54th ASH® Annual Meeting and Exposition

PRELIMINARY PROGRAM

Atlanta, GA
GEORGIA WORLD CONGRESS CENTER

Meeting Dates: December 8-11, 2012
Exposition Dates: December 8-10, 2012
Greetings from the President

It is my very distinct honor to invite you to join me for the preeminent celebration of research, education, and patient care in hematology at the 54th American Society of Hematology (ASH) Annual Meeting and Exposition at the Georgia World Congress Center in Atlanta, Georgia.

The ASH annual meeting is the main event in hematology that we look forward to each year, and the 2012 meeting promises to be the most exciting one yet. Our Education Program, chaired by Drs. Agnes Lee and Martin Tallman, will provide the practicing hematologist with invaluable information on nearly 30 of the most important areas of clinical progress, and our Scientific Program, chaired by Drs. Bruce Blazar and Roy Silverstein, promises to showcase the latest scientific advances in 17 key areas of hematology.

In addition to the Education and Scientific Programs, I’m excited to share several new and expanded offerings with you. First, and most importantly, we have added more sessions to the schedule. For the first time, sessions from our Education Program will be offered on Monday in addition to Saturday and Sunday. Our Simultaneous Oral Sessions have also been expanded, with new slots added on Saturday and Sunday.

This year’s meeting will also feature new Special Symposia. ASH will offer a Special Symposium on Epigenetics in Hematopoiesis that will focus on the effects of epigenetic alterations and gene mutations on hematopoietic stem cell function and discuss how epigenetics play a role in hematopoietic malignancies. In addition, our popular Tuesday morning Special Symposium on the Basic Science of Hemostasis and Thrombosis has been reconfigured based on audience feedback. The afternoon posters have been discontinued in favor of an enhanced morning program that will include a session highlighting the best thrombosis and hemostasis talks from the entire meeting.

Our popular, ticketed “Meet-the-Expert” sessions that have become a favorite for many at the ASH meeting have also been revamped for 2012. Now titled “Meet the Scientist” and “How I Treat: Bringing Science to Clinical Dilemmas,” these sessions have been restructured into basic science and clinical discussions, respectively, designed to foster informal interaction with some of the top experts in hematology. And a brand new session category – the ticketed “Scientific Forums” – will provide attendees with the opportunity to participate in small-group sessions with some of the field’s leading scientific authorities over lunch. For an entire list of each of the new offerings at this year’s annual meeting, see the “What’s New” section on page 3.

Of course, the Society’s annual celebration of groundbreaking advances in hematology would not be complete without honoring some of the distinguished leaders in the field through awards and special lectures. I encourage you to read more about each of our 2012 honorees on pages 7–9.

Finally, I hope that in the midst of marveling at the stimulating clinical and scientific advances presented at this year’s meeting, catching up with old friends and colleagues, and enjoying the cultural attractions of Atlanta, you take some time to consider participating more actively in ASH in 2013. If you are not yet a member, why not consider submitting an application at ASH Central to take advantage of the many programs and services ASH has to offer? If you are already a member, consider volunteering to serve on a committee (see www.hematology.org/Leadership) or make a gift to the new ASH Foundation, to be formally announced at this year’s meeting (learn more on page 44). There are countless ways to get involved, from writing to your legislators about the importance of federal funding for biomedical research to sharing your expertise with colleagues in a developing country (see page 13). It is truly an exciting time for the Society. We need your talents and energy to move the field forward!

The ASH annual meeting is without question the premier hematology meeting in the world. I hope that you will join me in Atlanta in December!

Sincerely yours,

Armand Keating, MD
2012 President
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  - Plenary Scientific Session
  - E. Donnall Thomas Lecture and Prize
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  - Grassroots Network Lunch
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- BACK COVER
The American Society of Hematology is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The American Society of Hematology designates this live activity for a maximum of 35.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Physicians not licensed in the United States who participate in this CME activity are also eligible for AMA PRA Category 1 Credits™.

Please see page 48 for more information on how to obtain these credits, as well as how to claim CME credits through the European Hematology Association.
Important Dates

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 7 – August 14</td>
<td>Abstract Submission Website Open</td>
</tr>
<tr>
<td></td>
<td>Only electronic submissions will be permitted. Visit the ASH website (<a href="http://www.hematology.org">www.hematology.org</a>) for abstract submission information.</td>
</tr>
<tr>
<td>July 18 – August 7</td>
<td>Online Early-Bird Registration Open for ASH Members Only</td>
</tr>
<tr>
<td>August 8 – November 7</td>
<td>Advance Registration Open for ASH Members and Non-Members</td>
</tr>
<tr>
<td>October 5</td>
<td>Group Room Block Request and Cancellation Deadline (see page 49)</td>
</tr>
<tr>
<td>October 5</td>
<td>Rooming Lists and Full Payments for Group Room Blocks Due to the ASH Housing Center (see page 49)</td>
</tr>
<tr>
<td>October 22 – 29</td>
<td>Late-Breaking Abstract Submission Website Open</td>
</tr>
<tr>
<td></td>
<td>The selection process for late-breaking abstracts is extremely competitive; a maximum of six abstracts will be selected, regardless of the number of submissions. This deadline is not intended as an extension of the general submission deadline. Abstract reviewers will focus on capturing abstracts with groundbreaking, novel data that otherwise could not be presented at the annual meeting.</td>
</tr>
<tr>
<td>November 7</td>
<td>Advance Registration Deadline</td>
</tr>
<tr>
<td></td>
<td>Registration must be received by this date in order to qualify for the reduced advance registration rates.</td>
</tr>
<tr>
<td>November 7</td>
<td>Individual Hotel Reservation Deadline</td>
</tr>
<tr>
<td></td>
<td>Reservations must be made by this date in order to qualify for the reduced room rate.</td>
</tr>
<tr>
<td>November 7</td>
<td>Child-Care Registration Deadline</td>
</tr>
<tr>
<td></td>
<td>Space is limited. Registration must be made by this date in order to secure child care.</td>
</tr>
<tr>
<td>November 27</td>
<td>Meeting Registration Cancellation Deadline</td>
</tr>
</tbody>
</table>

What’s New

In a continuing effort to improve and enhance the ASH annual meeting experience and offerings, each year the Society adds new sessions and programs. Attendees should take note of the new and enhanced offerings listed below that are making their debut at this year’s annual meeting; these will be indicated throughout this brochure with a “New This Year” or “New Time” icon:

- Special Symposium on Epigenetics in Hematopoiesis – new offering (page 11)
- Grassroots Network Breakfast now Grassroots Network Lunch – new time (page 12)
- Special Symposium on the Basic Science of Hemostasis and Thrombosis – extended schedule (page 13)
- Education Program Sessions – extended into Monday (page 17)
- Small Interactive Sessions with Experts (formerly “Meet-the-Expert Sessions”) – enhanced sessions
  - How I Treat: Bringing Science to Clinical Dilemmas (page 40)
  - Meet the Scientist (page 41)
  - Scientific Forums (page 42)
- Simultaneous Oral Sessions – extended schedule on Saturday and Sunday (page 43)
- ASH Foundation – new organization (page 44)
- Abstracts on flash drive only – print book discontinued (page 55)

This icon denotes sessions that may be of interest to PhD attendees.
Final schedule and meeting room assignments will be provided in the program material distributed at the annual meeting.

**THURSDAY, DECEMBER 6**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00 p.m. – 7:00 p.m.</td>
<td>Registration</td>
</tr>
</tbody>
</table>

**FRIDAY, DECEMBER 7**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m. – 6:00 p.m.</td>
<td>Registration</td>
</tr>
<tr>
<td>7:00 a.m. – 11:00 a.m.</td>
<td>Friday Satellite Symposia (sponsored by nonprofit organizations) These symposia are not part of the official ASH annual meeting and are planned solely by the sponsoring organizations. Brief symposium descriptions are included in a separate booklet provided with this brochure.</td>
</tr>
<tr>
<td>9:00 a.m. – 12:00 noon</td>
<td>American Board of Internal Medicine Maintenance of Certification Learning Session (ticketed session)</td>
</tr>
<tr>
<td>12:00 noon – 5:00 p.m.</td>
<td>Trainee Day (open to trainees wearing a blue badge only; pre-registration required)</td>
</tr>
<tr>
<td>12:30 p.m. – 4:30 p.m.</td>
<td>Friday Satellite Symposia (sponsored by nonprofit and for-profit organizations)</td>
</tr>
<tr>
<td>12:30 p.m. – 5:00 p.m.</td>
<td>Training Program Directors’ Workshop</td>
</tr>
<tr>
<td>5:00 p.m. – 7:00 p.m.</td>
<td>Trainee Welcome Reception and Meeting Overview (open to trainees wearing a blue badge only)</td>
</tr>
<tr>
<td>6:00 p.m. – 10:00 p.m.</td>
<td>Friday Satellite Symposia (sponsored by nonprofit and for-profit organizations)</td>
</tr>
</tbody>
</table>

**SATURDAY, DECEMBER 8: ASH ANNUAL MEETING BEGINS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>7:00 a.m. – 6:00 p.m.</td>
<td>Registration</td>
</tr>
<tr>
<td>7:30 a.m. – 9:00 a.m.</td>
<td>Education/Scientific Program</td>
</tr>
<tr>
<td>9:00 a.m. – 9:30 a.m.</td>
<td>Coffee Break (poster hall)</td>
</tr>
<tr>
<td>9:00 a.m. – 7:30 p.m.</td>
<td>Poster Session I – Viewing</td>
</tr>
<tr>
<td>9:30 a.m. – 11:00 a.m.</td>
<td>Education/Scientific Program</td>
</tr>
<tr>
<td>11:00 a.m. – 12:30 p.m.</td>
<td>Open Time for Lunch</td>
</tr>
<tr>
<td>11:00 a.m. – 5:00 p.m.</td>
<td>Exhibits Open</td>
</tr>
<tr>
<td>11:15 a.m. – 12:15 p.m.</td>
<td>How I Treat: Bringing Science to Clinical Dilemmas (ticketed sessions)</td>
</tr>
<tr>
<td>11:15 a.m. – 12:15 p.m.</td>
<td>Meet the Scientist (ticketed sessions)</td>
</tr>
<tr>
<td>11:15 a.m. – 12:15 p.m.</td>
<td>Career-Development Lunch Sessions (open to trainees wearing a blue badge only)</td>
</tr>
<tr>
<td>12:00 noon – 1:30 p.m.</td>
<td>Simultaneous Oral Sessions</td>
</tr>
<tr>
<td>12:30 p.m. – 1:30 p.m.</td>
<td>Ham-Wasserman Lecture</td>
</tr>
<tr>
<td>1:30 p.m. – 2:00 p.m.</td>
<td>Coffee Break (Exhibit Hall)</td>
</tr>
<tr>
<td>2:00 p.m. – 3:30 p.m.</td>
<td>Education/Scientific Program</td>
</tr>
<tr>
<td>2:00 p.m. – 3:30 p.m.</td>
<td>Special Symposium: Quality Improvement – A Toolkit for Hematology Practice</td>
</tr>
<tr>
<td>3:30 p.m. – 4:00 p.m.</td>
<td>Coffee Break (Exhibit Hall)</td>
</tr>
<tr>
<td>4:00 p.m. – 5:30 p.m.</td>
<td>Special Symposium on Epigenetics in Hematopoiesis</td>
</tr>
<tr>
<td>4:00 p.m. – 5:30 p.m.</td>
<td>Education/Scientific Program</td>
</tr>
<tr>
<td>5:30 p.m. – 7:30 p.m.</td>
<td>Poster Session I – Presentations</td>
</tr>
<tr>
<td>5:30 p.m. – 7:30 p.m.</td>
<td>Welcome Reception (poster hall)</td>
</tr>
<tr>
<td>6:00 p.m. – 7:30 p.m.</td>
<td>Practice Forum</td>
</tr>
<tr>
<td>6:30 p.m. – 9:00 p.m.</td>
<td>Promoting Minorities in Hematology Presentations and Reception</td>
</tr>
<tr>
<td>7:30 p.m. – 8:30 p.m.</td>
<td>Practice Forum Reception</td>
</tr>
</tbody>
</table>
SUNDAY, DECEMBER 9

7:00 a.m. – 5:00 p.m.  Registration
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7:30 a.m. – 9:00 a.m.  Education/Scientific Program
9:00 a.m. – 9:30 a.m.  Coffee Break (poster hall)
9:00 a.m. – 8:00 p.m.  Poster Session II – Viewing
9:30 a.m. – 11:00 a.m.  ASH/ASCO Joint Symposium
9:30 a.m. – 11:00 a.m.  Education/Scientific Program
11:00 a.m. – 12:30 p.m. Open Time for Lunch
(A light lunch will be provided in the Exhibit Hall)
11:00 a.m. – 4:30 p.m.  Exhibits Open
11:15 a.m. – 12:15 p.m. Grassroots Network Lunch
11:15 a.m. – 12:15 p.m. How I Treat: Bringing Science to Clinical Dilemmas
(ticketed sessions)
11:15 a.m. – 12:15 p.m. Meet the Scientist (ticketed sessions)
11:15 a.m. – 12:15 p.m. Scientific Forums (ticketed sessions)
11:15 a.m. – 12:15 p.m. Trainee Simultaneous Didactic Sessions
(open to trainees wearing a blue badge only)
12:00 noon – 1:30 p.m. Simultaneous Oral Sessions
12:15 p.m. – 1:15 p.m. ASH/EHA Joint Symposium
1:15 p.m. – 1:45 p.m.  Announcement of Awards
• Wallace H. Coulter Award for Lifetime Achievement in Hematology
• Mentor Award
1:45 p.m. – 2:00 p.m.  Remarks by Dr. Bob Löwenberg, Blood’s Editor-in-Chief Designee
2:00 p.m. – 4:00 p.m.  Plenary Scientific Session
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4:30 p.m. – 6:00 p.m.  Simultaneous Oral Sessions
4:30 p.m. – 6:00 p.m.  Education Spotlight Sessions (ticketed sessions)
6:00 p.m. – 8:00 p.m.  Poster Session II – Presentations
6:00 p.m. – 8:00 p.m.  Poster Hall Reception
6:15 p.m. – 7:15 p.m.  Blood and Beyond: Searching the Scientific Literature Online
6:30 p.m. – 8:00 p.m.  The HVO Volunteer Experience: Sharing Your Hematology
Expertise Globally
## Schedule At-a-Glance

### Monday, December 10

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m. – 5:00 p.m.</td>
<td>Registration</td>
</tr>
<tr>
<td>7:00 a.m. – 8:30 a.m.</td>
<td>Simultaneous Oral Sessions</td>
</tr>
<tr>
<td>7:00 a.m. – 8:30 a.m.</td>
<td>Education Program</td>
</tr>
<tr>
<td>7:30 a.m. – 12:30 p.m.</td>
<td>Consultative Hematology Course (ticketed session)</td>
</tr>
<tr>
<td>9:00 a.m. – 10:00 a.m.</td>
<td>E. Donnall Thomas Lecture and Prize</td>
</tr>
<tr>
<td>10:00 a.m. – 10:30 a.m.</td>
<td>Coffee Break (Exhibit Hall)</td>
</tr>
<tr>
<td>10:00 a.m. – 2:00 p.m.</td>
<td>Exhibits Open</td>
</tr>
<tr>
<td>10:00 a.m. – 6:00 p.m.</td>
<td>Poster Session III – Viewing</td>
</tr>
<tr>
<td>10:30 a.m. – 12:00 noon</td>
<td>Simultaneous Oral Sessions</td>
</tr>
<tr>
<td>10:30 a.m. – 12:00 noon</td>
<td>Education Program</td>
</tr>
<tr>
<td>10:30 a.m. – 12:00 noon</td>
<td>Education Spotlight Sessions (ticketed sessions)</td>
</tr>
<tr>
<td>11:15 a.m. – 12:15 p.m.</td>
<td>Scientific Forums (ticketed sessions)</td>
</tr>
<tr>
<td>12:00 noon – 1:30 p.m.</td>
<td>Open Time for Lunch (A light lunch will be provided in the Exhibit Hall)</td>
</tr>
<tr>
<td>12:15 p.m. – 1:15 p.m.</td>
<td>Trainee Simultaneous Didactic Sessions (open to trainees wearing a blue badge only)</td>
</tr>
<tr>
<td>1:30 p.m. – 2:30 p.m.</td>
<td>Ernest Beutler Lecture and Prize</td>
</tr>
<tr>
<td>2:30 p.m. – 2:45 p.m.</td>
<td>Coffee Break (poster hall)</td>
</tr>
<tr>
<td>2:45 p.m. – 4:15 p.m.</td>
<td>Simultaneous Oral Sessions</td>
</tr>
<tr>
<td>2:45 p.m. – 4:15 p.m.</td>
<td>Education Program</td>
</tr>
<tr>
<td>2:45 p.m. – 4:15 p.m.</td>
<td>Education Spotlight Sessions (ticketed sessions)</td>
</tr>
<tr>
<td>4:30 p.m. – 6:00 p.m.</td>
<td>Simultaneous Oral Sessions</td>
</tr>
<tr>
<td>6:00 p.m. – 8:00 p.m.</td>
<td>Poster Session III – Presentations</td>
</tr>
<tr>
<td>6:00 p.m. – 8:00 p.m.</td>
<td>Poster Hall Reception</td>
</tr>
<tr>
<td>6:15 p.m. – 7:45 p.m.</td>
<td>Simultaneous Oral Sessions</td>
</tr>
</tbody>
</table>

### Tuesday, December 11

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m. – 1:00 p.m.</td>
<td>Registration</td>
</tr>
<tr>
<td>7:15 a.m. – 9:15 a.m.</td>
<td>Special Symposium on the Basic Science of Hemostasis and Thrombosis</td>
</tr>
<tr>
<td>7:30 a.m. – 9:00 a.m.</td>
<td>Simultaneous Oral Sessions</td>
</tr>
<tr>
<td>7:30 a.m. – 9:00 a.m.</td>
<td>Late-Breaking Abstracts Session</td>
</tr>
<tr>
<td>9:30 a.m. – 9:45 a.m.</td>
<td>Announcement of Awards</td>
</tr>
<tr>
<td>9:45 a.m. – 11:15 a.m.</td>
<td>Presidential Symposium</td>
</tr>
<tr>
<td>11:15 a.m. – 11:30 a.m.</td>
<td>Business Meeting</td>
</tr>
<tr>
<td>12:00 noon – 1:00 p.m.</td>
<td>Best of ASH</td>
</tr>
</tbody>
</table>
**SATURDAY**

**Ham-Wasserman Lecture**

**SATURDAY, DECEMBER 8, 12:30 P.M. – 1:30 P.M.**

This lectureship is named in honor of two past Society presidents, the late Thomas Hale Ham, MD, and the late Louis R. Wasserman, MD, distinguished hematologists who contributed extensively to the Society. The Ham-Wasserman Lecture is given by an individual from outside the United States who has made a major contribution to our understanding of an area that relates to hematology.

**TITLE:**

Treatment of AML: Are We Making Progress?

**SPEAKER:**

Alan K. Burnett, MD, Cardiff University School of Medicine, Cardiff, United Kingdom

Age is an important initial consideration in deciding what treatment strategy to follow for new patients with acute myeloid leukemia (AML) and may represent a useful surrogate for the likelihood of toleration-intensive chemotherapy. In younger patients, there is clear evidence of improved survival in the last two or three decades, although this appears to be due primarily to improvements in supportive care and may be limited to those with favorable-risk disease. In older patients, there is little evidence of similar improvement, and the appropriateness of intensive treatment represents a current dilemma. Epidemiological and limited clinical studies might suggest that patients with similar characteristics will benefit from an intensive approach; however, there may be several undefined factors that dictated the treatment decision. The combination of a nucleoside analogue and an anthracycline (7+3) schedule has been the standard of care for several years.

The ability to accurately monitor treatment by molecular or immunophenotypic techniques has the potential to enhance a personalized approach to treatment. A substantial proportion of patients do not receive conventional chemotherapy and there is considerable scope not only for novel treatments, but also for trial design (e.g., the so-called “pick a winner” program). Since conventional chemotherapy has probably reached its potential, there is interest in novel treatments, particularly in older patients.

In this lecture, recent reports of dose escalation, augmentation by antibody-directed chemotherapy, or alternative chemotherapy to challenge this standard will be discussed. Consolidation with high-dose Ara-C is the standard of care for post-remission chemotherapy, but how often and at what dose level could be debated. Which patients should be offered stem cell transplant in first remission is also a matter of debate and risk assessment. The molecular and cytogenetic heterogeneity of AML is increasingly recognized and is being used to direct treatment to patient subgroups, of which several examples will be demonstrated. While much of this information is prognostic, the extent to which it is predictive of benefit to a chosen therapy is less clear, but potential examples are emerging.

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**SUNDAY**

**ASH/EHA Joint Symposium**

**SUNDAY, DECEMBER 9, 12:15 P.M. – 1:15 P.M.**

**TITLE:**

Overcoming Stem Cell Tourism by Promoting Clinical Trials

**CO-CHAIRS:**

Armand Keating, MD, President, American Society of Hematology, Princess Margaret Hospital, Toronto, Ontario, Canada

Ulrich Jäger, MD, President, European Hematology Association, Medical University of Vienna, Vienna, Austria

**SPEAKERS:**

Alan Trounson, PhD, President, California Institute for Regenerative Medicine, San Francisco, CA

Douglass Sipp, Center for Developmental Biology, Kobe, Japan

How does a hematologist balance the desire to help patients with dire clinical prognoses with the need to promote randomized clinical trials for new or unproven treatments?

Periodically, setbacks occur in the development of clinical trials for stem cell treatments. At the same time, the prevalence of stem cell tourism has been on the rise, providing patients with tempting but very risky alternatives. The scientific community, while sympathetic to patients’ concerns and motivations, understands the importance of promoting well-designed clinical trials that adhere to the scientific process in order to develop safe and efficacious stem cell treatments. Without these trials, issues with stem cell therapies will remain unresolved and progress in this arena of regenerative medicine will stagnate.

The scientific community, while sympathetic to patients’ concerns and motivations, understands the importance of promoting well-designed clinical trials that adhere to the scientific process in order to develop safe and efficacious stem cell treatments. Without these trials, issues with stem cell therapies will remain unresolved and progress in this arena of regenerative medicine will stagnate.

The session will feature Dr. Alan Trounson of the California Institute for Regenerative Medicine, who has led this institution since its founding. He will be joined by Douglass Sipp, of the Office for Science Communications and International Affairs at the Center for Developmental Biology in Japan. They will discuss the current obstacles and possible solutions to the challenge of assuring all avenues of regenerative medical research.
Announcement of Awards

SUNDAY, DECEMBER 9, 1:15 P.M. – 1:45 P.M.

Wallace H. Coulter Award for Lifetime Achievement in Hematology

This award, named for Wallace Henry Coulter, a prolific inventor who made important contributions to hematology and to ASH, is bestowed on an individual who has demonstrated a lifetime commitment and made outstanding contributions to hematology, and who has made a significant impact on education, research, and practice.

The 2012 Wallace H. Coulter Award for Lifetime Achievement in Hematology will be presented to James George, MD, of the University of Oklahoma Health Sciences Center in Oklahoma City for his remarkable career and commitment to hematology. Dr. George is a pioneer in the field of platelet glycoproteins, specializing in the radiolabeling of platelet surface components and their analysis by sodium dodecyl sulfate (SDS)–polyacrylamide gel electrophoresis. His methods helped define the molecular basis of platelet function in hemostasis. Dr. George has received numerous awards, including the Tibor Greenwalt Career Research Award of the American Association of Blood Banks (AABB) and the Investigator Recognition Award for Contributions to Hemostasis of the International Society on Thrombosis and Hemostasis (ISTH). Dr. George’s dedication to hematology spans more than four decades, exemplifying excellence in research, clinical care, and education.

Mentor Award

The ASH Mentor Award was established to recognize hematologists who have excelled in mentoring trainees and colleagues. Each year the Society recognizes two mentors, one in the basic sciences and one in clinical investigation and training, who have had a significant, positive impact on their mentees’ careers, and, through their mentees, have advanced research and patient care in the field of hematology. The 2012 award winners will be announced at the meeting.

Remarks by Bob Löwenberg, MD, PhD, Blood’s Editor-in-Chief Designee

SUNDAY, DECEMBER 9, 1:45 P.M. – 2:00 P.M.

Dr. Bob Löwenberg, who will assume the role of Blood Editor-in-Chief beginning in January 2013, will introduce his editorial team and his plans for the future direction of the journal, prior to the Plenary Scientific Session.

Plenary Scientific Session

SUNDAY, DECEMBER 9, 2:00 P.M. – 4:00 P.M.

During this prestigious session, a highlight of the annual meeting, attendees will hear the presentations of the highest-caliber scientific abstracts selected by the Program Committee from among the thousands submitted from around the world. Plenary Scientific Session speakers and topics will be announced on the ASH website (www.hematology.org) when the abstracts are posted online in early November.

MONDAY

E. Donnall Thomas Lecture and Prize

MONDAY, DECEMBER 10, 9:00 A.M. – 10:00 A.M.

This award and lectureship was created in 1992 and named after Nobel Prize laureate and past Society president E. Donnall Thomas, MD. The E. Donnall Thomas Prize recognizes pioneering research achievements in hematology.

TITLE:
The AML Genome

SPEAKER:
Timothy J. Ley, MD, Washington University School of Medicine, St. Louis, MO

Cytogenetics has been an important tool for the classification and treatment of acute myeloid leukemia (AML) for decades. Since 2008, it has become possible to sequence the entire genomes of AML samples to define their detailed structures. Several hundred AML genomes and exomes have now been sequenced, providing an unprecedented view of all of the common somatic mutations that occur in this disease. Next-generation DNA sequencing approaches are providing detailed information about the clonal architecture of AML at presentation and its evolution at relapse, and may provide new clues regarding the genetic underpinnings of drug resistance and disease progression. As additional AML genomes are sequenced, a fully integrated view of the AML genome (and epigenome) will become apparent, which will hopefully allow for more accurate classification and treatment plans for all patients with this disease.
Ernest Beutler Lecture and Prize

MONDAY, DECEMBER 10, 1:30 P.M. – 2:30 P.M.

This two-part lectureship, named for past president of ASH and legendary physician-scientist Ernest Beutler, MD, recognizes major advances related to a single topic. This award honors two individuals, one who has enabled advances in basic science and another for achievements in clinical science or translational research.

TITLE:
T-cell Infusions: A New Tool for Transfusion Medicine That Has Come of Age

SPEAKERS:
Bruce R. Blazar, MD, University of Minnesota, Minneapolis, MN
Carl H. June, MD, Abramson Cancer Center, University of Pennsylvania, Philadelphia, PA

Adoptive T-cell therapy is an emerging form of transfusion therapy that has potential to establish tolerance to hematopoietic or solid organ allografts, treat autoimmunity, and promote immunity to cancer and chronic infection. Advances in the understanding of T-cell biology have led to the development of efficient large-scale T-cell cultures, permitting the infusion of autologous or allogeneic T cells with retention of the desired function. Genetic engineering can be combined with T-cell cultures, so that strategies to regenerate damaged immune systems or to enhance cell functions as an application of synthetic biology are now possible. Clinical studies have established proof of concept for the ability of T-cell transfer therapy to either inhibit the adverse effects of allogeneic hematopoietic cell transplantation or to promote tumor immunity.

TUESDAY

Announcement of Awards

TUESDAY, DECEMBER 11, 9:30 A.M. – 9:45 A.M.

William Dameshek Prize

The William Dameshek Prize, named for the late William Dameshek, MD, a past president of ASH and the original editor of Blood, recognizes a recent outstanding contribution to the field of hematology.

Henry M. Stratton Medal

The Stratton Medal, named for the late Henry Maurice Stratton, co-founder of Grune and Stratton, the medical publishing house that first published Blood, has traditionally honored an individual known for his or her outstanding, well-recognized contributions to hematology in basic science or clinical and/or translational research. For the first time in 2012, the Stratton Medal will be awarded to two individuals, one in basic research and the other in clinical/translational research.

The 2012 Stratton Medal for Basic Research will be awarded to David Ginsburg, MD, of the University of Michigan in Ann Arbor and Howard Hughes Medical Institute, for his many seminal scientific contributions in characterizing the molecular and genetic basis of inherited bleeding and clotting disorders. Insights from his profound studies of the biosynthesis, processing, and function of the key protein targets affected in these hemostatic disorders have allowed Dr. Ginsburg to define the molecular biology of the major inherited coagulopathies. Dr. Ginsberg has received several other prestigious awards, including ASH’s 2000 E. Donnall Thomas Prize, and his work has led to unprecedented knowledge of the role of clotting factors in the body’s response to infection.

The 2012 Stratton Medal for Clinical/Translational Research will be awarded to Richard Aster, MD, of the BloodCenter of Wisconsin and Medical College of Wisconsin in Milwaukee, for his many breakthroughs in platelet immunology, mainly in drug-induced antibodies, human leukocyte antigen anti-platelet antibodies, and neonatal thrombocytopenia. Dr. Aster, who founded the Blood Research Institute of the Blood Center of Southeastern Wisconsin in 1970 and served as its first executive director, has contributed significantly to the development of hemostasis research in blood banks and has also served as a mentor to several generations of physicians and scientists.
**Presidential Symposium**

**TUESDAY, DECEMBER 11, 9:45 A.M. – 11:15 A.M.**

**TITLE:**

**Regenerative Medicine**

**CHAIR:**

Armand Keating, MD, President, American Society of Hematology, Princess Margaret Hospital, Toronto, Ontario, Canada

**SPEAKERS:**

Gordon Keller, PhD, McEwen Centre for Regenerative Medicine, Toronto, Ontario, Canada

Pluripotent Stem Cells: Modeling Human Hematopoietic Development

David T. Scadden, MD, Harvard Stem Cell Institute, Boston, MA

Adult Stem Cells: Hematopoietic Stem Cells and their Niche

Michele De Luca, MD, University of Modena and Reggio Emilia, Modena, Italy

Stem Cells to the Clinic: Lessons from the Limbus

The generation of hematopoietic stem cells from pluripotent stem cells (PSCs) depends on our ability to accurately recapitulate key aspects of embryonic hematopoietic development in the differentiation cultures. During the 2012 ASH Presidential Symposium, Dr. Gordon Keller will discuss the progress in modeling human hematopoietic development from PSCs in vitro and highlight approaches made to distinguish primitive and definitive hematopoiesis and to identify the signaling pathways that regulate these programs. Dr. Keller will also describe the identification of a PSC-derived definitive hematopoietic progenitor that develops from hemogenic endothelium and displays the capacity to generate lymphoid, myeloid, and erythroid progeny.

The advances in isolating and molecularly characterizing hematopoietic stem cells have led to few methods for altering their function in patients. These powerful and potentially dangerous cells rely on complex cues from the bone marrow environment for their regulated activity. Dr. David Scadden will focus on how dissecting the interaction between hematopoietic stem cells and the bone marrow has both enriched our understanding of how stem cells are governed and guided the development of treatments to improve hematopoietic stem cell transplantation. Dr. Scadden will also discuss data indicating that bone marrow stroma is highly dynamic and may contribute to dysplastic and neoplastic hematologic disease.

Epithelial stem cells, known as holoclones, are responsible for renewal and repair of human stratified epithelium. Stem cells of human corneal epithelium are located in the limbus, the narrow zone between the cornea and the bulbar conjunctiva. Self-renewal and proliferation of limbal stem cells are regulated by known transcription factors. Ocular burns may destroy the limbus, causing limbal stem cell deficiency. In such cases, the cornea acquires an epithelium through the invasion of bulbar conjunctival cells. This process causes neovascularization, chronic inflammation, and scarring, leading to corneal opacity and loss of vision. Allogeneic corneal transplantation, aimed at replacing the scarred corneal stroma and the inner endothelium, is, however, not a successful treatment. The only way to prevent this invasion is to restore the limbus. The finding that human limbal cell cultures contain stem cells led to the first therapeutic use of such cultures in the regeneration of corneal epithelium. Dr. Michele de Luca will present long-term clinical results of patients successfully treated with autologous limbal stem cell cultures.

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**Business Meeting**

**TUESDAY, DECEMBER 11, 11:15 A.M. – 11:30 A.M.**

At least one month prior to the annual meeting, reports on ASH’s financial status, Blood, and awards, and information about the Society’s leadership nominations are made available on the ASH website ([www.hematology.org](http://www.hematology.org)) for review by ASH members. The Business Meeting will offer a forum for members to raise issues of concern regarding the information presented in these documents and conclude with the traditional passing of the gavel to the new ASH President.

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**Best of ASH**

**TUESDAY, DECEMBER 11, 12:00 NOON – 1:00 P.M.**

**CO-CHAIRS:**

Bruce R. Blazar, MD, University of Minnesota, Minneapolis, MN

Roy L. Silverstein, MD, Medical College of Wisconsin, Milwaukee, WI

Before heading home, make time to attend “Best of ASH” on Tuesday for a review of the key themes from this year’s meeting. Don’t miss this one-hour session, led by the 2012 Annual Meeting Scientific Program Co-Chairs, to hear about the biggest breakthroughs from the meeting’s more than 4,000 abstract presentations.
**FRIDAY**

**Training Program Directors’ Workshop**

**FRIDAY, DECEMBER 7, 12:30 P.M. – 5:00 P.M.**

The Training Program Directors’ Workshop provides an interactive forum for directors of all hematology-related training programs to learn from the experts and from each other.

**CHAIR:**
Alison W. Loren, MD, University of Pennsylvania, Philadelphia, PA

**DIDACTIC SESSIONS:**

**SPEAKERS:**
- F. Daniel Duffy, MD, University of Oklahoma – Tulsa, Tulsa, OK
  *Systems-Based Practice in Fellowship Education*
- Lee R. Berkowitz, MD, The University of North Carolina at Chapel Hill, Chapel Hill, NC
  *Milestones in Graduate Medical Education*

**BREAKOUT SESSIONS:**

**SPEAKERS:**
- Lee R. Berkowitz, MD, The University of North Carolina at Chapel Hill, Chapel Hill, NC
  *Implementing Milestones in Fellowship*
- F. Daniel Duffy, MD, University of Oklahoma – Tulsa, Tulsa, OK
  Christian Cable, MD, Scott & White, Temple, TX
  *Implementing Systems-Based Practice Initiatives in Fellowships*

These sessions will provide training program directors outstanding opportunities to learn about and share best practices for critical issues facing their programs. Program directors who complete this workshop will be eligible for AMA PRA Category 1 Credit™. A buffet lunch will be available at 12:30 p.m. and the program will run from 1:00 p.m. to 5:00 p.m. There will be no business meeting with this workshop.

**SATURDAY**

**Special Symposium on Epigenetics in Hematopoiesis**

**SATURDAY, DECEMBER 8, 4:00 P.M. – 5:30 P.M.**

**CHAIR:**
Ari Melnick, MD, Weill Cornell Medical College, New York, NY

**SPEAKERS:**
- Margaret A. Goodell, PhD, Baylor College of Medicine, Houston, TX
  *Epigenetic Regulation of Hematopoietic Stem Cells*
- Lucy A. Godley, MD, PhD, The University of Chicago, Chicago, IL
  *5-Hydroxymethylcytosine Control of Hematopoiesis*
- Olivier Bernard, PhD, Institut Gustave-Roussy, Villejuif, France
  *Epigenetic Alterations in Myeloid Malignancies*

This session will focus on the epigenetic paradigms that control gene expression across the hematopoietic cell lineages, the molecular mechanisms by which epigenetic alterations control hematopoietic stem cell function and differentiation, and the effects of gene mutations in hematopoietic malignancies.

Dr. Margaret Goodell will review how epigenetic modifications alter hematopoietic stem cell function, with an emphasis on mouse models with disruptions in the DNA methyltransferase enzymes and how these studies impact our understanding of malignant hematopoiesis.

Dr. Lucy Godley will review how 5-hydroxymethylcytosine controls differentiation within the hematopoietic compartment, including how the TET2/IDH axis impacts epigenetic modifications and malignant hematopoiesis.

Dr. Olivier Bernard will focus on recent data on the role of the methylcytosine hydroxylase TET2 in both lymphoid and myeloid human malignancies, and their cross-talk with other oncogenic hits. Efforts in modeling these oncogenic networks in the mouse will also be presented.
Special-Interest Sessions

**Practice Forum**

**SATURDAY, DECEMBER 8, 6:00 P.M. – 7:30 P.M.**

**Hematology in Cyberspace: Benefiting from New Technologies and Social Networking**

**CHAIR:**
Steven L. Allen, MD, Hofstra North Shore-LIJ School of Medicine at Hofstra University, Hempstead, NY

The 2012 ASH Practice Forum will provide the ASH practice community with a greater understanding of existing and emerging technologies that help improve patient care and practice efficiency as well as provide opportunities for additional education and collaboration. The session will feature several examples from ASH members who have successfully implemented new technologies in their practices, illustrating how practitioners are not only becoming more aware of available technologies and better prepared to deploy them but also staying current on new and emerging technologies. The program will also provide an overview on federal efforts to encourage the adoption of electronic medical records and move toward additional technology-related programs.

**Practice Forum Reception**

**SATURDAY, DECEMBER 8, 7:30 P.M. – 8:30 P.M.**

A special reception for practitioners will follow the Practice Forum. The reception provides an opportunity for participants to network and talk directly with members of the ASH Committee on Practice to express issues of concern, learn more about the Society’s practice-related initiatives, and share personal experiences. Beverages and hors d’oeuvres will be served.

**SUNDAY**

**Hematology Course Directors’ Workshop**

**SUNDAY, DECEMBER 9, 7:00 A.M. – 9:00 A.M.**

**TITLE:**
Teaching Topics: Red Cell Disorders

**CHAIR:**
Alice D. Ma, MD, The University of North Carolina at Chapel Hill, Chapel Hill, NC

The 2012 Hematology Course Directors’ Workshop will begin a multi-year examination of the key topics covered by second-year course directors – the first topic will be red cell disorders. Course directors will share best practices, tools, and techniques for teaching this topic.

**ASH/ASCO Joint Symposium**

**SUNDAY, DECEMBER 9, 9:30 A.M. – 11:00 A.M.**

**TITLE:**
Clinical Oncology Update: Studies from the 2012 ASCO Annual Meeting

**CO-CHAIRS:**
Armand Keating, MD, President, American Society of Hematology, Princess Margaret Hospital, Toronto, Ontario, Canada
Sandra M. Swain, MD, President, American Society of Clinical Oncology, Washington Cancer Institute, Washington Hospital Center, Washington, DC

The ASH/ASCO Joint Symposium will review some of the best science from the 2012 ASCO Annual Meeting, featuring presentations by the investigators who contributed to these clinical research successes. Attendees seeking an overview of the latest clinical oncology research to complement the research presented at the ASH annual meeting will find this session of value.
Grassroots Network Lunch
SUNDAY, DECEMBER 9, 11:15 A.M. – 12:15 P.M.

ASH has become influential with policymakers because of the strength of its “Grassroots Network” – ASH members who contact their elected officials to share the Society’s messages, concerns, and recommendations. The Grassroots Network Lunch provides a forum for all interested members to learn how they can participate in ASH’s advocacy efforts, communicate with Congress and the White House, become effective advocates for hematology, and discuss the Society’s legislative priorities. Discussion will focus on the results of the November congressional and presidential elections and their impact on hematology.

Blood and Beyond: Searching the Scientific Literature Online
SUNDAY, DECEMBER 9, 6:15 P.M. – 7:15 P.M.

The explosion of information on the Internet has led to powerful new search technologies to help make it easier for users to find what they need. Blood has partnered with Stanford University’s HighWire Press to provide robust search capabilities within Blood’s online journal site (http://bloodjournal.org). This session will describe the search and alert features available on Blood Online, including RSS feeds (online features that automatically deliver updated website content directly to users) and electronic table-of-contents alerts, to mine the scientific literature. Participants will also be introduced to the 2.0 technology now available with Blood Online and to new search and automatic alert features available from the HighWire portal. These features allow users to conduct in-depth queries and browse hundreds of online journals and Medline as well as the other ASH publications that HighWire hosts.

The HVO Volunteer Experience: Sharing Your Hematology Expertise Globally
SUNDAY, DECEMBER 9, 6:30 P.M. – 8:00 P.M.

ASH and its partner organization Health Volunteers Overseas (HVO) are looking for hematologists with a passion for teaching and training who want to broaden their horizons through short-term volunteer experiences in developing countries. Interested parties can attend this session to gain insight into how volunteering with HVO can improve hematology care overseas and confront hematology health challenges globally. Several presentations from ASH members who serve as program directors and volunteers at various sites around the world will be featured. Attend to learn more about the sites, their educational, clinical, and laboratory hematology needs, and how you can make a difference as a volunteer. Following the presentations, a question-and-answer session will be held. Bring your sense of adventure and learn how a brief visit can make a very big impact.

Tuesday

Special Symposium on the Basic Science of Hemostasis and Thrombosis
Presented by the Scientific Committees on Hemostasis, Thrombosis and Vascular Biology, and Platelets

TUESDAY, DECEMBER 11, 7:15 A.M. – 9:15 A.M.

CO-CHAIRS:
Barbara A. Konkle, MD, Puget Sound Blood Center, University of Washington, Seattle, WA
Susan S. Smyth, MD, PhD, University of Kentucky, Lexington, KY
Andrew S. Weyrich, PhD, The University of Utah, Salt Lake City, UT

SPEAKERS:
James H. Morrissey, PhD, University of Illinois at Urbana-Champaign, Urbana, IL
Modulation of Hemostasis, Thrombosis, and Inflammation by Polyphosphate
Wolfram Ruf, MD, The Scripps Research Institute, La Jolla, CA
Coagulation Signaling in Inflammation
Charles S. Abrams, MD, University of Pennsylvania, Philadelphia, PA
Phosphoinositide Signaling in Platelets
Barbara A. Konkle, MD, Puget Sound Blood Center, University of Washington, Seattle, WA
Best of ASH in Hemostasis and Thrombosis

This special session is designed to expand the opportunity for exchange and communication among basic scientists in the fields of hemostasis and thrombosis. It will highlight the most important basic science contributions made in 2012 in the major areas of these fields.

A presentation will be made by the 2012 recipient of the Mary Rodes Gibson Memorial Award in Hemostasis and Thrombosis, the trainee with the highest-scoring abstract at the ASH annual meeting in the field of hemostasis and thrombosis.

New this year is the 30-minute overview of the “Best of ASH in Hemostasis and Thrombosis.” The overview will highlight the key breakthroughs presented at this year’s meeting.

Please note that the Tuesday afternoon simultaneous oral sessions of the Symposium have been discontinued.
Trainee Activities and Services

The ASH annual meeting provides hematology trainees with a variety of high-quality educational, career-development, and networking opportunities. To help trainees make the most of their meeting experience, the following activities and services have been identified as most relevant to the unique interests of undergraduates, medical and graduate students, residents, and fellows (MD and PhD).

These events are open only to Associate members and non-members in training wearing blue trainee meeting badges. To register for the meeting as a trainee, please see pages 46-47.

Trainee Day
FRIDAY, DECEMBER 7, 12:00 NOON – 5:00 P.M.

This year’s program will provide attendees with the opportunity to learn about hypothesis generation, basic and clinical investigation design, funding identification, collaborative research team development, and exploration of post-training career options.

CHAIRS:
Sherine F. Elsawa, PhD, Northern Illinois University, Dekalb, IL
Martha Mims, MD, Baylor College of Medicine, Houston, TX

FIRST DIDACTIC SESSION

SPEAKERS:
Diane Krause, MD, PhD, Yale University School of Medicine, New Haven, CT
Defining the Hypothesis/Research Question – Basic Science

Dr. Krause will explain how to take a good research idea and develop it into a testable hypothesis in the lab. Topics covered include how to solicit feedback on a research idea, how to carefully define aims and milestones, and how to ensure you achieve meaningful results, regardless of specific outcome.

Nancy Heddle, McMaster University, Hamilton, Ontario, Canada
Defining the Hypothesis/Research Question – Clinical Research

This session will discuss how to take a clinical observation and turn it into a research project, how to define clinically relevant outcomes, and how to involve statisticians to ensure outstanding research design.

SECOND DIDACTIC SESSION

SPEAKERS:
Linda Minium Boxer, MD, PhD, Stanford University, Stanford, CA
Identifying and Pursuing Funding for Your Basic Science Research

Dr. Boxer will cover several important aspects of becoming a principal investigator, including the importance of working as part of a larger group. This session will also review traditional principal investigator roles as well as new roles in academics, including bioinformatics experts, biostatisticians, lab managers, core facility managers, and roles closely tied to industry and law.

Michael L. Linenberger, MD, Fred Hutchinson Cancer Research Center, Seattle, WA
Identifying and Pursuing Funding for Your Clinical Research

Dr. Linenberger will focus on how to apply for clinical research funding via the National Institutes of Health and other government agencies, how to identify opportunities to obtain industry funding and ensure success, and how to search for pilot funding that will eventually lead to larger funding opportunities.

FIRST ROTATION BREAKOUT SESSIONS

SPEAKERS:
Jeffrey S. Miller, MD, University of Minnesota, Minneapolis, MN
Developing a Collaborative Basic Science Research Team

This talk includes discussion on how to find and engage basic science collaborators at every level, how to lead a team and avoid the pitfalls of collaboration, and how to ensure that everyone on the team wins.

Russell E. Ware, MD, PhD, Baylor College of Medicine, Houston, TX
Developing a Collaborative Clinical Research Team

This talk will cover how to find and engage clinical collaborators, how to give and receive feedback, defining team roles, and making sure everyone on the team feels valued.

Helen E. Heslop, MD, Baylor College of Medicine, Houston, TX
Developing a Collaborative Translational Research Team

This talk will cover finding, engaging, and defining the necessary roles of collaborators while valuing all members of the team. Discussion will focus on how to find and work with collaborators who do and do not understand the respective science and clinical sides of the question.

SECOND ROTATION BREAKOUT SESSIONS

SPEAKERS:
Brad S. Kahl, MD, University of Wisconsin, Madison, WI
Identifying Post-Training Academic Career Opportunities for MDs and PhDs

This talk will not only cover traditional scientist (e.g., lab principal investigator) or clinician-scientist roles, but also will identify new roles in academia, such as clinical lab directors, clinical research roles (e.g., regulatory experts, clinical research managers, etc.), and administrative roles (e.g., fellowship and clinic directors).

David D. Shepard, MD, Northwest Georgia Oncology Centers, P.C., Carrollton, GA
Identifying Post-Training Private Practice Career Opportunities for MDs and PhDs

Topics covered in the talk will include traditional and new approaches to private practice, including job sharing, viewing the hematologist as a “hospitalist,” and managing a clinical lab.

Julie Hambleton, MD, Clovis Oncology, San Francisco, CA
Identifying Post-Training Industry Career Opportunities for MDs

This talk will focus on industry roles in lab research to clinical protocol development, regulatory roles, medical science liaisons, and roles in clinical research.

Hal E. Broxmeyer, PhD, Indiana University School of Medicine, Indianapolis, IN
Identifying Post-Training PhD Career Opportunities

This topic is specifically for PhDs and will cover traditional principal investigator roles, working as part of a larger group, as well as new roles in academics, such as bioinformatics experts, biostatisticians, lab managers, and core facility managers, as well as roles in industry or law.

Trainee Welcome Reception
FRIDAY, DECEMBER 7, 5:00 P.M. – 7:00 P.M.

This informal social event provides the opportunity for undergraduates, medical students, graduate students, residents, and fellows (MD and PhD) to gather with their colleagues. Information highlighting annual meeting training events and sessions with an emphasis on those sessions most relevant to trainees will be available to attendees.
Career-Development Lunch Sessions
SATURDAY, DECEMBER 8, 11:15 A.M. – 12:15 P.M.

These sessions will provide an intimate venue for trainees to meet with leaders in hematology to discuss professional development questions. ASH has invited a diverse group of more than 30 distinguished researchers and physicians to participate, representing the wide array of practice areas within hematology. Faculty will be available to discuss careers in clinical, translational, and basic research. There will also be representatives present to discuss PhD careers, careers in industry settings, and careers in private and clinical practice. This event is open only to ASH Associate members and non-members in training wearing blue trainee meeting badges.

A boxed lunch will be provided. Space is available on a first-come, first-served basis. As seating is limited, attendees are strongly encouraged to arrive early. No additional participants will be allowed in the rooms once these sessions are filled.

CHAIR:
Reed E. Drews, MD, Beth Israel Deaconess Medical Center, Boston, MA

SPEAKERS:
Academic Program in Hematology and Hematology/Oncology for Residents and Medical Students

Session 1
Kristie A. Blum, MD, The Ohio State University, Columbus, OH
Don M. Benson Jr., MD, PhD, The Ohio State University, Columbus, OH

Session 2
Marc J. Kahn, MD, Tulane University School of Medicine, New Orleans, LA
Elaine A. Muchmore, MD, University of California – San Diego, San Diego, CA

Private Practice Careers

Session 1
Ian W. Flinn, MD, PhD, Sarah Cannon Research Institute, Nashville, TN
L. Crain Garrot, MD, Georgia Cancer Specialists, Marietta, GA

Session 2
David C. Portnoy, MD, The West Clinic, Memphis, TN
Lucio Gordon, MD, Florida Cancer Specialists & Research Institute, Gainesville, FL

PhD Careers

Session 1
Robert B. Levy, PhD, University of Miami Miller School of Medicine, Miami, FL
Joseph E. Italiano Jr., PhD, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA
Jay L. Hess, MD, PhD, University of Michigan, Ann Arbor, MI

Session 2
Hal E. Broxmeyer, PhD, Indiana University School of Medicine, Indianapolis, IN
Tucker W. LeBien, PhD, University of Minnesota, Minneapolis, MN
Nicholas J. Donato, PhD, University of Michigan, Ann Arbor, MI

Pediatric Hematology–Oncology Careers

Session 1
Gregory Reaman, MD, Children’s National Medical Center, Washington, DC
Kevin M. Shannon, MD, University of California – San Francisco, San Francisco, CA

Session 2
David A. Williams, MD, Children’s Hospital Boston, Boston, MA
Elis J. Neufeld, MD, PhD, Children’s Hospital Boston, Harvard Medical University, Boston, MA

Hospital-Based Hematology: Hemapheresis/Bone Marrow Transplant/Hematopathology Careers

Session 1
Deborah L. Ornstein, MD, Dartmouth Medical School, Lebanon, NH
Mark D. Fleming, MD, DPhil, Children’s Hospital Boston, Harvard Medical School, Boston, MA

Session 2
Parul Bhargava, MD, Beth Israel Deaconess Medical Center, Boston, MA
Terry B. Gernsheimer, MD, Puget Sound Blood Center and University of Washington, Seattle, WA

Laboratory and Translational Hematology

Session 1
Alan D. Michelson, MD, Children’s Hospital Boston, Harvard Medical School, Boston, MA
Michelle M. Le Beau, PhD, University of Chicago Comprehensive Cancer Center, Chicago, IL

Session 2
Robert R. Montgomery, MD, Blood Research Institute, Milwaukee, WI
Elisabeth Battinelli, MD, PhD, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA

Industry Careers

Session 1
D. Gary Gilliland, MD, PhD, Merck Research Laboratories, Boston, MA
Bruce J. Dezube, MD, Millennium Pharmaceuticals, Inc., Cambridge, MA

Session 2
Catherine Ann Wheeler, MD, Acetyon Pharmaceuticals, Boston, MA
David A. Roth, MD, Pfizer, Cambridge, MA

Government Careers: U.S. Food and Drug Administration, National Institutes of Health, and Centers for Disease Control and Prevention

Session 1
Albert B. Deisseroth, MD, PhD, U.S. Food and Drug Administration, Silver Spring, MD
Barbara M. Alving, MD, Former Director of National Center for Research Resources, National Institutes of Health, Uniformed Services University of the Health Sciences, Bethesda, MD

Session 2
Cynthia E. Dunbar, MD, Editor-in-Chief, Blood, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD
Hani K. Atrash, MD, Centers for Disease Control and Prevention, Atlanta, GA

Adult Hematology/Clinical Research

Session 1
Daniel J. DeAngelo, MD, PhD, Dana-Farber Cancer Institute, Harvard Medical School, Boston, MA
Robert S. Negrin, MD, Stanford University, Stanford, CA

Session 2
David Avigan, MD, Beth Israel Deaconess Medical Center, Boston, MA
Barbara A. Konkle, MD, Puget Sound Blood Center, University of Washington, Seattle, WA

15 ASH 54th Annual Meeting
Trainee Simultaneous Didactic Sessions

**SUNDAY, DECEMBER 9, 11:15 A.M. – 12:15 P.M.**

During lunch on Sunday and Monday, ASH will offer didactic sessions designed to provide trainees with an overview of timely and relevant career-oriented issues.

A boxed lunch will be provided. Space is available on a first-come, first-served basis. As seating is limited, attendees are strongly encouraged to arrive early. No additional participants will be allowed in the rooms once these sessions are filled.

**CHAIR:**
Ted Wun, MD, University of California – Davis, Sacramento, CA

**SPEAKERS:**

*Successful Manuscript Writing*
Cynthia E. Dunbar, MD, Editor-in-Chief, *Blood*, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD

Bob Löwenberg, MD, PhD, Editor-in-Chief Designee, *Blood*, Erasmus University Medical Center, Rotterdam, Netherlands

The ability to communicate one’s work effectively by publication in high-impact journals is a benchmark for success in academic medicine. Even high quality work may not be accepted if not presented in a well-crafted manuscript. This talk will provide insight into the elements of a high-quality manuscript worthy of publication in *Blood*, and tips on avoiding common errors that might result in rejection.

*Building a Successful Clinical Research Program*
Jennifer R. Brown, MD, PhD, Dana-Farber Cancer Institute, Boston, MA

The conduct of good clinical research has become a highly specialized and complex endeavor. While appropriate training in rigorous and innovative trial design is essential, the investigator must also be knowledgeable about regulatory, budgetary, and ethical issues. The clinical research enterprise is more dependent than ever on multiple team members including investigators, clinical research coordinators, research nurses, informatics specialists, and biostatisticians. This talk will provide an overview of essential elements needed to build a viable clinical research program.

**MONDAY, DECEMBER 10, 12:15 P.M. – 1:15 P.M.**

**CHAIR:**
Ted Wun, MD, University of California – Davis, Sacramento, CA

**SPEAKERS:**

*Building a Successful Research Lab*
Todd A. Fehninger, MD, PhD, Washington University School of Medicine, St. Louis, MO

Running a successful laboratory-based research program goes beyond good science and grant funding. Managing people, money, collaborations, and space are also required skills. This talk will recount lessons learned, including mistakes to be avoided, on the road to becoming an independent laboratory based investigator.

*Finding a Good Mentor/Being a Good Mentee*
Michael R. DeBaun, MD, Monroe Carell Jr. Children’s Hospital at Vanderbilt, Nashville, TN

One of the most important early career choices is finding a mentor. As with any good relationship, expectations need to be aligned and evolve as the mentee develops and the asymmetric interaction becomes more equal. Though mentors are traditionally thought of as a single person, many institutions encourage or even require mentoring teams for all junior faculty, which might consist of several research mentors or an overall career mentor.

**Trainee Lounge**

Trainees are invited to visit the Trainee Lounge located in the Georgia World Congress Center (specific room location to be provided in the on-site materials). The lounge provides a relaxing place for trainees to meet with colleagues, access the Internet, and recharge with complimentary refreshments. The lounge will be open from 7:00 a.m. to 6:00 p.m. on Saturday, December 8, from 7:00 a.m. to 6:00 p.m. on Sunday, December 9, and Monday, December 10, and from 7:00 a.m. to 12:00 noon on Tuesday, December 11.

**Additional Opportunities and Resources of Interest to Trainees**

| Promoting Minorities in Hematology Presentations and Reception | 12 |
| Grassroots Network Lunch | 13 |
| Education Session – "Trade Secrets of a Successful Academic" and “Junior-Faculty Development Education Program: How to Be Successful in Your First ‘real’ Job” | 29 |
| Education Spotlight Sessions | 37 |
| How I Treat: Bringing Science to Clinical Dilemmas | 40 |
| Meet the Scientist | 41 |
| Scientific Forums | 42 |
| ASH Booth | 44 |
| National Institutes of Health Booths | 44 |
| ASH Job Center | 55 |

**Are you a post-doctoral fellow residing outside North America?**

Consider participating in ASH’s International Post-Doctoral Fellows (IPDF) program, which allows post-doctoral fellows to access valuable ASH resources at no charge for up to four years. The program is open to postdoctoral fellows with a PhD, MD, or equivalent medical degree, who reside outside Canada, Mexico, or the United States; register for the ASH annual meeting as a non-member in training; and are enrolled in an approved hematology or oncology training program. Benefits include a complimentary online subscription to *Blood*, online access to *Hematology* (the Education Program Book), and a subscription to ASH’s award-winning member newsletter, *The Hematologist*. For more information and to submit an application, visit [www.hematology.org/IPDF](http://www.hematology.org/IPDF). If registering for the annual meeting as a non-member in training, see page 47 for special instructions.

**Are you a trainee, but not a member of ASH?**

Visit [www.hematology.org/Membership](http://www.hematology.org/Membership) for details about becoming an Associate member. If you reside in North America but are not yet enrolled in a hematology-related training program (and, therefore, do not yet meet the eligibility requirements for Associate membership), consider participating in ASH’s North American Student Benefit program, designed for trainees in the United States, Canada, and Mexico who are undergraduate or graduate students, residents (in post-graduate years 1-3 for Canadians), or PhD candidates. This benefit provides a complimentary online subscription to *Blood*, advance annual meeting notifications, and eligibility for reduced meeting registration at the non-member-in-training rate. For more information and to submit an application, visit [www.hematology.org/NASB](http://www.hematology.org/NASB). If registering for the annual meeting as a non-member in training, see page 47 for special instructions.
Acute Myeloid Leukemia: Newly Discovered Genes, Screens (for Minimal Residual Disease), and Therapeutic Means

**CHAIR:**
Ross L. Levine, MD, Memorial Sloan-Kettering Cancer Center, New York, NY

**SPEAKERS:**
Ross L. Levine, MD, Memorial Sloan-Kettering Cancer Center, New York, NY
How Do Novel Molecular Genetics Influence Treatment Decisions?

Elisabeth Paietta, PhD, The North Division of Montefiore Medical Center, Bronx, NY
Minimal Residual Disease in Acute Myeloid Leukemia: Coming of Age

Jeffrey Szer, MD, The Royal Melbourne Hospital, Parkville, Victoria, Australia
The Prevalent Predicament of Relapsed Acute Myeloid Leukemia

Recent clinical, genetic, and functional studies have improved our understanding of the biology of acute myeloid leukemia (AML) and allowed for the development of biomarkers to predict relapse and response to therapy, the implementation of approaches to monitor minimal residual disease (MRD) during and after dose-intensive therapy, and the development of novel therapies for patients with refractory AML. Dr. Ross Levine will review our current understanding of the molecular genetics of AML and how cytogenetic, genetic, and epigenetic studies can be used to improve prognostication in AML and to predict response to therapy. Dr. Elisabeth Paietta will review the current genetic and flow cytometric approaches to monitoring minimal residual disease in AML and the data indicating how MRD assessment can be used to inform clinical decisions. Dr. Jeffrey Szer will review the recent development of novel chemotherapeutic and targeted therapies for patients with refractory AML and how biologic insights are being translated to the clinic using novel therapeutic strategies.

The session will focus on recent advances in the basic biology and clinical features of acute lymphocytic leukemia (ALL) with an emphasis on the molecular genetics of this malignancy and treatment approaches to both Philadelphia-chromosome-positive (Ph+) and negative (Ph-) disease. Dr. Charles Mullighan will review the genomic analyses that have provided important insights into the biologic basis of ALL. He will also discuss the approaches used to profile ALL genomes, including microarrays and next generation sequencing, and review findings of recent studies in childhood B- and T-lymphocytic leukemia that contribute to leukemogenesis, and identified previously unsuspected targets of mutation. Notably, these studies contribute to development of new tests for diagnosis and risk stratification and have identified new therapeutic targets in high-risk disease.

Dr. Deborah Thomas will discuss the changing paradigms for treatment of the genetically distinct subtype of Ph+ or BCR-ABL-positive B-lymphocytic leukemia in the era of second- and later-generation tyrosine kinase inhibitors (TKIs), inclusive of emerging data regarding TKI therapy after allogeneic HCT. She will then review the prevalence and dynamics of tyrosine kinase domain mutations in the context of novel agents and potential therapeutic strategies designed to circumvent these and other resistance mechanisms.

Dr. Hillard Lazarus will review indications for when to consider proceeding with hematopoietic cell transplantation (HCT) in Ph- ALL in first complete remission compared to conventional approaches. Next, he will review patient outcomes obtained with myeloablative versus reduced-intensity conditioning regimens. Finally, he will review HCT results using different donor sources, including matched-related versus alternative donor sources.
The Spectrum of JAK2-Positive Myeloproliferative Neoplasms: Complications and Therapeutic Advances

CHAIR:
Stefan N. Constantinescu, MD, PhD, Ludwig Institute for Cancer Research, Brussels, Belgium

SPEAKERS:
Jean-Jacques Kladjian, MD, PhD, Hôpital Saint-Louis and French Intergroup of Myeloproliferative Disorders (FIM), Paris, France
The Spectrum of JAK2-Positive Myeloproliferative Neoplasms

Anna Falanga, MD, Ospedali Riuniti di Bergamo, Bergamo, Italy
Thrombotic Disease in the Myeloproliferative Neoplasms

Stefan N. Constantinescu, MD, PhD, Ludwig Institute for Cancer Research, Brussels, Belgium
Small-Molecule Inhibitors in Myeloproliferative Neoplasms: Are We Aiming for the Right Targets?

The purpose of the session is to present the spectrum of JAK2 V617F-positive myeloproliferative neoplasms (MPNs), to review thrombotic complications, and to then identify targets for inhibition. It is expected that the signaling by JAK2 mutant will be presented in the context of the array of MPNs, how this signaling contributes to thrombotic complications, and which signaling proteins and pathways should be targeted by screens. Inhibition of JAK2 kinase activity is just one avenue to take; other pathways contribute to phenotype, complications, clonal dominance, and evolution to leukemia.

Non-Hodgkin Lymphoma I: Changing Therapeutic Strategies in Aggressive Lymphomas

CHAIR:
Craig H. Moskowitz, MD, Memorial Sloan-Kettering Cancer Center, New York, NY

SPEAKERS:
Laurie H. Sehn, MD, British Columbia Cancer Agency, Vancouver, British Columbia, Canada
Paramount Prognostic Factors Which Guide Therapeutic Strategies in Diffuse Large B-Cell Lymphoma

Craig H. Moskowitz, MD, Memorial Sloan-Kettering Cancer Center, New York, NY
Role of FDG-PET Scanning in Treatment Decisions

Christian Gisselbrecht, MD, Hôpital Saint-Louis, Paris, France
Is There Any Role for Transplantation in the Rituximab Era for Diffuse Large B-Cell Lymphoma?

This session will focus on three of the most common strategies in lymphoma treatment that are currently being studied. The goal is to present the most recent pre-clinical, clinical, immunohistochemical, and molecular prognostic factors that may help guide primary therapy in patients with diffuse large B-cell lymphoma (DLBCL). Dr. Laurie Sehn will review the important pre-treatment, clinical, and molecular factors that may help guide primary therapy in the rituximab era. Importantly, she will help determine if any of these factors are potential targets for novel therapy and if they are additive to the international prognostic index.

Dr. Craig Moskowitz will review the use and abuse of fluorodeoxyglucos positron emission tomography (FDG-PET) imaging in the management of DLBCL, focusing on its utility as a prognostic tool for risk-adapted therapy in the primary as well as the relapsed setting.

Dr. Christian Gisselbrecht will describe why we may be fighting a losing battle once a patient relapses after primary therapy. He will use the results of the Cardiovascular Outcomes in Renal Atherosclerotic Lesions (CORAL) study as a platform for new treatment strategies in patients with primary refractory and relapsed DLBCL in the rituximab era.

Non-Hodgkin Lymphoma II: Understanding the Indolent Lymphomas

CHAIR:
Ginna G. Laport, MD, Stanford University, Stanford, CA

SPEAKERS:
Pier Luigi Zinzani, MD, PhD, Istituto di Ematologia Seràgnoli Università di Bologna, Bologna, Italy
The Many Faces of Marginal Zone Lymphoma

Brad Kahl, MD, University of Wisconsin, Madison, WI
Is There a Role for “Watch and Wait” in Indolent Lymphoma in the Rituximab Era?

Ginna G. Laport, MD, Stanford University, Stanford, CA
Changing Role of Stem Cell Transplantation in Follicular Lymphoma

The indolent lymphomas comprise several subtypes, including the marginal zone lymphomas and follicular lymphoma. Indolent lymphomas possess variable clinical characteristics and pathologic features, and a consensus has not yet been reached regarding their optimal treatment, which includes observation, radiation therapy, chemoinmunotherapy, and hematopoietic stem cell transplantation (HSCT).

Dr. Pier Zinzani will outline the three distinct entities of marginal zone lymphomas (MZLs): extranodal MZL of mucosa-associated lymphoid tissue (MALT) type, splenic MZL, and nodal MZL, all of which originate from post-germinal center marginal zone B cells. Pathogenic mechanisms and therapeutic advances will also be presented.

Dr. Brad Kahl will discuss the role of observation versus rituximab in indolent lymphoma. The “watch and wait” paradigm has been challenged with the advent of rituximab due to its low toxicity profile and its efficacy in improving progression-free survival.

Dr. Laport will present data regarding the role of HSCT in advanced follicular lymphoma. Both autologous and allogeneic HSCT can prolong progression-free survival. However, allogeneic HSCT remains the only known cure, and reduced-intensity conditioning regimens have broadened eligibility to older patients and can confer long-term remissions.
Hematopoietic Stem Cell Transplantation I: Exploiting Alternative Donors

CHAIR:
Elizabeth J. Shpall, MD, The University of Texas MD Anderson Cancer Center, Houston, TX

SPEAKERS:
Elizabeth J. Shpall, MD, The University of Texas MD Anderson Cancer Center, Houston, TX

Umbilical Cord Transplantation: Front and Center?
Andrea Bacigalupo, MD, Ospedale San Martino, Genoa, Italy

Matched and Mismatched Unrelated Donor Transplantation: Is the Outcome the Same as Matched-Sibling Donor?
Ephraim J. Fuchs, MD, The Johns Hopkins University School of Medicine, Baltimore, MD

Haploidentical Transplantation for Hematologic Malignancies: Where Do We Stand?

This session will discuss the state of the art in allogeneic stem cell transplant medicine, demonstrating that with the exciting advances in the field, almost every patient who needs a transplant will now have access to a stem cell donor. The speakers will focus on donor selection, the optimal strategies for allograft preparation, and the clinical results for each of the major stem sources in use today.

Dr. Elizabeth Shpall will review the latest results in cord blood transplantation for high-risk hematologic cancers and genetic diseases. She will discuss the use of single versus double cord blood transplants, myeloablative versus nonmyeloablative preparative regimens, and the generation of cord blood immune cells to enhance immune recovery and anti-tumor responses.

Dr. Andrea Bacigalupo will review the clinical outcome of patients transplanted with matched siblings or unrelated donors; separate analyses will be presented for acute leukemias, myelodysplastic syndromes, myelofibrosis, aplastic anemia, and thalassemia. Comparisons will consider predictive factors such as donor age, stem cell source, transplant protocol, and graft-versus-host disease (GVHD) prophylaxis.

Dr. Ephraim Fuchs will review the use of human leukocyte antigen (HLA)-haploidentical stem cell transplantation in patients with high-risk hematologic malignancies. This session will discuss approaches to prophylaxis of GVHD, selection of HLA-haploidentical donors, immune reconstitution, and applications to treat non-malignant diseases.

Hematopoietic Stem Cell Transplantation II: Toward Safer Allogeneic Transplantation

CHAIR:
Didier Blaise, MD, Institut Paoli-Calmettes, Marseille, France

SPEAKERS:
Didier Blaise, MD, Institut Paoli-Calmettes, Marseille, France
Do Different Conditioning Regimens Really Make a Difference?
Steven Z. Pavletic, MD, National Cancer Institute, National Institutes of Health, Bethesda, MD
Are We Making Progress in Graft-Versus-Host Disease Prophylaxis and Treatment?
Kieren Marr, MD, The Johns Hopkins Hospital, Baltimore, MD
Delayed Opportunistic Infections in Hematopoietic Cell Transplant Patients: A Surmountable Challenge

This session will focus on recent advances in allogeneic stem cell transplantation, providing an overview of conditioning regimens and graft-versus-host disease (GVHD) management, as well as challenging modifications to both that have been introduced in the last decade. Both aspects have conducted to better initial survival, probably due to longer exposure to immunosuppression, which leads to a higher exposure to late infections.

Dr. Didier Blaise will briefly review the concept of reduced-toxicity conditioning approaches. He will challenge their impact on transplant-related mortality with their ability to exert an adequate disease control as compared to usual standard myeloablative conditioning in different pathologies and populations. His presentation will seek to define the present challenges of the area for future development.

Dr. Steven Pavletic will review the achievements in acute and chronic GVHD management and how they have contributed to improved initial survival. He will also cover the long-term management of GVHD and its implication in disease control, and address the challenge represented by an older population in this context.

Dr. Kieren Marr will review the achievements in acute and chronic GVHD management and how they have contributed to improved initial survival. He will also cover the long-term management of GVHD and its implication in disease control, and address the challenge represented by an older population in this context.

Dr. Kieren Marr will review the pattern and characteristics of delayed infections. She will question the reasons for their emergence and will address recent advances in diagnosis, prophylaxis, and treatment.
Advances in the Pathogenesis and Treatment of Myelodysplastic Syndromes

CHAIR:
Ghulam J. Mufti, MD, PhD, King’s College Hospital NHS Foundation Trust, London, United Kingdom

SPEAKERS:
Maria F. Figueroa, MD, University of Michigan, Ann Arbor, MI
Valeria Santini, MD, University of Florence Azienda Ospedaliero-Universitaria Careggi, Florence, Italy

Novel Therapeutic Strategies: Hypomethylating Agents and Beyond

Ghulam J. Mufti, MD, PhD, King’s College Hospital NHS Foundation Trust, London, United Kingdom

Myelodysplastic Syndromes: Who and When in the Course of Disease to Transplant

During the past decade myelodysplastic syndromes (MDS) have emerged as a major research focus for the global hematologic community. In addition to the significant advances in their diagnosis, prognostic evaluation, and treatment, there has been an explosion in the characterization of molecular defects. These include the consequences of RPS14 gene deletions in 5q- syndrome, the significance of p53 aberrations, mutations of spliceosome complex genes (such as SF3B1 in refractory anemia with ring sideroblasts), and a plethora of other genetic abnormalities that either individually or collectively alter the hematopoietic differentiation and propensity to leukemic transformation.

The spectrum of biological significance of the mutations and their genetic and epigenetic consequences will be discussed by Dr. Maria Figueroa.

Relationships between the genetic and epigenetic changes and the effects of DNMT and HDAC inhibition will be discussed by Dr. Valeria Santini.

Allogeneic hematopoietic stem cell transplantation in MDS has come of age. Dr. Ghulam Mufti will discuss how transplant timing, pre-transplant preparative regimens, conditioning regimens, and post-transplant therapies have rapidly evolved to promote an increasing disease-free survival and possibly a cure in up to 40 percent of transplanted patients. He will also discuss the remaining challenges, both in terms of identifying key genetic events and expanding the therapeutic repertoire that will eventually lead to a prolongation in survival beyond what is achieved by currently available treatments.

Keeping Pace with Advances in Myeloma

CHAIR:
Antonio Palumbo, MD, University of Torino, Azienda Ospedaliero-Universitaria San Giovanni Battista, Torino, Italy

SPEAKERS:
Gareth J. Morgan, MD, PhD, Royal Marsden Hospital, London, United Kingdom
S. Vincent Rajkumar, MD, Mayo Clinic, Rochester, MN
Antonio Palumbo, MD, University of Torino, Azienda Ospedaliero-Universitaria San Giovanni Battista, Torino, Italy

How to Use New Biology to Guide Therapy in Myeloma

This session will focus on recent advances in the understanding of multiple myeloma biology and the changes in the treatment of this disease after the introduction of the immunomodulatory drugs thalidomide and lenalidomide and the proteasome inhibitor bortezomib. The role of transplantation in the era of novel agents will be addressed, and future therapeutic directions will be discussed. This program will report on the most effective treatment strategies available today and outline how to properly integrate them in the management of multiple myeloma.

Dr. Gareth Morgan will review the biological features of multiple myeloma. He will describe the physiological immune system development, explain the mechanisms determining molecular alterations in myeloma, and correlate these abnormalities with the evolution of the disease. He will also comment on the clinical implications of these alterations in myeloma therapy.

Dr. S. Vincent Rajkumar will review the different doublet, triplet, or quadruplet drug combinations used for the treatment of newly diagnosed myeloma. Dr. Rajkumar will provide efficacy and safety results of various studies and compare these approaches. He will also present preliminary results from recent studies introducing the concept of second-generation proteasome inhibitors.

Dr. Antonio Palumbo will review the role of stem cell transplantation in myeloma and the clinical benefit achieved after the introduction of novel induction, consolidation, and maintenance approaches. He will discuss whether drug combinations have replaced stem cell transplantation, the risk/benefit ratio of these approaches, and the role of maintenance treatment.

Chronic Myeloid Leukemia: The Pristine Paradigm for Successful Targeted Therapy

CHAIR:
Susan Branford, PhD, University of Adelaide, Adelaide, Australia

SPEAKERS:
David Marin, MD, Imperial College London, London, United Kingdom
Francois-Xavier Mahon, MD, PhD, University Bordeaux Segalen, Bordeaux, France

Is Going for Cure in Chronic Myeloid Leukemia Possible and Justifiable?

Dr. Susan Branford will review the role of kinase inhibitors in the cure of cMl is possible for some patients treated with kinase inhibitors. He will describe the new initiatives to increase the frequency of safe discontinuation. As some patients reach their second decade of targeted therapy, long-term effective molecular monitoring remains important to confirm adherence and is essential when considering treatment discontinuation.

Dr. David Marin will outline the therapeutic options for newly diagnosed patients and review the relative merits of the various kinase inhibitors. He will discuss whether more potent inhibitors offer an advantage in terms of transformation-free survival and deeper molecular responses compared with imatinib, which is still the recommended first-line therapy.

Dr. Francois-Xavier Mahon will discuss whether cure of CML is possible for some patients treated with kinase inhibitors. He will describe the new initiatives to increase the frequency of safe treatment discontinuation, and he will outline the risks of stopping therapy and the factors that independently predict for molecular disease recurrence and their potential biological basis.

Dr. Susan Branford will review the role of continued therapeutic response monitoring in optimal responders. She will discuss the difficulties of standardizing the analysis of deep molecular response, whether BCR-ABL1 mutation analysis is necessary in some circumstances, and whether changes in the molecular response can serve as a marker of non-adherence to therapy regimens.
Chronic Lymphocytic Leukemia: Can New Prognostic Factors Guide New Therapeutic Approaches?

**CHAIR:**

Nicholas Chiorazzi, MD, The Feinstein Institute for Medical Research, North Shore-LIJ Health System, Manhasset, NY

**SPEAKERS:**

Nicholas Chiorazzi, MD, The Feinstein Institute for Medical Research, North Shore-LIJ Health System, Manhasset, NY

Emerging Role of Kinase Targeted Strategies in Chronic Lymphocytic Leukemia

Adrian Wiestner, MD, PhD, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD

**A Look Into the Future: Can Minimal Residual Disease Guide New Therapeutic Approaches?**

**SPEAKERS:**

Dr. Paolo Ghia will discuss the future of CLL prognostication based on evidence that the quality of response to therapy is an independent predictor of overall survival. He will briefly review the methods for quantification of minimal residual disease and will discuss their potential use to predict prognosis and guide treatment.

**Untangling Uncommon Lymphoproliferative Disorders**

**CHAIR:**

Claire E. Dearden, MD, The Royal Marsden Hospital, London, United Kingdom

**SPEAKERS:**

Thomas P. Loughran Jr., MD, Penn State Hershey Cancer Institute, Hershey, PA

Large Granular Lymphocytic Leukemia: Molecular Pathogenesis, Clinical Manifestations, and Treatment

Robert J. Kreitman, MD, National Cancer Institute, National Institutes of Health, Bethesda, MD

Immonoconjugates and New Molecular Targets In Hairy Cell Leukemia

Claire E. Dearden, MD, The Royal Marsden Hospital, London, United Kingdom

B- and T-Cell Prolymphocytic Leukemia: Antibody Approaches

This session will present recent advances in the molecular pathogenesis and management of three rare and distinct lymphoproliferative disorders: large granular lymphocyte (LGL) leukemia, hairy cell leukemia (HCL), and prolymphocytic leukemia (PLL). There will be a focus on the understanding of underlying mechanisms of disease and how these can be exploited to develop effective therapy.

Dr. Thomas Loughran will review the molecular pathogenesis of LGL leukemia focusing on global dysregulation of apoptosis and survival pathways which are constitutively activated in leukemic LGL. He will then discuss clinical manifestations, indications for treatment, and therapeutic options for this disease.

Dr. Robert Kreitman will describe the clinical development of immunoconjugates for HCL, including the results of clinical trials using agents that target CD22 and CD25. He will also discuss the current understanding of the molecular pathogenesis of HCL and HCL-variant, including the role of the BRAF gene and the prognostic impact of specific immunoglobulin gene usage, such as VH4-34.

Dr. Claire Dearden will discuss PLL of B- and T-cell sub-types, briefly outlining the clinical presentation and diagnosis before concentrating on management of these disorders with an emphasis on the use of monoclonal antibody therapy.

**The Spectrum of Plasma Cell Dyscrasias**

**CHAIR:**

Morie Abraham Gertz, MD, Mayo Clinic, Rochester, MN

**SPEAKERS:**

Irene Ghobrial, MD, Dana-Farber Cancer Institute, Harvard Medical School, Boston, MA

Are You Sure This is Waldenström Macroglobulinemia?

Giampaolo Merlini, MD, Fondazione IRCCS Policlinico San Matteo, University of Pavia, Pavia, Italy

Differential Diagnosis of Monoclonal Gammopathy of Undetermined Significance

Morie Abraham Gertz, MD, Mayo Clinic, Rochester, MN

Case Vignettes and Other Brain Teasers of Monoclonal Gammopathies

This session will focus on the complex diagnostic challenges that are associated with plasma cell dyscrasias. The focus will be on those disorders that can cause diagnostic confusion and can potentially result in the incorrect treatment selection for patients. The session is aimed at busy practicing clinicians and is focused on making the correct diagnosis, determining the appropriate time to treat, and determining when to observe.

Dr. Irene Ghobrial will review the diagnostic criteria for Waldenström macroglobulinemia. While a number of disorders are associated with the monoclonal IgM protein, they are not Waldenström macroglobulinemia, underscoring the importance of taking specific, required considerations. The management of IgM and neuropathy will be discussed.

Dr. Giampaolo Merlini will review the differential diagnosis of monoclonal gammopathy of undetermined significance (MGUS). Many patients with small monoclonal gammapathies are often assumed to have MGUS when in fact they fulfill the criteria of a dangerous small B-cell clone. New classification schemes for MGUS and smoldering multiple myeloma focusing on criteria for starting treatment will be reviewed.

Dr. Morie Gertz will review the records of seven patients that were initially incorrectly diagnosed. He will present a detailed schema to recognize how to not overlook these entities.
Insights into Biology and Refinement of Treatment Strategies in Hodgkin Lymphoma

**CHAIR:**
Richard T. Hoppe, MD, Stanford University School of Medicine, Stanford, CA

**SPEAKERS:**
Ralf Küppers, PhD, University of Duisburg-Essen, Essen, Germany

*New Insights in the Biology of Hodgkin Lymphoma*

Martin Hutchings, MD, PhD, Rigshospitalet-Copenhagen University Hospital, Copenhagen, Denmark

*How Does PET/CT Help in Selecting Therapy for Patients with Hodgkin Lymphoma?*

Ralph M. Meyer, MD, Queen’s University, Kingston, Ontario, Canada

Richard T. Hoppe, MD, Stanford University School of Medicine, Stanford, CA

*Point-Counterpoint: Early Stage Hodgkin Lymphoma: The Role of Radiation Therapy*

This session will focus on recent advances in our understanding of the biology of Hodgkin lymphoma and important clinical issues related to the management of patients with the disease.

Dr. Ralf Küppers will review current concepts related to the biology of Hodgkin lymphoma.

He will discuss the histogenesis of Hodgkin/Reed-Sternberg cells and lymphocyte predominant cells, including their cellular origin and relationship to putative precursor cells; the genetic lesions that have been identified; and the deregulated transcription factor networks and signaling pathways that contribute to the survival and proliferation of these cells.

Dr. Martin Hutchings will review the multi-faceted roles of positron emission tomography (PET) imaging in Hodgkin lymphoma. He will discuss its applications in staging, early assessment of chemosensitivity, treatment response assessment, and post-treatment surveillance. He will also note important current clinical trials that incorporate PET imaging in defining patient management.

Drs. Ralph Meyer and Richard Hoppe will debate the advantages and disadvantages of incorporating radiation therapy into the management of patients with early-stage Hodgkin lymphoma. They will include a discussion of clinical trials that have tested the concept of Hodgkin lymphoma management with chemotherapy alone, as well as trials that have incorporated radiation therapy routinely. They will note the importance of different outcome measures for defining efficacy and identify opportunities for new clinical trials.

Dynamic Discoveries and Directions in Pediatric Leukemias

**CHAIR:**
Elizabeth A. Raetz, MD, New York University Medical Center, New York, NY

**SPEAKERS:**
Martin Schrappe, MD, University Medical Center Schleswig-Holstein, Kiel, Germany

*Minimal Residual Disease: Optimal Methods, Timing, and Clinical Relevance for an Individual Patient*

Renier J. Brentjens, MD, PhD, Memorial Sloan-Kettering Cancer Center, New York, NY

*Novel Cellular Therapies for Leukemia*

Elizabeth A. Raetz, MD, New York University Medical Center, New York, NY

*Where Do We Stand in the Treatment of Relapsed Acute Myeloid Leukemia?*

Acute leukemia is one of the most curable malignancies in children. While outcomes for newly diagnosed disease have now improved significantly, subgroups of patients with a high risk for treatment failure remain, and challenges include both how to integrate evolving new discoveries into clinical practice to identify these high-risk patients and how to improve their outcomes. Detection of minimal residual disease (MRD) has evolved as one of the most powerful tools in the risk assessment of acute leukemia. Clinical application of this highly sensitive tool, particularly in acute lymphocytic leukemia (ALL) requires reliable, reproducible, and quality-assured methods to ensure patient safety. To that end, the prognostic impact of MRD needs to be established prospectively in the context of clinical protocols.

Dr. Martin Schrappe will provide an overview of existing methods and evaluate the future role of this method in single and multiagent protocols.

Dr. Renier Brentjens will discuss the latest in cellular therapies for leukemia. An emphasis will be placed on adoptive therapy with T cells genetically modified to express tumor-specific chimeric antigen receptors (CARs). An update on currently ongoing clinical trials using this technology for B-cell malignancies will be included.

Dr. Elizabeth Raetz will highlight the outcome disparity that remains for children with relapsed ALL. Current strategies for treating relapsed ALL and the potential for using early measures of disease response to prioritize new agents and to allocate therapy will be discussed. Examples of how laboratory discoveries can inform clinical trial design will also be explored.
Thrombosis in Challenging Populations

CHAIR:
Alok A. Khorana, MD, University of Rochester Medical Center, Rochester, NY

SPEAKERS:
Alok A. Khorana, MD, University of Rochester, Rochester, NY
Cancer-Associated Thrombosis: Updates and Controversies

Michael B. Streiff, MD, The Johns Hopkins Hospital, Baltimore, MD
Thromboprophylaxis in Non-Surgical Patients

Peter W. Kamphuisen, MD, PhD, University Medical Center Groningen, Groningen, Netherlands
Life Line or a Pain in the Neck: Catheter-Related Thrombosis.

Thrombosis remains an important cause of morbidity and mortality among patients with medical illnesses in a variety of settings. Conflicting results from recent large randomized trials and contradictory recommendations from guidelines panels have led to controversy about the best approach to prophylaxis and treatment.

Dr. Alok Khorana will discuss emerging data and controversies in the field of cancer-associated thrombosis. Novel risk-assessment tools, biomarkers, and prophylaxis strategies, including results of recent randomized studies, will be outlined.

Dr. Michael Streiff will provide insight into results of large thromboprophylaxis studies conducted in medical and other populations, including the Prophylaxis of Thromboembolism in Critical Care (PROTECT) and the Study to Evaluate the Mortality Reduction of Enoxaparin in Hospitalized Acutely Ill Medical Receiving Enoxaparin (LIFENOX) trials. Controversial recommendations from recent guidelines panels will also be discussed.

Dr. Pieter Kamphuisen will explore optimal diagnostic and management strategies for catheter-related thrombosis in the contemporary era, with updates from recent studies.

The New Era in Antithrombotic Therapy

CHAIR:
Jeffrey I. Weitz, MD, Thrombosis and Atherosclerosis Research Institute and McMaster University, Hamilton, Ontario, Canada

SPEAKERS:
Jeffrey I. Weitz, MD, Thrombosis and Atherosclerosis Research Institute and McMaster University, Hamilton, Ontario, Canada
Novel Anticoagulants: Which One Should My Patient Use?

Alan K. Jacobson, MD, VA Loma Linda Healthcare System, Loma Linda, CA
Is There a Role for Warfarin Anymore?

Jessica L. Mega, MD, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA
Triple Therapy or Triple Threat?

For more than 60 years, the only orally available anticoagulants were the vitamin K antagonists, such as warfarin. The recent introduction of new oral anticoagulants that target thrombin or factor Xa have changed the current landscape. For example, dabigatran etexilate, an oral thrombin inhibitor, and rivaroxaban, an oral factor Xa inhibitor, are licensed as alternatives to warfarin for stroke prevention in patients with atrial fibrillation. Apixaban, another oral factor Xa inhibitor, is likely to follow soon. These agents also show promise for treatment of venous thromboembolism, and, when given in conjunction with antiplatelet therapy in stabilized acute coronary syndrome patients, rivaroxaban reduces cardiovascular death, stroke, and recurrent infarction compared with placebo. The new oral anticoagulants are more convenient than warfarin because they can be given in fixed doses without routine coagulation monitoring and there are few drug interactions. In addition, the new agents are associated with less intracranial bleeding than warfarin. With these advantages, the new oral anticoagulants are poised to replace warfarin for many indications.

Dr. Jeffrey Weitz will compare the pharmacological properties of the new oral anticoagulants and discuss the pros and cons of each drug for the various indications.

Dr. Alan Jacobson will highlight the opportunities and challenges of the new oral anticoagulants as replacements for warfarin.

Dr. Jessica Mega will outline the role of rivaroxaban as an adjunct to dual antiplatelet therapy to reduce the risk of recurrent ischemia in patients with acute coronary syndromes.

Landscape Changes and Challenges in Hemophilia

CHAIR:
Guy Young, MD, Children’s Hospital Los Angeles, Los Angeles, CA

SPEAKERS:
Guy Young, MD, Children’s Hospital Los Angeles, Los Angeles, CA
New Challenges in Hemophilia: Long-Term Outcomes and Complications

Peter W. Collins, MD, Cardiff University School of Medicine, Cardiff, United Kingdom
Therapeutic Challenges in Acquired Factor VIII Deficiency

Katherine A. High, MD, The Children’s Hospital of Philadelphia, Philadelphia, PA
The Gene Therapy Journey for Hemophilia: Are We There Yet?

The hemophilia landscape is changing and will continue to undergo dramatic changes in the next several years. After a relatively quiet period of novel treatment development and the initial setbacks with gene therapy, it is clear that innovation in hemophilia care is now moving more rapidly. There are a host of new treatments for factor VIII and IX deficiency as well as for inhibitor patients that are in late stages of clinical trials. Additional research regarding the management of acquired hemophilia has also provided new evidence to assist in the management of this rare disorder. Finally, the prospects for gene therapy appear to be much brighter given the recent breakthrough in the clinical trial of factor IX-deficient patients.

Dr. Guy Young will review the current challenges in the management of hemophilia and will discuss long-term outcomes and complications, including the management of inhibitor patients. He will also discuss the changing landscape of hemophilia given the new agents that are on the horizon.

Dr. Peter Collins will review the current status of the management of acquired hemophilia and discuss the results of recent studies and their impact on the care of these patients.

Dr. Katherine High will review the most recent results of gene therapy trials in humans as well as explore the different techniques that are being studied for the treatment of both factor VIII and factor IX deficiencies.
Everyday Bleeding Disorders

**CHAIR:**
Sarah H. O’Brien, MD, Nationwide Children’s Hospital, Columbus, OH

**SPEAKERS:**
Sarah H. O’Brien, MD, Nationwide Children’s Hospital, Columbus, OH

- **Making a Diagnosis of von Willebrand Disease**
  - Pier Mannuccio Mannucci, MD, Fondazione IRCCS Ca’ Granda-Ospedale Maggiore Policlinico, Milan, Italy
  - Hemostatic Defects in Liver and Renal Dysfunction

This session will focus on three commonly encountered challenges in the evaluation of patients with bleeding symptoms. The collection and interpretation of bleeding histories remains a subjective process.

Dr. Sarah O’Brien will describe the development of standardized bleeding scores as tools for a more quantitative assessment of bleeding, and for identification of patients with higher likelihood of developing an underlying bleeding disorder. She will discuss recent research applications of bleeding scores in adult and pediatric hematology, as well as their potential utility in clinical practice. The diagnosis of von Willebrand disease (VWD) remains a challenge because no single test is entirely diagnostic.

Dr. Jorge DiPaola will discuss the molecular interactions of von Willebrand factor (vWF) that have fueled the recent development of tests that allow for more accurate diagnosis. He will describe the utility of genetic testing for VWD type 2 and 3 and new laboratory techniques that improve the accuracy of subtype diagnosis. Finally, he will discuss type 1 VWD and the diagnostic dilemmas that arise from the overlap of borderline low vWF levels and mild bleeding.

Dr. Pier Mannucci will review the mechanism of hemorrhagic complications in liver cirrhosis and renal insufficiency. He will review current evidence that improvement of anemia through use of erythropoietin in renal insufficiency has dramatically reduced bleeding tendencies. In liver disease, bleeding is not explained by abnormalities of routine coagulation tests because a decrease in natural anticoagulants compensates for the decrease of procoagulant factors. In both diseases, thrombosis is actually a problem more pertinent than bleeding.

Perioperative Hematology: To Bleed or Not To Bleed

**CHAIR:**
Sam Schulman, MD, PhD, McMaster University, Hamilton, Ontario, Canada

**SPEAKERS:**
- Thomas L. Ortel, MD, PhD, Duke University Medical Center, Durham, NC
  - Perioperative Anticoagulation
- Jeannie Callum, MD, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada
  - Assessing Perioperative Bleeding

- Sam Schulman, MD, PhD, McMaster University, Hamilton, Ontario, Canada
  - Role of Tranexamic Acid and Reversal Agents in Perioperative Bleeding

This session will provide a review and update on the management of patients in association with surgery, focusing on blood coagulation. Successful surgery often requires an appropriate balance between avoidance of thrombosis and of excessive bleeding. Although preventive planning is the foundation for safe invasive procedures, the hematologist should also give advice when bleeding becomes uncontrollable.

Dr. Ortel will address the management of patients who are receiving chronic anticoagulant therapy and require an elective surgery or procedure. Consideration must be given to the indication for anticoagulant therapy and associated thrombotic risk, as well as to the potential hemorrhagic risks in the post-operative setting. Dr. Ortel will discuss options for various clinical scenarios and will also address the role of “bridging” therapy in high-risk situations.

Dr. Jeannie Callum will discuss the available laboratory tests for the massively bleeding patient, the transfusion strategies available, and the alternatives to transfusion. The discussion will include the evidence for near-patient testing, 1:1:1 formula resuscitation, antifibrinolytics, recombinant factor VIIa, and coagulation concentrates.

Dr. Sam Schulman will highlight the transfusion-saving role of antifibrinolytic therapy, particularly with tranexamic acid. He will also review the possibility, in the era of several new antithrombotic agents without available antidotes, of assessing the risk of bleeding or the contribution of such an agent to actual bleeding, as well as methods to reverse or mitigate the anti-hemostatic effect.

Evidence-Based Approaches to Cytopenias

**CHAIR:**
Laurence A. Boxer, MD, University of Michigan, Ann Arbor, MI

**SPEAKERS:**
- Laurence A. Boxer, MD, University of Michigan, Ann Arbor, MI
  - How to Approach Neutropenia
- Mark J. Koury, MD, Vanderbilt University, Nashville, TN
  - How to Approach Chronic Anemia
- Roberto Stasi, MD, PhD, St. George’s Hospital, London, United Kingdom
  - How to Approach Thrombocytopenia

This session will focus on recent advances on the diagnosis of neutropenia, chronic anemia, and thrombocytopenia. Emphasis will be placed on approaches for diagnostically difficult cases and how to resolve the diagnosis.

Dr. Laurence Boxer will review the approaches to establishing a diagnosis in challenging cases of acute and chronic neutropenia. He will focus on utilizing state-of-the-art cellular and molecular information to arrive at the cause of the neutropenia. Dr. Boxer will also discuss molecular diagnosis, mechanisms underlying neutropenia, cellular metabolism, and immunologic processes that suppress myeloid production or lead to neutrophil destruction.

Dr. Mark Koury will discuss a diagnostic approach to chronic anemia based on the evaluation of complete blood count, reticulocyte count, and red cell indices. The basic pathophysiological causes for the development of chronic anemia will be reviewed, and their effects on each of these laboratory results will be discussed. Examples of patient presentation, evaluations, and treatments will be presented.

Dr. Roberto Stasi will suggest a systematic diagnostic approach to challenging cases of thrombocytopenia. Dr. Stasi will focus on the interpretation of clinical findings as well as the relevance and appropriateness of diagnostic tests.
Hemoglobinopathies: New Frontiers and Insights

**CHAIR:**
Elliott P. Vichinsky, MD, Children’s Hospital and Research Center Oakland, Oakland, CA

**SPEAKERS:**
Philippe Leboulch, MD, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA

Emerging “A” Therapies in Hemoglobinopathies: Is the Future Here?

Elliott P. Vichinsky, MD, Children’s Hospital and Research Center Oakland, Oakland, CA

Julie A. Panepinto, MD, Children’s Hospital and Research Center Oakland, Oakland, CA

Health-Related Quality of Life in Patients with Hemoglobinopathies

This session will focus on emerging therapies in the treatment of hemoglobinopathies and the potential of quality-of-life instruments to measure their efficacy.

Dr. Leboulch will discuss curative treatments focusing on gene therapy. The only available curative therapy for the hemoglobinopathies is allogeneic hematopoietic stem cell transplantation. However, a general lack of available donors, transplant rejection, and the development of graft-versus-host disease are significant problems. Gene therapy, designed to compensate for the defective β-globin genes or inhibit HbS polymerization, has now reached phase I/II clinical trials. Five years after lentiviral β-globin gene therapy, a severe β-E/β-0 thalassemia patient has remained transfusion independent. Protocol details along with alternative approaches to increase safety and efficacy will be discussed.

Dr. Julie Panepinto will review what is known regarding patient-reported outcomes (PROs) in hemoglobinopathies. She will discuss the role of PROs within clinical trials in hemoglobinopathies and their benefits in measuring the effects of treatment. Dr. Panepinto will also review U.S. Food and Drug Administration guidelines on PRO instruments to measure efficacy endpoints in a clinical trial. Lastly, she will highlight potential uses for PROs in a clinical setting.

Immune Dysregulation

**CHAIR:**
Philip Scheinberg, MD, Hospital São José – Hospital Beneficência Portuguesa de São Paulo, São Paulo, Brazil

**SPEAKERS:**
Philip Scheinberg, MD, Hospital São José – Hospital Beneficência Portuguesa de São Paulo, São Paulo, Brazil

Aplastic Anemia: Therapeutic Updates in Immunosuppression and Transplantation

Charlotte Cunningham-Rundles, MD, PhD, Mount Sinai School of Medicine, New York, NY

The Many Faces of Common Variable Immunodeficiency

Jill M. Johnsen, MD, Puget Sound Blood Center, University of Washington, Seattle, WA

Pathogenesis of Immune Thrombocytopenia: New Insights

Immune dysregulation can lead to several hematologic disorders that include aplastic anemia, immune thrombocytopenia (ITP), and common variable immunodeficiency (CVID). An aberrant immune response can lead to auto-reactivity and cytopenia(s) in patients with aplastic anemia and ITP, or an inability to mount an effective immune response with susceptibility to infections in patients with CVID.

Dr. Phillip Scheinberg will briefly summarize recent insights into the pathogenesis of aplastic anemia. He will discuss the results of recent immunosuppression trials using alemtuzumab, horse and rabbit antithymocyte globulin (ATG), and how these studies are likely to affect clinical practice. He will then discuss transplantation outcomes in aplastic anemia in recent years and how the role of this therapeutic modality is evolving in aplastic anemia.

Dr. Charlotte Cunningham-Rundles will be discussing the presentations of CVID consisting of two phenotypes: one in which only infections are the characteristic; and another in which inflammatory and/or hematologic complications develop, including lymphadenopathy, splenomegaly, autoimmune cytopenias, enteropathy, and granulomatous disease. She will discuss how these phenotypes appear to be stable, how they are related to both immunologic and inflammatory markers, and how they are predictive of outcomes.

Dr. Jill Johnsen will present an overview of our current understanding of the pathogenesis of ITP. She will summarize the immune dysregulation observed in ITP and the associated phenotypes of accelerated platelet destruction and reduced platelet production. She will also discuss the implications of these evolving mechanistic models in the diagnosis and treatment of ITP.
Hematologic Diseases in Pregnancy

CHAIR:
Terry B. Gernsheimer, MD, Puget Sound Blood Center, University of Washington, Seattle, WA

SPEAKERS:
Terry B. Gernsheimer, MD, Puget Sound Blood Center, University of Washington, Seattle, WA
Thrombocytopenia in Pregnancy: Is This Immune Thrombocytopenia or...?

Sophie Lanzkron, MD, The Johns Hopkins University School of Medicine, Baltimore, MD
Baby on Board: What You Need to Know about Pregnancy in the Hemoglobinopathies

Ian A. Greer, MD, University of Liverpool, Liverpool, United Kingdom
Thrombosis in Pregnancy: Updates in Diagnosis and Management

Diagnosis and management of hematologic disorders in the pregnant patient presents special challenges with considerations for safety of both the woman and her fetus. Exacerbation may occur during pregnancy, and treatment goals change as pregnancy progresses and delivery nears. The fetus may be at risk of complications of the disease and its management, and may also require special monitoring before and after delivery. There is a marked lack of direct evidence and decisions based on extrapolation of data from non-pregnant cohorts and reported experience. New observations are expanding our understanding of pathologic mechanisms in pregnancy, improving management and opportunities for successful outcomes in “high-risk” pregnancies.

Dr. Terry Gernsheimer will discuss pathogenic mechanisms of thrombocytopenia and differential diagnosis of this common complication of pregnancy. Safety of the fetus limits therapeutic options and goals may be different than in the non-pregnant patient. A rational approach to risk assessment and management of both the patient and her offspring during pregnancy and delivery will be outlined.

Dr. Sophie Lanzkron will review maternal and fetal risks of pregnancy for individuals with β thalassemia major and sickle cell disease. As treatment for individuals with hemoglobinopathies has improved and life expectancy has increased, many people with these disorders are opting to have children. Treatment strategies to minimize complications during pregnancy will be discussed.

Dr. Ian Greer will discuss the implications of venous thromboembolic disease for pregnancy as well as for the long-term health of the mother. The diagnosis of thrombosis and the safety and efficacy of available anticoagulants in the gravid patient will be reviewed.
Pearls and Pitfalls in the Hematology Lab: Clotting and Bleeding

CHAIR:
Jacob H. Rand, MD, Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, NY

SPEAKERS:
Dorothy Marie Adcock, MD, Esoterix, Inc., Englewood, CO
Coagulation Assays and Anticoagulant Monitoring

Jacob H. Rand, MD, Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, NY
Dos and Don'ts in Diagnosing Antiphospholipid Syndrome

Teresa Quiroga, MD, Pontifical Catholic University of Chile School of Medicine, Santiago, Chile
Is This Patient a Bleeder?

Hematologist-oncologists are often asked to see patients for a variety of blood coagulation issues. These consultations usually require the consultant to make decisions about ordering and interpreting coagulation assays—a field in which practicing physicians have had progressively less direct contact. This session is designed to provide clinicians with current information on the latest guidelines and also with handy tips and practical advice on how to best utilize these assays.

Dr. Dorothy Adcock will discuss the current approaches to deciding when and how to monitor anticoagulant therapies. The discussion will include recommendations on the latest group of anticoagulants: the oral direct inhibitors of thrombin and factor Xa.

Dr. Jacob Rand will review the current diagnostic criteria for antiphospholipid syndrome, describe the clinical indications for testing, and offer recommendations on how the tests should be interpreted.

Dr. Teresa Quiroga will provide insight on the current approaches to identifying and evaluating patients who are suspected to have bleeding disorders.

Pearls and Pitfalls in the Hematology Lab: Updates on Cellular Diagnostics

CHAIR:
Tracy L. George, MD, Stanford University School of Medicine, Stanford, CA

SPEAKERS:
Peter Valent, MD, Medical University of Vienna, Vienna, Austria
Low Blood Counts: Immune, Idiopathic, or Myelodysplasia

Tracy L. George, MD, Stanford University School of Medicine, Stanford, CA
Malignant or Benign Leukocytosis

Ralph Green, MD, PhD, University of California – Davis, Sacramento, CA
Anemias Beyond B12 and Iron Deficiency: The Buzz about Other B’s, “Elementary” and “Non-Elementary” Problems

This session will focus on laboratory testing in hematology including new diagnostic assays, the interpretation of diagnostic laboratory tests, and problems associated with such testing.

Dr. Peter Valenti will discuss the diagnostic interface in mild cytopenias, ranging from low-risk myelodysplastic syndromes to immune-mediated cytopenias. He will review available clinical and laboratory markers and assays useful to delineate the mechanism(s) of cytopenia, with special reference to bone marrow function-related parameters. Dr. Valenti will also discuss available criteria and diagnostic algorithms through which a provisional or a final diagnosis can be established in these patients.

Dr. Tracy George will focus on the evaluation of leukocytosis, describing useful laboratory assays that separate malignant from benign proliferations. She will discuss practical aspects of cellular diagnostics, including examination of the peripheral blood smear, when flow cytometry immunophenotyping is appropriate and when it can be misleading, and when molecular genetic testing is helpful.

Dr. Ralph Green will present a practical approach to the diagnosis of anemia. He will discuss general principles including the use and limitations of red cell indices, testing algorithms, and discriminant functions. With the backdrop of the changing spectrum of the more and less commonly encountered anemias and through illustrative case examples from the obvious to the obscure, Dr. Green will focus on when to order what tests, how to interpret them, and what’s new and interesting beyond the commonplace.
3 P’s In a Pod

CHAIR:
Jeffrey Lawrence Winters, MD, Mayo Clinic, Rochester, MN

SPEAKERS:
Gregory Grabowski, MD, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH
Philippe Gaucher Disease and Other Storage Disorders
Robert J. Desnick, MD, PhD, Mount Sinai School of Medicine, New York, NY
Porphyrias: Advances in Diagnosis and Treatment of the “Purple” Diseases
Jeffrey Lawrence Winters, MD, Mayo Clinic, Rochester, MN
Plasma Exchange: Concepts, Mechanisms, and an Overview of the American Society for Apheresis Guidelines

This session will consist of a potpourri of pathologic processes and procedures of particular interest to the practicing hematologist, all involving the letter “P”!

Dr. Gregory Grabowski will review Gaucher disease as the prototype for lysosomal storage diseases (LSD) such as Fabry, Pompe, and Niemann-Pick diseases. He will also discuss the clinical and economic success of enzyme replacement therapy in this disorder-stimulated research, development in these diseases, and the recognition of disruption of autophagy/lysosomal function in other diseases, such as age-related degenerative diseases and idiopathic hypertrophic cardiomyopathy.

Dr. Robert Desnick will review the porphyrias, focusing on congenital erythropoietic porphyria (CEP), erythropoietic protoporphyrinia (EPP), and the recently identified X-linked protoporphyrinia (XLP). The diagnosis, treatment, and results of recent clinical trials will be presented. Dr. Desnick will also discuss chronic phlebotomy for Porphyria Cutanea Tarda and hemat and liver transplantation for the acute neurologic attacks in acute hepatic porphyrias.

Dr. Jeffrey Winters will review basic concepts and mechanisms of plasma exchange. He will discuss issues that must be considered when prescribing or performing plasma exchange in order to ensure safe and effective therapy. He will review the “Guidelines on the Use of Therapeutic Apheresis in Clinical Practice – Evidence-Based Approach from the Apheresis Applications Committee of the American Society for Apheresis” as a practical tool for determining the role of plasma exchange in disease treatment.

Pediatric Issues in Platelet Transfusions

CHAIR:
Cassandra Josephson, MD, Emory University, Atlanta, GA

SPEAKERS:
Martha Sola-Visner, MD, Children’s Hospital Boston, Harvard Medical School, Boston, MA
Platelets in the Neonatal Period: Developmental Differences in Platelet Production, Function, and Hemostasis, and the Potential Impact of Therapies
Simon J. Stanworth, MD, DPhil, NHS Blood and Transplant, Oxford University Hospital NHS Trust, Oxford, United Kingdom
Thrombocytopenia, Bleeding, and Platelet Transfusions in Sick Neonates
Cassandra Josephson, MD, Emory University, Atlanta, GA
Thrombocytopenia and Bleeding in Pediatric Oncology Patients

THIS SESSION IS JOINTLY SPONSORED WITH AABB.

This session will be devoted to recent advances in the basic science of developmental platelet production and function and implications for therapy. It will also discuss thrombocytopenia, transfusion thresholds, and bleeding in sick neonates and pediatric oncology/haematopoietic stem cell transplant patients.

Dr. Sola-Visner will review the main developmental differences in platelet production, survival, and function between neonates and adults, and describe some of the key molecular mechanisms underlying these differences. She will then discuss the unique characteristics of the neonatal hemostatic system and the potential impact of transfusing “developmentally mismatched” adult platelets on neonatal physiology.

Dr. Simon Stanworth will briefly review severity and clinical characteristics of neonates that develop thrombocytopenia. He will then discuss prevalence and patterns of bleeding in neonates with severe thrombocytopenia. Finally, Dr. Stanworth will review surveys and clinical studies that focus on the effectiveness of prophylactic platelet transfusions and platelet transfusion thresholds in this vulnerable population.

Dr. Cassandra Josephson will review the historic data and studies that focus on platelet transfusion thresholds, dosing of platelets, and bleeding incidence in pediatric oncology and hematopoietic stem cell transplant patients. She will then explore the lack of standardization of bleeding assessment tools for reporting bleeding outcomes and examine the clinical relevance of bleeding in this population.

Finally, Dr. Josephson will discuss the pediatric sub-analysis of the National Heart, Lung, and Blood Institute and Transfusion Medicine/Hemostasis Clinical Trial Network-sponsored trial on platelet dosing and bleeding outcomes in patients with hypoproliferative thrombocytopenia, the Prophylactic PLAtelet DOse (PLADO) trial.
International Hematology: Limitations and Accomplishments in Sickle Cell Disease

**CHAIR:**
Griffin P. Rodgers, MD, National Institute of Diabetes, Digestive, and Kidney Diseases, National Institutes of Health, Bethesda, MD

**SPEAKERS:**
Isaac Odame, MD, The Hospital for Sick Children, Toronto, Ontario, Canada
Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania
Julie Makani, MD, PhD, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania
Zakari Aliyu, MD, Taraba State Specialist Hospital, Taraba, Nigeria

**THIS SESSION IS OFFERED ONCE.**
This session will highlight the global burden of sickle cell disease (SCD) and steps being taken by an international village to advance research and clinical care in countries with few health resources. Speakers will describe a network that aims to increase awareness of and treatment for the disease, the challenges of providing care, research projects and opportunities where disease prevalence is high, and efforts to establish a new clinical care center in one of the largest hospitals in Nigeria.

Dr. Isaac Odame will provide an overview of the global burden of SCD and discuss steps that need to be taken to begin to address the problem. He will discuss the formation and role of a network of SCD clinicians and scientists committed to fostering North-South and South-South collaborations aimed at furthering research and advancing clinical care for patients with SCD, particularly in low-income countries with the highest disease burden.

Dr. Julie Makani will provide an overview of the challenges in delivering comprehensive care for SCD in Africa within the context of limited resources and high disease burden. She will discuss opportunities presented by high patient numbers and the steps taken by African investigators and their collaborators in promoting and performing SCD research in sub-Saharan Africa through the establishment of active regional research networks.

Dr. Zakari Aliyu will discuss an effective model of partnerships involved in building sustainable capacity through health system strengthening to advance clinical care and promote research in low-income settings. He will describe his collaborative efforts to establish a new blood, sickle cell, cancer, and palliative care institute within one of the largest hospitals in Nigeria.

**The Trade Secrets of a Successful Academic**

**CHAIR:**
Barbara M. Alving, MD, Former Director of National Center for Research Resources, National Institutes of Health, Uniformed Services University of the Health Sciences, Bethesda, MD

**SPEAKERS:**
Barbara M. Alving, MD, Former Director of National Center for Research Resources, National Institutes of Health, Uniformed Services University of the Health Sciences, Bethesda, MD
Sara K. Vesely, PhD, University of Oklahoma Health Sciences Center, Oklahoma City, OK
J. Douglas Rizzo, MD, Medical College of Wisconsin, Milwaukee, WI

**THIS SESSION IS OFFERED ONCE.**
This session will explore the secrets behind three critical factors in attaining academic success: achieving leadership through mentoring and being mentored; conducting research studies of value supported by appropriate knowledge of statistics, as well as engaging statisticians as team members; and creating and delivering presentations that captivate your audiences.

Dr. Barbara Alving will provide case studies of highly successful mentors and then examine questions that arise in considering mentorship. What defines a successful mentor? Is mentoring an altruistic activity? What is the difference between mentoring and coaching? When does a professional outgrow the need for mentoring, and are mentors needed in this highly connected, mobile world?

Dr. Sara Vesely will discuss how to interact with a biostatistician to ensure an appropriate study design and utilization of resources and clinical research participants. She will explain how the power of statistics is available to every investigator, regardless of career level.

Dr. J. Douglas Rizzo will discuss how to prepare dynamic, innovative presentations based on an ability to understand a variety of potential audiences, including community members, clinical trial participants, potential donors, management, academic colleagues, or international groups with language challenges. He will also describe effective use of presentation formats, such as PowerPoint, and delivery techniques to engage the audience and overcome anxiety.

**Junior Faculty Development Education Program: How to be Successful in Your First “Real” Job**

**CHAIR:**
Stephen Hunger, MD, University of Colorado School of Medicine, Aurora, CO

**SPEAKERS:**
Donald Small, MD, PhD, The Johns Hopkins University School of Medicine, Baltimore, MD
Mignon Loh, MD, University of California – San Francisco, San Francisco, CA
Barbara A. Konkle, MD, Puget Sound Blood Center, University of Washington, Seattle, WA

**THIS SESSION IS OFFERED ONCE.**
This session will focus on issues critical to career development of junior faculty members.

Dr. Donald Small will review how to define realistic research goals based on a research effort assignment, how to establish effective research collaborations, and how to obtain critical early career extramural funding.

Dr. Mignon Loh will discuss why it is important to identify a niche, how to decide on an appropriate niche and become the local expert in this area, and how to move from being a local expert to a national/international expert.

Dr. Barbara Konkle will illustrate the advantages and disadvantages of transitioning from trainee to junior faculty member at the same institution, how to identify potential issues, and how to remedy problem situations in constructive ways. She will also discuss appropriate considerations when things are going well and you are approached with other career opportunities.
The 2012 Scientific Committee Program Sessions will be held Saturday, December 8, and Sunday, December 9. Each session will be offered twice. A question-and-answer period will occur at the end of each individual speaker presentation. Invited abstracts of these sessions will be published in the Program Book and on the flash drive containing the annual meeting abstracts. In addition, this information will be provided online through the ASH website (www.hematology.org) in early November.

**Scientific Committee on Blood Disorders in Childhood**

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**Misguided Myeloid Cells: From Inflammation to Malignancy**

**CHAIR:** Catherine M. Bollard, MD, Baylor College of Medicine, Texas Children’s Hospital, The Methodist Hospital, Houston, TX

**SPEAKERS:**
- Miriam Merad, MD, PhD, Mount Sinai School of Medicine, New York, NY
- Carl E. Allen, MD, PhD, Baylor College of Medicine, Texas Children’s Cancer and Hematology Centers, Houston, TX
- Lisa Filipovich, MD, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

**Hemophagocytic Lymphohistiocytosis: Biology and Stem Cell Transplant**

This session will provide a bench-to-bedside overview of the histiocytic disorders Langerhans cell histiocytosis (LCH) and hemophagocytic lymphohistiocytosis (HLH). The emphasis of the basic science will be on the evolving understanding of intrinsic molecular lesions as well as the systemic immune dysregulation that underlie these disorders.

Dr. Miriam Merad will focus on the origin and function of myeloid dendritic cells. Specifically, she will focus on the significance of langerin+ cells (CD207), an antigen receptor with promiscuity and complexity beyond the epidermal Langerhans cell.

Dr. Carl Allen will discuss how recent molecular insights into the pathogenesis of LCH may redefine the disorder as a myeloid neoplasia and may affect future approaches to therapy.

Dr. Lisa Filipovich will review the genetic mutations and functional immune defects that lead to unrestrained inflammation in hemophagocytic lymphohistiocytosis. She will also discuss novel diagnostic and therapeutic strategies, including promising results with stem cell transplant.

**Scientific Committee on Hematopathology and Clinical Laboratory Hematology**

**New Insights into Blood Disorders from Sequencing of Genomes and Transcriptomes**

**CHAIR:** Catherine P. M. Hayward, MD, PhD, McMaster University, Hamilton, Ontario, Canada

**SPEAKERS:**
- Elaine R. Mardis, PhD, Washington University School of Medicine, St. Louis, MO
- Torsten Haferlach, MD, MLL Munich Leukemia Laboratory, Munich, Germany

**Insights into Leukemia Pathogenesis from Tumor Cell Genome Sequencing**

Randy D. Gascoyne, MD, British Columbia Cancer Agency, Vancouver, British Columbia, Canada

**Insights into the Pathogenesis of B-Cell Disorders from Sequencing**

Dr. Elaine Mardis will provide a fundamental explanation of next-generation sequencing methods, including their strengths and weaknesses, for comprehensive genome and transcriptome analysis. She will provide pertinent examples of emerging uses of these technologies to address important clinical questions in leukemias, using her work as an example. Lastly, Dr. Mardis will present an illustrative scenario whereby genomic information about a patient’s leukemia can be used to better treat the disease, using each patient as a specific example in the spectrum of personalized medicine.

Dr. Torsten Haferlach will discuss the application of deep sequencing and the insights it has provided for both leukemias and other myeloid neoplasms. He will further discuss the translation of the discoveries into state-of-the-art clinical diagnostic testing and personalized medicine.

Dr. Randy Gascoyne will describe the insights that whole genome, exome, and transcriptome (RNA-seq) sequencing have provided for mature B-cell and T-cell lymphoproliferative disorders. Recent discoveries from lymphoid cancers will be highlighted; including both the novel insights into biology and the potential for clinical translation based on recurrent somatic mutations, novel fusion discovery, and targeted re-sequencing strategies.
Scientific Committee on Hematopoiesis

RNA Splicing in Normal and Malignant Hematopoiesis

CHAIR:
William Vainchenker, MD, PhD, Institut National de la Santé et de la Recherche Médicale, Institut Gustave-Roussy, Villejuif, France

SPEAKERS:
Adrian Krainer, PhD, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY
Seishi Ogawa, MD, PhD, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan
Catherine J. Wu, MD, Dana-Farber Cancer Institute, Harvard Institutes of Medicine, Boston, MA

Over the past few years there have been significant advances in our understanding of the structure and function of von Willebrand factor (vWF) and its regulation by the vWF cleaving protease ADAMTS13. This session will highlight new findings in these areas and their implications in hemostasis and thrombosis.

Dr. Timothy Springer will discuss new molecular and biophysical studies of vWF. Recent electronic microscopy structures provide insight into the domain architecture of vWF and the basis for its flexibility. The extraordinary length of vWF allows it to act as a sensor of vascular flow. Dr. Springer will also provide new insights into how forces acting on vWF affect its function, including in types 2A and 2B Von Willebrand disease.

Dr. Cécile Denis will provide an overview of recent advances in identifying novel pathways regulating vWF function. She will discuss results from in vitro studies and in vivo approaches using dedicated animal models.

Dr. Long Zheng will discuss new findings in the structural components of ADAMTS13 required for productive cleavage of vWF. He will also describe the cofactor-dependent regulation of ADAMTS13 function in vitro and in vivo using animal models.

Dr. Adrian Krainer will review the general mechanisms of RNA splicing and how splicing misregulation may lead to various diseases, including cell transformation. He will discuss the possibilities of new therapeutic strategies specifically targeting relevant alternative isoforms.

Dr. Seishi Ogawa will provide an overview of the genetic alterations in the splicing pathway in myeloid malignancies and their correlation with disease phenotypes. He will then present the consequences of these spliceosome mutations on RNA splicing and on the biology of hematopoietic cells, including stem cells.

Dr. Catherine Wu will present the results of next-generation sequencing in CLL. She will focus on the mutations in SF3B1, their consequences on splicing, and the new mechanistic insights provided by understanding the role of splicing on the pathogenesis of CLL. Dr. Wu will discuss the impact of these mutations on prognosis and treatment.

Scientific Committee on Hemostasis

New Aspects of von Willebrand Factor Biology

CHAIR:
Barbara A. Konkle, MD, Puget Sound Blood Center, University of Washington, Seattle, WA

SPEAKERS:
Timothy A. Springer, PhD, Children’s Hospital Boston, Boston, MA
Cécile V. Denis, PhD, Institut National de la Santé et de la Recherche Médicale, Le Kremlin-Bicêtre, France
X. Long Zheng, MD, PhD, The Children’s Hospital of Philadelphia, Philadelphia, PA

Dr. Timothy Springer will discuss new molecular and biophysical studies of vWF. Recent electronic microscopy structures provide insight into the domain architecture of vWF and the basis for its flexibility. The extraordinary length of vWF allows it to act as a sensor of vascular flow. Dr. Springer will also provide new insights into how forces acting on vWF affect its function, including in types 2A and 2B Von Willebrand disease.

Dr. Cécile Denis will provide an overview of recent advances in identifying novel pathways regulating vWF function. She will discuss results from in vitro studies and in vivo approaches using dedicated animal models.

Dr. Long Zheng will discuss new findings in the structural components of ADAMTS13 required for productive cleavage of vWF. He will also describe the cofactor-dependent regulation of ADAMTS13 function in vitro and in vivo using animal models.
Scientific Committee on Immunology and Host Defense

**Immune Cells Bridging Innate and Adaptive Immunity**

**CHAIR:**
Fabio Candotti, MD, National Human Genome Research Institute, National Institutes of Health, Bethesda, MD

**SPEAKERS:**
Hergen Spits, PhD, Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands

*Innate Lymphoid Cells: Development and Function in Innate Immunity and Tissue Remodeling*

Madhav Dhodapkar, MD, Yale University, New Haven, CT

*Harnessing Invariant Natural Killer T Cells for Cancer Therapy*

James W. Young, MD, Memorial Sloan-Kettering Cancer Center, New York, NY

*Dendritic Cells Biology and Adaptive Immune Responses*

This session will explore the widening knowledge of the cellular players at the interface between the innate and adaptive immune systems. Special focus will be placed on the discussion of innate lymphoid cells, invariant natural killer cells, and dendritic cells, with particular attention to notions derived from studies in human cells.

Dr. Hergen Spits will discuss the multifaceted functions of innate lymphoid cells, a novel and expanding family of immune effector cells that serve multiple roles including lymphoid tissue formation in embryogenesis, immune protection from microorganisms, and tissue remodeling after infection or inflammatory injury.

Dr. Madhav Dhodapkar will focus his presentation on the latest understanding of diversity and functional properties of lipid-reactive natural killer T cells and the potential of harnessing the properties of these cells in clinical studies for cancer treatment.

Dr. James Young will provide an update on dendritic cell biology and describe the heterogeneous features of human dendritic cells and their effects on adaptive immune responses.

Scientific Committee on Iron and Heme

**Orchestration of Systemic Iron Balance**

**CHAIR:**
Gordon D. McLaren, MD, University of California – Irvine, Irvine, CA and VA Long Beach Healthcare System, Long Beach, CA

**SPEAKERS:**
Herbert Yih-Fuu Lin, MD, PhD, Massachusetts General Hospital, Boston, MA

*The Liver: Conductor of Systemic Iron Regulation*

Carole Peyssonnaux, PhD, Institut National de la Santé et de la Recherche Médicale, Institute Cochin, Paris, France

*The Gut: Role at Steady State and Variations in Disordered Conditions*

Yelena Ginzburg, MD, New York Blood Center, New York, NY

*The Red Cell: How Erythropoiesis Modulates Hemin Expression*

This session will focus on the three major organs involved in orchestrating systemic iron balance: the liver, the intestine, and the erythron. The role of each of these organs and their interactions will be reviewed, including normal control mechanisms in health and alterations in disease. Recent advances in understanding hereditary disorders associated with abnormal iron homeostasis and therapeutic implications will be discussed in relation to conditions such as hemochromatosis, the thalassemias, and iron-refractory iron deficiency anemia.

Dr. Herbert Lin will present recent research on hepatic iron sensing and how the liver acts as the conductor of systemic iron regulation through the BMP signaling pathway that controls production of hepcidin. A review of current knowledge about the regulation of hepcidin expression will be presented, including the effects of altered iron stores, inflammation, and hereditary disorders.

Dr. Carole Peyssonnaux will focus on the role of hepcidin in the normal control of intestinal iron absorption and variations associated with disorders, such as increased ineffective erythropoiesis and hypoxia. The roles of Hif2α, duodenal iron transporters (DMT1, ferroportin), and duodenal ferritin in regulation of iron transport across the duodenal mucosa will also be explored.

Dr. Yelena Ginzburg will discuss modulation of hepcidin expression by erythropoiesis both under normal conditions and in disease states associated with increased ineffective erythropoiesis, including the role of humoral erythropoietic factors that influence hepcidin regulation and thereby control the iron supply from both the reticuloendothelial system and dietary sources.

Scientific Committee on Lymphoid Neoplasia

**B-Cell Receptor Signaling in the Pathogenesis and Treatment of Lymphoid Malignancy**

**CHAIR:**
Clark W. Distelhorst, MD, Case Western Reserve University, Cleveland, OH

**SPEAKERS:**
Freda Stevenson, DPhil, University of Southampton, Southampton, United Kingdom

*B-Cell Receptor Signaling in Chronic Lymphocytic Leukemia*

Louis M. Staudt, MD, PhD, National Cancer Institute, National Institutes of Health, Bethesda, MD

*Chronic Active B-Cell Receptor Signaling in Lymphoma*

John C. Byrd, MD, The Ohio State University, Columbus, OH

*Therapeutic Targeting of B-Cell Receptor Signaling Pathways*

The speakers in this session will highlight recent advances in understanding the role of B-cell receptor (BCR) signaling in the pathogenesis of B-cell malignancies and the potential of targeting abnormal BCR signaling for therapeutic purposes.

Dr. Freda Stevenson will discuss the role of BCR signaling in chronic lymphocytic leukemia (CLL), based on evidence that ligand-induced modulation of surface immunoglobulin M (IgM) contributes to the pathogenesis of this malignancy by engaging downstream proliferative and anti-apoptotic pathways. New observations on the intracranial heterogeneity in selective IgM expression important for therapeutic targeting also will be described.

Dr. Louis Staudt will summarize how the use of functional and structural genomics revealed that the activated B-cell-like (ABC) subtype of diffuse large B-cell lymphoma (DLBCL) relies on a “chronic active” form of BCR signaling for survival. Therapies targeting chronic active BCR signaling have significant clinical activity in relapsed/refractory ABC DLBCL. Other human lymphoma subtypes also rely on constitutive BCR signaling for survival but engage this pathway in a mechanistically distinct fashion. The expanding potential of BCR-directed therapies in human lymphomas will be discussed.

Dr. John Byrd will explain how novel targeted therapies directed at BCR signaling produce a high rate of durable responses in both low-grade lymphoma and CLL. Remarkably, these agents have produced very modest toxicity that has allowed prolonged continuous dosing of medication and prolonged remissions. Many questions remain relative to the integration of these agents into routine clinical practice that will be reviewed during this session.
enhancers controlling a network of lineage-specific genes for pathogenesis of myeloid malignancies and are the target of some of the genetic lesions that drive leukemogenesis. This session will review the role of HOX gene regulation in both normal and malignant myelopoiesis.

Dr. Patricia Ernst will discuss the role of Mll1 and its downstream targets, including Hox genes, in coordinating hematopoietic stem cell self-renewal with proliferation. The mechanisms by which Mll1 controls the expression of its target genes will be considered, including the role of chromatin targeting and catalytic activities in maintaining different categories of genes required for normal hematopoiesis.

Dr. Elizabeth Eklund will discuss the role that posterior Hox proteins play in progenitor expansion and differentiation focusing on target genes for HoxA9 and HoxA10. Cooperative and antagonistic functions of these transcription factors in controlling myeloid progenitor expansion and differentiation will be considered.

Dr. Jay Hess will discuss emerging evidence suggesting that HoxA9, which is overexpressed in more than half of myeloid acute leukemias, modulates the activity of lineage-specific enhancers controlling a network of pro-leukemogenic target genes.

A major challenge in clinical medicine and biomedical research is to integrate current knowledge and technological advances into the best care for each individual patient. Genetic technologies have transformed our understanding of the genetic basis of myeloid malignant diseases, and it is expected that a new disease taxonomy that incorporates existing clinical parameters with data about mutations – and potentially epigenomic, metabolic, and microbiomic research – will provide accurate and precise definitions of diseases and opportunities for specific treatment modalities and improved individual health outcomes. This evolutionary process requires that patients, communities, and diseases be considered together and will demand new biomedical paradigms whereby physical and biological scientists and clinicians work closely to answer health-related questions. This session will focus on examining opportunities for translating new knowledge from different sources in the management of acute myeloid leukemia and myelodysplasia.

Dr. Benjamin Ebert will discuss the clinical impact of point-mutations in myelodysplastic syndromes, and how genetic data can be used to improve the prediction of prognosis and response to therapy.

Dr. Matthew Walter will discuss the clonal architecture of myelodysplastic syndromes and the clinical implications of whole genome sequencing.

Dr. Bob Löwenberg will discuss how a multitude of emerging potentially relevant molecular biomarkers are creating a growing informative prognostic background that can be used for risk-adapted therapy decisions.
Scientific Program

Scientific Committee on Red Cell Biology

How to Make a Red Blood Cell

CHAIR:
Dwayne Barber, PhD, Ontario Cancer Institute, Toronto, Ontario, Canada

SPEAKERS:
James Palis, MD, University of Rochester Medical Center, Rochester, NY
Primitive and Definitive Erythropoiesis
Igor Slukvin, MD, PhD, University of Wisconsin, Madison, WI
Induced Pluripotent Stem Cells and Erythrocyte Production
Luc Douay, MD, PhD, Université Pierre et Marie Curie, Paris, France
In Vitro Production of Erythrocytes

This session will focus on recent progress in the understanding of developmental erythropoiesis, advances in induced pluripotent stem cells, and the use of stem cell precursors in the expansion and production of erythrocytes.

Dr. James Palis will review aspects of red blood cell development including embryonic, fetal, and adult erythropoiesis. His laboratory has made significant advances in understanding the ontogeny of fetal erythropoiesis.

Dr. Igor Slukvin will discuss the development of induced pluripotent stem cells and describe optimization of conditions for the optimal production of differentiated red blood cells. Development of red blood cells from a defined progenitor has several advantages, including minimizing risk of transfusion reactions such as graft-versus-host disease. Dr. Slukvin will also discuss the emerging ethical and societal issues involved in utilizing an engineered blood product.

Dr. Luc Douay will report his exciting findings in the production of large quantities of red blood cells from CD34-positive precursors. His laboratory has shown that cultured red blood cells are functional when introduced into an immunodeficient mouse. Furthermore, Dr. Douay’s team illustrated that labeled cultured blood cells had a comparable half-life when injected into a volunteer. Dr. Douay will also provide perspectives on future directions in the use of progenitor cell, cord blood, and pluripotent stem cell technologies that have the potential to transform regenerative medicine.

Scientific Committee on Stem Cells and Regenerative Medicine

Stressed Out Stem Cells

CHAIR:
Margaret A. Goodell, PhD, Baylor College of Medicine, Houston, TX

SPEAKERS:
Markus G. Manz, MD, University Hospital Zurich, Zurich, Switzerland
Microbial Impact on Hematologic Homeostasis
Andreas Trump, MD, German Cancer Research Center (DKFZ) and HI-STEM, Heidelberg, Germany
Dormant HSCs and Their Response to Stress
Toshio Suda, MD, School of Medicine, Keio University, Tokyo, Japan
Metabolic Regulation of HSCs During Stress

Hematopoietic stem cells (HSCs) continuously replenish the peripheral blood at a steady rate during normal conditions. The hematopoietic system is highly flexible, with effector cell production augmented and restrained as needed. Recently, the role of hematopoietic stem cells in responding to these changing demands has become increasingly appreciated. This session will focus on the types of stresses HSCs experience, their response to stress, and the mechanisms involved in these responses. Individual presentations will elaborate on the highly dynamic role that stem cells play in hematologic homeostasis, as well as the regulatory mechanisms and the key questions that will shape research in the coming years.

Dr. Markus Manz will review the impact of infection on the effector, progenitor, and stem cell populations.

Dr. Andreas Trump will focus on the signaling molecules that enable the HSC response, particularly interferons.

Dr. Toshio Suda will focus on the unique metabolic status of HSCs and the changes that occur in HSC metabolism during the stress response.

Scientific Committee on Thrombosis and Vascular Biology

Initiation of Thrombus Formation During the Innate Immune Response

CHAIR:
Susan S. Smyth, MD, PhD, University of Kentucky, Lexington, KY

SPEAKERS:
Hartmut Weiler, PhD, BloodCenter of Wisconsin, Milwaukee, WI
Innate Immunity and Vascular Homeostasis
Thomas M. McIntyre, PhD, Cleveland Clinic Lerner Research Institute, Cleveland, OH
Inflammatory Cytokines and Thrombosis
Fahumiya Samad, PhD, Torrey Pines Institute for Molecular Studies, San Diego, CA
Inflammation, Obesity, and Thrombosis

Emerging evidence from animal models and clinical studies supports close connections between immune responses to tissue injury/insult and pathways involved in thrombosis. The interplay between the innate immune system, platelets, and the coagulation cascade may promote host-defense responses and tissue repair. It may also contribute to progression of disease processes such as atherosclerosis, autoimmune disorders, inflammatory lung and bowel disorders, and obesity. This session will provide the latest scientific evidence of the molecular mechanism(s) underlying these interactions and, when known, their pathophysiologic consequences.

Dr. Hartmut Weiler will discuss the fact that activated protein C (APC) – although initially demonstrating promise in reducing mortality in sepsis – exerts complex effects that alter its efficacy as a therapeutic agent. In preclinical models, the sepsis mortality reduction by APC involves signaling through protease-activated receptors, the endothelial protein C receptor, and integrins. Additionally, APC may interact with novel substrates such as histones and tissue factor pathway inhibitor to control coagulation and inflammation. Such receptor interactions may determine the biological response to endogenous and therapeutically administered APC.

Dr. Thomas McIntyre will briefly summarize the ability of platelets to splice and translate RNA and the pathways involved. He will then discuss how endotoxin promotes the synthesis and release of proinflammatory cytokines, such as IL1β, from platelets.

Dr. Fahumiya Samad will briefly review the links between obesity, inflammation, and thrombosis. In particular, she will focus on new evidence that tissue factor (TF) may have coagulation-independent functions in promoting obesity and its consequences. Dr. Samad will also describe the contributions of TF and PAR2 to diet-induced obesity and the molecular mechanism(s) responsible.
Scientific Committee on Transfusion Medicine

Toxicologic Effects of Blood Transfusion

CHAIR:
James C. Zimring, MD, PhD, Puget Sound Blood Center, University of Washington, Seattle, WA

SPEAKERS:
Eldad A. Hod, MD, Columbia University Medical Center, New York, NY
The Role of Iron in Toxicity of Stored Red Blood Cell Units

Nilam S. Mangalmurti, MD, University of Pennsylvania, Philadelphia, PA
Erythrocyte Advanced Glycation Endproducts as Novel Mediators of Endothelial Dysfunction Following Transfusion

Christopher C. Silliman, MD, PhD, Bonfils Blood Center, Denver, CO
Lipids: Free Fatty Acids, Eicosanoids, and Lysophospholipids and the Pro-Inflammatory Effects of Transfusion

This session will focus on recent developments in our understanding of potential toxicities that may be inadvertently generated as a result of storing blood and blood products prior to transfusion.

Dr. Eldad Hod will speak about the effects of transfusing stored red blood cells on infection and inflammation. Both animal and human data will be discussed, with a focus on how iron and iron biology may play a mechanistic role in influencing this process.

Dr. Nilam Mangalmurti will discuss the specific chemical class that accumulates both naturally and also in stored blood products called advanced glycation endproducts. The role that such chemical moieties play in potential toxicity of blood products will be discussed with a focus on biological interactions with vascular endothelium.

Dr. Christopher Silliman will discuss how proinflammatory lipid entities (eicosanoids and lysophospholipids) are generated during blood storage and discuss the biological sequelae of transfusing products containing such entities.

Scientific Committee on Transplantation Biology

Microbiota, Gut Inflammation, and Transplantation: Back to the Future

CHAIR:
Marcel R.M. van den Brink, MD, PhD, Memorial Sloan-Kettering Cancer Center, New York, NY

SPEAKERS:
Wendy S. Garrett, MD, PhD, Dana-Farber Cancer Institute, Harvard Medical School, Harvard School of Public Health, Boston, MA
Gut Microbiota and Intestinal Inflammation

Ernst Holler, PhD, Universitätssklinikum Regensburg, Regensburg, Germany
Intestinal Microbiota: From Inflammatory Bowel Disease to Bone Marrow Transplantation

Robert R. Jenq, MD, Memorial Sloan-Kettering Cancer Center, New York, NY
Intestinal Microbiota in Bone Marrow Transplantation

With the advent of novel methodologies, studies regarding human microbiota have made remarkable progress in the elucidation of the role of microbes in human health and disease. Inflammatory bowel disease (IBD) is an ideal setting for such studies, as disruption of homeostasis between the host immune system and the gut microbiota is central to IBD pathogenesis. The pathophysiology of intestinal graft-versus-host disease (GVHD) has many similarities with IBD. This session will review recent developments in the study of microbiota, IBD, and intestinal GVHD.

Dr. Wendy Garrett will discuss how specific microbes can instigate, promote, or inhibit colitis through their effects on the mucosal immune system or the microbial communities in the gut. Chronic inflammation in the intestine is also an important risk factor for colorectal cancer. Ongoing work on the colorectal microbiome using experimental models and human tumors will be discussed, as well as the potential benefits for beneficial microbes and functional foods in the context of these diseases.

Dr. Ernst Holler will review the role of molecules involved in immune defense against microbiota, especially NOD2/CARD15. Polymorphisms within these genes have been identified as risk factors of inflammatory bowel disease but have also been more recently associated with intestinal GVHD following allogeneic stem cell transplantation and rejection in small bowel transplantation. Potential mechanisms, such as altered antibacterial peptides – mainly defensins – as well as responses, microbiome changes, and altered recruitment of protective intestinal T cells will be discussed and linked to the increased activation of the T-cell response.

Dr. Robert Jenq will review the relationship between the intestinal bacterial flora and GVHD. He will then discuss the recent studies on the cross-talk between the intestinal microbiota, nutrition, and intestinal inflammation in murine and human recipients of allogeneic hematopoietic stem cell transplants.
Fanconi Anemia (FA) is an inherited bone marrow failure syndrome. Clinically, FA is characterized by a variety of congenital abnormalities and progressive bone marrow failure (BMF). Cells from FA patients have a striking hypersensitivity to DNA interstrand crosslinks, which has become the basis of a clinical diagnostic test for FA and is the basis of the genomic instability in patients with this condition. Among inherited bone marrow failure syndromes, FA has been the “poster child,” illustrating how insights into the pathogenetics and pathobiology directly impact diagnosis, care, and treatment of patients with FA. Furthermore, insights into the pathways of this rare genetic disease may lead to discovery of novel biological principles, such as the definition of a DNA repair pathway, with implications far beyond its own disease pathology.

Dr. Markus Grompe will review the phenotypic and genetic heterogeneity of FA, the genotype-phenotype correlations, and the pathways responsible for bone marrow failure. He will discuss how insight into these pathways provides novel therapeutic targets that may improve the severity of BMF or delay disease onset.

Dr. Stephen West will discuss how the FA proteins, encoded by genes that are mutated in FA, participate in the repair of DNA strand breaks and how mutations in these genes lead to genetic instability and cancer predisposition. He will demonstrate how the understanding of the disturbed pathways uncovers unexpected novel therapeutic options that might counterbalance the genomic stability and improve defective repair pathways in FA cells.

Dr. Ketan Patel will discuss exciting new insights into the link between metabolism and DNA damage and the consequences for potential new treatments.

Dr. Peter Jones will discuss the chromatin architecture and present an integrated view of the epigenome, including DNA methylation, histone modification, histone variants, and nucleosomal positioning, essential for chromatin-dependent signal transduction. He will also explain how these parameters change during the formation of most kinds of human cancers.

Dr. Jonathan Licht will review how histone methylation can be disrupted in multiple myeloma and related hematologic malignancies and how this affects cell growth, chromatin structure, gene expression, and DNA repair. He will also discuss how histone methyl transferases such as MMSET, rearranged and overexpressed in t(4;14)-associated myeloma, represent a therapeutic target in multiple myeloma.

Dr. James Bradner will discuss bromodomain and extraterminal (BET) subfamily of human bromodomain proteins (BRD2-4) associated with acetylated chromatin. These proteins facilitate transcriptional activation by increasing the effective molarity of recruited transcriptional activators. Dr. Bradner will also discuss the impact of targeting bromodomain proteins in myeloma and their therapeutic application in B-cell malignancies.
For this year’s Education Spotlight Program, ASH will offer eight exciting topics. Each 90-minute session will be presented once on either Sunday or Monday, in a small-venue format for approximately 100 ticketed attendees. Speakers will discuss the topic with ample time reserved for audience questions and participation. The talks will facilitate discussions of evidence-based practice, decision making, and controversies in diagnosis and management. The lectures will address the current state of knowledge, translational and clinical applications, and future directions.

**Ticket Prices (per session)**
- **Member**: $25
- **Associate Members**: $25
- **Non-Member in Training**: $25
- **Non-Member**: $40

The Education Spotlight Sessions are restricted to medical professionals only; no businessperson or media will be admitted. Individuals are limited to one ticket per session. Tickets may be purchased during the online registration process.

**Attention Trainees!**
A number of tickets for the Education Spotlight Sessions will be reserved especially for trainees. Proof of status as an Associate member or non-member in training will be required to purchase a ticket. Please show your name badge to the staff at the Ticketed Sessions counter.

### New Insights Into the Biology and Treatment of Waldenström Macroglobulinemia

**SUNDAY, DECEMBER 9**
**4:30 P.M. – 6:00 P.M.**

**CO-CHAIRS:**
- Steven Treon, MD, PhD, Dana-Farber Cancer Institute, Harvard Medical School, Boston, MA
- Enrica Morra, MD, Ospedale Niguarda Ca’ Granda, Milan, Italy

At this session, participants will learn about recent advances in the biology and therapy of Waldenström macroglobulinemia (WM).

Dr. Steven Treon will discuss predisposition to WM, highlighting recent studies that show strong familial clustering, and the potential impact of familial disease on clinical outcomes. Participants will also learn about the findings from recent whole-genome sequencing efforts, including the identification of a highly recurrent mutation (L265P) in the MYD88 gene, and the diagnostic and therapeutic implications for this mutation. Participants will also learn about novel signaling cascades triggered by MYD88 L265 and the implications of these findings on the development of targeted therapeutics. The role of the microenvironment in supporting WM cell expansion will also be discussed with a focus on mast-cell/tumor-cell interactions.

Dr. Enrica Morra will lead a discussion on treatment options for WM including the use of monoclonal antibodies, immunomodulatory agents, proteasome inhibitors, nucleoside analogues, and bendamustine. In her presentation, Dr. Morra will discuss a personalized approach to treatment selection based on consensus guidelines emerging from the 7th International Workshop on WM. Dr. Morra will also review data related to treatment-associated secondary malignancies and the impact of these findings on treatment stratification.

The session will also include a discussion on the role of maintenance therapy and transplantation, as well as updates from ongoing clinical trials with novel agents.

### Point-Counterpoint: Benefits and Hazards of T-Cell-Depleted Allogeneic Transplantation in Acute Myeloid Leukemia

**SUNDAY, DECEMBER 9**
**4:30 P.M. – 6:00 P.M.**

**CO-CHAIRS:**
- Robert J. Soiffer, MD, Dana-Farber Cancer Institute, Harvard Medical School, Boston, MA
- Richard J. O’Reilly, MD, Memorial Sloan-Kettering Cancer Center, New York, NY

Graft-versus-host disease (GVHD) accounts for a significant fraction of the morbidity and mortality associated with allogeneic hematopoietic cell transplantation (HCT). GVHD negatively impacts survival directly as a result of organ damage and indirectly as a consequence of infectious complications prompted by GVHD prophylaxis and therapy.

Donor T-cell depletion (TCD), when it was initially introduced, offered the potential for prevention of GVHD without the toxicity associated with immune suppressive drugs. However, numerous TCD methods achieving varying degrees of T-cell depletion have been utilized over the past three decades, and most of these were employed together with post-transplant immunosuppressive agents. These have included ex vivo negative selection approaches using monoclonal antibodies specific for different T-cell antigens, physical separation, or photodepletion techniques, ex vivo positive selection through CD34+ columns, or in vivo administration of commercially available anti-T-cell antibody preparations. Most early trials documented that TCD could substantially limit acute GVHD. However, this reduction in GVHD did not translate into improved overall survival because of unexpected high rates of graft failure, Epstein-Barr virus-associated lymphoproliferative disorders (EBV-LPD), and, in patients transplanted for chronic myeloid leukemia (CML), disease recurrence following T-cell-depleted bone marrow transplantation.

There have been a limited number of prospective randomized studies evaluating TCD, but those that have been performed have not convincingly demonstrated a survival advantage from this approach. However, recent evidence suggests a reduction in GVHD without compromising graft-versus-leukemia (GVL) activity. If advances in graft engineering can accomplish the goal of GVHD prevention without adversely affecting engraftment, immune competence, and anti-leukemic activity, then substantial improvements in overall transplant outcome can become reality.

This session will examine the state of the art in in vivo and ex vivo TCD in 2012, focusing on the advantages and disadvantages of current techniques, its application in different diseases, and the impact of conditioning regimen intensity on its efficacy. Speakers will discuss whether apparent benefits outweigh documented hazards.
Virally Driven Lymphomas
SUNDAY, DECEMBER 9
4:30 p.m. – 6:00 p.m.

CO-CHAIRS:
Richard F. Ambinder, MD, PhD, The Johns Hopkins University School of Medicine, Baltimore, MD
Kensei Tobinai, MD, PhD, National Cancer Center Hospital, Tokyo, Japan

Several entities of lymphoma have been known to be closely associated with viral infections. Until now, human immunodeficiency virus (HIV), human T-cell lymphotropic virus type-I (HTLV-1), Epstein-Barr virus (EBV), and hepatitis C virus (HCV) have been recognized as causative agents of lymphoma.

In this spotlight session, Dr. Richard Ambinder will provide an overview of the current recognition of virally driven lymphomas and will summarize the recent progress in the management of HIV-associated lymphoma, incorporating a case-based approach.

Dr. Kensei Tobinai will summarize recent progress in the management of HTLV-1-associated adult T-cell leukemia/lymphoma and EBV-associated natural killer/T-cell lymphoma, incorporating a case-based approach.

The spotlight session will allow participants to acquire the updated information regarding the current recognition of major entities of virally driven lymphoma and how to manage them appropriately.

Classification and Treatment Strategies for Burkitt and Other Aggressive Lymphomas
MONDAY, DECEMBER 10
10:30 a.m. – 12:00 noon

CO-CHAIRS:
Nancy Lee Harris, MD, Massachusetts General Hospital, Waban, MA
Kieron Dunleavy, MD, National Cancer Institute, National Institutes of Health, Bethesda, MD

Significant progress has been made in elucidating the clinicopathologic characteristics and molecular biology of Burkitt and other aggressive lymphomas. These insights have been incorporated into the diagnostic criteria codified in the World Health Organization classification of tumors of the lymphoid tissues. This evolution in classification has been driven by the identification of “hallmark” genetic abnormalities and has paved the way for discovering “driver” pathways in these diseases. Treatment strategies for Burkitt and other aggressive lymphomas have also evolved, and, for Burkitt lymphoma in particular, approaches that maintain high cure rates but reduce toxicity are being investigated. Diffuse large B-cell lymphoma can now be divided into molecular subtypes, and therapies that target individual subtypes are currently in development.

Dr. Harris will discuss current classification strategies for these diseases and how recent insights into their genetics and molecular biology have influenced them.

Dr. Dunleavy will review current treatment strategies for Burkitt and other aggressive lymphomas with a focus on approaches that reduce toxicity as well as novel agents that are under investigation.

Incidental Pulmonary Embolism or Venous Thrombosis: Is This a Real Disease?
MONDAY, DECEMBER 10
10:30 a.m. – 12:00 noon

CO-CHAIRS:
Clive Kearon, MD, PhD, McMaster University, Hamilton, Ontario, Canada
Menno V. Huisman, MD, PhD, Leiden University Medical Center, Leiden, Netherlands

Symptomatic pulmonary embolism (PE) and deep-vein thrombosis (DVT) require treatment with anticoagulant therapy. With widespread use of computed tomography (CT) examinations for staging of cancer and improvements in the quality of CT imaging, incidental PE and venous thrombosis, including those in the splanchnic area, are increasingly reported. Whether this type of venous thromboembolism (VTE) should be treated in the same way as symptomatic VTE is uncertain.

The purpose of this spotlight session is to provide the audience with an update on current evidence. The central issue of this session is whether anticoagulant treatment is routinely indicated upon detection of these asymptomatic thrombi. The session with begin by reviewing the scope of the problem.

Using a debate format, Dr. Menno Huisman will argue for usual anticoagulant therapy for patients with incidental VTE and Dr. Clive Kearon will argue for a less aggressive approach to treatment of these patients.

The debate will be followed by a discussion involving the audience. Toward the end of the session, the speakers will identify issues in the management of incidental VTE on which they agree, and those on which they disagree.

Reproductive Issues and the Use of Pre-Implantation Genetic Diagnosis in Thalassemia and Other Hematologic Disorders
MONDAY, DECEMBER 10
10:30 a.m. – 12:00 noon

CO-CHAIRS:
Sylvia Titi Singer, MD, Children’s Hospital and Research Center Oakland, Oakland, CA
Alison Lashwood, Guy’s and St. Thomas’ NHS Foundation Trust, London, United Kingdom

Although many thalassemia major (TM) patients attain sexual maturation, low gametogenesis and impaired reproductive capacity are common. The pathophysiology and evolution of infertility, relationship with iron burden, and early intervention for preserving fertility are not well explored. Advancements in reproductive technology are increasingly implemented for the care of TM patients and for families who are at risk of having a child affected by thalassemia or by other serious hematologic disorders. The scope of pre-implantation genetic diagnosis (PGD) to have an unaffected child has increased over time, from direct mutation testing applied to monogenic conditions including the hemoglobinopathies in the early ’90s to the first human leukocyte antigen (HLA)-matched birth reported in 2001.

Dr. Sylvia Singer will discuss infertility in TM patients, current methodology for assessing reproductive potential, possible treatment interventions, and evaluation and management of TM women prior to and during pregnancy.

Ms. Alison Lashwood will discuss the current use of PGD as a reproductive option for those at risk of having a child with an inherited hematologic disorder and the development of PGD for HLA tissue typing. She will highlight the complexities of clinical application of PGD and the inherent ethical dilemmas associated with it.
Mobilization of stem cells is critical for successful stem cell transplantation. Pathways, mediators, and mechanisms of stem cell mobilization have been poorly understood. Over the past 10 years, numerous mediators of stem cell mobilization and trafficking have been identified and tested in both preclinical models and in the clinic for patients undergoing both autologous and allogeneic stem cell transplantation.

In this session, current knowledge of the pathways and biochemical mechanisms of stem cell and leukemic cell trafficking will be discussed. In addition, a contemporary overview of all U.S. Food and Drug Administration-approved and experimental mobilizing agents and their modes of action for both stem cell mobilization and leukemic cell sensitization will be discussed.

Another interesting and novel strategy for the mobilization of stem cells that will be discussed is physical activity. Exercise is known to have a multitude of physiological effects often associated with improved health. Recently, we have described the effect of exercise training on the hematopoietic system. Notably, exercise has remarkable effects on remodeling of the hematopoietic stem cells niche – improving the capacity for stem cell mobilization and survival following transplantation in murine models, and up-regulation of factors known to induce mobilization. Interestingly, there are several examples in the literature demonstrating enhanced mobilization of CD34+ cells into circulation following acute exercise.

With a growing body of evidence supporting the positive impact of exercise on the hematopoietic system and the organic nature in which this happens, it is interesting to consider whether exercise may be an appropriate therapeutic strategy for the mobilization of stem cells.

Another interesting and novel strategy for the mobilization of stem cells that will be discussed is physical activity. Exercise is known to have a multitude of physiological effects often associated with improved health. Recently, we have described the effect of exercise training on the hematopoietic system. Notably, exercise has remarkable effects on remodeling of the hematopoietic stem cells niche – improving the capacity for stem cell mobilization and survival following transplantation in murine models, and up-regulation of factors known to induce mobilization. Interestingly, there are several examples in the literature demonstrating enhanced mobilization of CD34+ cells into circulation following acute exercise.

With a growing body of evidence supporting the positive impact of exercise on the hematopoietic system and the organic nature in which this happens, it is interesting to consider whether exercise may be an appropriate therapeutic strategy for the mobilization of stem cells.

The majority of adults with primary immune thrombocytopenia (ITP) who require treatment will respond to glucocorticoids; most will relapse once treatment is tapered to avoid their cumulative toxicity. The physician-patient dialogue then focuses on the evidence that treatment is needed, criteria for intervention, and treatment options. This involves an evaluation of the balance of risk of no treatment against the relative benefits and risks of each treatment option. Thrombopoietin receptor agonists (TRAs) have been studied in randomized, controlled trials, but comparisons with other "second-line" treatment options, such as rituximab and splenectomy among others, are complicated by uncertainty over the natural history of ITP, different mechanisms of actions of available agents, difference in numbers of patients treated, choice of endpoints, duration of follow-up, scarcity of data on long-term adverse effects, and lack of controlled trials comparing different interventions.

Drs. Douglas Cines and Nichola Cooper will discuss the evidence (and its limitations) for the various options in the treatment of adults with ITP who continue to have thrombocytopenia after a course of glucocorticoids and how this evidence was assessed in the most recent ASH and International Consensus guidelines. This will be an interactive session during which discussion will focus on the pros and cons of the various options in the context of a specific patient with ITP who has significant medical conditions that influence treatment decisions.

At the completion of this session, those enrolled in the ABIM MOC program can submit their answers to ABIM for scoring to receive MOC credit. Enrolled participants can order a copy of the module(s) online from ABIM’s website, www.abim.org. At the conclusion of the session, participants will transfer the answers to their online module and submit the module to ABIM for scoring. For additional information about ABIM’s MOC program requirements, visit www.abim.org or call the ABIM Contact Center at 800-441-ABIM. Please note that this is not a board review activity; the workshop is designed to facilitate completion of ABIM’s Self-Evaluation of Medical Knowledge MOC requirement.

**Ticket Prices (per session)**
- Member: $75
- Associate Member: $50
- Non-Member in Training: $75
- Non-Member: $125

Tickets can be purchased online during the meeting registration process.
Saturday, December 8, and Sunday, December 9
11:15 a.m. – 12:15 p.m.

The “How I Treat: Bringing Science to Clinical Dilemmas” sessions are designed to provide an opportunity for a small number of attendees to meet with a clinical expert in a setting that fosters interaction. This year, ASH has invited experts from all over the world to facilitate informal discussions allowing participants to present their questions and gain new perspectives. A boxed lunch will be provided.

Ticket Prices (per session)
Member: $35
Associate Member: $35
Non-Member in Training: $35
Allied Health Professional: $35
Non-Member: $50

The “How I Treat: Bringing Science to Clinical Dilemmas” sessions are restricted to medical professionals only; no businesspersons or media will be admitted. Tickets are limited and only available on site on a first-come, first-served basis. Only one ticket per person is allowed. Tickets can be purchased at the Ticketed Sessions counter in the registration area of the Georgia World Congress Center beginning Thursday, December 6, during registration hours until all tickets are sold. The location for each session will be published on the ASH website (www.hematology.org) prior to the meeting as well as indicated on the ticket and in the on-site materials. Please check your ticket carefully to ensure proper date, time, location, and session choice.

Attention Trainees!
A number of tickets for the “How I Treat: Bringing Science to Clinical Dilemmas” sessions will be reserved especially for trainees. Proof of status as an Associate member or non-member in training will be required to purchase a ticket. Please show your name badge to the staff at the Ticketed Sessions counter.

Schedule Subject to Change
Please note that the “How I Treat: Bringing Science to Clinical Dilemmas” session schedule included here is not final. Please check the ASH website (www.hematology.org) in late September to view an updated schedule.

SATURDAY

Anthony K.C. Chan, MD, McMaster University, Hamilton, Ontario, Canada
L-Asparaginase-Associated Thrombosis

Donna DiMichele, MD, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD
Immune Tolerance Induction Therapy in Hemophiliacs with Inhibitors

Lisa Filipovich, MD, Cincinnati Children’s Hospital, Cincinnati, OH
Hemophagocytic Lymphohistiocytosis

Andra H. James, MD, Duke University Medical Center, Durham, NC
Hematologic Emergencies in Pregnancy and Delivery

Clive Kearon, MD, PhD, McMaster University Clinic, Hamilton, Ontario, Canada
Clinical Guidelines on Testing for Heritable Thrombophilia

Robert A. Kyle, MD, Mayo Clinic, Rochester, MN
When to Worry about Monoclonal Gammapathy of Undetermined Significance and Smoldering Myelomas

Susan F. Leitman, MD, National Institutes of Health, Bethesda, MD
Transfusion and When to Consider Granulocyte Transfusion

Pier Mannuccio Mannucci, MD, The University of Milan, Milan, Italy
Management of Unexplained Coagulopathies

Effie W. Petersdorf, MD, Fred Hutchinson Cancer Research Center, Seattle, WA
Human Leukocyte Antigen (HLA)-Typing for Allogeneic Transplant: Selecting the Optimal Donor

J. Evan Sadler, MD, PhD, Washington University School of Medicine, St. Louis, MO
Perioperative Management in von Willebrand Disease

Srdan Verstovsek, MD, PhD, The University of Texas MD Anderson Cancer Center, Houston, TX
What Do JAK2 Inhibitors Do in Myeloproliferative Neoplasms and How Do They Work?

Andrew D. Zelenetz, MD, PhD, Memorial Sloan-Kettering Cancer Center, New York, NY
Targeted Therapy for Lymphoma

James C. Zimring, MD, PhD, Emory University School of Medicine, Atlanta, GA
Red Cell Storage

SUNDAY

Richard H. Aster, MD, BloodCenter of Wisconsin and Medical College of Wisconsin, Milwaukee, WI
Drug-Induced Immune Thrombocytopenia

Laurence A. Boxer, MD, University of Michigan, Ann Arbor, MI
Neutropenias

Alan K. Burnett, MD, Cardiiff University School of Medicine, Cardiff, United Kingdom
Does Molecular Information in Acute Myeloid Leukemia Change Treatment Decisions?

Joseph M. Connors, MD, British Columbia Cancer Agency, Vancouver, British Columbia, Canada
Hodgkin Lymphoma

Mary Cushman, MD, University of Vermont, Colchester, VT
Tailoring Thrombosis Management in the Elderly

H. Joachim Deeg, MD, Fred Hutchinson Cancer Research Center, Seattle, WA
Can We Separate Graft-Versus-Host Disease from Graft-Versus-Leukemia Effects?

Michael W. Deininger, MD, PhD, The University of Utah, Salt Lake City, UT
Approach to Patients with Suboptimal Response to Initial Therapy

Jonathan Friedberg, MD, University of Rochester, Rochester, NY
Mantle Cell Lymphoma

Nicola Goekbuget, MD, J.W. Goethe University Hospital Frankfurt, Frankfurt, Germany
Acute Lymphocytic Leukemia in Older Adults

Nicolaus Kröger, MD, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
Transplant for Myelodysplastic Syndromes

Ruben A. Mesa, MD, Mayo Clinic, Scottsdale, AZ
Management of Myelofibrosis

Susan O’Brien, MD, The University of Texas MD Anderson Cancer Center, Houston, TX
Chronic Lymphocytic Leukemia

Jesus F. San-Miguel, MD, PhD, Hospital Universitario de Salamanca and Centro de Investigación del Cáncer, Salamanca, Spain
Myeloma
The “Meet the Scientist” sessions are designed to provide an opportunity for a small number of attendees to meet with a scientific expert in a setting that fosters interaction. This year, ASH has invited experts from all over the world to facilitate informal discussions allowing participants to present their questions and gain new perspectives. A boxed lunch will be provided.

**Ticket Prices (per session)**
- Member: $35
- Associate Member: $35
- Non-Member in Training: $35
- Allied Health Professional: $35
- Non-Member: $50

The “Meet the Scientist” sessions are restricted to medical professionals only; no businesspersons or media will be admitted. Tickets are limited and only available on site on a first-come, first-served basis. Only one ticket per person is allowed. Tickets can be purchased at the Ticketed Sessions counter in the registration area of the Georgia World Congress Center beginning Thursday, December 6, during registration hours until all tickets are sold. The location for each session will be published on the ASH website (www.hematology.org) prior to the meeting as well as indicated on the ticket and in the on-site materials. Please check your ticket carefully to ensure proper date, time, location, and session choice.

**Attention Trainees!**
A number of tickets for the “Meet the Scientist” sessions will be reserved especially for trainees. Proof of status as an Associate member or non-member in training will be required to purchase a ticket. Please show your name badge to the staff at the Ticketed Sessions counter.

**Schedule Subject to Change**
Please note that the “Meet the Scientist” session schedule included here is not final. Please check the ASH website (www.hematology.org) in late September to view the schedule.

**Saturday, December 8, and Sunday, December 9**
11:15 a.m. – 12:15 p.m.

**S A T U R D A Y**

Elliott P. Vichinsky, MD, Children’s Hospital and Research Center Oakland, Oakland, CA
Oxidative Injury and Novel Antioxidants in Hemoglobinopathies

Mark J. Levis, MD, PhD, The Johns Hopkins University School of Medicine, Baltimore, MD
New Generation FLT3 Inhibitors in Acute Myeloid Leukemia

Timothy J. Ley, MD, Washington University School of Medicine, St. Louis, MO
Turning Discovery Genomics into Clinical Genomics

Jeffrey J. Molldrem, MD, The University of Texas MD Anderson Cancer Center, Houston, TX
Tumor-Specific Vaccines

Timothy Graubert, MD, Washington University School of Medicine, St. Louis, MO
Implications of Clonal Evolution in Myelodysplastic Syndromes

Anthony V. Moorman, PhD, Newcastle University, Newcastle Upon Tyne, United Kingdom
Clinical Relevance of Cytogenetics in Acute Lymphocytic Leukemia

**S U N D A Y**

Julie A. Panepinto, MD, Medical College of Wisconsin and Children’s Hospital of Wisconsin, Milwaukee, WI
Quality of Life and Other Health Outcome Measurements

David A. Williams, MD, Children’s Hospital Boston, Boston, MA
Translational and Clinical Gene Therapy

Catherine P.M. Hayward, MD, PhD, McMaster University, Hamilton, Ontario, Canada
Platelet Storage Disorders

Catriona Jamieson, MD, PhD, University of California – San Diego, La Jolla, CA
Does the Stem Cell Survive Tyrosine Kinase Inhibitors in Chronic Myeloid Leukemia and, If So, How?

Krishna V. Komanduri, MD, University of Miami Sylvester Comprehensive Cancer Center, Miami, FL
Immune Reconstitution After Allogeneic Transplantation

David Ginsburg, MD, University of Michigan and Howard Hughes Medical Institute, Ann Arbor, MI
Inherited Disorders of Bleeding and Clotting
SUNDAY

Scientific Forum on Epigenetics in Hematopoiesis

SPEAKERS:
Lucy A Godley, MD, PhD, The University of Chicago, Chicago, IL
Margaret A. Goodell, PhD, Baylor College of Medicine, Houston, TX
Olivier Bernard, PhD, Institut Gustave-Roussy, Villejuif, France

Scientific Forum on Platelet Secretion

CHAIR:
Andrew S. Weyrich, PhD, The University of Utah, Salt Lake City, UT

SPEAKERS:
Walter H. Kahr, MD, PhD, University of Toronto and The Hospital for Sick Children, Toronto, Ontario, Canada
Joseph E. Italiano Jr., PhD, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA
Sidney W. Whiteheart, PhD, University of Kentucky, Lexington, KY

MONDAY

Scientific Forum on Personalized Diagnostics in Acute Myeloid Leukemia and Myelodysplasia

SPEAKERS:
Benjamin L. Ebert, MD, PhD, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA
Matthew J. Walter, MD, Washington University School of Medicine, St. Louis, MO
Bob Löwenberg, MD, PhD, Erasmus Medical Center, Rotterdam, Netherlands

Scientific Forum on RNA Splicing in Normal and Malignant Hematopoiesis

SPEAKERS:
Adrian Krainer, PhD, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY
Seishi Ogawa, MD, PhD, Graduate School of Medicine and Faculty of Medicine, The University of Tokyo, Tokyo, Japan
Catherine J. Wu, MD, Dana-Farber Cancer Institute, Harvard Institutes of Medicine, Boston, MA
Abstracts selected for oral and poster presentations feature the latest research in the field and are considered the best of the thousands submitted for the 2012 ASH Annual Meeting. To help accommodate the increasing volume of research presented at the meeting, additional time for oral presentations has been added to the schedule. **Additional Simultaneous Oral Sessions will take place on Saturday, December 8, and Sunday, December 9, from 12:00 noon to 1:30 p.m.** A complete schedule of the Simultaneous Oral Sessions is listed below:

**SATURDAY, DECEMBER 8**
12:00 noon – 1:30 p.m.

**SUNDAY, DECEMBER 9**
12:00 noon – 1:30 p.m.
2:00 p.m. – 4:00 p.m. (Plenary Scientific Session)
4:30 p.m. – 6:00 p.m.

**MONDAY, DECEMBER 10**
7:00 a.m. – 8:30 a.m.
10:30 a.m. – 12:00 noon
12:00 noon – 1:30 p.m.
2:45 p.m. – 4:15 p.m.
4:30 p.m. – 6:00 p.m.
6:15 p.m. – 7:45 p.m.

**TUESDAY, DECEMBER 11**
7:30 a.m. – 9:00 a.m. (Late-Breaking Abstracts Session)

The Late-Breaking Abstracts Session will take place on Tuesday, December 11, from 7:30 a.m. to 9:00 a.m. and will feature up to six abstracts of significant scientific impact, the results of which were not available in time for the standard deadline. These abstracts will be published online only and will not be part of the special abstracts issue of *Blood*.

Posters will be available for viewing in Hall B1-B2 of the Georgia World Congress Center at the times listed. Meeting attendees will also have the opportunity to meet the abstract authors to discuss their research and ask questions during the presentation times listed.

A detailed schedule listing individual oral and poster abstract presentations and the full abstracts will be included on the abstracts on flash drive which will be mailed in mid-November to all registrants who register for the meeting by November 7. In addition, this information will be provided on the ASH website (www.hematology.org) in early November.

Materials contained in the ASH annual meeting presentations, including slides, audio, abstracts, and posters, are protected by copyright. Any photography, filming, or audio-video recording of the presentations or posters is strictly prohibited, except by registered members of the media.

An exception is made for non-flash photography and audio recording using hand-held equipment, so long as it is strictly for personal, non-commercial use and not disruptive. Violators of this policy will be escorted and barred from the session or exhibit hall. Repeat offenders will have their meeting badges revoked and will not be allowed to continue to attend the meeting. Please note that annual meeting content may not be published or reproduced in any medium (including social media) without express written permission from ASH (or, in the case of the posters, from the author).

**Poster Session Schedule**

**SATURDAY, DECEMBER 8**
9:00 a.m. – 7:30 p.m. Poster Session I – Viewing
5:30 p.m. – 7:30 p.m. Poster Session I – Presentations

**SUNDAY, DECEMBER 9**
9:00 a.m. – 8:00 p.m. Poster Session II – Viewing
6:00 p.m. – 8:00 p.m. Poster Session II – Presentations

**MONDAY, DECEMBER 10**
10:00 a.m. – 8:00 p.m. Poster Session III – Viewing
6:00 p.m. – 8:00 p.m. Poster Session III – Presentations

**Social Events**

**Welcome Reception**

**SATURDAY, DECEMBER 8, 5:30 P.M. – 7:30 P.M.**

All meeting attendees are invited to attend this kick-off event and enjoy a relaxing evening with their friends and colleagues. Complimentary hors d’oeuvres and drinks will be served. This event will take place in the poster hall (Hall B1-B2) of the Georgia World Congress Center.

**Poster Hall Receptions**

**SUNDAY, DECEMBER 9, 6:00 P.M. – 8:00 P.M.**

**MONDAY, DECEMBER 10, 6:00 P.M. – 8:00 P.M.**

ASH invites meeting attendees to take advantage of these receptions to meet abstract authors, discuss their research, and ask questions. Light snacks and beverages will be served.
Nearly 300 pharmaceutical companies, medical suppliers, clinical diagnostic and research-based companies, publishers, and nonprofit organizations will be participating in the 2012 ASH Annual Meeting and Exposition. The state-of-the-art exhibit hall will feature the latest technology and research as well as a wide range of products and services.

The exposition will be held in Halls B3 and B4 of the Georgia World Congress Center, and badges will be required for entrance. For safety and liability reasons, ASH does not permit any children 12 years of age or younger at any time in the exhibit areas. During move-in or move-out, NO ONE under the age of 18 will be permitted within the exhibit areas. (Please refer to page 55 for information on the child-care program.)

**Exhibit Hours**

- **Saturday, December 8** 11:00 a.m. – 5:00 p.m.
- **Sunday, December 9** 11:00 a.m. – 4:30 p.m.
- **Monday, December 10** 10:00 a.m. – 2:00 p.m.

**Come by the ASH Booth and See What the Society Has to Offer**

ASH is not just the annual meeting; it is the largest society in the world that focuses primarily on hematology with a wide variety of resources available to the global hematology community.

Be sure to visit the ASH booth (#3105) and get the latest details on grants and awards, publications, educational materials, and other ASH meetings. While you’re there, check out and pick up the most recent issues of *Blood*, see what materials are available for hematologists around the world, and discover free ASH online resources. Our friendly staff will be glad to answer your questions and hear your feedback about the annual meeting or the Society.

Consider this an open invitation to visit the booth on Saturday, Sunday, and Monday to explore all areas of ASH. Be sure to pick up a lanyard and a small giveaway as a token of our appreciation for attending the meeting.

**New This Year – the ASH Foundation Booth!**

ASH will be launching the ASH Foundation, dedicated to moving hematology forward, at this year’s annual meeting. The Foundation builds on ASH’s strong commitment to hematology – both in the United States and throughout the world.

Stop by the ASH Foundation booth (#3801) to learn about the foundation’s programs and how you can help support its important mission. Staff will be available on Saturday, Sunday, and Monday in the exhibit hall. You can make a donation on site and learn more about how your gift will impact critical issues in hematology.

**National Institutes of Health (NIH) Booths**

Several Institutes from the NIH will have booths in the exhibit hall that will offer opportunities to discuss many areas of hematology, research grants, career-development programs, and NIH policies.

The following Institutes will be exhibiting at Annual Meeting:

- National Cancer Institute (NCI)
- National Heart, Lung and Blood Institute (NHLBI)
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
- National Institute on Aging (NIA)

*These exhibitors are confirmed as of June 2012.*
How to Register

Online:  [www.hematology.org/ASH2012](http://www.hematology.org/ASH2012)

On Site:  Registration will be located in Hall A2, Building A in the Georgia World Congress Center, beginning Thursday, December 6, at 3:00 p.m.

If you are unable to register online, registration forms can be requested by contacting ashregistration@jspargo.com.

Questions? Contact the ASH Registration Center

Phone:  888-273-5704 – U.S. and Canada (toll free)

001 703-449-6418 – International

Email:  ashregistration@jspargo.com

Fax:  703-563-2715 – Domestic

001 703-563-2715 – International

Mail:  ASH Registration Center

c/o J. Spargo and Associates

11208 Waples Mill Road, Suite 112

Fairfax, VA 22030

Agents are available to help you from 8:30 a.m. to 5:00 p.m. (Eastern Time), Monday through Friday. The ASH Registration Center will be closed on weekends and holidays.

ASH Member-Only Registration

JULY 18 – AUGUST 7

ASH members who have paid their dues for 2012 are eligible for early-bird registration from July 18 until August 7. Members can register and make hotel reservations at [www.hematology.org/ASH2012](http://www.hematology.org/ASH2012).

When registering online, please be sure to enter your member ID number as it appears in ASH’s membership directory. You must register before making a hotel reservation.

If you need to renew your membership for 2012, visit [www.hematology.org](http://www.hematology.org) and click on “My Account” to log in or call 866-828-1231; international callers dial 001 202-776-0544.

Advance Registration (Members and Non-Members)

AUGUST 8 – NOVEMBER 7

From August 8 until November 7, both members and non-members can register for the meeting. Attendees who register after November 7 will be charged on-site registration rates.

Meeting badges will be mailed to all advance registrants in mid-November.

Late and On-Site Registration

AFTER NOVEMBER 7

Attendees who register online or on site after November 7 will be charged the late/on-site registration fee. On-site registration will begin on Thursday, December 6, at 3:00 p.m. local time in Hall A2, Building A in the Georgia World Congress Center.

### Registration Hours

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
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<tbody>
<tr>
<td>Thursday, December 6</td>
<td>3:00 p.m. – 7:00 p.m.</td>
</tr>
<tr>
<td>Friday, December 7</td>
<td>7:00 a.m. – 6:00 p.m.</td>
</tr>
<tr>
<td>Saturday, December 8</td>
<td>7:00 a.m. – 6:00 p.m.</td>
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<tr>
<td>Sunday, December 9</td>
<td>7:00 a.m. – 5:00 p.m.</td>
</tr>
<tr>
<td>Monday, December 10</td>
<td>7:00 a.m. – 5:00 p.m.</td>
</tr>
<tr>
<td>Tuesday, December 11</td>
<td>7:00 a.m. – 1:00 p.m.</td>
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### Registration Fees

<table>
<thead>
<tr>
<th>Registration Categories</th>
<th>Advance</th>
<th>On-Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member (Active and International)</td>
<td>$440</td>
<td>$495</td>
</tr>
<tr>
<td>Non-Member</td>
<td>$860</td>
<td>$990</td>
</tr>
<tr>
<td>Associate Member</td>
<td>$95</td>
<td>$95</td>
</tr>
<tr>
<td>Non-Member in Training</td>
<td>$195</td>
<td>N/A</td>
</tr>
<tr>
<td>Allied Health Professional</td>
<td>$440</td>
<td>$495</td>
</tr>
<tr>
<td>Spouse/Guest</td>
<td>$115</td>
<td>$115</td>
</tr>
<tr>
<td>Honorary/Emeritus Member</td>
<td>No Charge</td>
<td>No Charge</td>
</tr>
</tbody>
</table>

Registration fees can be paid by credit card or by check only. Wire transfers will not be accepted.

### WHAT IS INCLUDED IN THE REGISTRATION FEE?

- Abstracts on Flash Drive*  
- *Hematology 2012* (the Education Program Book)  
- Program Book  
- Access to ASH Annual Meeting Mobile Application  
- Admission to the General, Special-Interest, Education, Scientific, Oral, and Poster Sessions  
- Admission to the exhibit hall**  
- Admission to receptions in the poster hall**  
- Boxed lunch in the exhibit hall on Sunday and Monday**  
- Daily coffee breaks in the exhibit hall**

*The Abstract Book will only be provided in electronic (flash drive) format; the print book has been discontinued. The annual meeting schedule and full program will be available on the ASH website ([www.hematology.org](http://www.hematology.org)) in early November, and attendees are encouraged to use the online personal scheduler.

**Spouse/guest registrants will receive only the items marked with two asterisks.

### Meeting Cancellation Policy

The American Society of Hematology reserves the right to modify or cancel any or all activities associated with this meeting due to unforeseen circumstances. In the event that we have to unexpectedly cancel this annual meeting, the registration fee, less a processing charge, will be returned to each registrant.

### Registration Cancellation Policy

Registration cancellations must be submitted to the ASH Registration Center in writing by November 27 to receive a refund, less a $50 processing fee (see above for contact information). Refunds will not be granted after November 27.
Registration Badges
Badges and abstracts on flash drive will be mailed to all advance registrants beginning the week of November 12. If you do not receive your badge prior to the meeting, please go to the registration area in Hall A2, Building A in the Georgia World Congress Center to pick up your badge and meeting materials on site.

Meeting Materials
Due to popular demand for an electronic version of annual meeting abstracts, the Abstract Book will not be printed for the 2012 annual meeting. Abstracts are being provided on flash drive and online. Advance registrants will receive the flash drive in mid-November with their registration materials. The annual meeting abstracts and the full annual meeting program will be available online on the ASH website (www.hematology.org) in early November. Registrants may also use the ASH annual meeting mobile application to download the abstracts and annual meeting program to a smartphone (e.g., iPhone, Android, Blackberry) or tablet (iPad or Android).

Group Registration
If you are planning to register a group, please contact the ASH Registration Center at ashgroupreg@jspargo.com.

Registration Categories
ACTIVE/INTERNATIONAL MEMBERS
Applications for Active and International membership are considered by the Executive Committee twice per year; applications received between now and the annual meeting will not be processed in time for applicants to register as an ASH member for the 2012 annual meeting. Please consider applying by March 1, 2013, to become a member in time for the 2013 ASH Annual Meeting.

ASSOCIATE MEMBERS
Associate membership applications are reviewed on a rolling basis and must be received by November 7, 2012, to be eligible for reduced member meeting-registration rates. Applicants who are accepted will be billed for their 2012 membership dues immediately upon approval. Dues must be paid in full in order to qualify for the Associate member meeting-registration rate. Membership applications may be submitted on site at the ASH Resource Center during the annual meeting. Resulting memberships will begin in 2013.

NON-MEMBERS IN TRAINING
AUGUST 8 – NOVEMBER 7
Any resident or any post-doctoral fellow with an MD or PhD in a recognized hematology or oncology training program as well as any undergraduate, graduate, or medical student may register as a non-member in training. To receive the non-member-in-training advance registration rate of $195, you must register and submit your verification by November 7. Non-members in training who register after the advance registration deadline of November 7 will be charged the non-member rate of $990.

Residents and Post-Doctoral Fellows:
During the online registration process, you will need to provide:
- Program director’s name and contact information
- Name of the program that you are enrolled in
- Length (in years) of the program
- Program start date (month and year)
- Expected program completion date (month and year)

UNDERGRADUATE, GRADUATE, AND MEDICAL STUDENTS:
During the online registration process, you will need to provide:
- Name of your university/institution
- Name and contact information for your school counselor
- Field of study
- Start date and expected month and year of graduation

A verification letter (on official letterhead confirming that the registrant is a trainee) is required. An email notification will automatically be sent to your program director or school counselor requesting a signed letter of verification after your registration is received.

Individuals who registered in the non-member in training category last year and are still enrolled in their training programs will not need to send a letter verifying their enrollment status.

Verification letters may be emailed (in PDF format) to ashverification@jspargo.com. Verification may also be mailed to the address below: Fax copies will not be accepted.
ASH Registration Center
c/o J. Spargo and Associates
11208 Waples Mill Road, Suite 112
Fairfax, VA 22030

Individuals will be officially registered for the meeting once ASH confirms their training status.

The North American Student Benefit is designed for U.S., Canadian, and Mexican students (undergraduate, graduate, medical, or osteopathic), residents (in post-graduate years 1-3 for Canadians), and PhD candidates who have an interest in hematology but are not yet enrolled in a hematology-related training program. The benefit provides:
- A complimentary online subscription to Blood
- Online access to Hematology (the Education Program Book)
- Advance annual meeting notifications
- Eligibility for reduced meeting registration at the non-member-in-training rate

Those registering online for the ASH annual meeting as non-members in training will be invited to apply. For more information and to submit an application, visit: www.hematology.org/NASB.

As part of our continuing efforts to provide valuable opportunities to international hematologists, ASH has established the International Post-Doctoral Fellows (IPDF) program, which allows post-doctoral fellows to access valuable ASH resources at no charge for up to four years. The program is open to post-doctoral fellows with an MD, or equivalent medical degree, who reside outside Canada, Mexico, or the United States, register for the ASH annual meeting as a non-member in training, and are enrolled in an approved hematology or oncology training program. Benefits include:
- A complimentary online subscription to Blood
- Online access to Hematology (the Education Program Book) and The Hematologist
- Advance annual meeting notifications
- Eligibility for reduced meeting registration at the non-member-in-training rate

Those registering online for the ASH annual meeting as non-members in training will be invited to apply. For more information and to submit an application, visit: www.hematology.org/IPDF.
Continuing Medical Education Information

Educational Objectives
Upon completion of this educational activity, participants should be able to:

• Employ the knowledge gained regarding the diagnosis and treatment of benign and malignant hematologic disorders to improve patient care;
• Discuss state-of-the-art research in hematology; and
• Analyze the potential contribution of novel, not-yet-approved modalities of therapy to current evidence-based management of hematologic disorders.

Accreditation
The American Society of Hematology is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The American Society of Hematology designates this live activity for a maximum of 35.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Physicians not licensed in the United States who participate in this CME activity are also eligible for AMA PRA Category 1 Credits™.

CME Certificate Eligibility
ASH is accredited to provide AMA PRA Category 1 Credits™ to physicians only.

Physicians not licensed in the United States who participate in this CME activity are also eligible for AMA PRA Category 1 Credits™.

How to Obtain a CME Certificate
A processing fee of $25 will be charged for CME certificates. If you plan to claim CME credit for attending the meeting, you must indicate this by checking the appropriate box during online registration. Attendees may complete the process to claim their CME credits and print their CME certificates on site through the Internet stations available at the convention center by selecting “CME program.” Alternately, credits can be claimed through the ASH website (www.hematology.org) by clicking the CME link on the homepage.

The online process for claiming CME credits and printing a CME certificate for the 54th ASH Annual Meeting must be completed no later than April 12, 2013.

Certificate of Attendance
Physicians and other health-care professionals attending the meeting can receive a Certificate of Attendance on site by completing the Annual Meeting Survey online at any of the Internet stations available at the convention center. Alternately, the survey and certificate can be accessed through the ASH website (www.hematology.org) after the meeting is over. The online process of filling out the annual meeting survey must be completed no later than April 12, 2013. There is no charge to meeting registrants for this service.

European Hematology Association CME
ASH is applying for CME accreditation with the European Hematology Association (EHA). For information about claiming EHA CME, please stop by the ASH CME desk or email cme@hematology.org.

Conflict-of-Interest Policy for the ASH Annual Meeting
ASH is committed to providing quality, objective, balanced, and scientifically rigorous continuing medical education activities that are free from commercial and non-commercial bias. All meeting session chairs, speakers, and moderators are required to disclose, in writing, any conflicts they may have prior to the meeting and to orally disclose their relationships as displayed at the start of their presentations. All poster presenters are required to disclose, in writing, any conflicts they may have prior to the meeting, and display their disclosures on their poster boards. If bias, actual or perceived, occurs during the presentations, session attendees are encouraged to address such bias during the question-and-answer periods following the presentations.
Hotel Accommodations

Hotel rooms have been reserved throughout the city of Atlanta for meeting attendees. Pages 50-52 of this brochure include maps of the downtown Atlanta, Midtown, and Buckhead areas with hotel locations marked, as well as a list of participating hotels and their room rates. Additional hotel rooms are available in the Northwest Perimeter, Perimeter Center, and Century Center area of Atlanta. ASH will provide complimentary shuttle service between these hotels and the Georgia World Congress Center, except as noted on the list of participating hotels. For more information on this service, see page 54.

Headquarters/Members-Only Hotels
The Omni Hotel at CNN Center is the official headquarters hotel for the 2012 ASH Annual Meeting and is designated for ASH members only. In addition, the Atlanta Marriott Marquis and Embassy Suites Centennial Park are available exclusively to Society members. Non-members, international tour groups, and exhibitors will not be able to reserve rooms in these hotels.

Hotel Reservations
You must register for the meeting before you make your hotel reservation. Hotel reservations must be made directly with the ASH Housing Center no later than Wednesday, November 7, using any of the methods listed below. Online reservation is strongly encouraged, though hotel reservation forms can also be requested by contacting meetings@hematology.org or 202-776-0544.

Online: www.hematology.org
Phone: 888-273-5704 – U.S. and Canada (toll free)
001 703-449-6418 – International
Fax: 703-563-2715 – Domestic
001 703-563-2715 – International
Mail: ASH Housing Center
C/o J. Spargo and Associates
11208 Waples Mill Road, Suite 112
Fairfax, VA 22030

For additional information regarding hotel reservations, please contact the ASH Housing Center at the phone numbers listed above. Agents are available to answer questions from 8:30 a.m. to 5:00 p.m. (Eastern Time), Monday through Friday. Please note that the ASH Housing Center is closed on weekends and holidays. Questions may also be emailed to the ASH Housing Center at ashhousing@jspargo.com.

Hotel Confirmations/Deposits
All hotel reservations must be guaranteed by a major credit card or by check made payable to the hotel. A deposit amount of two nights’ room rate (plus tax) will be charged to your credit card if you do not cancel at least five days prior to your arrival date.

If you plan to guarantee your hotel reservation by check, please be sure to indicate this on your Hotel Reservation Form. The check must be made payable to the hotel and received by the ASH Housing Center by November 7. If the ASH Housing Center does not receive the check by November 7, your hotel reservation will be cancelled.

The ASH Housing Center will mail, fax, or email a confirmation in response to every reservation requested. If you make a hotel reservation online, you will receive a confirmation instantly, and if you make a hotel reservation by fax or mail, a written confirmation will be sent to you by mail, fax, or email within five business days of receipt. If you do not receive your confirmation, please call the ASH Housing Center to verify that your request has been received.

ASH Cancellation/Change Policy
You may cancel or make changes to your hotel reservation either in writing or online until 5:00 p.m. (Eastern Time) Wednesday, November 14, 2012. Written requests should be sent to the ASH Housing Center and will be acknowledged with a confirmation as soon as possible or within five business days. After this date, all changes to accommodations must be made directly through your hotel.

Between November 14 and November 19, housing records will be transferred from the ASH Housing Center to the individual hotels; therefore, attendees are strongly encouraged to wait until after Monday, November 19, to contact the hotels directly to make changes or cancellations.

To cancel or change a hotel reservation online, you will need your confirmation number and the email address you used to make your reservation. Online requests are acknowledged with an immediate email confirmation.

A cancellation must be made at least five days prior to your scheduled arrival date or you will be assessed a cancellation fee equivalent to two nights’ room rate (plus tax). The hotel will not hold your room if you do not arrive on the first night of your reservation and you will lose your deposit.

This hotel cancellation policy will be strictly enforced. Please retain the cancellation confirmation from the ASH Housing Center or the cancellation number provided to you by the hotel, as this proof of cancellation will be required to resolve any credit card disputes.

Group Room Reservations
A group room reservation is defined as two or more rooms. All requests for group room blocks must be received at the ASH Housing Center by October 5.

The ASH Housing Center will provide a website for all groups to manage their own room blocks and rooming lists online. A Group Booking Agreement, including a password, will be sent to each group contact after the group room reservations are approved by ASH.

After October 5, the ASH Housing Center will cancel any group room reservations for which it has not received a rooming list and full payment. Any rooms not accounted for on the rooming list will automatically be released. Cancellations must also be made by October 5. Any cancellations after October 5 will result in forfeiture of the entire payment.

The rules and regulations governing group room reservations are explicitly detailed on the Group Room Reservation Form.

Please contact the ASH Housing Center at 888-273-5704 (U.S. and Canada toll free) or 001 703-449-6418 (international) for additional instructions on how to obtain a group room block.
The hotels listed here have been reserved for annual meeting attendees. ASH will provide complimentary shuttle service between these hotels and the Georgia World Congress Center unless otherwise indicated. For more information on this service, please see page 54. Rates listed are for single/double accommodations.

Hotel Map

Hotel Listing (in alphabetical order)

1. Atlanta Marriott Buckhead Hotel and Conference Center 3405 Lenox Road NE Atlanta, GA 30326 $229/$229
2. Atlanta Marriott Marquis 305 Peachtree Street NW Atlanta, GA 30308 $225/$225
3. Best Western Plus Inn at the Peachtrees 330 W. Peachtree Street NW Atlanta, GA 30308 $139/$139
4. Courtyard Atlanta Buckhead 3342 Peachtree Road NE Atlanta, GA 30326 $179/$179
5. Courtyard by Marriott Buckhead 3332 Peachtree Road NE Atlanta, GA 30326 $139/$139
6. Courtyard by Marriott Downtown 1132 Techwood Drive Atlanta, GA 30318 $179/$179
7. Courtyard by Marriott Midtown 6250 Peachtree-Dunwoody Road Atlanta, GA 30328 $176/$176
8. Courtyard by Marriott Perimeter Center 4355 Ashford Dunwoody Road Atlanta, GA 30346 $149/$149
9. Courtyard by Marriott Marquis – Members Only 303 Peachtree Center Avenue NE Atlanta, GA 30303 $225/$225
10. Crowne Plaza Atlanta Perimeter Galleria 6345 Powers Ferry Road NW Atlanta, GA 30339 $149/$149
11. Crowne Plaza Atlanta Perimeter at Ravina 6355 Ashford Dunwoody Road Atlanta, GA 30346 $159/$159
12. Doubletree by Hilton Atlanta – Marietta 2055 South Park Place Atlanta, GA 30339 $179/$179
13. Embassay Suites Atlanta Buckhead 3285 Peachtree Road NE Atlanta, GA 30309 $186/$186
14. The Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
15. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
16. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
17. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
18. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
19. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
20. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
21. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
22. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
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36. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
37. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
38. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
39. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
40. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
41. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
42. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
43. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
44. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
45. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
46. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
47. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
48. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
49. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320
50. Four Seasons Hotel Atlanta 75 14th Street NE Atlanta, GA 30309 $320/$320

*Shuttle service will not be provided to these hotels as they are within walking distance of the Georgia World Congress Center.
Hotel Listing (continued in alphabetical order)

Regency Suites Hotel
975 W. Peachtree Street NE
Atlanta, GA 30309
$179/$179

Renaissance Atlanta Midtown Hotel
866 West Peachtree Street NW
Atlanta, GA 30308
$199/$199

Renaissance Atlanta Waverly Hotel
2950 Galleria Parkway SE
Atlanta, GA 30339
$189/$189

Residence Inn Atlanta Buckhead
2960 Piedmont Road NE
Atlanta, GA 30305
$189/$189

Residence Inn Atlanta Midtown
1365 Peachtree Street
Atlanta, GA 30309
$209/$209

Sheraton Atlanta
165 Courtland Street NE
Atlanta, GA 30303
$195/$195

Sheraton Suites Galleria
2844 Cobb Parkway SE
Atlanta, GA 30339
$189/$189

SpringHill Suites by Marriott Buckhead
3459 Buckhead Loop NE
Atlanta, GA 30326
$189/$189

St. Regis Atlanta
88 West Paces Ferry Road
Atlanta, GA 30305
$290/$290

Staybridge Suites Buckhead
540 Pharr Road
Atlanta, GA 30305
$129/$129

The Artmore Hotel
1302 West Peachtree Street
Atlanta, GA 30339
$159/$169

The Georgian Terrace Hotel
659 Peachtree Street
Atlanta, GA 30308
$179/$179

The Glenn Hotel
110 Marietta Street
Atlanta, GA 30303
$199/$199

The Mandarin Oriental Atlanta
(formerly The Mansion on Peachtree)
3376 Peachtree Road NE
Atlanta, GA 30326
$235/$235

W Atlanta Buckhead
3377 Peachtree Road NE
Atlanta, GA 30326
$244/$244

The Omni Hotel at CNN Center – Headquarter Hotel
100 CNN Center
Atlanta, GA 30303
$245/$245

The Ritz-Carlton Atlanta
181 Peachtree Street NE
Atlanta, GA 30303
$260/$260

The Ritz-Carlton Buckhead
3434 Peachtree Road NE
Atlanta, GA 30326
$260/$260

Twelve Hotel & Residences
Centennial Park
400 W. Peachtree Street
Atlanta, GA 30308
$215/$215

Westin Atlanta Downtown
45 Ivan Allen Jr. Boulevard
Atlanta, GA 30308
$259/$279

Westin Midtown Atlanta
188 14th Street
Atlanta, GA 30361
$244/$244

Westin Peachtree Plaza
210 Peachtree Street
Atlanta, GA 30303
$219/$219

*Shuttle service will not be provided to these hotels as they are within walking distance of the Georgia World Congress Center.
Meeting Location
The Georgia World Congress Center is located in the heart of downtown Atlanta at 285 Andrew Young International Blvd., NW. Key meeting areas will be located as follows:

- Registration – Hall A2, Building A
- ASH Central – International Boulevard Concourse between Buildings A and B
- General Sessions – Hall B5, Building B
- Exhibit Hall – Halls B3-B4, Building B
- Poster Hall – Halls B1-B2, Building B
- Other session rooms – Level 1 and 4, Building A; Levels 2-5, Building B; Levels 2-3, Building C

Atlanta offers many attractions for tourists visiting the area, such as the Georgia Aquarium, Centennial Olympic Park, and the World of Coca-Cola. For more information about Atlanta’s popular attractions, visit www.atlanta.net.

Visitor Safety
To stay safe during your visit to Atlanta, please follow the tips provided below:

- Always lock your front and/or patio doors. Use the safety chain/lock for security.
- Never open your room door unless you know who is there. If you did not call for the hotel service offered by the person at the door, call hotel security or the front desk to see if they have sent someone to your room.
- Place valuables in a safety deposit box in your room or at the hotel office. Do not leave valuables in your car.
- When checking into a hotel, consult the floor plan on the back of your room door to familiarize yourself with fire and emergency exits.
- When driving, keep all car doors locked.

Weather
Atlanta has mild winters. Temperatures in December typically range from 36°F to 55°F (2 to 12°C), so attendees should bring a light jacket.

Air Travel
EWA Travel, Inc., has been selected as the official travel agency for the 2012 ASH Annual Meeting in Atlanta. To make your travel arrangements, please contact:

EWA Travel, Inc.
Phone: 800-705-8580 U.S. and Canada (toll free)
001 520-797-0291 International
Email: marika@ewatravel.com

Agents are available for reservations from 9:00 a.m. to 5:30 p.m. (Eastern Time), Monday through Friday.

Visa Application Process for International Travelers
If you are not a U.S. citizen and are planning to attend the annual meeting, advance planning is critical. Citizens of some foreign countries will need a visa to enter the United States and attend the ASH annual meeting. Therefore, ASH encourages you to start your visa application process as soon as possible. Because of new U.S. State Department regulations, U.S. embassies and consulates may require a face-to-face interview for most non-immigrant visa applications. You should apply for your visa at least three to four months before the annual meeting. To schedule an interview for the visa application process, please contact the nearest U.S. embassy or consulate. For more information, please visit http://travel.state.gov/visa.

Effective January 20, 2010, citizens of countries participating in the Visa Waiver Program (VWP) may be unable to enter the U.S. without Electronic System for Travel Authorization (ESTA) approval from the U.S. Government. For more information on the visa waiver countries or how to apply for ESTA authorization, please visit http://www.cbp.gov/xp/cgov/travel/id_visa/esta/.

If you would like to request an invitation letter from the American Society of Hematology for your visa application, you must first register and pay in full for the meeting. To obtain a visa invitation letter, have your registration confirmation number available and visit the visa link in your registration confirmation email.

Please contact ashregistration@jspargo.com for any questions regarding visa invitation letters.

Public Transportation
Taxis are available at designated areas of the airport; follow the signs leading to the transportation plazas and a transportation coordinator will assist you. Atlanta has established set taxi fares between the airport and the downtown convention district and several other locations. For more information regarding taxi rates and destinations, visit http://attend.atlanta.net/transportation.aspx.

Shuttles are another great way to travel and may be less expensive for larger groups. For a complete list of transportation options, including shuttle services, visit www.atlanta-airport.com/GroundTransportation/shuttlesLocal.aspx.

Convenient transportation is also available through MARTA, Atlanta’s public rail system. Service is available from the airport to the city of Atlanta and surrounding areas. Trains begin service at 5:00 a.m. on weekdays and 6:00 a.m. on weekends/holidays and run until 1:00 a.m. daily. A visitor pass provides unlimited travel for consecutive calendar days on MARTA bus and rail and is an easy and inexpensive way to travel. Visit www.itismarta.com for fares and schedule information.
Car Rental
Hertz is offering 2012 ASH Annual Meeting attendees special rental car rates, including unlimited mileage. Reservations can be made from all metro Atlanta Hertz locations, online at www.hertz.com, or by calling 800-654-2240 (in the U.S.) or 405-749-4434 (International and Canada). Be sure to mention CV# 04PW0002 when booking your rental. Rates are available from December 1 through December 18.

**HERTZ**
CV number: 04PW0002
Website: www.hertz.com
Phone: 800-654-2240 United States (toll free)
        405-749-4434 International and Canada

<table>
<thead>
<tr>
<th>Car Class</th>
<th>Daily (per day)</th>
<th>Weekend (per day)</th>
<th>Weekly (5-7 days)</th>
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<tr>
<td>A – Economy</td>
<td>$48</td>
<td>$29</td>
<td>$192</td>
</tr>
<tr>
<td>B – Compact</td>
<td>$54</td>
<td>$32</td>
<td>$206</td>
</tr>
<tr>
<td>C – Mid-Size</td>
<td>$58</td>
<td>$34</td>
<td>$223</td>
</tr>
<tr>
<td>D – Standard 2/4 DR</td>
<td>$61</td>
<td>$39</td>
<td>$239</td>
</tr>
<tr>
<td>E – Full-Size 4 DR</td>
<td>$64</td>
<td>$41</td>
<td>$255</td>
</tr>
<tr>
<td>F – Premium</td>
<td>$69</td>
<td>$46</td>
<td>$266</td>
</tr>
<tr>
<td>G – Luxury</td>
<td>$89</td>
<td>$72</td>
<td>$357</td>
</tr>
<tr>
<td>L – Standard SUV</td>
<td>$83</td>
<td>$72</td>
<td>$357</td>
</tr>
<tr>
<td>R – Minivan</td>
<td>$86</td>
<td>$74</td>
<td>$366</td>
</tr>
<tr>
<td>U – Convertible</td>
<td>$83</td>
<td>$72</td>
<td>$357</td>
</tr>
</tbody>
</table>

Parking
The fee for all-day parking at the Georgia World Congress Center is $10 per car. The convention center accepts cash, traveler’s checks, American Express, MasterCard, and Visa. In addition, there are many parking lots surrounding the convention center. These lots are privately owned and operated, and prices vary.

Shuttle Bus Service
ASH will provide complimentary shuttle service between the majority of hotels in ASH’s housing block (see pages 50-52) and the Georgia World Congress Center.

Shuttles will run during the periods listed below. Service frequency will vary throughout the day. Look for detailed shuttle bus schedules in your hotel lobby.

**Shuttle Bus Service Hours**
- **Thursday, December 6**: 2:30 p.m. – 7:15 p.m.
- **Friday, December 7**: 6:30 a.m. – 10:30 p.m.
- **Saturday, December 8**: 6:30 a.m. – 9:30 p.m.
- **Sunday, December 9**: 6:30 a.m. – 8:30 p.m.
- **Monday, December 10**: 6:00 a.m. – 8:30 p.m.
- **Tuesday, December 11**: 6:30 a.m. – 2:00 p.m.

*Service will not be provided for Embassy Suites Centennial Park, The Omni Hotel at CNN Center or The Glenn Hotel, as they are within walking distance of the Georgia World Congress Center.*

Remote Airline Check-in Service
The Georgia World Congress Center offers a remote check-in baggage service (called “BAGS, Inc.”) for attendees taking domestic flights out of Hartsfield-Jackson Atlanta International Airport. Those flying on AirTran, American, and Delta can check their luggage with BAGS, Inc., and receive their boarding pass in the International Boulevard lobby of the convention center. The cost for this service is $12 per passenger. Normal airline baggage fees apply. Pre-enrollment is strongly encouraged. Simply fill out the form online (www.hematology.org/AMbags) and email to GWCC@airportbags.com.

**BAGS, Inc. Hours**
- **Monday, December 10**: 7:00 a.m. – 2:00 p.m.
- **Tuesday, December 11**: 7:00 a.m. – 1:30 p.m.
ASH Central – Attendee Services in One Location

ASH will bring all essential attendee services together in one convenient location, ASH Central, which will be located in the International Boulevard Concourse between Building A and Building B at the Georgia World Congress Center. Attendee services, Internet stations, comfortable lounge areas, and much more will be available in ASH Central.

ASH RESOURCE CENTER in ASH CENTRAL

Be sure to stop by the ASH Resource Center to learn about ASH membership, apply for or renew your membership, update your address, or purchase ASH products.

ASH offers a variety of products to aid hematologists in their professional development. Plan to stop by to peruse the latest ASH educational products, including:

- American Society of Hematology Self-Assessment Program (ASH®-SAP), Fourth Edition
- 2012 Annual Meeting Abstracts on Flash Drive
- 2012 Annual Meeting Education Program DVD
- 2012 Annual Meeting On-Demand Webcast (Education Program and Special Lectures)
- Hematology 2012 (the Education Program Book)
- 2012 Highlights of ASH® DVD
- 2012 State-of-the-Art Symposium DVD

These items will also be available for purchase in the online ASH Store at www.hematology.org/Store.

ASH Job Center

The ASH Job Center connects you to open hematology and hematology-oncology job opportunities throughout the world. This resource makes it easy to find your next position – search by job title, location, type of employment, or educational requirements. New features include the ability to post your resume and save job listings of interest.

Available year-round on the ASH website, this service is always free for job seekers. Look for the designated Job Center computers at the meeting or visit the site today at www.hematology.org/JobCenter.

Need to fill a position? Don’t miss out on the increased traffic to the ASH website during the annual meeting. Email jobbank@hematology.org for more information.

Free Wi-Fi

ASH is pleased to offer Internet access to all attendees in public lobbies and meeting rooms at the Georgia World Congress Center, as well as meeting rooms and adjacent pre-function space at the Atlanta Marriott Marquis and Omni Hotel at CNN Center. This complimentary service is provided to support annual meeting activities requiring Internet access, Web browsing, and email connectivity.

Child Care

For safety reasons, children under the age of 12 (including infants in carriers and strollers, or hand-carried infants and toddlers) are not permitted in the exhibit hall and poster sessions. Additionally, ASH prohibits children and infants in the sessions as they may distract the speakers and other attendees.

ASH has made arrangements with KiddieCorp to provide subsidized child-care services at the meeting beginning on Saturday, December 8, and ending on Tuesday, December 11. KiddieCorp staff members are bonded and trained child-care specialists. The cost to parents is $5 per hour, per child with a two-hour minimum required per child, per day. Snacks, light meals, and beverages will be provided each day. Pre-registration is recommended to ensure participation. Space is limited, so please register your child by November 7.

For additional program information and to reserve a spot for your child, please visit www.kiddiecorp.com/ashkids.htm. KiddieCorp is also available by phone at 800-942-9947 or e-mail at info@kiddiecorp.com.

The child-care room will be located in the Georgia World Congress Center.

<table>
<thead>
<tr>
<th>Childcare Hours</th>
<th>Time</th>
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<tr>
<td>Saturday, December 8</td>
<td>6:30 a.m. – 7:30 p.m.</td>
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<tr>
<td>Sunday, December 9</td>
<td>6:30 a.m. – 8:00 p.m.</td>
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<tr>
<td>Monday, December 10</td>
<td>6:30 a.m. – 8:00 p.m.</td>
</tr>
<tr>
<td>Tuesday, December 11</td>
<td>6:30 a.m. – 1:00 p.m.</td>
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</table>

Lactation Room

A private lactation room will be available for nursing mothers during the annual meeting. This room contains a private bathroom and will also be equipped with a table, chair, electrical outlet, and hospital-grade breast pump. The lactation room will be located in the Georgia World Congress Center.

<table>
<thead>
<tr>
<th>Lactation Room Hours</th>
<th>Time</th>
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<tbody>
<tr>
<td>Friday, December 7</td>
<td>7:00 a.m. – 6:00 p.m.</td>
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<tr>
<td>Saturday, December 8</td>
<td>7:00 a.m. – 6:00 p.m.</td>
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<tr>
<td>Sunday, December 9</td>
<td>7:00 a.m. – 6:00 p.m.</td>
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<tr>
<td>Monday, December 10</td>
<td>7:00 a.m. – 6:00 p.m.</td>
</tr>
<tr>
<td>Tuesday, December 11</td>
<td>7:00 a.m. – 1:00 p.m.</td>
</tr>
</tbody>
</table>

Georgia World Congress Center Guest Services and Dining Options

A wide variety of services and amenities are available at the Georgia World Congress Center:

INFORMATION DESKS

Georgia World Congress Center staff can be found at the entrance to each building to provide assistance with brochures and maps, lost and found, wheelchair service, and information about the location of key ASH meeting areas.

TOURISM & CONCIERGE DESK

Located in the Building B entrance lobby, the Tourism & Concierge Desk features brochures for attractions in the metro Atlanta area and offers complimentary restaurant reservation services.

COAT/BAGGAGE CHECK

Attendees can check coats and bags for $2 per item during the meeting at the coat check located in the International Boulevard Concourse between Buildings A and B.

ATMs

ATM machines are located throughout the facility. Accept Discover, MasterCard, Visa, Cirrus, and Alert cards are accepted.

FEDEX OFFICE BUSINESS CENTER

Located in the Building B entrance lobby, FedEx Office is a full-service business center. Mobility scooters and wheelchairs can also be rented from FedEx Office.

DINING OPTIONS

Levy Restaurants at the Georgia World Congress Center offers a wide variety of dining options, including the Terraces Restaurant (fine dining), Starbucks, and a variety of quick, grab-and-go items.
Attendees will have a variety of options for receiving annual meeting content, including the oral and poster session abstracts. In addition to a flash drive containing the abstracts and a link to the online program and scheduler, registrants may use a mobile application to download the abstracts and annual meeting program to a smartphone (iPhone, Android, Blackberry) or tablet (iPad or Android). *ASH News Daily*, the daily on-site newspaper of the annual meeting, will also be accessible via a mobile-friendly website this year.

**Abstracts on Flash Drive**

Beginning with the 2012 meeting, the Abstract Book will no longer be printed and will instead be available on flash drive. The flash drive will include the full text of all annual meeting abstracts as well as the full annual meeting program (accurate as of the mid-October print date) and allow users to search for presentations of interest.

The flash drive will be mailed with meeting badges in mid-November to those who register during early-bird and advance registration. Attendees who register after the advance registration deadline may pick up the flash drive on site.

Members and Blood subscribers who are not attending the annual meeting will receive the abstracts on flash drive in the mail in December. The final program will be available online in early November, and attendees are encouraged to use the online program planner and the mobile application (see below).

**Annual Meeting Mobile Application**

Looking for annual meeting information at your fingertips? Download the official 2012 ASH Annual Meeting mobile application, which will provide program and exhibitor information, abstracts, maps, messaging capability, and other general annual meeting information. The application includes the full text of annual meeting abstracts and articles from *Hematology 2012* (the Education Program Book). The application allows users to add a session to their device’s calendar which will build their itinerary for the meeting. The 2012 ASH Annual Meeting mobile application will be available for download on iPhone, Android, and Blackberry smartphones as well as on iPad and Android tablets. Attendees are encouraged to download the application when it is published in late November.

**Abstracts Online/Program Planner**

Check the ASH website ([www.hematology.org](http://www.hematology.org)) in early November for the full text of the annual meeting abstracts. The online system will allow you to search the full and up-to-date annual meeting program and generate your own personal annual meeting schedule, which can be printed or downloaded to your portable device. Additionally, attendees have the option of using the annual meeting mobile application to download the abstracts and annual meeting program to their smartphones (iPhone, Android, Blackberry) or tablets (iPad or Android).

A mobile-Web version of the online abstracts/program planner will also be available to attendees. This site is for attendees who prefer to access this information using a mobile Web browser.

**Hematology 2012**

*Hematology 2012*, the ASH Education Program Book, provides an updated and comprehensive review of each of the topics covered in the annual meeting education sessions. The peer-reviewed manuscripts are written by the Education Program speakers. A chapter on the Ham-Wasserman Lecture, as well as evidence-based mini-reviews related to the topics covered in this year’s Education Program, will also be included. *Hematology 2012* will be distributed on site to registrants, and extra copies may be purchased for $80 per copy for members and $130 per copy for non-members. (ASH will not be responsible for shipping books purchased on site.) ASH members not attending the meeting will be mailed a copy of *Hematology 2012* in January 2013.

**Program Book**

This book contains the master schedule and complete annual meeting program (as of the mid-October print date), including detailed information for the general and special-interest sessions, trainee activities, Education and Scientific Programs, oral and poster sessions, and ticketed events. A listing of exhibitors and Friday Satellite Symposia is also included.

Please note that the abstracts on flash drive will also contain program information (as of the mid-October print date) for the meeting.

For the most up-to-date program information, attendees are encouraged to use the online program planner at [www.hematology.org](http://www.hematology.org) (available in early November) or download the annual meeting mobile application for smartphones and tablets.
Annual Meeting Education Program DVD

Education Program DVDs will be available for pick-up beginning Monday, December 10, during the evening poster session, and on Tuesday, December 11, during registration hours at the ASH Resource Center. Name badges will be required to purchase DVDs on site. The Education Program DVD will include all Education Program Sessions, including “The Trade Secrets of a Successful Academic” and “Junior-Faculty Development: How to Be Successful in Your First ‘Real’ Job.”

The DVD may be purchased on site. Discounts will be available for ASH Members, Associate Members, and Non-Members in Training. For additional details and pricing, please visit the ASH website (www.hematology.org).

Annual Meeting On-Demand Webcast (Education Program and Special Lectures)

On-demand webcasts of all the Education Program sessions and the special lectures will be available on the ASH website (www.hematology.org) after the meeting. Users will be able to access audio recordings of the presentations while viewing associated color slides. Sessions that will be captured for the webcast are as follows:

- All Education Program Sessions, including “Trade Secrets of a Successful Academic” and “Junior-Faculty Development Education Program: Mentorship – How to Be Successful in Your First ‘Real’ Job”
- Education Spotlight Sessions
- Presidential Symposium
- Ham-Wasserman Lecture
- E. Donnall Thomas Lecture
- Ernest Beutler Lecture
- ASH/EHA Joint Symposium
- Trainee Simultaneous Didactic Sessions
- Special Symposium from the Quality of Care Subcommittee – Quality Improvement: A Toolkit for Hematology Practice
- Practice Forum

The On-Demand Webcast may be purchased on site. Discounts will be available for ASH Members, Associate Members, and Non-Members in Training. For additional details and pricing, please visit the ASH website (www.hematology.org).

ASH News Daily

The on-site daily meeting newspaper, ASH News Daily, will be available to attendees each day. Four separate issues of ASH News Daily, covering the four days of the 2012 ASH Annual Meeting, will feature informative articles on a wide range of Education and Scientific Program sessions and abstract presentations written by distinguished ASH members. Each issue of ASH News Daily will highlight the day’s sessions and events and provide information about the city of Atlanta. This publication will be distributed throughout the Georgia World Congress Center, made available on all of the shuttle buses, and delivered to select hotels. Once again this year, a mobile version of ASH News Daily will be available. You can access the newspaper from your laptop, tablet, or mobile phone. Meeting attendees will receive an email each morning; just click on the link from your device to read the latest issue.
Photography/Recording
Materials contained in the ASH annual meeting presentations, including slides, audio, abstracts, and posters, are protected by copyright. Any photography, filming, or audio-video recording of the presentations or posters is strictly prohibited, except by registered members of the media. An exception is made for non-flash photography and audio recording using hand-held equipment, so long as it is strictly for personal, non-commercial use and not disruptive. Attendees taking photos or audio/video recording in the exhibit hall for personal use must obtain permission from the exhibiting company before engaging in such activities within a particular booth. Violators of this policy will be escorted and barred from the session or exhibit hall. Repeat offenders will have their meeting badges revoked and will not be allowed to continue to attend the meeting. Please note that annual meeting content may not be published or reproduced in any medium (including social media) without express written permission from ASH (or, in the case of the posters, from the author).

Disclaimer
ASH will have professional photographers present at the annual meeting; therefore, please note that any photographs taken at the meeting may be used in future ASH publications, on the ASH website (www.hematology.org), or in other Society materials. Exhibitors in the exhibit hall also may be taking photographs or recordings; however, they are required to obtain written permission from attendees if using such photos or recordings for promotional or commercial purposes. Attendance or participation in the meeting constitutes an agreement with ASH by the registrant for the Society to use and distribute the registrant’s image or voice in photographs, videotapes, audiotapes, or other electronic media pertaining to annual meeting events and activities.

No Smoking
Smoking will not be permitted in any of the hallways, lobbies, meeting rooms, exhibits, or poster sessions at the convention center. Please refrain from smoking unless you are outside the building.

Prohibited Session Room Behavior
In crowded sessions, please honor the instructions provided by ASH staff. You may be told not to stand against the walls in these rooms or not to block the aisles. Please note that if a room reaches full capacity, you may be denied entry, as ASH must obey the guidelines established by the Fire Marshall at the convention center.

Participation of Financial Professionals
Financial professionals and other individuals whose principal reason for attending the annual meeting is to seek business opportunities or obtain information affecting investment positions are welcome to register for the ASH Annual Meeting. However, the educational and scientific aspects of the annual meeting are always top priority. Financial professionals are required to identify themselves when speaking with presenters, particularly when asking questions for which the answers may have implications for corporate valuation or positions in equity markets. Speakers and moderators are also asked to give preference to questioners with scientific or clinical enquiries.

Children Under 12
For safety reasons, children under the age of 12 (including infants in carriers and strollers, or hand-carried infants and toddlers) are not permitted in the exhibit hall and poster sessions. Additionally, ASH prohibits children and infants in the sessions, as they may distract the speakers and disrupt other attendees. (See page 55 for child-care services provided at the meeting.)
2012

STATE-OF-THE-ART SYMPOSIUM
The theme of this year’s State-of-the-Art Symposium is “Recent Advances in Hematologic Malignancies Including a Special Focus on Thrombosis.” This annual, clinically focused, CME-accredited symposium is designed to offer the same high caliber of educational content for which the ASH annual meeting is known. The symposium will feature leading experts who will present current best practices for treatment in the field of hematology.

New in 2012, the State-of-the-Art Symposium will be held in two locations:
- Chicago, IL  September 28-29
- Los Angeles, CA  October 12-13

Advance registration is now open. Visit www.hematology.org/SAS2012 for the most current information on this meeting.

CONSULTATIVE HEMATOLOGY COURSE
Two Consultative Hematology Courses will be offered in 2012. The first will take place on Friday morning, September 28, 2012, prior to the State-of-the-Art Symposium in Chicago; the second will be held on Monday, December 11, 2012 during the 54th annual meeting (details regarding this meeting can be found under the “Ticketed Sessions” section of this preliminary program on page 42). Geared toward North American practitioners trained in hematology or hematology-oncology who infrequently see patients with non-malignant hematologic disorders, the 2012 Consultative Hematology Course will cover commonly encountered clinical problems that arise in everyday practice and require the expertise of a hematologist.

Please visit www.hematology.org/CHC2012 for more information.
Upcoming ASH Meetings

2013

HIGHLIGHTS OF ASH® IN NORTH AMERICA
These smaller, clinically focused meetings, held a few weeks after the annual meeting, provide another opportunity to hear leading experts present unbiased analyses of the 54th ASH Annual Meeting abstracts and sessions; attendees also learn more about the evolving therapies, latest treatment options, and their clinical applications that were discussed at the meeting. The program format is designed to allow practitioners, fellows, academicians, and allied health professionals the opportunity to discuss some of the most rapidly evolving developments in the field with experts as well as colleagues.

The 2013 Highlights of ASH® in North America meetings will be held in six locations:
- Phoenix, AZ, and Toronto, Ontario, Canada January 18-19
- Dallas, TX, and New York, NY January 25-26
- Miami, FL, and San Francisco, CA February 1-2

INTERNATIONAL HIGHLIGHTS OF ASH®
The international Highlights of ASH meetings provide opportunities for hematologists who would otherwise not travel to attend the annual meeting a chance to take advantage of expert analysis of the 54th ASH Annual Meeting closer to home. The content is similar to the North American Highlights of ASH program with the addition of new topics that are relevant to the region. The 2013 International Highlights of ASH meetings will be held in Santiago, Chile, and Shanghai, China.

For more information, please visit the ASH website at www.hematology.org/Meetings.

55TH ASH ANNUAL MEETING AND EXPOSITION
Ernest N. Morial Convention Center
New Orleans, LA
Meeting: December 7-10, 2013
Exposition: December 7-9, 2013

PLAN AHEAD FOR NEXT YEAR
ASH members receive special advantages for ASH annual meetings, including advance copies of the Preliminary Program, the ability to reserve rooms in the prime hotels reserved exclusively for ASH members, and reduced registration rates that are significantly less than those for non-members.

If you are interested in becoming a member of the Society, you may submit an application online at www.hematology.org/Membership. If you have questions about eligibility or benefits, please contact ASH Headquarters at membership@hematology.org or 202-776-0544.

Applications for Active and International membership must be received by March 1, 2013, in order to take advantage of these benefits in time for the annual meeting in December. Don’t miss out on these special opportunities for the 2013 ASH Annual Meeting!
Greetings from the President

Acknowledgments

Special thanks are due to:

Agnes Y. Lee, MD  
2012 Education Program Co-Chair and Program Committee Member

Martin S. Tallman, MD  
2012 Education Program Co-Chair and Program Committee Member

Bruce R. Blazar, MD  
2012 Scientific Program Co-Chair and Program Committee Member

Roy L. Silverstein, MD  
2012 Scientific Program Co-Chair and Program Committee Member

Charles Abrams, MD  
Secretary and Program Committee Member

Linda Burns, MD  
Vice President, Executive Editor, Hematology 2012, and Program Committee Member

Joseph Mikhael, MD  
Co-Editor, Hematology 2012

Bradford Schwartz, MD  
Co-Editor, Hematology 2012

ADDITIONAL PROGRAM COMMITTEE MEMBERS

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Liaison, Chair, Committee on Practice

Cynthia E. Dunbar, MD  
Liaison, Editor-in-Chief, Blood

Peter D. Emanuel, MD  
Liaison, Chair, Committee on Communications

Robert A. Hromas, MD  
Liaison, Chair, Committee on Scientific Affairs

Jose A. Lopez, MD  
2013 Scientific Program Co-Chair

Bob Löwenberg, MD, PhD  
Liaison, Editor-in-Chief Designee, Blood

Charles J. Parker, MD  
Liaison, Editor-in-Chief, The Hematologist

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Liaison, Chair, Committee on Training Programs

Kevin Shannon, MD  
2013 Scientific Program Co-Chair

Wendy Stock, MD  
2013 Education Program Co-Chair

John F. Tisdale, MD  
2013 Education Program Co-Chair

Jane N. Winter, MD  
Liaison, Chair, Committee on Educational Affairs

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