

ASFA

● ● ● ● ● ● American Society for Apheresis



ACADEMIC PROGRAM

2019

ASFA's 40th Annual Meeting

PORTLAND, OREGON

MAY 14 – 18, 2019

Hilton Portland Downtown

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WELCOME FROM THE PRESIDENT

As President of the American Society for Apheresis, it is my honor to welcome you to Portland for the 40th Annual Meeting of our society. This milestone meeting hosted in the beautiful Pacific Northwest, promises to be an outstanding educational and networking event.

I would like to thank the Organizing Committee, led by President-Elect Dr. YanYun Wu, for their time and dedication over the past year putting together this exciting program. I must also thank the dedicated team of the ASFA Head Office for their efforts during the planning of this meeting.

In addition to the diverse educational opportunities the meeting program offers, there will be many networking opportunities to meet with colleagues and share thoughts and ideas. To celebrate the 40th ASFA Annual Meeting, we are thrilled to host a 40th celebration on Friday, May 17th. We hope you can join us on the 23rd floor in the Skyline Suite to celebrate 40 years of apheresis education.

In the spirit of giving back, ASFA was pleased to continue the travel awards scholarships and further expand to introduce a fourth scholarship this year to an individual who has successfully taken and passed the Qualifications in Apheresis (QIA) exam in 2018. Scholarship awardees were selected based on their applications after meeting certain qualifying criteria. ASFA is pleased to have these deserving members participate in the annual meeting this year.

ASFA is also pleased to offer complimentary Apheresis Review Session registration to those who plan to take the QIA exam after the Review Session. To the 100+ individuals who have already attained this designation, I congratulate you on your professional accomplishment.

Our members strengthen the society. Please feel welcome to communicate your thoughts and ideas. Talk with ASFA leadership to find out how you can get more involved, and consider joining a committee. Thank you for taking time out of your busy schedules to attend ASFA 2019.

On behalf of the ASFA Board of Directors and ASFA Head Office Staff, thank you for participating in the 40th Annual Meeting and welcome to Portland!



A handwritten signature in black ink that reads "J Schwartz".

JOSEPH (YOSSI) SCHWARTZ, MD, MPH
PRESIDENT
AMERICAN SOCIETY FOR APHERESIS

ACADEMIC PROGRAM

WELCOME FROM THE CONFERENCE CHAIR

On behalf of the 2019 Annual Meeting Organizing Committee and the ASFA Board of Directors, I would like to extend a warm welcome to our 40th Annual Meeting in Portland, Oregon. The venue is a wonderful location for our meeting and will provide excellent opportunities to learn and network with colleagues, in the field of apheresis medicine.

The Annual Meeting Organizing Committee has been working diligently since the last annual meeting to bring you an exciting and diverse educational program. Thanks to this group of dedicated and enthusiastic colleagues, we have a very exciting program in store for you. The annual meeting is a great environment to meet colleagues, share best practices and learn about advances in apheresis medicine.

The meeting format is familiar to many of you. We are continuing to offer breakfast with the experts each morning, scientific and educational sessions, abstract sessions, and poster networking sessions. Our corporate program includes a large exhibit hall, as well as lunch and dinner symposia. Social and networking sessions including the welcome reception, breakfast with the experts, poster networking evening, and meet and greet session for new members and first time attendees. A unique and exciting networking event will take place on Friday, May 17th to celebrate the 40th anniversary of the ASFA annual meetings. ASFA delegates will enjoy an evening of networking, appetizers and drinks, with a beautiful skyline view of downtown Portland.

The educational and scientific sessions cover a variety of donor and therapeutic apheresis topics that will appeal to a diverse audience. Furthermore, with the increasing role of apheresis in cellular and gene therapy, the scientific sessions have been carefully selected around this topic. We will also highlight ASFA's continued efforts in evidence-based and outcome driven apheresis practice. The annual meeting will feature world-renowned speakers in many key areas including apheresis medicine, immunology, hematology, transplantation, neurology, nephrology, dermatology, quality and regulation, and others.

There are some exciting features to highlight at the annual meeting this year, which include:

- New this year – 'Hot Topics in Apheresis': managing hemostasis/coagulation issues related to TPE, from testing, replacement fluid, to the use of anti-coagulants and important considerations for RBC exchange, cellular depletion, and priming for apheresis

- A joint session with AABB will focus on innovative concepts for the management of patients with sickle cell disease
- Vascular Access – Tips & Tricks/Best Practices hands on educational session is back by popular demand. It will concentrate on different vascular access options including peripheral and central lines, as well as ports, used in apheresis. In addition, the experience in the use of ultrasound as a tool to help with identifying appropriate access will be presented
- The new ASFA evidence-based guidelines will be presented in the Closing Symposium
- Member proposal will be "The Dos and Don'ts of Tandem Procedures"
- People's Choice Poster Abstract Award – cast your vote to determine the winner! Join us during the Poster Networking Evening in the Exhibit Hall on Thursday, May 16th to vote for your favorite poster
- The 5K Fun Run is back! Proceeds will benefit Hemophilia Foundation of Oregon, which provides programs and services that promote and support knowledge, health, and advocacy for all people whose lives are affected by bleeding disorders
- The ASFA Annual General Meeting will take place on Friday, May 17th, immediately after lunch; coffee and dessert will be served. I encourage all ASFA members to attend so that you are informed about our society and participate in updates to the bylaws and election of ASFA leadership
- Delegate tour of OHSU (Oregon Health and Science University) Hospital on Wednesday, May 15th
- Several corporate lunch and dinner events

Throughout the meeting, please make an effort to visit and interact with our corporate sponsors and exhibitors who have come prepared to share their most current platforms, information and tools. This includes participating in sponsored symposia.

Thank you for attending the ASFA Annual Meeting this year and on behalf of the Organizing Committee, the ASFA Board of Directors and myself, welcome to the beautiful & charming Portland!



YANYUN WU, MD, PhD, QIA
CONFERENCE CHAIR
PRESIDENT-ELECT
AMERICAN SOCIETY FOR APHERESIS

GENERAL INFORMATION

MEETING LOCATION

The ASFA 2019 Annual Meeting events will take place at the Hilton Portland Downtown. Please consult this program to determine the exact room or location of each event.

INCLUDED IN YOUR REGISTRATION FEE

Full-conference registered attendees receive:

- Access to the Welcome Reception
- Access to all Scientific and Education Sessions
- Access to all Abstract Sessions
- Access to Posters and Exhibits
- Access to the Poster Networking Evening
- Access to the 40th Annual Meeting Celebration
- Conference Meals
- Annual Meeting Materials
- Final Program
- Abstract Issue of the Journal of Clinical Apheresis
- Delegate Bag

Exhibit-only attendees receive:

- Access to the Exhibit Hall
- Conference Meals Served in the Exhibit Hall

Registered guests receive:

- Access to the Welcome Reception, Poster Networking Evening and 40th Annual Meeting Celebration

ASFA 2019 MOBILE APP

ASFA is excited to present its Annual Meeting mobile app for those who use smart devices. This free interactive tool is designed to enhance attendees' meeting experience and can be downloaded from the Apple App store or Google Play Store under **ASFA**.

Use this app to review the conference program, schedule sessions, and learn more about our speakers and conference supporters.



REGISTRATION

The Registration Desk is located in the Plaza Foyer.

Registration hours are as follows:

- Tuesday, May 14, 2019 – 3:00PM – 6:00PM
- Wednesday, May 15, 2019 – 7:00AM – 6:00PM
- Thursday, May 16, 2019 – 7:00AM – 6:00PM
- Friday, May 17, 2019 – 7:00AM – 5:30PM
- Saturday, May 18, 2019 – 7:00AM – 12:30PM

SPEAKER SERVICES CENTER

The Speaker Services Center, located in the Plaza Suite, is equipped with laptop PC computers for all faculty members to review their presentations before their sessions. To better serve you, your presentation should be uploaded at least 24 hours prior to your session, and can be previewed up to 3 hours before your session.

The Speaker Services Center hours are as follows:

- Tuesday, May 14, 2019 – 3:00PM – 6:00PM
- Wednesday, May 15, 2019 – 7:00AM – 6:00PM
- Thursday, May 16, 2019 – 7:00AM – 6:00PM
- Friday, May 17, 2019 – 7:00AM – 5:30PM
- Saturday, May 18, 2019 – 7:00AM – 12:00PM

CONTINUING EDUCATION CREDIT INFORMATION

ACCREDITATION AND CREDIT DESIGNATION

TARGET AUDIENCE

This activity has been designed to meet the educational needs of physicians, allied health professionals and medical students involved with donor and therapeutic apheresis. The specialties involved include, but are not exclusive of, pathology, hematology, immunology, nephrology, pediatrics, and rheumatology.

STATEMENT OF NEED/PROGRAM OVERVIEW

The ASFA Annual Meeting is the only one of its kind that offers a focus on apheresis medicine in both the donor and patient settings. It is a key educational and networking event for physicians, scientists, and allied health professionals in the field of apheresis.

The ASFA 2019 Annual Meeting will be the Society's 40th Conference. Each year, ASFA takes the feedback it receives from attendees to build a relevant program for the next year.

The need for the ASFA 2019 Annual Meeting was determined through an analysis of the evaluations from the ASFA 2018 Annual Meeting as well as through ongoing feedback from the Society's over 1,000 members. The results of these evaluations clearly illustrate that attendees find the program useful and necessary for their professional development. The Organizing Committee used these results, as well as new developments in research, technology, and clinical experience, to plan the program for the 2019 Annual Meeting.

ASFA expects to attract over 500 apheresis professionals to the 2019 Annual Meeting, including MD and/or PhD clinicians and scientists, as well as allied health professionals who are involved in the field of apheresis medicine.

EDUCATIONAL OBJECTIVES

After completing this activity, the participant should be better able to:

- Explain the principles of evidence-based knowledge as they apply to therapeutic apheresis
- Describe the latest scientific, clinical, and technological advances in donor and therapeutic apheresis
- Describe the general practice of apheresis medicine and its role in the donor and patient setting

CEU

ASFA is approved by the California Board of Registered Nursing, provider number 14122, as a provider of continuing nursing education programs. ASFA designates this event for a maximum of 29.5 contact hours.

CMLE

This continuing medical laboratory education activity is recognized by the American Society for Clinical Pathology as meeting the criteria for 29.5 CMLE credit.

ASCP CMLE credits are acceptable to meet the continuing education requirement for the ASCP Board of Registry Certification Maintenance Program.

ACKNOWLEDGEMENT

The American Society for Apheresis wishes to recognize and thank the following companies for their ongoing support through educational grants: Terumo BCT and Miltenyi Biotec.

INSTRUCTIONS FOR CREDIT

Continuing education credit has been assigned to the following sessions:

- Apheresis Review Session
- Breakfast with the Expert I, II, III
- Opening Symposium: Current State of Cell & Gene Therapy
- Education Session I: Donor Apheresis
- Plenary Abstract Session
- Education Session II: Hot Topics in Apheresis
- Education Session III: Joint AABB/ASFA Session
- Scientific Symposium: The Immune System and Neurologic Disorders: Intersections with TPE
- Education Session IV: Vascular Access – Tips & Tricks/ Best Practices
- Education Session V: ASFA Forum Live – Ask the Experts
- Abstract Session I: Therapeutic Apheresis
- Abstract Session II: Donor Apheresis
- Education Session VI: Therapeutics Apheresis
- Education Session VII: Ethical Considerations in Apheresis
- Closing Symposium: Best Practice in Apheresis Medicine
- Education Session VIII: Member Proposal
- Education Session IX: Program Management and Professional Development

The meeting evaluation must be completed in order to claim CME Credit. Please note that physicians should claim only the credit commensurate with the extent of their participation in the activity. **CME Certificates will be emailed within 6-8 weeks of the program.**

CONTINUING MEDICAL EDUCATION CREDIT INFORMATION

This activity has been planned and implemented in accordance with the accreditation requirements of the Washington State Medical Association through the joint providership of Providence Health Care and the American Society for Apheresis. Providence Health Care is accredited by the WSMA to provide continuing medical education for physicians.

Providence Health Care designates this live activity for a maximum of 29.5 AMA PRA Category 1 Credit(s)[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

This activity meets the criteria for up to 29.5 hours of Category I CME credit to satisfy the relicensure requirements of the Washington State Medical Quality Assurance Commission.



ACADEMIC PROGRAM

AWARDS

FRANCIS S. MORRISON, MD MEMORIAL LECTURE AWARD

The Francis S. Morrison, MD Memorial Lecture is an annual keynote lecture at the ASFA Annual Meeting. The lecture has been created to keep alive and honour the memory of Francis S. Morrison, MD, a true pioneer in apheresis medicine and a leading apheresis professional. The first lecture was held at the ASFA Meeting in 2002. The Francis S. Morrison, MD Memorial Lecture award is bestowed upon a member of the Society who has made major contributions to the field of apheresis medicine and an apheresis professional who has made a lasting difference in the field, preferably at the national level.

JEFFREY L. WINTERS, MD

LECTURER AWARD

The Lecturer Award of the American Society for Apheresis is bestowed upon a member of the Society who has consistently contributed to the Society as a speaker, teacher, or mentor.

JILL ADAMSKI, MD, PhD

PRESIDENTIAL AWARD

The Presidential Award of the American Society for Apheresis is bestowed upon a member of the Society who has consistently made major contributions to, and performed outstanding service for the Society over a number of years.

CHRISTINE FERNANDEZ, RN, MSN, OCN

SHS AWARD

The Society for Hemapheresis Specialists was the first national organization in the United States which provided a forum for the professional development of technical specialists in the field of apheresis. In the ensuing decades since the founding of SHS, its members contributed to the maturation of apheresis as a medical specialty and to the growth of the American Society for Apheresis in to the principal platform for organized apheresis activities in North America. This award commemorates the pioneering efforts of SHS which have culminated in the high standards and sophistication which characterize the field of American apheresis. Its recipient is a hemapheresis specialist who has demonstrated sincere commitment to apheresis and who has emerged as a leader and role model in the field.

ROBIN WILLIS, RN, BSN, HP(ASCP)

ALLIED HEALTH ABSTRACT AWARD

This award is given to the primary author of an outstanding abstract submitted by an allied health professional who is a member of ASFA. This year's recipient abstract is:

MICHELLE TUMBAGA-FLORES, BSN, RN, HP (ASCP^{CM})

"IMPROVED COLLECTION OUTCOMES USING HIGHER HEPARIN CONCENTRATION WITH THE SPECTRA OPTIA CMNC PROGRAM"

BEST ABSTRACT AWARDS

These awards are given to the primary authors of two outstanding abstracts. This year's recipient abstracts are:

SARAH MAKHANI, BA

"THERAPEUTIC PLASMA EXCHANGE PRACTICES IN NEUROMYELITIS OPTICA SPECTRUM DISORDER RELATED HOSPITALIZATIONS: RESULTS FROM A NATIONALLY REPRESENTATIVE SAMPLE"

REINHARD KLINGEL, MD, PhD

"REAL-WORLD STUDY: ESCALATING TARGETED LIPID-LOWERING TREATMENT WITH PCSK9-INHIBITORS AND LIPOPROTEIN APHERESIS"

JUNIOR INVESTIGATOR ABSTRACT AWARD

This award is given to the primary author of an outstanding abstract submitted by a junior investigator who is a member of ASFA. This year's recipient abstract is:

GUSTAAF DE RIDDER, MD, PhD

"MODERN MORTALITY OF THROMBOTIC THROMBOCYTOPENIC PURPURA: LONGITUDINAL ANALYSIS OF 100 CONSECUTIVE PATIENTS IN A LARGE SINGLE-CENTER DATABASE"

PEOPLE'S CHOICE POSTER ABSTRACT AWARD

All posters submitted and presented at the conference are eligible to receive this award. All ASFA Annual Meeting delegates will be given a ballot to vote for the poster they believe to be the best poster at the ASFA 2019 Annual Meeting.

Join us during the Poster Networking Evening in Plaza Foyer on Thursday, May 16th to cast your vote! Voting closes at 8:00pm on Thursday, May 16th and the winner will be announced during the ASFA 2019 Annual General Meeting.

PROGRAM AT A GLANCE

TUESDAY, MAY 14, 2019

7:00AM – 11:30AM	Meeting Registration for State of the Science Conference on Extracorporeal Photopheresis	Grand Ballroom Foyer
7:00AM – 5:00PM	State of the Science Conference on Extracorporeal Photopheresis (ECP) <i>(pre-registration with ASFA and additional registration fees required)</i>	Grand Ballroom I
3:00PM – 6:00PM	Meeting Registration	Plaza Foyer
7:00PM – 10:00PM	ASFA Board of Directors and State of the Science Conference Speakers Dinner <i>(by invitation only)</i>	Offsite

WEDNESDAY, MAY 15, 2019

7:00AM – 6:00PM	Meeting Registration	Plaza Foyer
7:00AM – 5:00PM	Preconference Workshop: Apheresis Review Session <i>(pre-registration with ASFA and additional registration fees required)</i>	Grand Ballroom I
7:30AM – 5:00PM	Fact Cellular Therapy Collection Inspection And Accreditation Workshop (Applicant Session) <i>(pre-registration with FACT and additional registration fees required)</i>	Parlor A&B
7:30AM – 3:00PM	ASFA Board of Directors Meeting <i>(by invitation only)</i>	Council Suite
8:00AM – 4:30PM	Exhibit Hall Move In	Atrium Ballroom
12:00PM – 5:00PM	Fact Cellular Therapy Collection Inspection And Accreditation Workshop (Inspector Track) <i>(pre-registration with FACT and additional registration fees required)</i>	Parlor C
3:00PM – 5:00PM	Journal of Clinical Apheresis Editorial Board Meeting <i>(by invitation only)</i>	Forum Suite
3:00PM – 6:00PM	WAA Board of Directors Meeting <i>(by invitation only)</i>	Directors Suite
2:00PM – 4:00PM	OHSU Tour for ASFA Delegates <i>(pre-registration with ASFA required)</i>	Meet in hotel lobby at 1:45PM
4:30PM – 5:30PM	Poster Move In	Plaza Foyer
5:00PM – 6:00PM	ASFA Board of Directors and Sponsors Meeting <i>(by invitation only)</i>	Council Suite
5:30PM – 6:00PM	New Member and First Time Attendee Meet and Greet	Broadway I
6:00PM – 8:00PM	Exhibit Hall Open	Atrium Ballroom
6:00PM – 8:00PM	Welcome Reception in Exhibit Hall <i>Please join us for a drink, hors d'oeuvres, and to network with your colleagues!</i>	Atrium Ballroom & Plaza Foyer
8:00PM – 10:00PM	ASFA Past Presidents' Dinner <i>(by invitation only)</i>	Offsite

THURSDAY, MAY 16, 2019

7:00AM – 6:00PM	Meeting Registration	Plaza Foyer
7:15AM – 8:15AM	Breakfast with the Expert I <i>(first-come, first-served – arrive early for your favorite topic!)</i> <i>Join us for roundtable discussions with experts in the field.</i>	Grand Ballroom I
8:00AM – 8:30AM	Continental Breakfast	Pavilion Ballroom

ACADEMIC PROGRAM

THURSDAY, MAY 16, 2019

8:30AM – 9:00AM	Opening Remarks and Awards Presentation	Pavilion Ballroom
9:00AM – 12:20PM	Opening Symposium: Current State of Cell & Gene Therapy	Pavilion Ballroom
10:00AM – 8:00PM	Exhibit Hall Open	Atrium Ballroom
10:15AM – 10:45PM	Break in Exhibit Hall	Atrium Ballroom
10:45AM – 12:15PM	Education Session I: Donor Apheresis	Grand Ballroom II
12:30PM – 1:30PM	Concurrent Corporate Lunch Symposium <i>(open to all registered delegates)</i>	Grand Ballroom I
12:30PM – 1:30PM	Concurrent Corporate Lunch Symposium <i>(open to all registered delegates)</i>	Grand Ballroom II
12:30PM – 1:30PM	Lunch in Exhibit Hall	Atrium Ballroom
12:30PM – 1:30PM	Committee Chairs Meeting with the Presidents <i>(by invitation only)</i>	Council Suite
1:45PM – 2:30PM	Francis S. Morrison, MD Memorial Lecture	Pavilion Ballroom
2:45PM – 5:15PM – Concurrent Session	Plenary Abstract Session	Pavilion Ballroom
2:45PM – 3:45PM – Concurrent Session	Education Session II: Hot Topics in Apheresis	Grand Ballroom II
3:45PM – 4:15PM	Break in Exhibit Hall	Atrium Ballroom
4:15PM – 5:15PM – Concurrent Session	Education Session III: Joint AABB/ASFA Session	Grand Ballroom II
5:30PM – 6:15PM	Committee Meetings <i>*New members welcome!</i>	
6:00PM – 8:00PM	Poster Networking Evening in Exhibit Hall <i>Please join us for a drink, hors d'oeuvres, and to visit the abstract posters.</i>	Plaza Foyer & Atrium Ballroom
7:30PM – 9:30PM	Dinner Symposium <i>(pre-registration required)</i>	Grand Ballroom I

FRIDAY, MAY 17, 2019

6:00AM – 7:00AM	5K Fun Run <i>(Pre-registration with ASFA and Additional Registration Fees Required)</i> <i>Get your blood flowing and join your colleagues for a fun run starting on the Waterfront Path.</i>	Meet in hotel lobby at 5:45AM
7:00AM – 5:30PM	Meeting Registration	Plaza Foyer
7:30AM – 8:30AM	Breakfast with the Expert II <i>(first-come, first-served – arrive early for your favorite topic!)</i> <i>Join us for roundtable discussions with experts in the field.</i>	Grand Ballroom I
8:15AM – 8:45AM	Continental Breakfast	Pavilion Ballroom
8:45AM – 12:15PM – Concurrent Session	Scientific Symposium: The Immune System and Neurologic Disorders: Intersections with TPE	Pavilion Ballroom
8:45AM – 10:15AM – Concurrent Session	Education Session IV: Vascular Access – Tips & Tricks/Best Practices <i>(pre-registration required)</i>	Galleria
10:00AM – 4:30PM	Exhibit Hall Open	Atrium Ballroom
10:15AM – 10:45AM	Break in Exhibit Hall	Atrium Ballroom

FRIDAY, MAY 17, 2019

10:45AM – 12:15PM – Concurrent Session	Education Session V: ASFA Forum Live – Ask the Experts	Grand Ballroom II
12:30PM – 1:30PM	Concurrent Corporate Lunch Symposium (<i>open to all registered delegates</i>)	Grand Ballroom I
12:30PM – 1:30PM	Concurrent Corporate Lunch Symposium (<i>open to all registered delegates</i>)	Grand Ballroom II
12:30PM – 1:30PM	Lunch in Exhibit Hall	
1:45PM – 2:30PM	ASFA Annual General Meeting (<i>ASFA members only</i>) <i>Join us for coffee and dessert and to learn more about ASFA's activities, financials and leadership.</i>	Pavilion Ballroom
2:45PM – 5:15PM – Concurrent Session	Abstract Session I: Therapeutic Apheresis	Pavilion Ballroom
2:45PM – 5:15PM – Concurrent Session	Abstract Session II: Donor Apheresis	Grand Ballroom I
2:45PM – 3:45PM – Concurrent Session	Education Session VI: Therapeutic Apheresis	Grand Ballroom II
3:45PM – 4:15PM	Break in Exhibit Hall	Atrium Ballroom
4:15PM – 5:15PM – Concurrent Session	Education Session VII: Ethical Considerations in Apheresis	Grand Ballroom II
4:15PM – 4:30PM	Poster Move Out	Plaza Foyer
4:45PM – 8:00PM	Exhibit Hall Move Out	Atrium Ballroom
5:15PM – 6:00PM	Committee Meetings <i>*New members welcome!</i>	
6:00PM – 8:00PM	ASFA 40 th Annual Meeting Celebration (<i>pre-registration with ASFA required</i>)	Skyline Suite I&II

SATURDAY, MAY 18, 2019

7:00AM – 12:30PM	Meeting Registration	Plaza Foyer
7:30AM – 8:30AM	Breakfast with the Expert III (<i>first-come, first-served – arrive early for your favorite topic!</i>) <i>Join us for roundtable discussions with experts in the field.</i>	Grand Ballroom I
8:15AM – 8:45AM	Continental Breakfast	Pavilion Ballroom
8:45AM – 12:15PM – Concurrent Session	Closing Symposium: Best Practice in Apheresis Medicine	Pavilion Ballroom
8:45AM – 10:15AM – Concurrent Session	Education Session VIII: Member Proposal	Grand Ballroom II
10:15AM – 10:45AM	Break in Foyer	Plaza Foyer and Grand Ballroom Foyer
10:45AM – 12:15PM – Concurrent Session	Education Session IX: Program Management and Professional Development	Grand Ballroom II
12:15PM – 1:30PM	Post-conference ASFA Board of Directors Meeting (<i>by invitation only</i>)	Council Suite

ACADEMIC PROGRAM

PROGRAM

PRECONFERENCE: TUESDAY, MAY 14, 2019

7:00AM – 11:30AM	Meeting Registration for State of the Science Conference on Extracorporeal Photopheresis	Grand Ballroom Foyer
7:00AM – 5:00PM	STATE OF THE SCIENCE CONFERENCE ON EXTRACORPOREAL PHOTOPHERESIS (ECP) <i>(pre-registration with ASFA and additional registration fees required)</i>	Grand Ballroom I
3:00PM – 6:00PM	Meeting Registration	Plaza Foyer
7:00PM – 10:00PM	ASFA BOARD OF DIRECTORS AND THE STATE OF SCIENCE CONFERENCE SPEAKERS DINNER <i>(by invitation only)</i>	Offsite

PRECONFERENCE: WEDNESDAY, MAY 15, 2019

7:00AM – 6:00PM	Meeting Registration	Plaza Foyer
	PRECONFERENCE WORKSHOP: APHERESIS REVIEW SESSION <i>(pre-registration with ASFA and additional registration fees required) *free if registered to take the QIA exam</i>	Grand Ballroom I

The Apheresis Review Session will provide a basic overview of the theory and applications of apheresis medicine. Experts in the field will provide a broad overview of each of the topics and participants will have an opportunity to work with case studies. The Review Session is an appropriate preparatory course for the Qualification in Apheresis (QIA) Exam, offered by ASCP.

Morning Chairs: Rebecca Nourse, RN, BSN & Peggy Reid, RN

Afternoon Chairs: Debbie Ferrell, MSN, RN, HP(ASCP) & Lindsay Palomino, BSN, RN, HP(ASCP)

	7:00AM – 7:30AM	Continental Breakfast	
	7:30AM – 8:00AM	Welcome and Introduction to Qualification in Apheresis (QIA)	Christina Anderson, RN, BSN, HP(ASCP)
	8:00AM – 8:45AM	Basic Science in Apheresis	Jill Adamski, MD, PhD
	8:45AM – 9:30AM	Apheresis Instrumentation	Edwin A. Burgstaler, MT, HP(ASCP)
	9:30AM – 10:15AM	Apheresis Program Management Essentials	David Lin, MD, MHA, QIA
7:00AM – 5:00PM	10:15AM – 10:45AM	Break	
	10:45AM – 11:30AM	Clinical Applications: Therapeutic Apheresis	Nicole AQUI, MD
	11:30AM – 12:15PM	Clinical Applications: Cellular Therapy	Bruce Sachais, MD, PhD, QIA
	12:15PM – 1:15PM	Lunch & Equipment Fair	
	1:15PM – 2:00PM	Apheresis Math	Jay Raval, MD
	2:00PM – 3:00PM	Care of the Apheresis Donor and Therapeutic Apheresis Patient	Tina Ipe, MD, MPH
	3:00PM – 3:45PM	Quality in Apheresis: Standards, Guidelines and Regulations	Margaret M. Hannan, BS, MSM/OL, CGA (ASQ)
	3:45PM – 4:00PM	Break	
	4:00PM – 4:45PM	Donor Apheresis Overview	Jeannie Nielsen, BSN, RN, HP(ASCP)
	4:45PM – 5:00PM	Wrap up	Debbie Ferrell, MSN, RN, HP(ASCP)
7:30AM – 5:00PM		FACT CELLULAR THERAPY COLLECTION INSPECTION AND ACCREDITATION WORKSHOP (APPLICANT SESSION) <i>(pre-registration with FACT required and additional registration fees required)</i>	Parlor A&B

PRECONFERENCE: WEDNESDAY, MAY 15, 2019

8:00AM – 3:00PM	ASFA BOARD OF DIRECTORS MEETING <i>(by invitation only)</i>	Council Suite
8:00AM – 4:30PM	Exhibit Hall Move In	Atrium Ballroom
12:00PM – 5:00PM	FACT CELLULAR THERAPY COLLECTION INSPECTION AND ACCREDITATION WORKSHOP (INSPECTOR TRACK) <i>(pre-registration with FACT required and additional registration fees required)</i>	Parlor C
3:00PM – 5:00PM	JOURNAL OF CLINICAL APHERESIS EDITORIAL BOARD MEETING <i>(by invitation only)</i>	Forum Suite
3:00PM – 6:00PM	WAA BOARD OF DIRECTORS MEETING <i>(by invitation only)</i>	Directors Suite
2:00PM – 4:00PM	OHSU TOUR FOR ASFA DELEGATES <i>(pre-registration with ASFA required)</i>	Offsite, Meet in Hotel Lobby at 1:45pm
4:30PM – 5:30PM	Poster Move In	Plaza Foyer
5:00PM – 6:00PM	ASFA BOARD OF DIRECTORS AND SPONSORS MEETING <i>(by invitation only)</i>	Council Suite
5:30PM – 6:00PM	NEW MEMBER AND FIRST TIME ATTENDEE MEET AND GREET	Broadway I
6:00PM – 8:00PM	Exhibit Hall Open	Atrium Ballroom
6:00PM – 8:00PM	WELCOME RECEPTION IN EXHIBIT HALL Please join us for a drink, hors d'oeuvres, and to network with your colleagues!	Atrium Ballroom & Plaza Foyer
8:00PM – 10:00PM	ASFA PAST PRESIDENTS' DINNER <i>(by invitation only)</i>	Offsite

CONFERENCE DAY 1: THURSDAY, MAY 16, 2019

7:00AM – 6:00PM	Meeting Registration	Plaza Foyer
	BREAKFAST WITH THE EXPERT I <i>(first-come, first-served – arrive early for your favorite topic!)</i> <i>Join us for roundtable discussions with experts in the field on the topics below.</i>	Grand Ballroom I
	Chairs: Jennifer Collins, RN & Laura Collins, RN, BSN, HP (ASCP)	
	1. & 2. Quality and Apheresis – 2 tables	Margaret M. Hannan, BS, MSM/OL, CQA (ASQ) & Erica Agy, BS
	3. Role of Advanced Practitioners in Apheresis	Amelework Wodajo
	4. Lipoprotein Apheresis - LDL Apheresis for Nephrotic Syndrome	Amber Sanchez, MD
	5. & 6. Pediatric Therapeutic Apheresis – 2 tables	Kira Geile, MSN, RN, CPNP & Alicia Garcia, RN, HP(ASCP)
7:15AM – 8:15AM	7. Unexpected Events During Apheresis	David Lin, MD, MHA, QIA
	8. QIA – The Who, What, Where, When, and How	Antonia Hagan-Coonradt, RN
	9. HPC Collection Challenges	Laurie Wolf, BSN, RN, HP
	10. Meet the JCA Editor	Jeffrey L. Winters, MD
	11. ISBT Labeling for Cellular Collections	Kristen Klimisch, BS
	12. Graduate Medical Education: Cell Therapy Education Across Specialties	Michael Linenberger, MD, FACP

ACADEMIC PROGRAM

CONFERENCE DAY 1: THURSDAY, MAY 16, 2019

8:00AM – 8:30AM	Continental Breakfast		<i>Pavilion Ballroom</i>
8:30AM – 9:00AM	OPENING REMARKS AND AWARDS PRESENTATION ASFA President, Joseph Schwartz, MD, MPH & ASFA President-Elect and Organizing Chair, Yanyun Wu, MD, PhD, QIA		<i>Pavilion Ballroom</i>
	OPENING SYMPOSIUM: CURRENT STATE OF CELL & GENE THERAPY		<i>Pavilion Ballroom</i>
	Chairs: Laura Connelly-Smith, MBBCh, DM & Nicole Aqui, MD		
9:00AM – 10:15AM	9:00AM – 9:40AM	Current State of CAR-T Therapy	Don Siegel, MD, PhD
	9:40AM – 10:15AM	Collection for CAR-T Manufacturing	Nicole Aqui, MD
10:00AM – 8:00PM	Exhibit Hall Open		<i>Atrium Ballroom</i>
10:15AM – 10:45AM	Break in Exhibit Hall		<i>Atrium Ballroom</i>
	OPENING SYMPOSIUM (continued)		<i>Pavilion Ballroom</i>
10:45AM – 12:20PM – Concurrent Session	10:45AM – 11:25AM	Current State of Gene Therapy for Inherited Blood Disorders	Pamela Becker, MD, PhD
	11:25AM – 12:00PM	Facilitating the Development of Cell and Gene Therapies	Peter Marks, MD, PhD
	12:00PM – 12:20PM	Patient Perspective	Stephanie Florence
	EDUCATION SESSION I: DONOR APHERESIS		<i>Grand Ballroom II</i>
	Chairs: Eileen Galvin Karr, RN, BSN, HP(ASCP), QIA & Margaret M. Hannan, BS, MSM/OL, CQA (ASQ)		
10:45AM – 12:15PM – Concurrent Session	10:45AM – 11:25AM	Impact of Frequent Apheresis Blood Donation on Bone (ALTRUYST Study)	Walter Bialkowski, PhD
	11:25AM – 12:15PM	Engagement Amongst Staff Working in Donor Centers – How this Contributes to the Success of Hitting Collection Goals	Fran Carson
12:30PM – 1:30PM	Concurrent Corporate Lunch Symposium – Terumo BCT (<i>open to all registered delegates</i>)		<i>Grand Ballroom I</i>
12:30PM – 1:30PM	Concurrent Corporate Lunch Symposium – Sanofi Genzyme (<i>open to all registered delegates</i>)		<i>Grand Ballroom II</i>
12:30PM – 1:30PM	Lunch in Exhibit Hall		<i>Atrium Ballroom</i>
12:30PM – 1:30PM	Committee Chairs Meeting with the Presidents (<i>by invitation only</i>)		<i>Council Suite</i>
	FRANCIS S. MORRISON, MD MEMORIAL LECTURE		<i>Pavilion Ballroom</i>
	Chair: Joseph Schwartz, MD, MPH		
1:45PM – 2:30PM	We are pleased to honor Jeffrey L. Winters, MD as this year's recipient of the Francis S. Morrison, MD Memorial Lecture award.		
	Two Decades of Therapeutic Apheresis and the American Society for Apheresis: The Good, The Bad, and The Future		

CONFERENCE DAY 1: THURSDAY, MAY 16, 2019

PLENARY ABSTRACT SESSION

Pavilion Ballroom

** denotes an award winner*

Chairs: Christina Anderson, RN, BSN, HP(ASCP) & Christine Fernandez, RN, MSN, OCN

2:45PM – 3:00PM*	Modern Mortality of Thrombotic Thrombocytopenic Purpura: Longitudinal Analysis of 100 Consecutive Patients in a Large Single-center Database	Gustaaf de Ridder, MD, PhD
3:00PM – 3:15PM	Incidence and Risk Factors Associated with Central Venous Catheter Use in Matched, Related Allogeneic Peripheral Blood Stem Cell Donors: An ASFA HPC Donor Safety Study	Laura Cooling, MD, MS
3:15PM – 3:30PM	A Survey of Current Practices of Red Blood Cell Exchange Transfusion for Patients with Sickle Cell Disease	Matthew Karafin, MD, MS
2:45PM – 5:15PM – Concurrent Session	3:30PM – 3:45PM* Therapeutic Plasma Exchange Practices in Neuromyelitis Optica Spectrum Disorder Related Hospitalizations: Results from a Nationally Representative Sample	Ruchika Goel, MD, MPH
4:15PM – 4:30PM	Infectious Disease (ID) Rates among Donors Reinstated after Changes to the Men Having Sex with Other Men (MSM) Deferral Policy	Yvette Miller, MD
4:30PM – 4:45PM*	Real-world Study: Escalating Targeted Lipid-lowering Treatment with PCSK9-inhibitors and Lipoprotein Apheresis	Reinhard Klingel, MD, PhD
4:45PM – 5:00PM	The Effect of Hydroxyethyl Starch on Renal Function in Long-term Granulocyte Donors	David Brust, MD
5:00PM – 5:15PM*	Improved Collection Outcomes using Higher Heparin Concentration with the Spectra Optia CMNC Program	Michelle Tumbaga-Flores, BSN, RN, HP (ASCP^{CM})

EDUCATION SESSION II: HOT TOPICS IN APHERESIS

Grand Ballroom II

Chairs: Antonia Hagan-Coonrad, RN & Peggy Reid, RN

2:45PM – 3:45PM – Concurrent Session	2:45PM – 3:15PM Managing Hemostasis/Coagulation Issues Related to TPE, from Testing, Replacement Fluid, to the Use of Anti-Coagulants	Thomas Deloughery, MD
	3:15PM – 3:45PM Important Considerations for RBC Exchange, Cellular Depletion, and Priming for Apheresis	Haewon Kim, MD
3:45PM – 4:15PM	Break in Exhibit Hall	Atrium Ballroom

EDUCATION SESSION III: JOINT AABB/ASFA SESSION INNOVATIVE CONCEPTS FOR THE MANAGEMENT OF PATIENTS WITH SICKLE CELL DISEASE

Grand Ballroom II

Chairs: Alicia Garcia, RN, HP(ASCP) & Jay Raval, MD

4:15PM – 5:15PM – Concurrent Session	4:15PM – 4:45PM Sickle Cell Anemia: Current Concepts, Treatment Interventions and Clinical Trials	Michael Linenberger, MD, FACP
	4:45 PM – 5:15PM Selection of Red Blood Cell Units for Simple or Exchange Transfusion for Patients with Sickle Cell Anemia	Nicole Zantek, MD

COMMITTEE MEETINGS

**New members welcome!*

5:30PM – 6:15PM	<ul style="list-style-type: none"> Allied Health Committee Public Affairs and Advocacy Committee 	Parlor A&B Parlor C	<ul style="list-style-type: none"> Research Committee International Affairs Committee (Ends 7:00PM) Communications Committee 	Forum Suite Directors Suite Council Suite
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ACADEMIC PROGRAM

CONFERENCE DAY 1: THURSDAY, MAY 16, 2019

6:00PM – 8:00PM **POSTER NETWORKING EVENING IN EXHIBIT HALL** *Plaza Foyer & Atrium Ballroom*
Please join us for a drink, hors d'oeuvres, and to visit the abstract posters.

7:30PM – 9:30PM **DINNER SYMPOSIUM: INTERNATIONAL PRACTICE PERSPECTIVES AND REGULATORY VARIATIONS ON CAR-T CELL THERAPIES** *Grand Ballroom I*
Supported by an Educational Grant from Terumo BCT (primary) and Miltenyi Biotec (supplementary). The content for the symposium was developed by the ASFA International Affairs Committee. (pre-registration with ASFA required)
This program will discuss the topic of international variations in apheresis cell collection approaches, regulatory (JACIE/FACT) approaches and variations for the CAR-T cell production, and the clinical use and (near) future use of the CAR-T cells in Asia and Middle East.
Speakers:
Quentin Eichbaum, MD, PhD, MPH, MFA, MMHC, JD, FCAP, FASCP, Hans Vrielink, MD, PhD, Volker Witt, MD, Fevzi Altuntas, MD

CONFERENCE DAY 2: FRIDAY, MAY 17, 2019

6:00AM – 7:00AM **5K FUN RUN** *(pre-registration with ASFA and additional registration fees required)*
Get your blood flowing and join your colleagues for a fun run starting on the Waterfront Path. *Meet in Hotel Lobby at 5:45AM*

7:00AM – 5:30PM Meeting Registration *Plaza Foyer*

BREAKFAST WITH THE EXPERT II *(first-come, first-served – arrive early for your favorite topic!)*
Join us for roundtable discussions with experts in the field on the topics below. *Grand Ballroom I*

Chairs: Antonia Hagen-Coonrad, RN & Peggy Reid, RN

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|---|---|--|
| | 1. Pediatric HPC/MNC Collections | Alicia Garcia, RN, HP(ASCP) |
| | 2. Immunotherapy and Collection of the Unstimulated Donor | Dana Atkinson, BS, MT(ASCP), CCRA & Christine Fernandez, RN, MSN, OCN |
| | 3. Staff Training & Competency | Michelle Tumbaga-Flores, BSN, RN, HP (ASCP^{CM}) |
| | 4. Apheresis in Low Resource Areas / Tele-health / Tele-medicine | Walter Linz, MD, MBA |
| | 5. Apheresis Metrics | Christina Anderson, RN, BSN, HP(ASCP) |
| 7:30AM – 8:30AM
– Concurrent Session | 6. Abstract Writing for Allied Health | Jay Raval, MD & Edwin A. Burgstaler, MT, HP(ASCP) |
| | 7. Validations | Kristen Klimisch, BS |
| | 8. Donor Recruitment and Retention | Jeannie Nielsen, BSN, RN, HP(ASCP) |
| | 9. Staff Engagement and Retention | Eileen Galvin Karr, RN, BSN, HP(ASCP), QIA |
| | 10. ECP Challenges | Laurie Wolf, BSN, RN, HP & Rebecca Nourse, RN, BSN |
| | 11. Cyto Reductions (Platelet and WBC) | Tina Ipe, MD, MPH |
| | 12. Vascular Access for Low Body Weight | Kate Douglas, RN |
| | 13. Graduate Medical Education: Got Your Entrustable Professional Activities in Apheresis Medicine Ready? | Nicole Zantek, MD & Ileana Lopez-Plaza, MD |

8:15AM – 8:45AM Continental Breakfast *Pavilion Ballroom*

CONFERENCE DAY 2: FRIDAY, MAY 17, 2019

SCIENTIFIC SYMPOSIUM: THE IMMUNE SYSTEM AND NEUROLOGIC DISORDERS: INTERSECTIONS WITH TPE

Atrium Ballroom

Chairs: Thomas Deloughery, MD & Jay Raval, MD

8:45AM – 12:15PM
– Concurrent Session

8:45AM – 9:30AM	Immunology Breakdown: General Principles and Recent Updates in Function and Dysfunction	Sean Stowell, MD, PhD
9:30AM – 10:15AM	Current and Emerging Targeted Therapies for Neuro-Immune Disorders	Jeanne Hendrickson, MD
10:15AM – 10:45AM	Break in Exhibit Hall	Atrium Ballroom
10:45AM – 11:35 AM	TPE and Alzheimer's Disease: AMBAR Study	Ziggy Szczepiorkowski, MD, PhD, FCAP & Oscar Lopez, MD
11:35AM – 12:15PM	TPE for Treatment of Neuro-Immune Disorders: Updates!	Thomas Deloughery, MD

EDUCATION SESSION IV: VASCULAR ACCESS – TIPS & TRICKS/BEST PRACTICES

Galleria

(pre-registration with ASFA required)

Chairs: Betty Doggett, AT(ASCP) & Alicia Garcia, RN, HP(ASCP)

8:45AM – 10:15AM
– Concurrent Session

This interactive session provides hands on instruction in a variety of apheresis venous access options. This year, we are pleased to feature experts in ultrasound guided peripheral access, standard dual lumen and newly FDA approved implanted venous access devices, as well as central venous catheters.

10:00AM – 4:30PM	Exhibit Hall Open	
10:15AM – 10:45AM	Break in Exhibit Hall	Atrium Ballroom

EDUCATION SESSION V: ASFA FORUM LIVE – ASK THE EXPERTS

Grand Ballroom II

Chairs: Christina Anderson, RN, BSN, HP(ASCP) & Amelework Wodajo

10:45AM – 12:15PM
– Concurrent Session

The ASFA Online Discussion Forum is a networking resource to query the community on common practices and challenges related to apheresis. Join us for a live discussion forum with expert panelists answering past forum queries and audience questions focusing on immunotherapy, quality and pediatric apheresis.

Panelists: Erica Agy, BS, Nicole AQUI, MD, Lizette Caballero, MLS(ASCP)CM, Kate Douglas, RGN, RN, RSCN, Christine Fernandez, RN, MSN, OCN, Sarita Joshi, MBBS, MD, Eneida Nemececk, MD, MS, MBA, Lindsay Palomino, BSN, RN, HP(ASCP), Lyndsey Saunier, RN, BSN, CPN, & Laurie Wolf, BSN, RN, HP

12:30PM – 1:30PM	Concurrent Corporate Lunch Symposium – Fresenius Kabi <i>(open to all registered delegates)</i>	Grand Ballroom I
12:30PM – 1:30PM	Concurrent Corporate Lunch Symposium – Alexion Pharmaceuticals <i>(open to all registered delegates)</i>	Grand Ballroom II
12:30PM – 1:30PM	Lunch in Exhibit Hall	Atrium Ballroom

ASFA ANNUAL GENERAL MEETING *(ASFA members only)*

Join us for coffee and dessert and to learn more about ASFA's activities, financials and leadership.

1:45PM – 2:30PM		Pavilion Ballroom
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ABSTRACT SESSION I: THERAPEUTIC APHERESIS

Pavilion Ballroom

ACADEMIC PROGRAM

CONFERENCE DAY 2: FRIDAY, MAY 17, 2019

Chairs: Jill Adamski, MD, PhD & Nicole Aquil, MD

2:45PM – 5:15PM
– Concurrent Session

2:45PM – 3:00PM	Therapeutic Plasma Exchange for Management of Heparin-induced Thrombocytopenia: Results of an International Practice Survey	Oluwatoyosi Onwuemene, MD, MS
3:00PM – 3:15PM	Apheresis Red Blood Cells Associated with Hemolysis during Blood Priming of the Cellex Photopheresis System	Laura Cooling, MD, MS
3:15PM – 3:30PM	Heterogeneity of Pediatric Apheresis Physician Viewpoints and Practice Patterns: A Study by the ASFA Pediatric Subcommittee	Jay Raval, MD
3:30PM – 3:45PM	Relationship of Aquaporin-4 Antibody with Presenting Sequelae in Neuromyelitis Optica Spectrum Disorder Patients Receiving Therapeutic Plasma Exchange	Tina Ipe, MD
4:15PM – 4:30PM	Mathematical Investigation of Impact of Recirculation in Patients Receiving Tandem Extracorporeal Membrane Oxygenation and Therapeutic Plasma Exchange	Charles Puelz
4:30PM – 4:45PM	Delta Hematocrit after a Red Cell Exchange Procedure is a Good Quality Assurance Indicator	Parvez Lokhandwala, MD, PhD
4:45PM – 5:00PM	Therapeutic Plasma Exchange to Manage Patients with HIT Prior to Possible Heparin Re-exposure	Chelsea Halprin, DO
5:00PM – 5:15PM	Therapeutic Plasma Exchange in Sepsis Shock Patients: A Retrospective Analysis of Clinical Outcomes	Giang Tran

ABSTRACT SESSION II: DONOR APHERESIS

Grand Ballroom I

Chair: Anand Padmanabhan, MD, PhD, QIA & YanYun Wu, MD, PhD, QIA

2:45PM – 5:15PM
– Concurrent Session

2:45PM – 3:00PM	Use of Fluorinated Plastic Catheters for Peripheral Venous Cannulation Using Ultrasound Guidance is Highly Effective in Facilitating Red Blood Cell Exchange	Jenny Riesenber, RN, BSN, VA-BC
3:00PM – 3:15PM	Is the Minimal Residual Disease (MRD) in HPC Apheresis Products in Patients with Neuroblastoma of Importance for the Prognosis; A Retrospective Data Analysis	Volker Witt, MD
3:15PM – 3:30PM	Autologous Lymphapheresis of Multiple Myeloma Patients Yields Adequate CD3+ Lymphocytes for CAR-BCMA T-cell Production	Shelley Sahu, MD
3:30PM – 3:45PM	A Prospective, Observational, Longitudinal Pilot Study of Hematological and Biochemical Changes in Healthy Donors after Automated Plateletpheresis Donation	Divya Setya
4:15PM – 4:30PM	Calcium Chloride Is Superior to Calcium Gluconate as a Calcium Replacement during Peripheral Blood Stem Cell Collections	James Sikora
4:30PM – 4:45PM	Comparative Flow Cytometry Analysis of White Blood Cells in Peripheral Blood and Collected Autologous Transplant in Non-hodgkin's Lymphoma and Myeloma Patients	Ronnie Peleg
4:45PM – 5:00PM	Dual Lumen Ports Used for Automated Red Blood Cell Exchange in Pediatric Sickle Cell Patients Allow for Shorter Procedures and with Less Procedural Complications than in Adults	Leon Su, MD
5:00PM – 5:15PM	NMDP Collection Center of Excellence Model and Scheduling Tool	Amy McGarrity

CONFERENCE DAY 2: FRIDAY, MAY 17, 2019

EDUCATION SESSION VI: THERAPEUTIC APHERESIS

Grand Ballroom II

Chairs: Ame Pousson, BSN, RN, QIA & Mike Perez, MD

2:45PM – 3:45PM – Concurrent Session	2:45PM – 3:15PM	TBV Calculations in Special Populations (Obese, Pregnant, Amputee)	Liz Rosenbaum, MD
	3:15PM – 3:45PM	TPE in Pregnancy	Antonio Torloni, MD

3:45PM – 4:15PM	Break in Exhibit Hall	Atrium Ballroom
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EDUCATION SESSION VII: ETHICAL CONSIDERATIONS IN APHERESIS

Grand Ballroom II

Chairs: Peggy Reid, RN & Rebecca Nourse, RN, BSN

4:15PM – 5:15PM – Concurrent Session	4:15PM – 5:15PM	When to Say No to Apheresis	Jan Hofmann, MD, MPH, MS & Andrew Nord, PA-C, MT(ASCP)
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4:15PM – 4:30PM	Poster Move Out	Plaza Foyer
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4:45PM – 9:00PM	Exhibit Hall Move Out	Atrium Ballroom
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Committee Meetings
*New members welcome!

5:15PM – 6:00PM	• Physicians Committee	Directors Suite	• Clinical Application Committee	Galleria North
	• Education Committee	Forum Suite	• Principles of Apheresis Technology 7th Edition Subcommittee	Galleria South

6:00PM – 8:00PM	ASFA 40TH ANNUAL MEETING CELEBRATION (pre-registration with ASFA required)	Skyline Suite I&II
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CONFERENCE DAY 3: SATURDAY, MAY 18, 2019

7:00AM – 12:30PM	Meeting Registration	Plaza Foyer
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BREAKFAST WITH THE EXPERT III (first-come, first-served – arrive early for your favorite topic!)

Join us for roundtable discussions with experts in the field on the topics below.

Grand Ballroom I

Chairs: Christine Fernandez, RN, MSN, OCN & Lan Ma, RN, MSN

7:30AM – 8:30AM – Concurrent Session	1. Anticoagulation Practices for CVC	Maria Di Mola, RN, BScN, CPL
	2. Incorporating Pediatric Apheresis into an Adult Apheresis Service	Lyndsey Saunier, RN, BSN, CPN
	3. Custom Primes for Pediatric Procedures (Albumin vs. Red Cell)	Jennifer Collins, RN
	4. How to Get Involved with Apheresis Research at ASFA	Edward Wong, MD
	5. Transfusion Medicine Basics for Apheresis Practitioners	Nabiha Huq Saifee, MD, MPH
	6. Implementation of Ultrasound Guided Peripheral Access	Betty Doggett, AT(ASCP)
	7. TPE for Nephrological Disorders	Amber Sanchez, MD
	8. Cellular Therapy Regulations	Erica Agy, BS
	9. Therapeutic Apheresis (Spanish)	Tomas Armendariz, BSN
	10. Regulatory Aspects of Immune Effector Cells Collections	Nicole Aquí, MD
	11. Apheresis in Low Resource Countries	Hans Vrieling, MD, PhD
	12. How to Develop and Implement a Sound Survey: Principles, Practices and Instruments	Quentin Eichbaum, MD, PhD, MPH, MFA, MMHC, JD, FCAP, FASCP & Matthew S. Karafin, MD MS
	13. Graduate Medical Education: Cell Therapy Education Across Specialties	Laura Connelly-Smith, MBBCh, DM

8:15AM – 8:45AM	Continental Breakfast	Pavilion Ballroom
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ACADEMIC PROGRAM

CONFERENCE DAY 3: SATURDAY, MAY 18, 2019

CLOSING SYMPOSIUM: BEST PRACTICE IN APHERESIS MEDICINE

Pavilion Ballroom

Chairs: Nancy Dunbar, MD, YanYun Wu, MD, PhD, QIA, & Tina Ipe, MD, MPH

8:45AM – 12:15PM
– Concurrent Session

8:45AM – 9:15AM	ASFA Choosing Wisely Campaign	Vishesh Chhibber, MD & Laura Connelly-Smith, MBBCh, DM
9:15AM – 9:45AM	Use of Peripheral Venous Access to Facilitate Apheresis Procedures	Anand Padmanabhan, MD, PhD, QIA
9:45AM – 10:15AM	Practice Variation in Coagulation Testing and Replacement Fluid for TPE. What Do We Know?	Nicole Zantek, MD, PhD & YanYun Wu, MD, PhD, QIA
10:15AM – 10:45AM	Break in Foyer	Plaza Foyer
10:45AM – 11:15AM	Evolving Evidence in Apheresis, ASFA Special Issue	Nancy Dunbar, MD
11:15AM – 11:45AM	A Historical and Organizational Perspective on the Transition to Value-Based Health Care	Caleb Stowell, MD
11:45AM – 12:15PM	The Establishment of the ASFA Therapeutic Apheresis Outcome Systems (TAOS), Moving to Outcome Driven Apheresis Practice	YanYun Wu, MD, PhD, QIA

EDUCATION SESSION VIII: MEMBER PROPOSAL THE DOS AND DON'TS OF TANDEM PROCEDURES

Grand Ballroom II

Chairs: Tomas Armendariz, BSN & Rebecca Nourse, RN, BSN

8:45AM – 10:15AM
– Concurrent Session

8:45AM – 9:15AM	Which Patients Need Tandem Procedures – Indications for Apheresis and ECMO	Omar Al-Ibrahim, MD
9:15AM – 9:45AM	Technical Aspects and Complications of Tandem Apheresis Procedures	Bree Kramer, DO
9:45AM – 10:15AM	Technical Aspects and Complications with Tandem Apheresis Procedures in the Pediatric Population: ECMO/CRRT/TPE	Cindy George, RN, MSN

10:15AM – 10:45AM

Break in Foyer	Grand Ballroom Foyer
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EDUCATION SESSION IX: PROGRAM MANAGEMENT AND PROFESSIONAL DEVELOPMENT

Grand Ballroom II

Chairs: Antonia Hagen-Coonradt, RN and Betty Doggett, AT(ASCP)

10:45AM – 12:15PM
– Concurrent Session

10:45AM – 11:05AM	Training, Competency and Professional Development	Lindsay Palomino, BSN, RN, HP(ASCP)
11:05AM – 11:25AM	Staffing and Patient Scheduling in New and Ongoing Apheresis Programs	Laura Collins, RN, BSN, HP (ASCP)
11:25AM – 12:15PM	Abstract Writing for Allied Health	Jay Raval, MD & Edwin Burgstaller, MT, HP(ASCP)

12:15PM – 1:30PM

POST-CONFERENCE ASFA BOARD OF DIRECTORS MEETING <i>(by invitation only)</i>	Council Suite
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SPEAKERS

REVIEW SESSION
SPEAKERS

Christina Anderson, *RN, BSN, HP(ASCP)*
 Jill Adamski, *MD, PhD*
 Nicole Aquí, *MD*
 Edwin A. Burgstaler, *MT, HP(ASCP)*
 Margaret M. Hannan, *BS, MSM/OL, CGA (ASQ)*
 Tina Ipe, *MD, MPH*
 David Lin, *MD, MHA, QIA*
 Jeannie Nielsen, *BSN, RN, HP(ASCP)*
 Jay Raval, *MD*
 Bruce Sachais, *MD, PhD, QIA*

OPENING SYMPOSIUM
SPEAKERS

Nicole Aquí, *MD*
 Pamela Becker, *MD, PhD*
 Stephanie Florence
 Peter Marks, *MD, PhD*
 Don Siegel, *PhD, MD*

FRANCIS S. MORRISON,
MD MEMORIAL LECTURE
SPEAKER

Jeffrey L. Winters, *MD*

SCIENTIFIC SYMPOSIUM
SPEAKERS

Thomas Deloughery, *MD*
 Jeanne Hendrickson, *MD*
 Oscar Lopez, *MD*
 Sean Stowell, *MD, PhD*
 Zbigniew Szczepiorkowski, *MD, PhD, FCAP*

CLOSING SYMPOSIUM
SPEAKERS

Vishesh Chhibber, *MD*
 Laura Connelly-Smith, *MBBCh, DM*
 Nancy Dunbar, *MD*
 Anand Padmanabhan, *MD, PhD, QIA*
 Caleb Stowell, *MD*
 YanYun Wu, *MD, PhD, QIA*
 Nicole Zantek, *MD, PhD*

EDUCATION SESSION
SPEAKERS

Omar Alibrahim, *MD*
 Walter Bialkowski, *PhD, MS*
 Edwin A. Burgstaler, *MT, HP(ASCP)*
 Frances Carson
 Laura Collins, *RN, BSN, HP(ASCP)*
 Thomas Deloughery, *MD*

Cindy George, *RN, MSN*
 Jan Hofmann, *MD, MPH, MS*
 Haewon Kim, *MD*
 Bree Kramer, *DO*
 Michael Linenberger, *MD, FACP*
 Andrew Nord, *PA-C, MT(ASCP)*
 Lindsay Palomino, *BSN, RN, HP(ASCP)*
 Jay Raval, *MD*
 Lizabeth Rosenbaum, *MD*
 Antonio S. Torloni, *MD*
 Nicole Zantek, *MD, PhD*

EDUCATION SESSION IV
FACILITATORS

Jill Adamski, *MD, PhD*
 Tomas Armendariz, *BSN, RN, CMSRN*
 Jasmine Blake, *BSN, RN*
 Jennifer Collins, *RN, QIA*
 Christina Cotterman, *RN, BSN, QIA*
 Siobhan Field, *BSN*
 Michelle Tumbaga-Flores, *BSN, RN, HP (ASCP^{CM})*
 Kira Geile, *MSN, RN, CPNP*
 Mindi Johnson, *RN, HP*
 Eileen Galvin Karr, *RN, BSN, HP(ASCP)*
 Rebecca Nourse, *RN, BSN, QIA(ASCP)*
 Anand Padmanabhan, *MD, PhD, QIA*
 Peggy Reid, *RN, QIA (ASCP)*
 Nina Rosché, *RN, MSN, PNP, VA-BC*
 Laurie Wolf, *BSN, RN, HP*

EDUCATION SESSION V
PANELISTS

Erica Agy, *BS*
 Nicole Aquí, *MD*
 Lizette Caballero, *MLS(ASCP)CM*
 Kate Douglas, *RGN, RN, RSCN*
 Christine Fernandez, *RN, MSN, OCN*
 Sarita Joshi, *MBBS, MD*
 Eneida Nemecek, *MD, MS, MBA*
 Lindsay Palomino, *BSN, RN, HP(ASCP)*
 Lyndsey Saunier, *RN, BSN, CPN*
 Laurie Wolf, *BSN, RN, HP*

BREAKFAST WITH THE
EXPERT

Erica Agy, *BS*
 Christina Anderson, *RN, BSN, HP(ASCP)*
 Nicole Aquí, *MD*
 Tomas Armendariz, *BSN*
 Dana Atkinson, *BS, MT(ASCP), CCRA*
 Edwin Burgstaler, *MT, HP(ASCP)*
 Jennifer Collins, *RN*
 Laura Connelly-Smith, *MBBCh, DM*
 Maria Di-Mola, *RN, BScN, CPL*
 Betty Doggett, *AT(ASCP)*
 Kate Douglas, *RN*

Quentin Eichbaum, *MD, PhD, MPH, MFA, MMHC, JD, FCAP, FASCP*
 Christine Fernandez, *RN, MSN, OCN*
 Michelle Tumbaga-Flores, *BSN, RN, HP (ASCP^{CM})*
 Alicia Garcia, *RN, HP(ASCP)*
 Kira Geile, *RN, CPNP*
 Antonia Hagan-Coonradt, *RN*
 Margaret Hannan, *BS, MSM/OL, CGA (ASQ)*
 Tina Ipe, *MD, MPH*
 Matthew Karafin, *MD, MS*
 Eileen Galvin Karr, *RN, BSN, HP(ASCP), QIA*
 Kristen Klimisch, *BS*
 David Lin, *MD, MHA, QIA*
 Michael Linenberger, *MD, FACP*
 Walter Linz, *MD, MBA*
 Ileana Lopez-Plaza, *MD*
 Jeannie Nielsen, *BSN, RN, HP(ASCP)*
 Rebecca Nourse, *RN, BSN*
 Jay Raval, *MD*
 Nabihah Huq Saifee, *MD, PhD*
 Amber Sanchez, *MD*
 Lyndsey Saunier, *RN, BSN, CPN*
 Hans Vriellink, *MD, PhD*
 Jeffrey Winters, *MD*
 Amelework Wodajo
 Laurie Wolf, *BSN, RN, HP*
 Edward Wong, *MD*
 Nicole Zantek, *MD, PhD*

PLENARY ABSTRACT
SPEAKERS

David Brust, *MD*
 Laura Cooling, *MD, MS*
 Gustaaf de Ridder, *MD, PhD*
 Ruchika Goel, *MD, MPH*
 Matthew Karafin, *MD, MS*
 Reinhard Klingel, *MD, PhD*
 Yvette Miller, *MD*
 Michelle Tumbaga-Flores, *BSN, RN, HP (ASCP^{CM})*

ORAL ABSTRACT
PRESENTERS

Lilach Bonstein, *PhD*
 Laura Cooling, *MD, MS*
 Amy McGarrity
 Chelsea Halprin, *DO*
 Tina Ipe, *MD*
 Parvez Lokhandwala, *MD, PhD*
 Oluwatoyosi Onwuemene, *MD, MS*
 Ronnie Peleg
 Charles Puelz
 Jay Raval, *MD*
 Jenny Riesenber, *RN, BSN, VA-BC*
 Shelley Sahu, *MD*
 Divya Setya
 James Sikora
 Leon Su, *MD*
 Giang Tran
 Volker Witt, *MD*

SPEAKER PRESENTATION SUMMARIES

APHERESIS REVIEW SESSION

Welcome and Introduction to Qualification in Apheresis (QIA)

Christina Anderson, RN, BSN, HP(ASCP)

Topics Covered:

1. Overview of the application and examination process
2. The various routes of eligibility
3. Recommendations on preparing for the exam

ASFA is pleased to offer the Qualification in Apheresis (QIA) in partnership with The Board of Certification (BOC) of the American Society for Clinical Pathology (ASCP). The new credential in Apheresis excellence went into effect in December of 2015. The review session will cover the steps necessary to apply, test, and become Qualified In Apheresis.

An eligible applicant does not have to be a member of ASFA or ASCP but must satisfy the requirements of at least one of the six routes of eligibility.

Basic Science in Apheresis

Jill Adamski, MD, PhD

Understanding the science of apheresis improves our ability to comprehend the rationale supporting treatment of certain indications and helps us understand the mechanics of the apheresis procedures. This knowledge benefits the apheresis practitioner when managing adverse reactions or troubleshooting unexpected events during patient treatments. During this session the participant will gain greater understanding of several important topics related to apheresis medicine. The general categories covered in this review are: blood components, immunology, coagulation, electrolytes and apheresis physics.

Apheresis Instrumentation

Edwin A. Burgstaler, MT, HP(ASCP)

Instruments are a part of apheresis. Without instruments, apheresis could not be performed. Early apheresis equipment used centrifuge separators that resembled the cream separator, but those designs have continually evolved into more sophisticated separators. Apheresis employs three principles of operation: 1) Draw and separate the blood, 2) remove the desired component, and 3) return or replace the remaining components. This is done using centrifugation, filtration, or a combination of both. Components are separated by size or specific gravity (weight). Apheresis

instruments have common features such as pumps, valves, sensors, separators, and microprocessors. Cleaning and maintenance is very important in ensuring the instruments are safe and efficient.

Selective removal therapy allows removal of specific elements in the plasma or blood and the return of the remaining components by means of filtration or adsorption. Extracorporeal photopheresis allows the collection of patient cells, photoactivation, and then return to the patient as treatment. Immunotherapy and bone marrow transplant are rising as a major form of treatment in the future and apheresis instruments are essential in collecting the initial cells, as well as provide hematopoietic progenitor cells for bone marrow transplants. A good team of apheresis instruments and operators provides a valuable resource in the practice of medicine.

Apheresis Program Management Essentials

David Lin, MD, MHA, QIA

This interactive session will draw upon real-life scenarios to cover a wide range of topics in Apheresis Program Management Essentials, including quality plan, regulations, standards, finances, recruitment, retention, training, competency, schedules, surge volumes, inventory management.

Clinical Applications: Therapeutics Apheresis

Nicole AQUI, MD

Apheresis is a general term that refers to the removal of whole blood from a donor or patient, separation into individual components with the removal of a specific component and the return of the remaining components. This session will utilize case studies to review common conditions treated with apheresis. The presentation and pathophysiology of the disease entities, as well as the specific procedure used for treatment will be discussed. This presentation will focus on leukocytapheresis, red cell exchange, and therapeutic plasma exchange. Particular emphasis will be placed on how to approach requests for apheresis and the use of the 2016 American Society for Apheresis Guidelines, including the ASFA categories and recommendation grades.

Clinical Applications: Cellular Therapy

Bruce Sachais, MD, PhD, QIA

Cellular therapies comprise a variety of treatments that use cells collected from patients and allogenic donors that can be used to treat a variety of disorders including cancer and

inherited disorders of hemoglobin. Many of these therapies require the collection of cells from the peripheral circulation, placing apheresis medicine front and center in the cell therapy revolution. This talk will provide an overview of cellular therapy, as well as discuss medical, technical and regulatory aspects relevant to apheresis professionals.

Apheresis Math

Jay Raval, MD

In this session, we will review relevant numerical facts and mathematical calculations that can be utilized for performance and monitoring of therapeutic plasma exchange, red cell exchange, apheresis stem cell collections, and LDL apheresis. By the end of the session, the participant will be able to understand these important principles and perform these routinely used calculations.

Care of the Apheresis Donor and Therapeutic Apheresis Patient

Tina Ipe, MD, MPH

Apheresis can be used for donor collections and therapeutically for patients using different instruments. This presentation will focus on providing optimal care for both the apheresis donor and therapeutic apheresis patient by highlighting measures that should be considered during the different phases of the procedure. Also, donor and patient adverse reactions and mitigation strategies will be reviewed.

Quality in Apheresis: Standards, Guidelines and Regulations

Margaret M. Hannan, BS, MSM/OL, CQA (ASQ)

It is important for apheresis practitioners to have a thorough and accurate understanding of regulations affecting apheresis programs in order to ensure donor and patient safety. During this session, the regulatory agencies having oversight of apheresis processes will be reviewed, in addition to the requirements for informed consent and donor selection (eligibility) of apheresis donors. Also covered will be a review of registration, licensure, and accreditation requisites, as well as the requirements for the training and competence for apheresis personnel.

Overview of Donor Apheresis

Jeannie Nielsen, BSN, RN, HP(ASCP)

This session will provide a general overview of donor apheresis topics, including:

- Benefits of blood donation via apheresis
- Collection technology
- Apheresis donor care

- Apheresis product types
- Donor and recipient safety
- Mobile apheresis considerations
- Applicable donor apheresis rules and regulations

OPENING SYMPOSIUM: CURRENT STATE OF CELL & GENE THERAPY

Current State of CAR-T Therapies

Don Siegel, MD, PhD

Our understanding of basic principles governing how the human immune system operates combined with novel genetic methods that can be applied in the laboratory are leading to exciting new strategies for enhancing natural cell functions in order to create personalized cell-based therapies for cancer and other disorders. In particular, the ability to turn a patient's T lymphocytes into chimeric antigen receptor-expressing T cells (CAR-Ts) has led to the creation of "serial killer cells" that are engineered to destroy that patient's malignancy in a rapid, specific, and durable manner. While successes in this area have been achieved for hematological malignancies as recognized by the very recent FDA approval of two CAR-T products for the treatment of leukemia and lymphoma, application of these technologies to patients with solid tumors presents a number of challenges that need to be addressed. This talk will review the current state of the field and describe a number of state-of-the-art approaches that are facilitating translation from the research bench into patient clinical trials focused on non-hematological cancers.

Collection for CAR-T Manufacturing

Nicole AQUI, MD

In 2017, two chimeric antigen receptor (CAR) T cell therapies were approved by the FDA – tisagenlecleucel (KYMRIA[®], Novartis) for the treatment of pediatric and young adult B-cell precursor ALL, and axicabtagene ciloleucel (YESCARTA[®], Kite) for adult patients with relapsed or refractory large B-cell lymphoma. Since that time, demand for mononuclear cell collections to provide starting material for commercial manufacturing has increased significantly. However, it is clear that manufacturing a cell-based product is very different from the synthesis of other pharmaceutical drugs. Mononuclear cell products are a snapshot of the donor; therefore, there are many factors prior to and at collection that can affect downstream parameters. Sources of variation include patient demographics, clinical indication, and prior treatment. Variation mitigation strategies have been used with varying levels of success. It is important for apheresis practitioners to have an understanding of the manufacturing process to best optimize the collection for individual patients.

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Current State of Gene Therapy for Inherited Blood Disorders

Pamela Becker, MD, PhD

The objective of gene therapy utilizing hematopoietic progenitor cells is to correct the defects associated with inherited disorders. The advances in technology have permitted durable correction of a number of blood disorders, including severe combined immunodeficiency and thalassemia, and there are promising results in a number of other conditions. The goal is to provide durable, long-lasting symptomatic correction. Initially, viral vectors were employed to transfer the normal gene, beginning with gammaretroviral vectors, more recently lentiviral vectors. The latest methods of gene transfer include electroporation and nanoparticles. Moreover, instead of introducing the full-length copies of normal genes, the latest cutting edge research is on gene editing.

The first step is procurement of the target cells, that in the case of blood disorders, can be accomplished by collection of hematopoietic stem cells from the blood or marrow. The issue for some of the disorders is that there is a paucity of normal stem cells, or challenges in the ability to collect them. This has necessitated using bone marrow, collected by bone marrow harvest, in the past. Initially approved for lymphoma and myeloma, plerixafor in combination with G-CSF is also successful in mobilizing normal peripheral blood stem cells in patients with inherited blood disorders such as thalassemia or Fanconi anemia. The stem cells are collected by leukapheresis, then manipulated in good manufacturing process (GMP) facilities. The procedures include enrichment of CD34+ cells, viral transduction for a period of time *ex vivo*, then viability and microbiology testing prior to cell infusion. To promote engraftment of the transduced cells, a preparative regimen has typically been administered, although some studies are investigating alternative approaches to promote engraftment. Thus far, all gene transfer for inherited blood disorders has been investigational, with pharmaceutical companies now taking a leading role toward FDA approval of the novel therapy.

Facilitating the Development of Cell and Gene Therapies

Peter Marks, MD, PhD

Traditionally, the role of FDA has been to ensure the safety and efficacy of medical products. Increasingly, the agency has been charged with expediting the development and availability of products, such as cell and gene therapies, that address serious and life-threatening conditions. Toward this end, Congress has provided the agency with the authority

for several expedited development programs, including breakthrough therapy and regenerative medicine advanced therapy designation. As FDA moves forward to expedite the development of cell and gene therapies for patients in need, the agency sees its role as contributing across the spectrum of product development, from fostering the development and implementation of improved manufacturing technologies, to helping to establish standards for product development, to facilitating the optimal design of innovative clinical trials for product evaluation, to streamlining the regulatory approval process to the greatest extent possible, while still maintaining our standards for safety and effectiveness.

Patient Perspective

Stephanie Florence

A short overview of my history and diagnosis as a patient, followed by the impact the apheresis team I worked with had on me during my cell collections.

EDUCATION SESSION I: DONOR APHERESIS

Impact of Frequent Apheresis Blood Donation on Bone (ALTRUYST Study)

Walter Bialkowski, PhD

Transfusion increasingly relies on blood products derived from healthy volunteers who undergo apheresis. Exposure to citrate anticoagulant during apheresis induces significant decreases in serum ionized calcium, increases in parathyroid hormone, and affects markers of bone remodeling. Though previous epidemiological work has demonstrated modest donation frequency does not impact BMD, the impact of high frequency apheresis platelet donation, with the associated upper limit of citrate burden, on BMD was unclear. ALTRUYST (NCT02655055) was a prospective, randomized, clinical trial designed to test the hypothesis that high frequency exposure to citrate through apheresis donation reduces BMD. Male donors, 18-65 years of age with no more than five previous apheresis donations, agreed to make ≥ 20 apheresis donations in the subsequent one year period. Dual-energy x-ray absorptiometry was performed at baseline, before randomization into a high frequency apheresis or no apheresis arm, and again after one year of participation. The trial was powered at 80% to detect a 3% decline in BMD at the lumbar spine. Donors in the apheresis arm completed a median of 20 apheresis donations during the one-year study period; control donors made no apheresis donations. Mean change in BMD at the lumbar spine was no different for controls (-0.002 g/cm², 95% CI [-0.020, 0.016], $p=0.78$) or apheresis donors (0.007 g/cm², CI [-0.005, 0.018], $p=0.24$). Mean change in BMD at the total hip was

no different for controls (0.002 g/cm², CI [-0.006, 0.009], p=0.63) or apheresis donors (-0.004 g/cm², CI [-0.10, 0.002], p=0.16). Tests for differences in the proportions of donors with positive or negative changes in BMD that exceeded the least significant change were no different between study arms. This trial demonstrated no significant alterations to BMD in male, high frequency apheresis platelet donors and suggests that current donation guidelines adequately protect skeletal health in these donors.

Engagement Amongst Staff Working in Donor Centers – How this Contributes to the Success of Hitting Collection Goals

Frances Carson

Does a paycheck equal staff engagement? In a time of increased restrictions and an aging donor base, optimizing donors is a must to ensure product availability for patients. Collection staff are the face of your organization and the gateway to the communities you serve. In today's world of social media, where you can reach hundreds of people in a split second, donor center staff are a key component to your organization's reputation. This session will define staff engagement, evaluate the impact staff engagement can have on production and provide ideas, tactics and practices that can help educate and motivate staff on the importance of production goals. We will also discuss paths to take when staff are not meeting expectations and review some lessons learned through this process.

FRANCIS S. MORRISON, MD MEMORIAL LECTURE

Two Decades of Therapeutic Apheresis and the American Society for Apheresis: The Good, The Bad, and The Future

Jeffrey L. Winters, MD

As the American Society for Apheresis enters its 40th year of existence and the speaker, Dr Jeffrey L Winters, enters his 20th year as an ASFA member and as an apheresis practitioner, he will examine the changes that he has witnessed in both his practice of apheresis medicine as well as ASFA. From that very first "refractory HELLP" patient he saw in 1997, Dr Winters will describe the growth and maturation of the American Society of Apheresis to the respected and influential organization it is today recounting the significant changes that have occurred in the Society's governance, operations, and capabilities. Dr. Winters will also review the maturation of the ASFA guidelines for the use of apheresis in clinical care from their initial opinion based, but evidence supported structure to the rigorous evidence based guidance of today.

In addition to the changes in ASFA, the changes in the science and technology will also be reviewed, the good and the bad, as well as the regulatory and reimbursement challenges that we face. Finally, the speaker will look to the future of apheresis medicine focusing on CAR-T cell therapy and the apheresis practitioner's role in this promising and explosively growing area.

EDUCATION SESSION II: HOT TOPICS IN APHERESIS

Managing Hemostasis/Coagulation Issues Related to TPE, from Testing, Replacement Fluid, to the Use of Anti-Coagulants

Thomas Deloughery, MD

This presentation will discuss variety of issues related to coagulation- effects of pheresis on hemostasis, the approach to a patients with coagulation defects or who needs anticoagulation, and the use of pheresis in treatment of disorders of hemostasis.

Important Considerations for RBC Exchange, Cellular Depletion, and Priming for Apheresis

Haewon Kim, MD

The primary goal of exchanging or depleting cells is to improve outcomes for patients. In disorders when apheresis therapy is indicated, the outcomes primarily depend upon a safe and effective apheresis procedure. Since apheresis instrumentation has a direct impact on the physiology of the patient undergoing apheresis, technical and physiological/ clinical considerations will be addressed. First, clinical considerations should be made to set the goals of each procedure after careful evaluation of each patient. For example, for RBCx in sickle cell disease, set the appropriate target hematocrit (Hct) and HbS levels; for WBC depletion, set the appropriate target WBC count. Second, technical considerations should be made as to how to perform the safe and effective procedure. Special considerations unique to pediatric apheresis will be discussed.

The most important factors for a safe apheresis procedure are maintenance of adequate intravascular volume and circulating red cell mass to prevent hemodynamic instability, and providing adequate oxygen delivery to tissues. During the procedure, the percent reduction of both intravascular volume and RBC volume are dependent upon the extracorporeal volume (ECV) of the equipment. ECV is dependent on the type of apheresis equipment and type of apheresis procedure. Regardless of the type of equipment, the ECV represents a larger fraction of the total blood volume for a child than for an adult. ECV is significantly larger

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with leukapheresis than with red cell/plasma exchange. Especially with WBC depletion, there is greater intravascular fluid and RBC volume reduction than with leukapheresis for cellular collection.

Prior to the procedure, one should establish the maximum ECV shift and the lowest Hct level that the individual patient can tolerate. When the ECV is predicted to be greater than the target ECV limit, modification of the procedure is indicated by custom prime using albumin, plasma or RBC. When the anticipated Hct level is lower than the target value, custom prime should be performed using blood. The formula for determining whether blood prime is indicated will be explained through a step-by-step calculation.

EDUCATION SESSION III: JOINT AABB/ASFA SESSION

Outline Current Clinical Trials, Concepts, Interventions for Treatment of Patients with Sickle Cell Disease

Michael Linenberger, MD, FACP

Significant progress has been made over the past 20 years establishing standards of care for the prophylactic and therapeutic management of patients with sickle cell anemia (SCA), including routine use of hydroxyurea for all patients and transfusion programs for selected patients. In addition to hydroxyurea, other agents that interfere with HbS polymerization and reduce red cell sickling are under investigation in experimental protocols. More recent insights to pathophysiologic mechanisms of hemolysis, vasoocclusion and tissue injury have identified specific cellular and humoral mediators of cytoadhesion, inflammation and end-organ injury that are targeted by rationally designed pharmacologic agents and antibodies in current clinical trials. The understanding that restoration of significant proportions of HbF and/or HbA can also ameliorate the acute and chronic complications of SCA have driven continued progress in allogeneic stem cell transplantation and established a foothold in gene therapy interventions with exciting preliminary data. This session will highlight this progress and review recently approved and experimental therapeutic approaches that hold great promise for patients with SCA.

Selection of Red Blood Cell Units for Simple or Exchange Transfusion for Patients with Sickle Cell Anemia

Nicole Zantek, MD

Red blood cell (RBC) transfusion is a mainstay of management for acute and chronic complications in patients with sickle cell anemia. Alloimmunization to RBC antigens can make it

a challenge to identify units for transfusion, which may delay providing this potentially life-saving therapy. While basic blood bank testing can establish the patient's blood type and detect antibodies to RBC antigens, additional testing may be required to clarify the situation. Determination of the patient's phenotype, i.e. pattern of expression of RBC antigens, through serologic and/or genetic typing can aid in the determination of antibody specificity and the potential risks to develop new antibodies. Alloimmunization can be further prevented by providing antigen matched RBC units, typically for the Rh and Kell antigens. Additional factors, such as hemoglobin S negative and age of the unit, should also be considered when selecting units in the setting of sickle cell anemia.

SCIENTIFIC SYMPOSIUM: THE IMMUNE SYSTEM AND NEUROLOGIC DISORDERS: INTERSECTIONS WITH TPE

Immunology Breakdown: General Principles and Recent Updates in Function and Dysfunction

Sean Stowell, MD, PhD

Host immunity must be able to distinguish between pathogen and host in order to provide effective protection against pathogens while avoiding injury to self. However, host immunity can occasionally lose tolerance to self, resulting in self-reactivity that can ultimately cause autoimmunity. While loss of tolerance within cellular and humoral immunity can result in autoimmune conditions, this lecture will focus on the types of immune dysfunction that may contribute to the breakdown in self-tolerance within humoral immunity. These concepts are intended to provide insight into the rationale behind different approaches used to treat autoantibody-driven autoimmune conditions.

Current and Emerging Targeted Therapies for Neuro-Immune Disorders

Jeanne Hendrickson, MD

Treatment options for neuro-immune diseases are rapidly evolving. Therapeutic plasma exchange, though often life-saving, is just one of many treatments. This presentation, which will be given from the perspective of an apheresis provider who is also the mother of a child with a neuro-immune disease, will discuss adjunctive therapies targeting CD20+ B-cells, the proteasome, CD38+ plasma cells, and complement C5, among others. The presentation will also touch on autologous stem cell transplantation for treatment refractory, relapsing multiple sclerosis.

TPE and Alzheimer's Disease: AMBAR Study

Ziggy Szczepiorkowski, MD, PhD, FCAP & Oscar Lopez, MD

Drs. Oscar Lopez and Ziggy Szczepiorkowski will present the results from the largest randomized controlled trial using apheresis in patients with mild-to-moderate Alzheimer's disease.

Alzheimer's disease (AD) is the most common cause of dementia in adults. The last symptomatic treatment for AD was approved in 2003 and no treatments have shown clear benefits since then.

Alzheimer's Management By Albumin Replacement (AMBAR) is a multicenter, randomized, patient- and rater-blinded, placebo-controlled, parallel-group, phase IIb/III trial in mild-to-moderate AD. The study evaluates plasma exchange (PE) with three different replacement volumes of albumin (Albutein®, Grifols), with or without intravenous immunoglobulin (Flebogamma® DIF, Grifols), versus placebo (sham PE). There is a first 6-week stage of therapeutic PE followed by a second 12-month stage of low-volume PE. Changes from baseline to the end of treatment periods in the ADAS-Cog (a global measure of cognition) and ADCS-ADL (a global measure of function) scores are the coprimary efficacy variables. Secondary efficacy variables include changes from baseline in specific domains, changes in plasma and cerebrospinal fluid biomarker levels and assessment of neuroimaging. Safety and tolerability are assessed.

The study enrolled 496 patients from 41 centers (19 in Spain and 22 in the USA); 347 were randomized and underwent close to 5000 PEs (25% were sham PEs). There was a trend in favor of the PE treated patients in ADS-Cog ($p=0.06$, 66% less decline) and a significant difference between PE and placebo ($p=0.03$, 52% less decline) in ADCS-ADL. The most beneficial was noted in patients with moderate dementia in both, cognitive ($p=0.05$, 61% less decline) and functional ($p=0.002$, 61% less decline) measures. Significant differences in favor of PE were observed in relevant clinical secondary endpoints and in CSF biomarkers. There were more adverse events in the PE treated group, mainly related to catheter insertion.

This innovative approach for treatment of AD showed that PE can improve cognition and function in patients with AD, especially in patients with a moderate dementia syndrome. The treatment is safe and well-tolerated by elderly individuals. Drs. Lopez and Szczepiorkowski will also discuss the future of apheresis in AD.

TPE for Treatment of Neuro-Immune Disorders: Updates!

Thomas Deloughery, MD

Despite the many advances in treatment of neuroimmunologic diseases, TPE remains a mainstay of initial and chronic therapy of many of these diseases. This talk will review the role of TPE in acute therapy of Neuroimmunological disorders and the indications for chronic therapy.

EDUCATION SESSION IV: VASCULAR ACCESS – TIPS & TRICKS/BEST PRACTICES

This interactive session provides hands on instruction in a variety of apheresis venous access options. This year, we are pleased to feature experts in ultrasound guided peripheral access, standard dual lumen and newly FDA approved Implanted Venous Access devices, as well as central venous catheters.

EDUCATION SESSION V: ASFA FORUM LIVE – ASK THE EXPERTS

The ASFA Online Discussion Forum is a networking resource to query the community on common practices and challenges related to apheresis. Join us for a live discussion forum with expert panelists answering past forum queries and audience questions focusing on immunotherapy, quality and pediatric apheresis. Panelists were specifically chosen for their expertise in the focus topics and their depth of apheresis experience. This is the first year for the ASFA Forum Live session - past feedback from conference attendees was for a dedicated opportunity to engage with subject matter experts on a broad range of apheresis-topics. We hope this session is the first of many in meeting this important delegate need. The expert panel is:

- Erica Agy, *BS* – Cellular Therapeutics Regulatory Compliance Manager, Seattle Cancer Care Alliance
- Nicole Aqui, *MD* – Chief, Transfusion and Apheresis Services, Hospital of the University of Pennsylvania
- Lizette Caballero, *MLS(ASCP)CM* – Senior Supervisor, Blood and Marrow Transplant Laboratory, University of California at San Francisco
- Kate Douglas, *RGN, RN, RSCN* – Apheresis Coordinator, BC Children's Hospital
- Christine Fernandez, *RN, MSN, OCN* – Director of Apheresis / Clinical Scientist, CRISPR Therapeutics
- Sarita Joshi, *MD, MBBS* - Medical Staff, St. Francis Hospital for Children / Children's Hospital Pittsburgh

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- Eneida Nemecek, MD, MS, MBA – Director for Pediatric Bone Marrow Transplant and Cellular Therapy Apheresis, Oregon Health Sciences University
- Lindsay Palomino, BSN, RN, HP(ASCP) – Apheresis Nurse Expert, CRISPR Therapeutics
- Lyndsey Saunier, RN, BSN, CPN – Team Lead/Charge Nurse, Children’s Hospital St. Louis
- Laurie Wolf, BSN, RN, HP(ASCP) – Staff RN, University of California at San Francisco

EDUCATION SESSION VI: THERAPEUTICS APHERESIS

TBV Calculations in Special Populations (Obese, Pregnant, Amputee)

Liz Rosenbaum, MD

During this presentation, we will review how to calculate total blood volume for typical therapeutic apheresis patients. We will discuss why certain special patient populations may require adjustments from the standard calculations and how to account for the differences.

TPE in Pregnancy

Antonio Torloni, MD

Therapeutic Apheresis during pregnancy presents a series of perceived challenges and is usually a “scary situation” for both the mother, the physician overseeing apheresis and especially the nurses who are performing the procedure, since this is an infrequent situation few and there is a lack of experience and little is available in the literature. This presentation will cover the indications for plasmapheresis leukoreduction, red cell exchange during pregnancy, taking in consideration physiology of pregnancy, fluid shifts, special consideration to fetal well-being and the role of the placenta. We will discuss the basic changes in pregnancy and how to address unusual situations based on the speaker’s 34 years of experience in all areas of apheresis.

EDUCATION SESSION VII: ETHICAL CONSIDERATIONS IN APHERESIS

When to Say No to Apheresis

Jan Hofmann, MD, MPH & Andrew Nord, PA-C, MT(ASCP)

This presentation will review the basic principles of ethical considerations in apheresis, with a focus on when and how to withhold apheresis treatment. We will discuss the practical aspects of informed consent and risk/benefit ratio, when and how to ask for an ethics consultation, setting up family meetings, and how to frame the narrative around limiting a course of apheresis treatment. We will outline the issues

involved in limiting (or not starting) apheresis treatment with specific examples of unstable or futile patients, and discuss the legal and ethical ramifications of withholding apheresis treatment. During the second half of our presentation, we will have an interactive discussion involving several clinical scenarios in which ethical and/or legal issues are present; audience participation is encouraged, but not mandatory. We will propose best practices for obtaining informed consent, deciding on appropriate/acceptable replacement fluids, and when to start/alter the treatment plan. The focus will be on pediatric, Jehovah’s Witness, unstable and futile patient populations.

CLOSING SYMPOSIUM: BEST PRACTICE IN APHERESIS MEDICINE

ASFA Choosing Wisely Campaign

Vishesh Chhibber, MD & Laura Connelly-Smith, MBBCh, DM

The Choosing Wisely® initiative of the American Board of Internal Medicine (ABIM) Foundation seeks to advance a national dialogue on avoiding unnecessary medical tests, treatments and procedures. In 2018, ASFA joined over 80 other medical specialty societies in adopting a list of five Choosing Wisely recommendations that reflect best practices in apheresis medicine. Over the last year, the ASFA Choosing Wisely Subcommittee has reviewed all Choosing Wisely recommendations from other medical specialty societies and has developed a list of the top 10 recommendations that are most relevant to apheresis. These recommendations complement our existing ASFA Choosing Wisely recommendations and should be considered by apheresis practitioners in patient management and decision-making. This session will describe the process of selection of these top 10 recommendations by the ASFA Choosing Wisely Subcommittee. We will also briefly discuss the Choosing Wisely Champions program and how this program may be used to create interventions and to design initiatives to educate providers involved in the care of apheresis patients.

Using Peripheral Access When Possible

Anand Padmanabhan, MD, PhD, QIA

The #1 item on ASFA’s Choosing Wisely recommendation reads “Do not place a central venous catheter if peripheral vein access is a safe and effective option.” Apheresis practice is varied across centers and while attempts are made to evaluate performance of apheresis therapies with the use of peripheral veins, not always is this evaluation exhaustive. This presentation will focus on the use of ultrasound to facilitate peripheral access for the performance of apheresis procedures. The speaker will provide an overview of

one way that an apheresis center has navigated the ultrasound-guided access initiative as well. The presentation will also provide additional details of critical aspects of this process with the aim of fostering best practice in this area to make procedures safer, while maintaining treatment efficacy.

When to Check Coagulation in Relevant to TPE

Nicole Zantek, MD, PhD & YanYun Wu, MD, PhD, QIA

Therapeutic plasma exchange (TPE) impacts hemostasis. Use of coagulation factor deficient replacement fluids such as 5% albumin results in reduction of coagulation factor levels. Patients may also have underlying disorders of hemostasis that increase their risk for bleeding or thrombosis. The ASFA Choosing Wisely 2018 campaign has recommendations on both use of plasma as replacement fluid and monitoring of coagulation tests during a course of treatment for patients undergoing TPE. There is currently wide variation in how apheresis medicine providers address these issues. This session will review historic and current data on the extent of reduction and recovery of coagulation factor levels by TPE. Based on survey data, disparity exists in how often laboratory testing is obtained, what tests are ordered, and what level the thresholds for action are set at and in the selection of replacement fluids to manage hemostasis in patients undergoing TPE.

Evolving Evidence in Apheresis, ASFA Special Issue

Nancy Dunbar, MD

Since 1986, the Journal of Clinical Apheresis has periodically published Guidelines on the Use of Therapeutic Apheresis (i.e. the Special Issue). The current edition (7th Special Issue) was published in 2016. The 8th special issue will be published in June of 2019. This 30-minute presentation will review the history of these guidelines with an emphasis on how the guidelines have evolved to support evidence based apheresis practice. Key changes in the 2019 Special Issue will also be reviewed. Do not miss this opportunity to get a sneak peek at the new issue!

A Historical and Organizational Perspective on the Transition to Value-Based Health Care

Caleb Stowell, MD

The impetus to measure health care results and costs of care and make them transparent has historical origins in the early 20th century. The environmental pressure of that time is recapitulated today with increasing focus on bringing competition on outcomes and cost into health care. This talk will highlight this broader shift with a particular focus on how to define value and then will explore the implications

of value based health care in a large community hospital delivery system.

Therapeutic Apheresis Outcome Systems (TAOS)

YanYun Wu, MD, PhD, QIA

The delivery of value-based care depends on our ability to measure the impact of costly medical interventions on patient outcomes. A working group of the ASFA applications committee was formed to develop an apheresis treatment-based outcomes system. In this session, we detail the process to establish a therapeutic apheresis outcomes system (TAOS) and present the outcomes system developed for de novo thrombotic thrombocytopenic purpura (TTP) treated with therapeutic plasma exchange (TPE). In addition, we will present the road map for outcome-drive apheresis medicine practice.

EDUCATION SESSION VIII: MEMBER PROPOSAL

Which Patients Need Tandem Procedures – Indications for Apheresis and ECMO

Omar Alibrahim, MD

Extracorporeal membrane oxygenation (ECMO) has been used in patients with pulmonary and/or cardiac disease. In several circumstances, patients may have to undergo simultaneous Apheresis therapies mainly therapeutic plasma exchange (TPE).

This presentation will discuss the type of patients and diseases that requires ECMO; and who, out of these patients, would potentially benefit from different Apheresis therapies. I will discuss ECMO and sepsis, focusing on pediatric patients with septic shock and TAMOF (Thrombocytopenia Associated MultiOrgan Failure). This presentation will shed light on the history behind the use of TPE in TAMOF, the most recent evidence to support its use, possible complications and recent outcomes.

Technical Aspects and Complications of Tandem Apheresis Procedures

Bree Kramer, DO

This presentation is about pediatric tandem procedures, specifically extracorporeal membrane oxygenation, therapeutic apheresis, and continuous renal replacement therapy. The talk will include technical aspects of connecting two circuits together include the advantages of different locations of connections, the options for anticoagulation, and complications that can arise from tandem procedures.

ACADEMIC PROGRAM

Technical Aspects and Complications with Tandem Apheresis Procedures in the Pediatric Population: ECMO/CRRT/TPE

Cindy George, RN, MSN

Individually, extracorporeal membrane oxygenation (ECMO), continuous renal replacement therapy (CRRT) and therapeutic plasma exchange (TPE) are all procedures used in critically ill patients presenting with a variety of diseases. When these treatments are combined and performed simultaneously in the pediatric population, the acuity level of each process increases and detailed review of each treatment is necessary to ensure the best outcomes possible.

We have been performing tandem therapies since 2014 and have completed over 160 tandem therapies. We conducted a review of 59 tandem therapies provided YTD in FY'19 to assess for safety, efficiency and feasibility.

This presentation will discuss the technical aspects and complications of providing tandem therapies in the pediatric population. Discussion will include considerations for a custom prime and fluid balance, management of anticoagulation and patient ionized calcium levels as well as techniques and rationale for location of circuit connections. We will review our safety time out process, designed to decrease the risk of unplanned events and increase the safety and successful outcomes of these treatments.

EDUCATION SESSION IX: PROGRAM MANAGEMENT AND PROFESSIONAL DEVELOPMENT

Training, Competency and Professional Development

Lindsay Palomino, BSN, RN, HP(ASCP)

Apheresis programs range from small (3-4 staff) to large (20-25 staff), have a mix of clinical and non-clinical personnel, and may need to meet a variety of training and competency requirements. Apheresis operators must be uniquely skilled and qualified to successfully perform the complex and dynamic procedures in this highly specialized field of medicine. In addition to fundamental training, the explosion of clinical trials using apheresis-derived material now puts further training demands on the clinical staff. Further, professional development of staff is crucial for employee satisfaction, retention, feeding institutional staff pipelines, and elevating any apheresis unit from average to awesome. This presentation will discuss fundamentals and challenges of implementing and maintaining training and

competency for apheresis programs, as well as professional development basics and lessons learned.

Staffing and Patient Scheduling in New and Ongoing Apheresis Programs

Laura Collins, RN, BSN, HP(ASCP)

Therapeutic Apheresis medicine is often unpredictable. The number of procedures each day can fluctuate making it difficult to utilize staff efficiently. Unplanned emergent procedures can occur at any time. This presentation will review some scheduling and staffing challenges, discuss possible solutions, and describe a cross training staffing model implemented at one institution to utilize staff more efficiently.

Abstract Writing for Allied Health

Edwin Burgstaller, MT, HP(ASCP) & Jay Raval, MD

There is a dire need for apheresis allied health professionals to engage in apheresis research and writing up the research in abstracts and manuscripts. Participation in apheresis research has many benefits to the participant such as better understanding of apheresis procedures, techniques, equipment, blood components, and patient diagnosis. ASFA benefits from their participation with the submission of abstracts, manuscripts, as well as networking sessions and lectures. This presentation gives some of the considerations for getting involved in research, examples of research projects performed by an allied health professional, definition of the scientific method, and considerations on research techniques. An actual research project is dissected into its components as an example. In addition, two award winning abstracts are dissected and presented. The purpose of this presentation is to show that there are possibilities for participation in apheresis research by allied health professionals.

POSTER ABSTRACT LISTINGS

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P-1	PREVENTATIVE THERAPEUTIC PLASMA EXCHANGE PRIOR TO RITUXIMAB FOR MIXED CRYOGLOBULINEMIA	Edward Yoon, MD
P-2	PREDICTING THE DURATION OF PERIPHERAL BLOOD STEM CELL (PBSCC) COLLECTION: MID COLLECTION CD34+ CELL COUNT IS MORE RELIABLE THAN PRE-COLLECTION COUNTS	Michal Pearl-Yafe, MD, PhD
P-3	ISCHEMIC CEREBRAL INFARCTION IN PATIENTS WITH IMMUNE THROMBOTIC THROMBOCYTOPENIC PURPURA	Raima A Memon, MD
P-4	USE OF CPDA-1 UNITS FOR RED BLOOD CELL EXCHANGE DECREASES COST AND ANTIGEN EXPOSURE IN A LARGE ACADEMIC CENTER	Lawrence Williams, MD
P-5	IMPACTS OF AGE OF RED BLOOD CELL UNITS USED WITH CHRONIC RED CELL EXCHANGE IN PATIENTS WITH SICKLE CELL DISEASE	Rance Chadwick Siniard, MD
P-6	SURVIVAL AND RELAPSE IN CALIFORNIANS WITH THROMBOTIC THROMBOCYTOPENIC PURPURA	Sarah Barnhard, MD
P-7	OPERATIONAL EFFICIENCY COMPARISON OF MULTISTEP AND CLOSED EXTRACORPOREAL PHOTOPHERESIS SYSTEMS	Wolfgang Mayer, MD
P-9	PREPARING FOR THE WORST TO ENSURE THE BEST: HIGH FIDELITY SIMULATION IN THE APHERESIS UNIT	Rose Nemece, RN, BScN, MAEd, CNeph (c)
P-10	APHERESIS PATTERNS IN THE US: 2013-2015	Nicole Dodge Zantek, MD, PhD
P-11	AUTOMATED WHOLE BLOOD EXCHANGE (WBEX) IN THE TREATMENT OF SEVERE AUTOIMMUNE HEMOLYTIC ANEMIA: A CASE REPORT OF A NOVEL AND SIMPLE PROTOCOL USING THE SPECTRA OPTIA	David Lin, MD, MHA
P-12	A RETROSPECTIVE ANALYSIS FOR THE AMICUS RED BLOOD CELL EXCHANGE PROTOCOL	Leon Su, MD
P-14	SAVING BLOOD IN ISOVOLAEMIC HAEMODILUTION-RED BLOOD CELL EXCHANGE (IHD-RBCX) IN SICKLE CELL DISEASE PATIENTS: A SINGLE CENTRE EXPERIENCE	Romeo Valeza
P-15	ALBUMIN 5% PRIME VS RBC PRIME IN PEDIATRIC PATIENTS UNDER 25 KILOS OF BODY WEIGHT FOR TPE PROCEDURES	Gabriela Marcarian
P-16	THERAPEUTIC PLASMA EXCHANGES FOR ANTIBODY MEDIATED REJECTION OF KIDNEY ALLOGRAFT – AN EVALUATION OF KIDNEY ALLOGRAFT SURVIVAL	Kevin Ha, DO
P-17	EVALUATION OF A NEW AUTOMATED RED CELL DEPLETION PROCEDURE IN ROUTINE USE	Frederick Sanderson, MD
P-18	A COMPARISON OF COBE SPECTRA AND SPECTRA OPTIA LEUKOREDUCTION EFFICIENCIES AT A LARGE UNIVERSITY HOSPITAL	Andrea Ho, MD
P-19	STUDY ON EFFECTIVENESS OF AGGRESSIVE PLASMA EXCHANGE IN COMPARISON WITH ROUTINE PLASMA EXCHANGE ON THE TREATMENT OF THE PATIENTS WITH SEVERE ACUTE TOXIC HEPATITIS	Thuan Le
P-20	ROUTINE FIBRINOGEN TESTING IS UNNECESSARY IN MYASTHENIA GRAVIS PATIENTS RECEIVING THERAPEUTIC PLASMA EXCHANGE	Kathleen Madden, MD
P-21	INCREASING UTILIZATION OF PORTS IN PATIENTS NEEDING CENTRAL VENOUS CATHETERS FOR LONG-TERM OUTPATIENT THERAPEUTIC PLASMA EXCHANGE	Betty Murray Doggett, AT (ASCP)
P-22	COMPARISON BETWEEN INTERMITTENT AND CONTINUOUS APHERESIS PROTOCOLS FOR AUTOLOGOUS NON-MOBILIZED MONONUCLEAR CELL COLLECTIONS FOR MANUFACTURING OF CHIMERIC ANTIGEN RECEPTOR T CELLS IN CHILDREN WITH HIGH-RISK LEUKEMIA	Salah Ali
P-23	IMPACT OF MOBILIZATION REGIME ON MULTIDAY COLLECTION OF PERIPHERAL BLOOD CD34+ CELLS BY LARGE VOLUME LEUKAPHERESIS	Jian Chen, MD, PhD
P-24	OPTIMIZING DURATION OF APHERESIS FOR HEMATOPOIETIC STEM CELLS IN A PEDIATRIC POPULATION: A SINGLE INSTITUTION EXPERIENCE	Brianna Empringham
P-25	SIX CASES OF THROMBOTIC MICROANGIOPATHY SECONDARY TO MALIGNANT HYPERTENSION	Manasa Reddy, MD
P-26	RED CELL INDICES HAVE HIGH SPECIFICITY FOR PREDICTING IRON DEFICIENCY IN PLATELET DONORS	Christopher Kuo, MD
P-27	THE EFFECT OF PRE-DONATION DEXAMETHASONE ON BONE MINERAL DENSITY IN HEALTHY VOLUNTEER GRANULOCYTAPHERESIS DONORS	David Gardiner Brust, MD
P-28	ELECTROLYTE AND MINERAL CHANGES AFTER GRANULOCYTAPHERESIS: CRITICAL ACUTE HYPOPHOSPHATEMIA IN A SUBSET OF DONORS	Kamille West, MD
P-29	APPROPRIATE MONITORING FOR LOW FIBRINOGEN ASSOCIATED WITH PLASMA EXCHANGE: IS THERE AN INDICATION?	Yanyun Wu, MD, PhD, QIA

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P-30	HISTORIC FORMULAS TO CALCULATE UNITS NEEDED TO PERFORM STANDARD AUTOMATED RED BLOOD CELL EXCHANGE MAY NOT BE ACCURATE FOR NEWER TECHNOLOGY	Rana Aldrees, MD
P-31	OPTIMIZATION OF INFUSIONAL CALCIUM GLUCONATE FOR PREVENTION OF HYPOCALCEMIC REACTIONS DURING THERAPEUTIC PLASMA EXCHANGE	Yong Zhao, MD
P-32	RED CELL EXCHANGE FOR IMMEDIATE AND RAPID REDUCTION OF EXTREMELY SUPRATHERAPEUTIC SIROLIMUS LEVELS	Frank A. Nizzi Jr., DO
P-33	THERAPEUTIC PLASMA EXCHANGE IN ANTI-N-METHYL-D-ASPARTATE RECEPTOR ENCEPHALITIS: A RETROSPECTIVE REVIEW	Linda J Mamone, MD
P-34	THE EFFECT OF LEUKOCYTAPHERESIS ON HEMATOCRIT AND IMPLICATIONS FOR PERI-PROCEDURAL RBC TRANSFUSION OR CIRCUIT PRIMING	Amal Hejab, MBCh
P-35	DIFFERENCE BETWEEN MNC AND CMNC IN CD34 COLLECTION WITH SPECTRA OPTIA®	Hans Vrieling, MD, PhD
P-36	UTILIZING HLA ANTIBODY DILUTIONS TO GUIDE THERAPEUTIC PLASMA EXCHANGE IN CARDIAC AMR	Edward Yoon, MD
P-37	CONCOMITANT ADSORPTIVE GRANULOCYTE AND MONOCYTE APHERESIS IN INFLAMMATORY BOWEL DISEASE PATIENTS RECEIVING INFlixIMAB DOES NOT AFFECT BLOOD LEVEL OF THE DRUG: CASE SERIES FROM INVESTIGATIONS IN CLINICAL PRACTICE SETTING	Kazuyoshi Yamashita
P-38	LOWER NEUTROPHIL COUNTS IN AUTOLOGOUS HPC, APHERESIS PRODUCTS CORRELATE WITH IMPROVED CELL VIABILITY AT THAW	Luke Plumier, MD
P-39	IMPROVING OUTCOMES WITH IMPLANTED APHERESIS CATHETER	Kathleen Gaillard
P-40	OUTCOMES ASSOCIATED WITH THE TRANSFUSION OF EXTENDED-DATE APHERESIS PLATELETS	Phillip J. DeChristopher, MD, PhD
P-41	ASSESSING THE EFFICACY OF PRETREATMENT PLASMA INFUSION IN SELECTED PATIENTS WITH ACQUIRED TTP	Jan C. Hofmann, MD, MPH, MSc
P-42	THERAPEUTIC PLASMA EXCHANGE FOR PEMBROLIZUMAB-INDUCED MYASTHENIA GRAVIS	Liz Rosenbaum, MD
P-43	THERAPEUTIC PLASMA EXCHANGE FOR NECROTIZING AUTOIMMUNE MYOPATHY	Robert Kruse, MD, PhD
P-44	REVIEW OF ANTICOAGULATION IN PEDIATRIC VORTEX PORTS	Maria Di Mola, RN BScN CPL
P-45	MODIFICATIONS TO TERUMO OPTIA THERAPEUTIC PLASMA EXCHANGE TO ACHIEVE RAPID EXCHANGE ON CARDIOPULMONARY BYPASS PRIOR TO PEDIATRIC CARDIAC TRANSPLANT	Jennifer Webb, MD MSCE
P-46	SUCCESSFUL TREATMENT OF ACUTE ANTIBODY-MEDIATED PANCREAS GRAFT REJECTION BY NONANTIGEN-SPECIFIC IMMUNOADSORPTION. A CASE REPORT	Enrique Montagud-Marrahí
P-47	THERAPEUTIC PLASMA EXCHANGE IN THE TREATMENT OF ANTI-NMDA RECEPTOR ENCEPHALITIS SECONDARY TO OVARIAN TERATOMAS IN TWO PATIENTS WITH DIFFERENT OUTCOMES	Daniela Hermelin, MD
P-48	THE EFFECT OF CD34-PRE-COUNT, GENDER, AGE, AND TYPE OF COLLECTION PROCEDURE ON COLLECTION EFFICIENCY IN STEM CELL COLLECTION FOR MULTIPLE MYELOMA	Hans Vrieling, MD, PhD
P-49	APPROPRIATE UTILIZATION OF APHERESIS: A CRITICAL REVIEW OF APHERESIS PROCEDURES DECLINED BY THE MEDICAL DIRECTOR	Thomas Zachary Thompson, MD
P-50	IMPROVED MANAGEMENT TO PREVENT INCREASED GLUCOSE LOADS IN INSULIN-DEPENDENT PATIENTS RECEIVING ANTICOAGULANT CITRATE DEXTROSE SOLUTION WHO ARE UNDERGOING AUTOLOGOUS HEMATOPOETIC STEM CELL COLLECTIONS	Daniela Hermelin, MD
P-51	ISOAGGLUTININ ADSORPTION BY ANTI-A/ANTI-B MINI-COLUMNS	Lisa Weidner
P-53	OUTCOME OF REGULAR AUTOMATED RED CELL EXCHANGE TRANSFUSION (ARCET) IN MANAGEMENT OF RECURRENT MAJOR & STUTTERING PRIAPISM (MP& SP): EXPERIENCE AT A TERTIARY CARE HOSPITAL IN CENTRAL SAUDI ARABIA	Saadiya Nazli, MBBS, BSc, QIA (ASCP) CM
P-54	MONITORING HEPARIN-INDUCED THROMBOCYTOPENIA ANTIBODY REACTIVITY IN A HEART FAILURE PATIENT UNDERGOING PLASMA EXCHANGE AND IVIG PRIOR TO HEART TRANSPLANTATION	Edward Wong, MD
P-56	IMPLEMENTATION OF BARD POWERFLOW APHERESIS PORTS AT IU HEALTH	Andrew Nord, PA-C, MT(ASCP)
P-57	INCIDENCE OF GRAFT-VERSUS-HOST DISEASE IN HAPLOIDENTICAL STEM CELL TRANSPLANTS AFTER CHANGE OF APHERESIS INSTRUMENT	Patrick DeMoss, MD
P-58	PLASMA EXCHANGE FOR PATIENTS WITH ACUTE LIVER FAILURE: A SINGLE INSTITUTION CASE SERIES OF SEVEN PATIENTS	Jason Kendelhardt, MD

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P-59	ACUTE FLACCID MYELITIS IMPROVEMENT AFTER PLASMAPHERESIS	Bree Kramer, DO
P-60	ALLOIMMUNIZATION FOLLOWING RED BLOOD CELL EXCHANGE IN A PATIENT WITH RH(D) VARIANT	David Allison, DO
P-61	BLOOD VOLUME ESTIMATES BY OPTIAR ARE ACCEPTABLE BY FIBRINOGEN REDUCTION KINETICS FOR PEDIATRIC PATIENTS ABOVE 25 KG	Poyyapakkam Srivaths, MD
P-62	TREATMENT OF PRIMARY FOCAL SEGMENTAL GLOMERULOSCLEROSIS ASSOCIATED NEPHROTIC SYNDROME WITH LDL-APHERESIS	Hollie Lynn Benson, MT (AMT)
P-63	THE EFFECT OF SERUM 25-OH-D LEVELS ON PERIPHERAL BLOOD HEMATOPOIETIC STEM CELL MOBILIZATION IN PATIENTS WITH HEMATOLOGICAL MALIGNANCY	Tugce Nur Yigenoglu
P-64	MANAGING ALLERGIC REACTIONS DURING TPE FOR TTP: SUCCESS OF OCTAPLAS IN THE TREATMENT OF TWO PATIENTS	Nicholas Bandarenko, MD
P-65	COSTS TO TREAT MYASTHENIC CRISIS: IVIG VERSUS TPE	Hans Vrielink, MD, PhD
P-66	PLATELET DEPLETION - UTILIZATION OF OPTIA (CMNC) FOR PLATELET DEPLETION	Isagani Marquez
P-67	PERFORMANCE CHARACTERISTICS OF THE BARD POWERFLOW® IMPLANTABLE APHERESIS IV PORT: EARLY EXPERIENCE	Danielle Garrity, RN, BSN
P-68	INCREASING PERIPHERAL VASCULAR ACCESS USE IN ALLOGENEIC STEM CELL DONORS USING A CONTINUOUS IMPROVEMENT MODEL	Kristin Ricci, MD
P-69	STICK THAT VEIN, DON'T GIVE UP: A SINGLE CENTER STRATEGY TO INCREASE UTILIZATION OF PERIPHERAL VEIN FOR APHERESIS	Amir Abdipour, MD
P-70	DEVELOPMENT OF SYSTEMATIC EDUCATIONAL METHODS WITH A PICTORIAL SERIES OF GRADUALLY INCREASING COMPLEXITY AND REAL LIKE SITUATIONAL CHALLENGE QUESTIONS FOR TEACHING COMPLEX PHYSICS AND MATHEMATICAL PRINCIPLES IN APHERESIS AND THEIR EFFECTIVE SANDWICH-SOCRATIC EDUCATIONAL APPROACH	Saptarshi Mandal, MD
P-71	THERAPEUTIC PLASMA EXCHANGE USING THE BUTTONHOLE TECHNIQUE FOR CANNULATING AN ARTERIOVENOUS FISTULA	Patrick DeMoss, MD
P-72	AN INSTITUTIONAL REVIEW OF THE SPECTRA OPTIA FOR USE IN THERAPEUTIC PLATELETAPHERESIS PROCEDURES	Margaret Jones DiGuardo, MD
P-73	THERAPEUTIC PLASMA EXCHANGE IN LEFT VENTRICULAR ASSIST DEVICE PATIENT WITH HEPARIN INDUCED THROMBOCYTOPENIA	Mary A. Morrow-Sutton, MD
P-75	ANATOMY OF AN EXCHANGE TRANSFUSION PROGRAM FOR ADULTS WITH SICKLE CELL DISEASE	Natasha Wright, DNP, CRNP
P-76	MANUAL EXCHANGE IN INFANT ACUTE LYMPHOBLASTIC LEUKEMIA-RELATED HYPERLEUKOCYTOSIS: A CASE REPORT AND ARGUMENT FOR CONSIDERATION	Linda J Mamone, MD
P-77	PLASMAPHERESIS FOR THE TREATMENT OF IATROGENIC ANTITHROMBIN EXCESS: A CASE REPORT	Eric Destrampe, DO
P-78	RISK OF URINARY TRACT INFECTIONS INCREASES IN WOMEN UNDERGOING THERAPEUTIC PLASMA EXCHANGE	Amber Sanchez, MD
P-79	BARD POWERFLOW VERSUS TIDALPORT: A COMPARISON OF INLET FLOW RATES	Tomas Armendariz, BSN, RN, CMSRN
P-81	AUTOLOGOUS HEMATOPOIETIC STEM CELL COLLECTION UTILIZATION IN PATIENTS WITH PLASMA CELL MYELOMA	Grace F. Monis, MD, PhD
P-82	PHYSICIAN INTERPRETATION OF EQUIVOCAL RESULTS FOR AHUS GENETIC TESTING VARIES GREATLY AND IS FREQUENTLY AT ODDS WITH LABORATORY VIEWS	Bjorn Stromsness
P-83	ROLE OF THERAPEUTIC PLASMA EXCHANGE IN MANAGEMENT OF PROLONGED AND SEVERE MYASTHENIC EXACERBATION	Kara Leigh Roncin, MD
P-84	"IT TAKES A VILLAGE": OBTAINING INSURANCE AUTHORIZATION FOR OUTPATIENT APHERESIS PROCEDURES	Amber Sanchez, MD
P-85	USE OF THERAPEUTIC PLASMA EXCHANGE IN THE TREATMENT OF ACUTE FLACCID MYELITIS IN A THIRTEEN YEAR OLD MALE WITH RECENT FEVER AND UPPER RESPIRATORY ILLNESS	Mary A. Morrow-Sutton, MD
P-86	ROBUST REVIEWS... IT'S CRITICAL! ENSURING EMPHASIS ON COMPETENCY IN CRITICAL FUNCTIONS THROUGH ROBUST REVIEWS	Lyndsey Saunier, RN, BSN, CPN
P-87	SINGLE CENTER EVALUATION OF THE QUALITY OF STANDARD CALCIUM REPLACEMENT IN PEDIATRIC THERAPEUTIC PLASMA EXCHANGE	Maria Di Mola, RN, BScN, CPL

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P-89	PLASMAPHERESIS IN THE TREATMENT OF REFRACTORY AUTOIMMUNE PULMONARY ALVEOLAR PROTEINOSIS: A CASE REPORT	Eric Destrampe, DO
P-90	SUCCESSFUL REDUCTION OF PLASMA FREE- HEMOGLOBIN USING THERAPEUTIC PLASMA EXCHANGE IN A NEONATE : A CASE REPORT	Raja Dandamudi, MD
P-91	A SINGLE CENTER RETROSPECTIVE REVIEW OF PHOTOPHERESIS TREATMENT COMPLETION UTILIZING A ONE TO ONE NURSING CARE MODEL	Kelly Modugno, BSN, RN
P-92	USE OF PLASMA EXCHANGE (TPE) IN DERMATOMYOSITIS WITH LUNG INVOLVEMENT (ANTISYNTHEASE SYNDROME); SMALL CASE SERIES	Aleh Bobr, MD
P-93	SUCCESSFUL TREATMENT OF MYASTHENIA GRAVIS CRISIS WITH CONCOMITANT IMMUNE THROMBOCYTOPENIA PURPURA	James Kim, MD
P-95	LEUKOCYTE DEPLETION IN PERTUSSIS	Daniel K. Noland, MD, FCAP
P-96	AUDIT OF CALCIUM USE DURING PLASMAPHERESIS IN AN IRISH THERAPEUTIC APHERESIS SERVICE (TAS)	Joan Power, MD
P-98	A RARE CASE OF HYPERVISCOSITY SYNDROME IN IGG MULTIPLE MYELOMA WITH ELEVATED RHEUMATOID FACTOR	Esther Soundar, MD, MPH
P-99	RED BLOOD CELL EXCHANGE THERAPY COMPLIANCE IMPROVES CLINICAL OUTCOMES AND QUALITY OF LIFE FOR PATIENTS WITH SICKLE CELL DISEASE	Kimberly C. Ward, MSN, RN, BMTCN, QIA

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Robert Weinstein, MD (2003)
Ronald Gilcher, MD (2004)
Haewon Kim, MD (2005)
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Nicholas Bandarenko, MD (2007)
Marisa Marques, MD (2008)
Christine Fernandez, RN, BSN, OCN (2009)
Mark Brecher, MD (2010)
Dobri Kiprof, MD (2011)
Chester Andrzejewski, MD (2012)
Jeffrey L. Winters, MD (2013)
Edward Snyder, MD (2014)
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Robert Weinstein, MD (2005)
Thomas Price, MD (2006)
Gail Rock, PhD, MD (2007)
Edwin Taft, MD (2008)
Edwin A. Burgstaler, MT, HP(ASCP) (2009)
Bruce McLeod, MD (2010)
Mark Brecher, MD (2011)
Zbigniew Szczepiorkowski, MD (2012)
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Jeffrey L. Winters, MD (2014)
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D. Gladden, RN (2003)
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Betty Kong, MT(ASCP), HP (2005)
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Sandy Maresh (1992)
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Jocelyn Guillermo, RN (1994)
Joleen Pavelka, RN, BSN (1995)
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Edwin A. Burgstaler, MT, HP(ASCP) (2012)
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Wilmore Webley, MS, BA, MT (2003)
Sudha Sinha, MD (2005)
Haifeng M. Wu, MD (2006)
Anand Padmanabhan, MD, PhD, QIA (2007)
Yasuko Erickson, MD (2008)
Elie Richa, MD (2009)
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Neil Shah, MD (2011)
Neil Shah, MD (2012)
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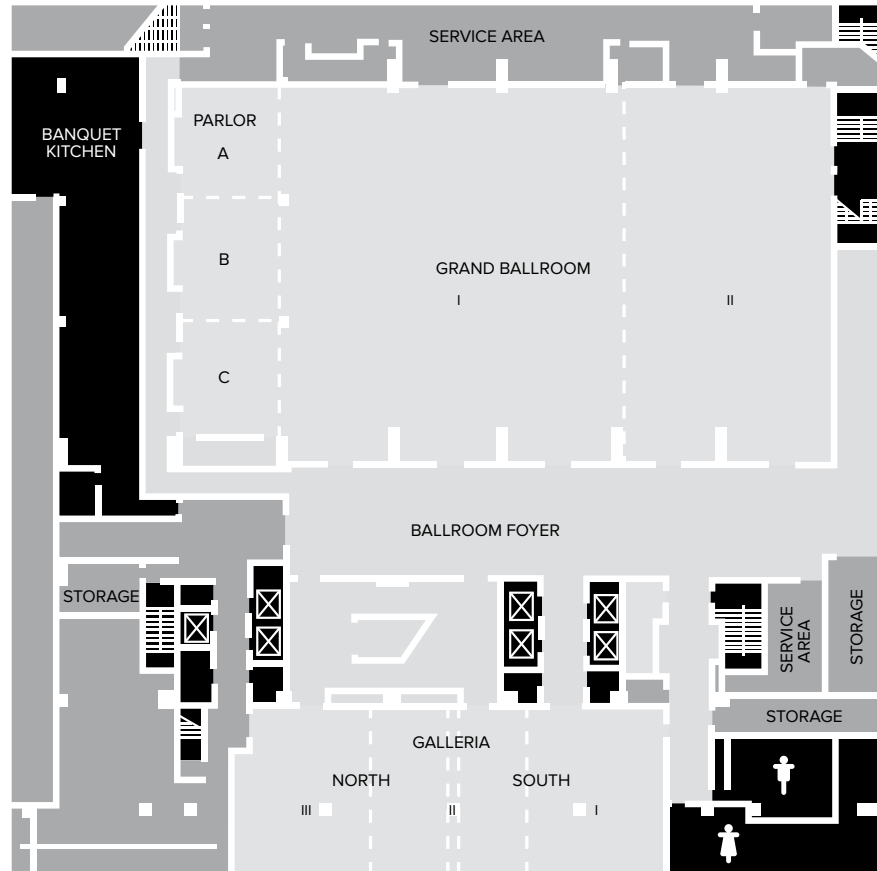
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THINGS TO DO IN PORTLAND

POWELL'S CITY OF BOOKS

From humble storefront beginnings in 1971, Powell's has grown into a Portland landmark and one of the world's great bookstores. Covering an entire city block, Powell's City of Books contains more than 1 million books in 3,500 different sections.

LAN SU CHINESE GARDEN

A year-round wonder, the Lan Su Chinese Garden is an authentically built Ming Dynasty style garden. Covered walkways, bridges, pavilions and a richly planted landscape frame a picturesque lake in this urban oasis built by artisans from Portland's sister city of Suzhou. Public and audio tours are available, and the garden's teahouse serves light snacks and traditional teas.

VOODOO DOUGHNUT

Located in Old Town's popular nightlife district, Voodoo Doughnut is one of the city's most unusual and delicious culinary destinations. The doughnuts, topped with creative ingredients such as bacon, Captain Crunch and Oreos, are almost as fun to look at as they are to eat.

STUMPTOWN COFFEE ROASTERS

In 1999, Stumptown Coffee took Portland caffeine lovers by the storm. What started as a single roastery on Southeast Division Street quickly expanded to the rest of Portland and, more recently, New York City and Seattle. Stumptown emphasizes direct trade and highlights the different flavor profiles of coffee varietals. While grabbing a latte from Stumptown may take longer than going to Starbucks, the gorgeous latte art, not to mention the singularly Portland vibe, will more than make up for it.

OREGON ZOO

At the Oregon Zoo, you can travel around the world in an afternoon, observing more than 2,000 animals from around the world, from agouti (a rainforest rodent) to zebra. This conservation zoo is renowned for its Asian elephant breeding program.

OREGON MUSEUM OF SCIENCE AND INDUSTRY (OMSI)

One of the nation's leading science museums, OMSI is 219,000 square feet of brain-powered fun. Five enormous halls bring science to life with hundreds of interactive exhibits and displays. You can experience an earthquake, take part in live lab demonstrations, see a movie in the Empirical Theater, explore the universe in a world-class planetarium and even tour a real submarine.

PITTOCK MANSION

High in the West Hills of Portland, Pittock Mansion soars 1,000 feet above the city's skyline. A century-old symbol of Portland's dramatic transformation from a small lumber town to a bustling city, it's an architectural wonder.

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