in May in the *Journal of Clinical Oncology*, found that patients who received standard R-CHOP (rituximab plus cyclophosphamide, doxorubicin, vincristine, and prednisone) therapy as their initial treatment had improved outcomes when receiving stem cell transplant. However, those that received a more intensive initial regimen — either DA-EPOCH-R (etoposide, prednisone,

vincristine, cyclophosphamide, doxorubicin, and rituximab), R-hyperCVAD (rituximab, cyclophosphamide, vincristine, doxorubicin, dexamethasone, methotrexate, and cytarabine), or R-CODOX-M/IVAC (rituximab, cyclophosphamide, doxorubicin, vincristine, methotrexate/ ifosfamide, etoposide, high-dose cytarabine) — showed no significant benefit in outcomes whether they received a stem cell transplant or not, and had a comparable overall survival rate to patients who received R-CHOP followed by transplant. The study’s authors, including SAB member Kristie Blum, MD of Emory University, MCL Consortium member Timothy Fenske, MD of the Medical College of

Wisconsin, former SAB member Julie Vose, MD of the University of Nebraska Medical Center, and LRF grantees Jonathon Cohen, MD, of Emory University and Ryan Cassaday, MD of Fred Hutchinson Research Center, recommended that an intensive chemotherapy regimen upfront with no transplant, should become a standard treatment strategy for double hit lymphoma patients, sparing them from an additional, and often taxing, procedure.

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

LRF Publishes Recommendations on AYA Lymphoma Research

Findings from a 2015 Lymphoma Research Foundation scientific symposium on adolescent/young adult (AYA) lymphomas have recently been published in the influential journal *Blood Advances*. The paper, “Adolescent and Young Adult Lymphoma: Collaborative Efforts at Understanding Biology and Optimizing Care,” reviews lymphoma diagnosis and management across both pediatric and adult oncology, examining the differences and similarities between the two approaches.

AYA patients, classified as patients between the ages 15 and 39, often find themselves caught between adult and pediatric treatment strategies. LRF’s AYA Lymphoma Initiative convened a one-day symposium in November 2015, bringing together researchers specializing in both adult and pediatric lymphomas to discuss how to better serve this patient population. Following the structure of the symposium, the paper focuses on Hodgkin lymphoma, diffuse large B-cell lymphomas, and anaplastic large cell lymphoma, three subtypes commonly diagnosed in AYA patients.

The paper identifies the “information gap” in AYA lymphoma as a key challenge, whereby basic knowledge about lymphoma biology and therapeutic efficacy for this specific population is more limited than for younger or older populations, and proposes combining pediatric and adult research resources and leverage

existing data. “Developing well-designed therapeutic clinical trials that span pediatric and adult groups, and incorporate biologic and health services correlatives, is critical to improving outcomes and advancing research in this important and vulnerable population,” the authors note.

The paper was authored by Justine M. Kahn, MD, of Columbia University (a 2017 LRF Scholar), Nmazuo W. Ozuah, MD of Dana-Farber Cancer Institute, and AYA Symposium Steering Committee members Kieron Dunleavy, MD of George Washington University, Tara O. Henderson, MD of The University of Chicago, Kara M. Kelly, MD of Roswell Park Cancer Institute and the University of Buffalo, and Ann LaCasce, MD, of Dana-Farber Cancer Institute. Drs. Dunleavy, Kelly, and LaCasce are also members of LRF’s Scientific Advisory Board. With the participation of both pediatric and adult oncologists, the paper itself represents the type of collaboration for which it advocates.

“The Lymphoma Research Foundation is proud to support collaborative efforts such as our AYA Symposium and the *Blood Advances* paper to better address the unique needs of adolescent and young adult lymphoma patients,” said Meghan Gutierrez, LRF Chief Executive Officer. “We thank Drs. Kahn and Ozuah, as well as our AYA Symposium Steering Committee and The Paul Foundation, for their dedication in advocating for research and treatment strategies specific to this patient population.”

Dr. Habermann Interview

[CONTINUED FROM PAGE 6]

the more I learn. I subsequently became a Program Director a year and a half after going on faculty at Mayo Clinic. I then became an Associate Dean in the Mayo Clinic Graduate School of Medicine and Science. Over the years, I have come to deeply appreciate the importance of education at so many levels and believe that it is so fundamental to the future.

I have come to understand that the more we can educate patients and families about their disease and their treatments, the better. When I started my career, we really did not offer significant education to patients and their families, either in our offices or in other avenues as we have today. The Minnesota Lymphoma Workshop really opened my eyes to how much patients and families appreciated learning more. These avenues, along with the North American Education Forum, help filter further information that patients are obtaining on the internet, from other lymphoma patients, from physician offices and other avenues.

The quality of the events that the Lymphoma Research Foundation hosts is outstanding. The number of individuals and the qualifications of the individuals that speak at the North American Education Forum is outstanding and humbling. The amount of time that our colleagues spend doing this is really a tribute to their commitment to patients, patient care, and the Lymphoma Research Foundation.

When you began your medical studies, what drew you to scientific research in general and lymphoma research in particular?

Let me point out at the outset, that I had no prediction that my career would end up as it has. It has been fascinating to look back at what has happened to me since I entered medical school in 1975. In 1985, I was initially recruited to be in the hematology laboratory and involved in automated hematology. As a fellow I had the opportunity to become involved in the earliest alpha recombinant interferon trials in hairy cell leukemia. This opened phenomenal doors. I was able to meet the top investigators in the country in hematologic malignant lymphoproliferative disorders and communicate with them at meetings at very unique levels at a young age. Dr. Murray Silverstein, MD, the Chair of Hematology in 1985, came to Dr. T.E. Witzig and I and asked us to develop a proposal to reintegrate our lymphoma practice. That was the beginning of our Lymphoma Laboratory at Mayo Clinic and the Mayo Lymphoma Clinic Database. That database now has over 27,000 patients. I subsequently was asked to become the Principle Investigator

of the Eastern Cooperative Oncology Group U10 Mayo Clinic Grant in 1994 and remain the current ECOG-ACRIN PI on the Mayo Clinic U10 grant. That really moved my career in new directions, including chairing the North American Intergroup Study on R-CHOP. We have a very active program in the Mayo Clinic Lymphoma Group with many individuals, but especially Dr. T.E. Witzig. To date, I have been a co-author on 21 different drugs before their FDA approval, some of which have become FDA approved. In 2001, we were awarded a SPORE Grant in Lymphoma with the University of Iowa. I have been the Director of the Clinical Research Core. In this, Dr. James Cerhan developed the Molecular Epidemiology Research Project. This database has resulted in very extensive clinical and biologic studies and national and international collaborations as we consented and collected peripheral blood with tissue on patients for research. This has allowed us to collaborate with individuals such as Dr. Margaret Shipp at the Dana Farber Cancer Institute.

Clinical research has made this all so much more meaningful on a daily basis when I see patients.

What recent developments in lymphoma research give you the most hope for the future?

Genomic studies in concert with industry and clinical trials provide the most hope to improve overall survival. In addition, we are now becoming far more sophisticated in following patients with aspects that include quality of life, exercise, toxicities and other metrics which involve to whole patient and their family members which I believe are very essential and hold other keys to future patient outcomes.

Is there anything else you would like to add?

I did not dream nor have the foresight when I finished training to see or think that we could be where we are today in lymphoproliferative disorders. Through foundations, federal dollars, industry and institutional dollars, extraordinary progress has been made. It is likely that what we are doing today with treatment and how we follow patients in getting them through their journey will be considered naive. The future is very exciting.

At this time, I believe that the LRF has never been more poised to make a difference in so many aspects of lymphoproliferative disorders. The new LRF headquarters, our CEO and her team, the LRF Board, and the LRF Scientific Advisory Board make us poised to make genuine differences. We must rise to the occasion. I am very humbled to be the Chair of the LRF SAB.

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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LYMPHOMA RESEARCH • FOUNDATION

National Headquarters

Wall Street Plaza
88 Pine Street, Suite 2400
New York, NY 10005
(212) 349-2910
(212) 349-2886 fax

Helpline: (800) 500-9976
helpline@lymphoma.org

Website: lymphoma.org



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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

TJ Ragucci of Lynn, MA has turned a passion for cars into a Team LRF fundraiser. TJ has been running the Northeast Rod Run, an annual road "cruise" for muscle car enthusiasts through the Northeast U.S., since 2008. In 2016, he turned the event into a charity run – choosing LRF because of his girlfriend, Hollie, who is currently battling lymphoma, and a close friend, who passed from complications of his lymphoma treatment. After raising nearly \$10,000 in 2016, TJ hopes to match that for the 2017 event. "We are very fortunate to be able to enjoy this once a year cruise, but there are so many others that aren't able to enjoy much smaller things in life, because of this disease," TJ says. He adds that Hollie's doctor was interested to learn about their involvement with LRF, having been a past speaker at an LRF education event. "He told us how great the organization is and how it has grown and changed over the years. If that wasn't enough to reassure us that we were doing the right thing, then I don't know what would have."

Lymphoma Research Foundation
Wall Street Plaza
88 Pine Street, Suite 2400
New York, NY 10005

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◀ Scan using your
smartphone to read our
Research Reports online.

Interview with Dr. Thomas Habermann

LRF's new SAB Chair shares his
goals and thoughts on the future of
lymphoma research.
Details on Page 6.

LYMPHOMA TELECONFERENCES

LRF's free teleconference programs are hour-long interactive programs that provide an opportunity for members of the lymphoma community to learn more about the disease, treatment options, clinical trials and promising research. You can listen in to the live teleconference on the telephone or via live web streaming. Teleconferences are available as podcasts following the live program.

Update on Mantle Cell Lymphoma

Tuesday, November 14, 2017

1:30 - 2:30pm Eastern

Speakers:

Ajay Gopal, MD

Fred Hutchinson Cancer Research Center

Brad Kahl, MD

Washington University Medical School

Update on Lymphoma from the 2017

**American Society of Hematology
(ASH) Annual Meeting**

Tuesday, January 23, 2018

1:30 - 2:30pm Eastern

Speakers:

Stephen Ansell, MD, PhD

Mayo Clinic, Rochester

Laurie Sehn, MD, MPH

British Columbia Cancer Agency