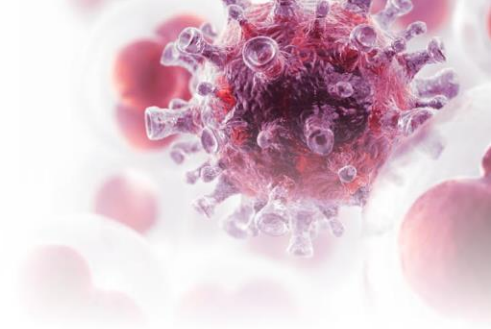


CAR-T AND THE RISE OF CELLICON VALLEY

PHILADELPHIA // AGENDA

MAY 9-10, 2019



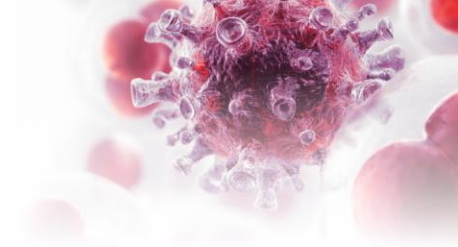
Thursday, May 9, 2019

- 2:00 pm** **Tour Center for Advanced Cellular Therapies**
Perelman Center for Advanced Medicine
Tour registration is closed; capacity has been reached.
- 3:30 pm** **Check in**
Irvine Auditorium
- 4:30 pm** **Welcome**
Irvine Main Auditorium
Amy Gutmann, PhD // University of Pennsylvania
- 4:35 pm** **KEYNOTE ADDRESS**
Irvine Main Auditorium
Cellular Immunotherapy of Cancer Targeting Unique Cancer Antigens
Steven A Rosenberg, MD, PhD // National Cancer Institute
- 5:35 pm** **CAR T Cells: A 20-year overnight sensation**
Carl H June, MD // Penn Medicine
- 6:05 pm** **Cocktail Reception**
Perelman Quadrangle
- 7:05 pm** **Dinner Reception**
The University of Pennsylvania Museum of Archaeology and Anthropology

Friday, May 10, 2019

- 7:30 am** **Check-in and Breakfast**
Irvine Auditorium and Perelman Quadrangle
- 8:30 am** **Welcome**
Irvine Main Auditorium
J Larry Jameson, MD, PhD // University of Pennsylvania
Madeline Bell // Children's Hospital of Philadelphia

CAR-T AND THE RISE OF CELLICON VALLEY PHILADELPHIA



GENERAL SESSION 1: Current Application of CAR-T Cells- Matching to the Patient Journey Irvine Main Auditorium

Moderator: David L Porter, MD // Penn Medicine

8:45 am Perspectives on Driving CARs Into Uncharted Territory
Carl H June, MD // Penn Medicine

8:50 am CD19 CAR T Cells: The first big success
David Maloney, MD, PhD // Fred Hutchinson Cancer
Research Center/Seattle Cancer Care Alliance // University of Washington

9:05 am Anti-BCMA CAR T Cells for Multiple Myeloma
James N Kochenderfer, MD // National Cancer Institute

9:20 am Immunotherapy for Brain Tumors-Using CAR T-Cell Platform for Glioblastoma
Donald O'Rourke, MD // Penn Medicine

9:35 am Discussion

GENERAL SESSION 2: Improving the CAR-T Landscape: Toxicity management and increasing responses

Irvine Main Auditorium

Moderator: Stephan A Grupp, MD, PhD // Children's Hospital of Philadelphia

9:45 am CAR T Cell Toxicity Management in Acute Leukemia
Shannon L Maude, MD, PhD // Children's Hospital of Philadelphia

10:00 am CARTOX and Toxicity Management in Lymphoma
Sattva S Neelapu, MD // The University of Texas MD Anderson Cancer Center

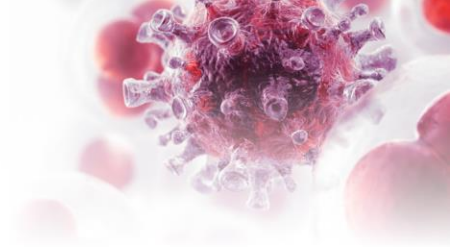
10:15 am Next Generation CAR T Cell Therapy for Cancer
Renier J Brentjens, MD, PhD // Memorial Sloan Kettering Cancer Center

10:30 am Discussion

Concurrent Sessions begin at 11:00 am – See pages following General Session listings

CAR-T AND THE RISE OF CELLICON VALLEY

PHILADELPHIA



GENERAL SESSION 3: Overcoming Resistance/Novel CAR Strategies

Irvine Main Auditorium

Moderator: Carl H June, MD // Penn Medicine

10:45 am **Proteomic Strategies for Identifying Resistance Mechanisms and Therapeutic Targets in Lymphoma**

Megan S Lim, MD, PhD // Penn Medicine

11:00 am **Control of Cellular Immunotherapy**

Travis S Young, PhD // California institute for Biomedical Research

11:15 am **T-cell Engineering for Cancer Applications-the University College London experience**

Martin Pule, MB BCH, MRCP // University College London

11:30 am **Discussion**

GENERAL SESSION 4: Gene Delivery and Editing for Better CARs

Irvine Main Auditorium

Moderator: Michael C Milone, MD, PhD // Penn Medicine

12:00 pm **Gene Editing in Lymphocytes for Novel Immune Applications**

David J Rawlings, MD // Seattle Children's Research Institute/Seattle Children's Hospital/ University of Washington

12:15 pm **Engineering Human T Cell Circuitry with CRISPR**

Alexander Marson, MD, PhD // University of California, San Francisco

12:30 pm **Genetic Engineering Using ARCUS Nucleases for Production of Fit-for-Purpose CAR T Cells**

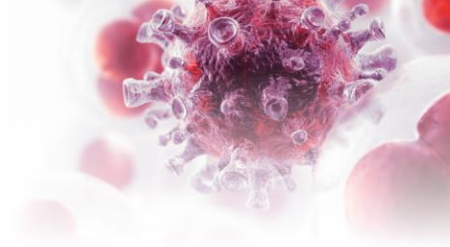
Bruce McCreedy, PhD // Precision Bioscience

12:45 pm **Discussion**

1:00 pm **Lunch**

Perelman Quadrangle

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GENERAL SESSION 5: New Targets and Technologies Allogeneic and Treg CAR Ts

Irvine Main Auditorium

Moderator: Marco Ruella, MD // Penn Medicine

2:00 pm **The Battle Between Self and Non-Self: Treading the fine line with better T Cells**

Carl H June, MD // Penn Medicine

2:15 pm **Expanding the Functionality of CAR T Cells Through Meditope Engineering**

Christine Brown, PhD // City of Hope

2:30 pm **Vaccine Boosting CAR T Cells Through the Chimeric Antigen Receptor**

Darrell J Irvine, PhD // Massachusetts Institute of Technology

2:45 pm **Discussion**

GENERAL SESSION 6: Allogeneic CAR-Ts and NKs: The future is now?

Irvine Main Auditorium

Moderator: Stephen J Schuster, MD // Penn Medicine

3:00 pm **The Application of Off-the-Shelf CAR NK Cells in Cancer**

Katy Rezvani, MD, PhD // The University of Texas MD Anderson Cancer Center

3:15 pm **Creating the Shift from Autologous to Allogeneic CAR T-cell Therapy**

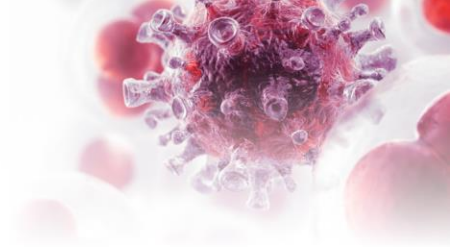
David Chang MD, PhD // Allogene Therapeutics

3:30 pm **Non-Gene Edited Approaches to CAR T-cell Therapy**

David Gilham // Celyad

3:45 pm **Discussion**

CAR-T AND THE RISE OF CELLICON VALLEY PHILADELPHIA



GENERAL SESSION 7: Globalization of CAR T Cell Therapies and the Ethics of Patient Access

Irvine Main Auditorium

4:00 pm

Moderator: Usman “Oz” Azam, MD // Tmunity Therapeutics

Panel: Ezekiel J Emanuel, MD, PhD // University of Pennsylvania

Noelle V Frey, MD // Penn Medicine

Kristen Harrington-Smith // Novartis

Toni Liu // Cellular Biomedicine Group

Shannon L Maude, MD, PhD // Children’s Hospital of Philadelphia

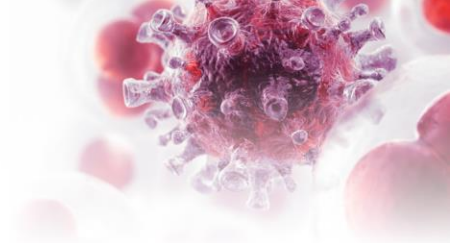
4:45 pm

Discussion

5:00 pm

Adjourn

CAR-T AND THE RISE OF CELLICON VALLEY PHILADELPHIA



CONCURRENT SESSIONS 11:00 am – 4:00 pm

Lunch 1:00 pm – 2:00 pm – Perelman Quadrangle

Concurrent Session: PEDS/BMT 1

Bodek Lounge – Houston Hall, first floor

Moderator – Timothy S Olson, MD, PhD

11:00 am SCT for Bone Marrow Failure

Timothy S Olson, MD, PhD // Children's Hospital of Philadelphia

11:15 am SCT for Immunodeficiency

Nancy J Bunin, MD // Children's Hospital of Philadelphia

11:30 am GVHD Biomarkers

John E Levine, MD, MS // Icahn School of Medicine at Mount Sinai

11:45 am Discussion

Concurrent Session: PEDS/BMT 2

Bodek Lounge – Houston Hall, first floor

Moderator – Amanda DiNofia, MD, MSCE

12:00 pm Gene Edited SCT for SS and Thal

Janet L Kwiatkowski, MD, MSCE // Children's Hospital of Philadelphia

12:15 pm Anti-Viral Cell Therapy

Michael Keller, MD // Children's National Health System

12:30 pm CAR T Cells in Special Populations

Amanda DiNofia, MD, MSCE // Children's Hospital of Philadelphia

12:45 pm Discussion

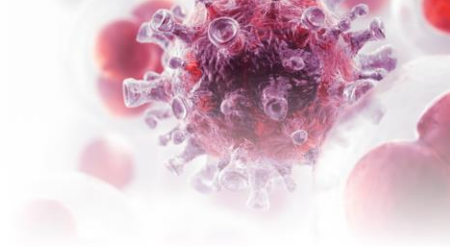
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View Presentations: **PennMedicine.org/CART2019**

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CAR-T AND THE RISE OF CELLICON VALLEY PHILADELPHIA



Concurrent Session: Logistics of Cell Collection and Chain of Custody

Bodek Lounge – Houston Hall, first floor

Moderator – Nicole Alyse Aqui, MD

2:00 pm **Nuts and Bolts of Apheresis**
Nicole Alyse Aqui, MD // Penn Medicine

2:15 pm **Processing Apheresis Cell Production from Collection to Send Off**
Yongping Wang, MD, PhD // Children’s Hospital of Philadelphia

2:30 pm **Apheresis Product Heterogeneity in Solid Tumor T Cell Therapies**
Raymond Luke // Adaptimmune

2:45 pm **Discussion**

Concurrent Session: Financial Implications for Health Systems

Bodek Lounge – Houston Hall, first floor

Moderator – Kevin B Mahoney, MBA

3:00 pm **Cancer Moonshot: How do we pay for the fuel?**
Kevin B Mahoney, MBA // Penn Medicine

3:20 pm **The View from the Ground Floor: The cost of care for cellular therapy**
Richard T Maziarz, MD // Oregon Health & Science University

3:40 pm **Discussion**

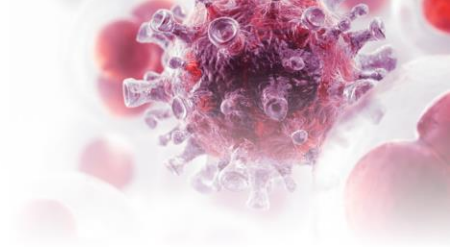
Concurrent Session: Cell Manufacturing and Analytics

Hall of Flags – Houston Hall, ground floor

Moderator – Bruce L Levine, PhD

11:00 am **“Be All That You Can Be” – Getting T Cells Into Shape and When to Make the Cut**
Bruce L Levine, PhD // Penn Medicine

CAR-T AND THE RISE OF CELLICON VALLEY PHILADELPHIA



11:15 am T Cell Fitness

David M Barrett, MD, PhD // Children's Hospital of Philadelphia

11:30 am Strategies and Methodologies for Selecting and Implementing New Technologies for Cell Therapy Processes

Greg Russotti // Celgene

11:45 am Discussion

Concurrent Session: Gene Therapy IND's and Regulatory Considerations

Hall of Flags – Houston Hall, ground floor

Moderator – Anne Chew, PhD // Penn Medicine

12:00 pm Approval of CD19-Directed CAR T cells: FDA licensure of new cell-based gene therapy products with a challenging safety profile

Roger J Kurlander, MD // FDA

12:15 pm CART IND Development in the Pharma Space

Christina Coughlin, MD, PhD // Tmunity

12:30 pm Cellular Gene Therapies: Regulatory Challenges

Viera Muzithras // Celgene

12:45 pm Discussion

Concurrent Session: Unconventional CAR's

Hall of Flags – Houston Hall, ground floor

Moderator – Michael C Milone, MD, PhD

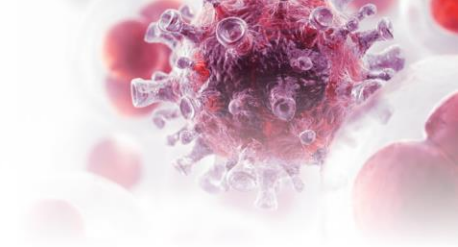
2:00 pm CAAR's, CAR Tregs, CAR Macs

Michael C Milone, MD, PhD // Penn Medicine

2:15 pm New Targets and Technologies Allogeneic and Treg CAR-Ts

Megan Levings, PhD // BC Children's Hospital Research Institute

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2:30 pm **Chimeric Antigen Receptor Macrophages for Cancer Immunotherapy**
Michael Klichinsky, PharmD, PhD

2:45 pm **Discussion**

Concurrent Session: Nursing Care - Adults

Amado Recital Hall - Irvine first floor

Moderator – Patricia Mangan, MSN, CRNP

11:00 am **Chronic Graft Versus Host Disease: An Unmet Clinical Need**
Linda Perry, PA-C // Penn Medicine

12:00 pm **Patient Management from Identification Through Treatment**
Elizabeth Weber, RN, BSN // Penn Medicine

2:00 pm **Managing Side Effects of CAR T-cell Therapy**
Heather Difilippo, MSN, CRNP // Penn Medicine

3:00 pm **What's Next? Multiple Myeloma CAR T-cell Therapy, Auto Transplant
and Future Therapies**
Patricia Mangan, MSN, CRNP // Penn Medicine

Concurrent Session: Nursing Care – Pediatric

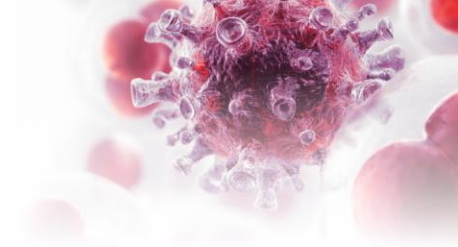
Cafe 58 - Irvine Auditorium, first floor

2:00 pm- **Management and Future Directions for ALL**
3:00 pm **Moderator-** Laura Smith, MSN, CRNP // Children's Hospital of Philadelphia

2:00 pm **Nursing Considerations and Management of Pediatric Patients Receiving CAR
T-cell Therapy for ALL**
Diane Baniewicz, MSN, CRNP // Children's Hospital of Philadelphia

2:30 pm **Future Directions of CAR T-cell Therapy for Pediatric ALL Patients**
Colleen Callahan, MSN, CRNP // Children's Hospital of Philadelphia

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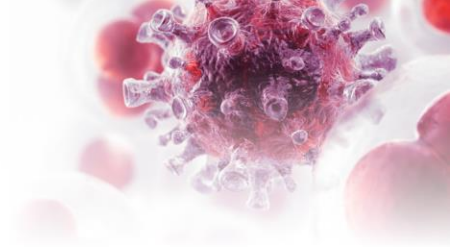


- 3:00 pm- 3:45 pm** **Special Considerations for Pediatric Populations**
Moderator- Anne Wohlschlaeger, MSN, CRNP //Children's Hospital of Philadelphia
- 3:00 pm** **Minor Donor Collections and Issues that Arise: Assent vs consent**
Elizabeth A Worster, MSN, CRNP //Children's Hospital of Philadelphia
- 3:20 pm** **Ethical Issues in Pediatric BMT as Demonstrated by Two Unique Case Studies**
Kimberly L Venella, MSN, CRNP //Children's Hospital of Philadelphia

Evaluation and Post-Test

Please complete the post-test, and evaluation. In six months, you will receive an email asking you to complete an on-line survey which will evaluate changes in practice you have implemented based on the conference objectives.

CAR-T AND THE RISE OF CELLICON VALLEY PHILADELPHIA



OVERVIEW

CAR T represents a turning point in the history of human medicine, a genuine revolution in our approach to disease within the field of cellular therapy and transplant. The recent approval of chimeric antigen receptor (CAR) T cells offers even patients with highly chemo-refractory hematologic malignancies additional treatment options. World experts in CAR T-cellular therapy and hematopoietic stem cell transplantation (HSCT) have been assembled to discuss the development and implementation of this therapy and to weigh in on current applications, best practices, novel strategies and future developments for CAR T cells.

LEARNING OBJECTIVES

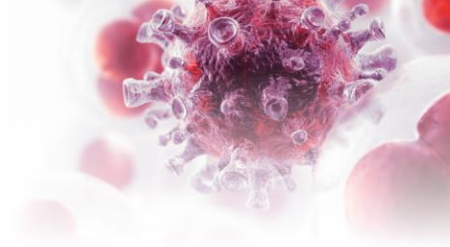
Upon completion of this course, participants should be able to:

- Identify current application of CAR T-cell therapy including: accurate patient selection, manufacture and treatment administration
- Implement guidelines for patient management of toxicities of CAR T-cell therapies including cytokinerelease syndrome
- List factors in overcoming resistance with novel CAR strategies
- Describe gene delivery and editing for CARs
- Identify the latest targets and technologies for CARs
- Identify the current status of globalization of CAR T-cell therapies and identify principles in ethics of patient access
- Describe current approaches in treatment and supportive care for hematopoietic stem cell transplantation (HSCT) in pediatric patients with nonmalignant conditions
- Identify the latest evidence based standards in nursing care resulting from the recent advances in cell therapy and transplant

WHO SHOULD ATTEND

These activities are intended for both adult and pediatric hematologist-oncologists, medical oncologists, hematologists, hematopathologists, immunologists, immunobiologists, transfusion medicine, researchers and other healthcare professionals interested in the latest advances in the use of CAR T-cell therapy. Fellows, nurses, nurse practitioners, physician assistants, and other healthcare professionals interested in the treatment of adult and pediatric patients with cellular therapies are also invited to attend.

CAR-T AND THE RISE OF CELLICON VALLEY PHILADELPHIA



Acknowledgement of Commercial Support

Penn's Abramson Cancer Center, Children's Hospital of Philadelphia and Penn's Center for Cellular Immunotherapies gratefully acknowledge the following organizations for providing independent medical educational grants for this symposium:

Allogene Therapeutics
Celgene Corporation
Incyte
Novartis
Tmunity

Penn's Abramson Cancer Center, Children's Hospital of Philadelphia and Penn's Center for Cellular Immunotherapies gratefully acknowledge these exhibiting organizations for their support:

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Agios	Legend Biotech
Aldeveron	Maxcyte
Amgen	Miltenyi Biotec
Avantor	Novartis
Beckman Coulter Life Sciences	Nucleus Biologics
Celgene	Oxford Biomedica
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