

AUGUST 7-9, 2024

HILTON PHILADELPHIA AT PENN'S LANDING | PHILADELPHIA, PA + VIRTUAL



CAMBRIDGE HEALTHTECH INSTITUTE'S 12TH ANNUAL

Immuno-Oncology

SUMMIT 2024 Connecting the Immunotherapy Community to Drive Innovation and Collaboration

Conference Programs

Wed, August 7 & Thurs AM, August 8

Thurs PM, August 8 & Fri, August 9




Bispecific Antibodies for Cancer Immunotherapy



Emerging Tech for IO Targeting and Discovery




Advances in CART Therapy



Emerging Cell-Based Immunotherapies



Therapeutic Cancer Vaccines



Tumor Microenvironment

PLUS! 2 Dinner Short Courses



Register Early for Maximum Savings!

Plenary Keynote

Keynote Speakers



Bruce L. Levine, PhD
 Professor, Cancer Gene Therapy
 University of Pennsylvania



Andrew Tsourkas, PhD
 Professor, Bioengineering
 University of Pennsylvania



Rakesh Dixit, PhD
 President & CEO
 Bionavigen



Robert Meehan, MD
 Senior Director, Clinical Development
 Moderna



M. Celeste Simon, PhD
 Scientific Director
 Abramson Family Cancer Research Institute

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#IOSummit Immuno-OncologySummit.com



About the Event

In the past 11 years, CHI's Immuno-Oncology Summit has grown into the premier annual meeting for advancing biotherapeutics. This summit offers a comprehensive 3-day 6-track program, exploring bi- and multispecific biotherapeutics; highlighting the latest developments in CAR T therapies, emerging targeting technologies, personalized immunotherapy, and cell-based immunotherapies; and addressing the challenges of overcoming tumor resistance. Attendees delve into predictive models, tumor microenvironment modulation, and the increasing role of AI and machine learning in cancer immunology. The summit serves as a vital platform for exchanging high-quality research and fostering collaboration in the ever-evolving landscape of immuno-oncology.

Every year, 375+ thought leaders and influencers from industry and academia converge to showcase the latest breakthroughs in cancer immunology. Beyond the enriching discussions, the dynamic venue fosters extensive networking and collaborative opportunities, empowering teams to focus on their objectives.

We look forward to seeing you in Philadelphia this August 7-9, where we convene to advance our understanding of the immune system, propelling the development of next-generation immunotherapies to optimize patient treatment outcomes.



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Plenary Keynote Session

THURSDAY, AUGUST 8, 2024 | 11:25 AM

11:20 am Organizer's Remarks

Nikki Cerniuk, Conference Producer, Cambridge Innovation Institute



11:25 Accelerating Cell and Gene Therapy: Current Challenges and Future Directions

Bruce L. Levine, PhD, Barbara & Edward Netter Professor, Cancer Gene Therapy, Center for Cellular Immunotherapies, University of Pennsylvania

New designs for genetically modified T cells include switches and potency enhancements that will be required for targeting solid tumors. Determining the critical quality attributes, dose, potency, and anticipating pharmacokinetics of a living, dividing drug presents unique challenges. Improving patient access depends not only on scientific progress in targeting, gene modification, and cellular manipulation, but also on meeting automation, engineering, clinical site onboarding, and health policy challenges.

11:55 Transition to Lunch

12:05 pm LUNCHEON PRESENTATION: HCAb Harbour Mice Advances Multispecific, CAR T, and ADC Therapy in a New Level



Jiyong Zhang, Vice President Head of Business Development, Business Development, Nona Biosciences
HCAb Harbour Mice of Nona Biosciences is the first fully human Heavy Chain only Antibody (HCAb) transgenic mice platform in history. It is optimized, clinically validated with global patent

protection. Fully human heavy chain only Antibodies have high affinity and have excellent biophysical characteristics. They are the ideal antibody format to generate a multitude of next-generation therapeutic modalities, including bispecific/multispecific antibodies, ADCs, CAR-based, and mRNA therapeutics.

12:35 pm PLENARY KEYNOTE PANEL: Presentation to be Announced



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DINNER SHORT COURSES*

THURSDAY, AUGUST 8, 2024 | 5:30 - 8:00 PM | IN-PERSON ONLY

Our short courses are designed to be instructional, interactive, and provide in-depth information on a specific topic. They allow for one-on-one interaction between the participants and instructors to facilitate the explanation of the more technical aspects that would otherwise not be covered during our main presentations.

SC1: *In vitro* Assays for Immuno-Oncology Candidate Selection and Optimization



Instructor:

Martijn Vlaming, PhD, Team Lead, Immuno-Oncology, ImmunXperts

Increased understanding of the tumor microenvironment boosts therapeutic interest and highlights the importance of developing innovative *in vitro* bioassays. Combining live cell imaging, multiplex cytokine production analysis, and flow cytometry provides pivotal information on the functional dynamics of candidate therapeutics. T cell, myeloid, NK cell, and neutrophil-based assays each require specific considerations. Besides premium reagents, high-quality, primary human immune cells are essential for *in vitro* bioassays with superior robustness and reproducibility.

SC2: Optimizing Solid Tumor Targeting and Penetration

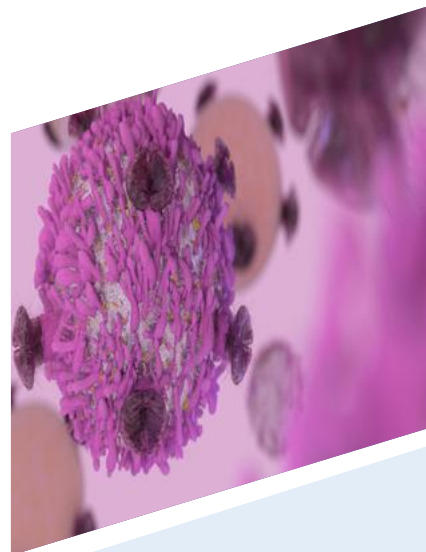


Instructor:

Tony R. Arulanandam, DVM, PhD, Senior Vice President and Head R&D, Cytovia Therapeutics, Co-Founder NextPoint Therapeutics

This short course delves into the complexities of treating solid tumors in the realm of immunotherapy, tackling challenges, and presenting viable solutions. We examine techniques for crafting therapies with enhanced precision targeting, modifying the tumor microenvironment (TME) to facilitate deeper penetration, and addressing the hurdles posed by tumor heterogeneity. You will also gain insights into the clinical applications of these strategies and explore emerging technologies with promising prospects for the future.

*Separate registration required



SPONSORSHIP & EXHIBIT OPPORTUNITIES

SPONSORSHIP & EXHIBIT OPPORTUNITIES

CII offers comprehensive packages that can be customized to your budget and objectives. Sponsorship allows you to achieve your goals before, during, and long after the event. Packages may include presentations, exhibit space, and branding, as well as the use of delegate lists. Signing on early will maximize your exposure to qualified decision-makers and drive traffic to your website in the coming months.

Podium Presentations – Available within Main Agenda!

Showcase your solutions to a guaranteed, targeted audience through a 15- or 30-minute presentation during a specific program, breakfast, lunch, or a pre-conference workshop. Package includes exhibit space, on-site branding, and access to cooperative marketing efforts by CII. Lunches are delivered to attendees who are already seated in the main session room. Presentations will sell out quickly! Sign on early to secure your talk.

Invitation-Only VIP Dinner/Hospitality Suite

Select specific delegates from the pre-registration list to attend a private function at an upscale restaurant or a reception at the hotel. From extending the invitations, to venue suggestions, CII will deliver your prospects and help you make the most of this invaluable opportunity.

One-to-One Meetings

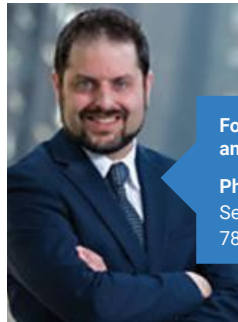
CII will set up 6-8 in-person meetings during the conference, based on your selections from the advance registration list. Our staff will handle invites, confirmations, and reminders, and walk the guest over to the meeting area. This package also includes a meeting space at the venue, complimentary main-conference registrations, branding, an 8'x10' exhibit space, and more.

Exhibit

Exhibitors will enjoy facilitated networking opportunities with qualified delegates, making it the perfect platform to launch a new product, collect feedback, and generate new leads. Exhibit space sells out quickly, so reserve yours today!

Additional branding and promotional opportunities are available, including:

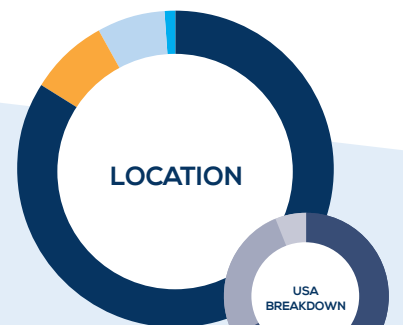
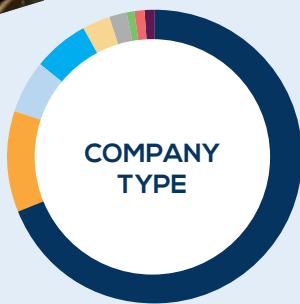
- » Conference Tote Bags
- » Literature Distribution (Tote Bag Insert or Chair Drop)
- » Badge Lanyards
- » Conference Materials Advertisement
- » Padfolios and More...



For more information regarding exhibit and sponsorship, please contact:

Phillip Zakim-Yacouby
Senior Business Development Manager
781.247.1815 | philzy@cambridgeinnovationinstitute.com

2023 Attendee Demographics





WEDNESDAY, AUGUST 7

7:30 am Registration and Morning Coffee**8:30 Organizer's Remarks****ENGINEERING FOR IMPACT: IMPROVING EFFICACY AND TARGETING****8:35 Chairperson's Opening Remarks***Even Walseng, PhD, Associate Director Biologics Engineering, Biologics Engineering, AstraZeneca***8:40 Creating Cancer-Specific Neoantigens by Design and Targeting Them with Bispecific Antibodies***Takamitsu Hattori, PhD, Research Assistant Professor, Biochemistry and Molecular Pharmacology, NYU Grossman School of Medicine*

Oncogenic mutants of intracellular proteins are attractive sources of tumor-specific neoantigens presented by MHC. However, recognizing minimal differences between oncomutations and their wild-type counterparts is challenging. We have established the HapImmune technology that exploits covalent inhibitors to create distinct neoantigens presented by MHC that can be targeted with antibodies. HapImmune bispecific antibodies selectively and potently kill drug-treated but drug-resistant cancer cells, thereby uniting targeted and immune therapies.

9:10 PEGylated Bispecific ADC: Better Tumor Penetration and Lower Toxicity*Sam Shu-Min Liu, PhD, CEO & President, Princeton Enduring Biotech, Inc.*

JY108 is a pegylation bispecific T cell engager targeting CD3 and CD19. It was developed to address the limitations of blinatumomab, the first FDA-approved bispecific T cell engager (BiTE). JY108 has shown to exert potent cytotoxicity against target cells without extra cytokine release. The extended elimination half-life of JY108 overcomes the administration challenge of blinatumomab. JY108 is a promising therapeutic alternative to treat patients with CD19+ non-Hodgkin's lymphoma.

9:40 A Bispecific T Cell Engager Targeting Mesothelin That Is Not Blocked by Shed Mesothelin*Ira H. Pastan, PhD, Co-Chief, Head & Distinguished Investigator, Molecular Biology, National Cancer Institute (NCI), National Institutes of Health*

Mesothelin is a popular target for antibody-based therapies. MSLN is shed in large amounts due to various proteases. Most anti-MSLN antibodies bind to shed MSLN, preventing their binding to target cells. Mab 15B6 binds to the protease sensitive region, does not bind to shed MSLN, and makes very active bispecific T cell engagers that produce complete remissions in mice, and whose tumor activity is not blocked by shed MSLN.

BREAKOUT DISCUSSIONS & COFFEE**10:10 Networking Coffee Break with Breakout Discussions**

Breakout Discussions are informal, moderated discussions, allowing participants to exchange ideas and experiences and develop future collaborations around a focused topic. Each discussion will be led by a facilitator who keeps the discussion on track and the group engaged. To get the most out of this format, please come prepared to share examples from your work, be a part of a collective, problem-solving session, and participate in active idea sharing. Please visit the Breakout Discussions page on the conference website for a complete listing of topics and descriptions.

10:55 Design Meets Biology: Importance of Avidity versus Geometry in Engineering T Cell Engagers*Even Walseng, PhD, Associate Director Biologics Engineering, Biologics Engineering, AstraZeneca*

T cell engagers are rapidly transforming cancer care. Adapting these biotherapeutics to target the massive intracellular proteome has been a critical goal for improving cancer treatment—but it is challenging due to low cell-surface density antigen presentation.

Here, we evaluate the interplay of geometry and valency on T cell engager bioactivity and demonstrate that geometry plays an important role in efficiently targeting low density cell-surface pMHC, rather than avidity.

11:25 Rapid, Site-Specific Labeling of "off-the-Shelf" and Native Serum Autoantibodies with T Cell-Redirecting Domains*Andrew Tsourkas, PhD, Co-Director, Center for Targeted Therapeutics and Translational Nanomedicine; Professor, Bioengineering, University of Pennsylvania*

A simple method was developed for the site-specific, covalent attachment of T cell-redirecting domains to any Immunoglobulin G (IgG) antibody. By labeling antibodies isolated from immunocompetent mice inoculated with NALM-6 leukemia cells, we show it is possible to generate T cell-redirecting autoantibodies that act as an effective therapeutic against NALM-6 tumors. The incorporation of autoantibodies into a bispecific antibody format presents a new paradigm in personalized cancer treatment.

11:55 Presentation to be Announced**12:25 pm Transition to Lunch****12:35 Luncheon Presentation (Sponsorship Opportunity Available) or Enjoy Lunch on Your Own****1:05 Session Break****1:45 Chairperson's Remarks***Nathan D. Trinklein, PhD, Co-Founder and President, Rondo Therapeutics***1:50 Tritce Co-stim: A Novel Trispecific T Cell Engager Platform, With Integrated CD28 Costimulation, Engineered to Widen the Therapeutic Window for Treatment of Poorly Infiltrated Tumors***Nicole Afacan, PhD, Principal Scientist, Therapeutics Research, Zymeworks Inc***TRANSFORMING SOLID TUMOR TREATMENT****2:20 Targeting Solid Tumors through Novel Bispecific Strategies***Nathan D. Trinklein, PhD, Co-Founder and President, Rondo Therapeutics*

The fight against solid tumors demands innovative solutions. This study explores a novel bispecific antibody for increased solid tumor penetration. By simultaneously targeting tumor-specific antigens and immune cells, bispecific antibodies hold immense potential to overcome treatment resistance and unleash a more potent anti-tumor immune response.

2:50 Sponsored Presentation (Opportunity Available)**3:20 Grand Opening Refreshment Break in the Exhibit Hall with Poster Viewing****4:00 Infiltrating Solid Tumor Stromal Barriers with Trispecific Antibodies***Maria P. MacWilliams, PhD, Vice President Molecular Biology, Tavotek Biotherapeutics*

TAVO412, a humanized multispecific antibody with two distinct anti-EGFR nanobody domains, an anti-cMET Fab arm, and an anti-VEGF ScFv, was designed to treat patients with gastric, TNBC, and pancreatic cancer subtypes that are driven by abnormal EGFR signaling, increased cMET activation, and VEGF-linked angiogenesis. The engineered Fc domain provides enhanced effector function, antibody-like pharmacokinetic profile, and enables single cell line CMC. US FDA IND and China NMPA have been approved.

4:30 Therapeutic Potency of SAIL66—A Next-Generation T Cell Engager—Against CLDN6-Positive Tumors*Naoki Kimura, PhD, Scientist, Discovery Pharmacology, Chugai Pharmaceutical Co. Ltd.*

The development of conventional T cell engagers (TCEs) for solid tumors presents two challenges: the risk of "on-target, off-tumor toxicity" and T cell dysfunction associated with signal 1-dependent T cell activation. We generated SAIL66, a tri-specific antibody





BISPECIFIC ANTIBODIES FOR CANCER IMMUNOTHERAPY

Bispecific Breakthroughs: Reimagining Design, Manufacturing, & Safety

against CLDN6/CD3/CD137. By applying our proprietary next-generation TCE technology (Dual-Ig), SAIL66 activates both signal 1 and signal 2, therefore appropriately activating T cells and demonstrating more potent anti-tumor effects than conventional TCEs.

5:00 ABBV-184: A Novel Survivin-Specific CD3 Bispecific T Cell Engager Is Active against Both Solid Tumor and Hematological Malignancies

Feng Dong, PhD, Principal Research Scientist II, Foundational Immunology, AbbVie Cambridge Research Center

ABBV-184, a novel TCR/anti-CD3 bispecific composed of a highly selective soluble TCR that binds a peptide derived from the oncogene survivin (BIRC5) bound to the Class I MHC allele human leukocyte antigen (HLA)-A2:01 expressed on tumor cells, and a specific binder to the CD3 receptor on T cells. ABBV-184 is an attractive clinical candidate for the treatment of patients with AML and NSCLC.

5:30 Welcome Reception in the Exhibit Hall with Poster Viewing

dosing frequency (Q3W) for clinical trials. Our findings shed light on the complex PK/PD dynamics of PD1/IL15 TaCk, informing dose selection and dosing frequency for clinical evaluation.

9:05 Talk Title to be Announced

Mike Schmidt, Chief Scientific Officer, Alloy Therapeutics



9:35 Coffee Break in the Exhibit Hall with Poster Viewing

10:15 Benefit and Risk Considerations for Dose Optimization in Immuno-Oncology

Mohamed Elmeliegy, PhD, Director Clinical Pharmacology, Clinical Pharmacology, Pfizer Inc.

This presentation explores dose optimization, a strategy to find the ideal balance. By meticulously evaluating response and side effects across different doses, researchers aim to pinpoint the sweet spot that maximizes effectiveness while minimizing adverse reactions, potentially leading to better outcomes and improved tolerability for patients.

10:45 PANEL DISCUSSION: Bringing Safety to the Clinic

Moderator: Maria P. MacWilliams, PhD, Vice President Molecular Biology, Tavotek Biotherapeutics

- Optimizing bispecific antibody design to minimize off-target effects and potential for cytokine release syndrome.
- Designing robust preclinical studies to evaluate potential safety risks
- Strategies for improving clinical trial design and monitoring
- Management of adverse events
- Addressing potential long-term safety concerns and immunogenicity risks associated with bispecific antibodies.

Panelists:

Rakesh Dixit, PhD, President & CEO, Bionavigen

Sam Shu-Min Liu, PhD, CEO & President, Princeton Enduring Biotech, Inc.

Rajbharan Yadav, PhD, Senior Principal Scientist, Development Sciences, Genentech

11:15 Transition to Plenary Keynote

WOMEN IN SCIENCE MEET-UP

6:10 pm Women in Science Meet-Up IN-PERSON ONLY



Theresa M. LaVallee, PhD, Chief Development Officer, Coherus Biosciences
Theresa L. Whiteside, PhD, Professor, Pathology, Immunology & Otolaryngology, UPMC Hillman Cancer Center, University of Pittsburgh Cancer Institute

- Which woman has been an inspiration/mentor to you in your career?
- How can we encourage young women in science?
- What were your biggest work-life balance challenges and what have you done to manage these?

6:30 Close of Day

THURSDAY, AUGUST 8

7:30 am Registration and Morning Coffee

PROMISE TO PRACTICE: OPTIMIZING SAFETY AND CLINICAL PERFORMANCE

8:00 Chairperson's Remarks

Rakesh Dixit, PhD, President & CEO, Bionavigen



8:05 KEYNOTE PRESENTATION: Safety Challenges of Bispecific Immunotherapeutics and Antibody-Drug Conjugates

Rakesh Dixit, PhD, President & CEO, Bionavigen

Bispecific immunotherapeutic biologics offer tremendous potential to improve clinical efficacy and safety by targeting two different antigens in immune and tumor cells. In this presentation, we will provide an in-depth analysis of the safety challenges associated with bispecific immunotherapies and the rapidly rising use of antibody-drug conjugates, offering a comprehensive understanding of these complex issues.

8:35 Translational PK/PD and the First-in-Human Dose Selection of a PD1/IL15 Targeted Cytokine: An Engineered Recombinant Fusion Protein for Cancer Immunotherapy

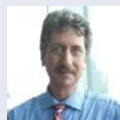
Rajbharan Yadav, PhD, Senior Principal Scientist, Development Sciences, Genentech

We engineered a targeted cytokine, PD1/IL15 TaCk, combining an anti-PD-1 antibody with engineered IL-15. This construct delivers IL-15 signaling selectively to PD-1-expressing lymphocytes. Using the MABEL approach and studying PK/PD effects in cynomolgus monkeys, we determined the first-in-human (FIH) dose (0.003 mg/kg) and

PLENARY KEYNOTE SESSION

11:20 Organizer's Remarks

Nikki Cerniuk, Conference Producer, Cambridge Innovation Institute



11:30 Accelerating Cell and Gene Therapy: Current Challenges and Future Directions

Bruce L. Levine, PhD, Barbara & Edward Netter Professor, Cancer Gene Therapy, Center for Cellular Immunotherapies, University of Pennsylvania

New designs for genetically modified T cells include switches and potency enhancements that will be required for targeting solid tumors. Determining the critical quality attributes, dose, potency, and anticipating pharmacokinetics of a living, dividing drug presents unique challenges. Improving patient access depends not only on scientific progress in targeting, gene modification, and cellular manipulation, but also on meeting automation, engineering, clinical site onboarding, and health policy challenges.

12:00 pm Transition to Lunch



12:15 LUNCHEON PRESENTATION:

HCAb Harbour Mice Advances Multispecific, CAR T, and ADC Therapy to a New Level

Jiyong Zhang, PhD, Vice President Head of Business Development, Business Development, Nona Biosciences





7TH ANNUAL

AUGUST 7-8

BISPECIFIC ANTIBODIES FOR CANCER IMMUNOTHERAPY

Bispecific Breakthroughs: Reimagining Design, Manufacturing, & Safety

HCAb Harbour Mice of Nona Biosciences is the first fully human heavy chain only antibody (HCAb) transgenic mice platform in history. It is optimized, clinically validated with global patent protection. Fully human heavy chain only antibodies have high affinity and have excellent biophysical characteristics. They are the ideal antibody format to generate a multitude of next-generation therapeutic modalities, including bispecific/multispecific antibodies, ADCs, CAR-based, and mRNA therapeutics.



12:45 Talk Title to be Announced

Jakob Dupont, MD, Executive Partner, R&D, Sofinnova Investments

1:20 Close of Bispecific Antibodies for Cancer Immunotherapy Conference



**WEDNESDAY, AUGUST 7****7:30 am Registration and Morning Coffee****8:30 Organizer's Remarks****PRECISION BY DESIGN: ENGINEERING THE NEXT-GENERATION OF CAR T****8:35 Chairperson's Opening Remarks***Saba Ghassemi, PhD, Research Assistant Professor Pathology & Lab Medicine, Center for Cellular Immunotherapies, University of Pennsylvania***8:40 FEATURED PRESENTATION: Disruption of SUV39H1-Mediated H3K9 Methylation Sustains CAR T Cell Function***Sjoukje van der Stegen, PhD, Research Fellow, Memorial Sloan Kettering Cancer Center*

CAR T cell therapy holds promise for cancer treatment, but maintaining CAR T cell function over time remains a challenge. This study investigates a method to improve CAR T cell persistence and function. By altering a specific molecular process (H3K9 methylation), the research demonstrates enhanced anti-tumor activity. This approach has the potential to improve the efficacy of CAR T cell therapies.

9:10 Type I Interferon Blockade Enhances Transduction Efficiency and Efficacy of Non-Activated CAR T Cells*Saba Ghassemi, PhD, Research Assistant Professor Pathology & Lab Medicine, Center for Cellular Immunotherapies, University of Pennsylvania*

Chimeric antigen receptor (CAR) T cell therapy shows promise against cancer. However, current methods activate T cells before engineering them, potentially limiting their effectiveness. This study explores blocking type I interferon, a natural immune response, during CAR T cell engineering of non-activated T cells. This approach aims to improve the efficiency of CAR integration and potentially lead to more potent CAR T cells for cancer treatment.

9:40 Hybrid CAR T Cells with Engineered Fuel Selectivity*Roderick O'Connor, PhD, Research Assistant Professor, Pathology & Lab Medicine, University of Pennsylvania*

Here we show that Glut5-expressing CAR T cells have superior anti-tumor function to standard CAR Ts in a xenograft model of AML. Fructose supports maximal glycolytic capacity and ATP replenishment rates in GLUT5-expressing T cells cultured in glucose-free conditions. As fructose is abundant within the bone marrow of AML patients, our findings have immediate translational relevance, indicating that fructose can be repurposed as fuel for CAR T cells against AML.

BREAKOUT DISCUSSIONS & COFFEE**10:10 Networking Coffee Break with Breakout Discussions**

Breakout Discussions are informal, moderated discussions, allowing participants to exchange ideas and experiences and develop future collaborations around a focused topic. Each discussion will be led by a facilitator who keeps the discussion on track and the group engaged. To get the most out of this format, please come prepared to share examples from your work, be a part of a collective, problem-solving session, and participate in active idea sharing. Please visit the Breakout Discussions page on the conference website for a complete listing of topics and descriptions.

10:55 Engineering Macrophages for Cancer Immunotherapy: CAR M, *in vivo* Reprogramming, and Beyond*Michael Klichinsky, PharmD, PhD, Co-Founder & Chief Scientific Officer, Carisma Therapeutics*

Current cancer immunotherapy struggles to harness the full potential of macrophages. This study explores innovative methods to engineer macrophages for tumor destruction. Investigating CAR M (Chimeric Antigen Receptor Macrophages) and *in vivo* reprogramming, the research proposes a revolutionary approach to rewire macrophages, leveraging their abilities to fight cancer.

11:25 Precision Targeting of the Malignant Clone in B Cell Malignancies Using Chimeric Antigen Receptor T Cells against the Clonotypic IGHV4-34 B Cell Receptor*Ivan J. Cohen, PhD, Postdoc Researcher, Hematology & Oncology, University of Pennsylvania*

This study proposes a precision medicine approach for B-cell malignancies using CAR T cells. It involves engineering T cells with a CAR that recognizes the IGHV4-34 B Cell Receptor (BCR). This targeted therapy aims to specifically eliminate malignant B-cells while sparing healthy B-cells, potentially leading to a more effective and safer treatment for B-cell malignancies.

11:55 Presentation to be Announced

The BioXp system speeds up personalized cancer therapy by automating DNA and mRNA synthesis for TCR and CAR T therapies. It cuts development time from 45 to 12-13 days, making screening 3X faster. This change speeds up treatment delivery and improves outcomes.

12:25 pm Transition to Lunch**12:35 Luncheon Presentation (Sponsorship Opportunity Available) or Enjoy Lunch on Your Own****1:05 Session Break****INNOVATIVE SOLUTIONS FOR IMPROVED CAR T OUTCOMES****1:45 Chairperson's Remarks***Christopher L. Murriel, PhD, Vice President, Preclinical Pharmacology, Arsenal Biosciences***1:50 Engineering Next-Gen CAR T Cells: Leveraging mRNA for Optimal T Cell Design***Stella Khiew, PhD, Senior Scientist, Merck & Co.*

Current CAR T cell therapy is constantly evolving. This study explores the use of messenger RNA (mRNA) technology for engineering next-generation CAR T cells. By harnessing mRNA's unique properties, researchers aim to create CAR T cells with improved functionality and efficacy, potentially leading to a new wave of more potent cancer treatments.

2:20 *In Vivo* Generation of CAR T and NK Cells Utilizing an Engineered Lentiviral Vector*Philip R. Johnson, MD, CEO, Interius Biotherapeutics*

Current CAR T cell therapy often involves extracting and engineering T cells outside the body. This study explores *in vivo* generation of CAR T cells. This approach aims to create CAR T cells directly within a patient, potentially leading to improved therapeutic outcomes in immuno-oncology (IO) by overcoming limitations associated with *ex vivo* manipulation.

2:50 Sponsored Presentation (Opportunity Available)**3:20 Grand Opening Refreshment Break in the Exhibit Hall with Poster Viewing****4:00 Next-Generation CAR T Cells for the Immunotherapy of High-Grade Glioma***Giedre Krenciute, PhD, Assistant Professor, Bone Marrow Transplantation & Cellular Therapy, St. Jude Children's Research Hospital*

Current CAR T cell therapy for aggressive brain tumors shows limited success. This presentation explores next-generation CAR T cells, engineered with improved functionalities. These advancements aim to address challenges like immunosuppressive environments and antigen escape, potentially leading to more efficient targeting and destruction of gliomas.





ADVANCES IN CAR T THERAPY

Breaking Barriers in CAR T: Engineering, Synergistic Strategies, & Beyond

4:30 CARvac: A Novel Platform Harnessing a Combined “Tumor-Vaccine” Effect

Greg Deener, CEO, iCell Gene Therapeutics

A new platform, CARvac, emerges in the fight against cancer. This approach combines CAR T cell therapy with a vaccine-like effect. CARvac's design aims to both directly target tumors with engineered immune cells and stimulate a broader anti-cancer immune response, potentially leading to a more robust and effective treatment strategy.

5:00 Targeting Solid Tumors with Integrated Circuit T Cells

Christopher L. Murriel, PhD, Vice President, Preclinical Pharmacology, Arsenal Biosciences

Traditional T cell therapies for solid tumors face limitations. This study explores Integrated Circuit T Cells (ICTs), a novel engineered T cell design. ICTs incorporate multiple functionalities, overcoming challenges that use conventional methods. This research investigates ICTs as a promising approach for achieving more precise and effective targeting of solid tumors.

5:30 Welcome Reception in the Exhibit Hall with Poster Viewing

WOMEN IN SCIENCE MEET-UP

6:10 pm Women in Science Meet-Up IN-PERSON ONLY



Theresa M. LaVallee, PhD, Chief Development Officer, Coherus Biosciences
Theresa L. Whiteside, PhD, Professor, Pathology, Immunology & Otolaryngology, UPMC Hillman Cancer Center, University of Pittsburgh Cancer Institute

- Which woman has been an inspiration/mentor to you in your career?
- How can we encourage young women in science?
- What were your biggest work-life balance challenges and what have you done to manage these?

6:30 Close of Day

THURSDAY, AUGUST 8

7:30 am Registration and Morning Coffee

SAFETY AND BEYOND: CLINICAL CONSIDERATIONS AND ADVANCEMENTS

8:00 Chairperson's Remarks

Nagendra V. Chemuturi, PhD, Senior Director, Eli Lilly and Company

8:05 Best Practices and Considerations for Clinical Pharmacology and Pharmacometric Aspects for Optimal Development of CAR T Therapies

Nagendra V. Chemuturi, PhD, Senior Director, Eli Lilly and Company

This presentation outlines essential considerations in clinical pharmacology and pharmacometrics for optimal development of CAR T cell therapies. It delves into pivotal aspects such as dosing, toxicity management, and patient-specific variability. By integrating best practices in these domains, CAR T therapies can achieve enhanced efficacy, safety, and personalized treatment outcomes, advancing the frontier of cancer immunotherapy.

8:35 Overcoming the Immune Barrier in Allogeneic Cell Therapy

Sonja Schrepfer, PhD, Senior Vice President & Head, Hypoimmune Platform, Sana Biotechnology, Inc.

This presentation explores strategies to surmount the immune barrier in allogeneic cell therapy. Addressing challenges of host immune rejection and graft-versus-host disease, it highlights approaches such as immune modulation and genetic engineering to enhance tolerance and efficacy. By overcoming these hurdles, allogeneic cell therapies hold the promise of broader applicability and improved outcomes, propelling the field towards transformative advancements in regenerative medicine.

9:05 Sponsored Presentation (Opportunity Available)

9:35 Coffee Break in the Exhibit Hall with Poster Viewing

10:15 VIPER-101: Gene-Edited, Autologous, Dual-Population CAR T Cell Therapy for T Cell Lymphoma; CD5 Knockout, Anti-CD5 Chimeric Antigen Receptor T Cell with SENZA5 Technology

Nick A. Siciliano, PhD, CEO, ViTToria Biotherapeutics

VIPER-101, a novel T cell therapy, targets T cell lymphoma. This approach engineers a patient's own immune cells (autologous) with a dual modification. First, it prevents self-targeting by the therapy. Second, it equips the cells to recognize and attack the cancer cells. This strategy, utilizing SENZA5 technology holds promise for a safer and more effective treatment of T cell lymphoma.

10:45 Talk Title to be Announced

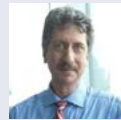
Devon J Shedlock, Chief Scientific Officer, Poseida Therapeutics Inc

11:15 Transition to Plenary Keynote

PLENARY KEYNOTE SESSION

11:20 Organizer's Remarks

Nikki Cerniuk, Conference Producer, Cambridge Innovation Institute



11:30 Accelerating Cell and Gene Therapy: Current Challenges and Future Directions

Bruce L. Levine, PhD, Barbara & Edward Netter Professor, Cancer Gene Therapy, Center for Cellular Immunotherapies, University of Pennsylvania

New designs for genetically modified T cells include switches and potency enhancements that will be required for targeting solid tumors. Determining the critical quality attributes, dose, potency, and anticipating pharmacokinetics of a living, dividing drug presents unique challenges. Improving patient access depends not only on scientific progress in targeting, gene modification, and cellular manipulation, but also on meeting automation, engineering, clinical site onboarding, and health policy challenges.

12:00 pm Transition to Lunch



12:15 LUNCHEON PRESENTATION:

HCAb Harbour Mice Advances Multispecific, CAR T, and ADC Therapy to a New Level

Jiyong Zhang, PhD, Vice President Head of Business Development, Business Development, Nona Biosciences

HCAb Harbour Mice of Nona Biosciences is the first fully human heavy chain only antibody (HCAb) transgenic mice platform in history. It is optimized, clinically validated with global patent protection. Fully human heavy chain only antibodies have high affinity and have excellent biophysical characteristics. They are the ideal antibody format to generate a multitude of next-generation therapeutic modalities, including bispecific/multispecific antibodies, ADCs, CAR-based, and mRNA therapeutics.



12:45 Talk Title to be Announced

Jakob Dupont, MD, Executive Partner, R&D, Sofinnova Investments

1:15 Close of Advances in CAR T Therapy Conference





INAUGURAL

THERAPEUTIC CANCER VACCINES

Innovative Vaccine Strategies to Advance Cancer Immunotherapy

AUGUST 7-8

WEDNESDAY, AUGUST 7

7:30 am Registration and Morning Coffee

8:30 Organizer's Remarks

mRNA-BASED CANCER VACCINES

8:35 Chairperson's Remarks

Philip Arlen, MD, President & CEO, Precision Biologics



8:40 KEYNOTE PRESENTATION: mRNA

Therapeutics in Cancer: Coming of Age

Robert S. Meehan, MD, Senior Director, Clinical Development, Moderna

The advent to mRNA technology has unleashed a new wave of medicines, starting with COVID vaccines. The recent exciting data

in melanoma and pancreatic cancer portends the power of this platform for unique applications in cancer. This presentation will highlight the latest developments of mRNA technology for immuno-oncology, including emerging clinical and translational data, ongoing studies, and future development opportunities with this platform.

9:10 Personalized Therapeutic mRNA Nano-Vaccines

Natalie Silver, MD, Director, Head and Neck Cancer Research, Center for Immunotherapy & Precision Immuno-Oncology, Cleveland Clinic

The therapeutic application of messenger RNA (mRNA) has ignited optimism in the pursuit of curing challenging diseases like cancer. We have translated a novel personalized therapeutic mRNA lipid nanoparticle vaccine from preclinical studies to first-in-human clinical trials in brain cancer. We have demonstrated vaccine efficacy in head and neck cancer preclinical models and pet felines with oral cancer and look forward to a Phase I clinical trial for head and neck.

9:40 PANEL DISCUSSION: Progress and Prospects for Cancer Vaccines

Moderator: Philip Arlen, MD, President & CEO, Precision Biologics

A tremendous transformation in our understanding of the immune system has occurred over the past 130 years since Coley observed tumor regression following administration of the first vaccines using bacterial toxins. Since the late 1990s a number of approaches have been implemented to approve immune responses via vaccinations. With new approaches, including mRNA vaccines and other immunotherapies enhancing T cell function, which vaccines and combinations will be most effective therapeutically?

Panelists:

Peter C. DeMuth, PhD, CSO, Elicio Therapeutics

Keith Knutson, PhD, Professor, Immunology, Mayo Clinic

Natalie Silver, MD, Director, Head and Neck Cancer Research, Center for Immunotherapy & Precision Immuno-Oncology, Cleveland Clinic

BREAKOUT DISCUSSIONS & COFFEE

10:10 Networking Coffee Break with Breakout Discussions

Breakout Discussions are informal, moderated discussions, allowing participants to exchange ideas and experiences and develop future collaborations around a focused topic. Each discussion will be led by a facilitator who keeps the discussion on track and the group engaged. To get the most out of this format, please come prepared to share examples from your work, be a part of a collective, problem-solving session, and participate in active idea sharing. Please visit the Breakout Discussions page on the conference website for a complete listing of topics and descriptions.

BREAKOUT DISCUSSION: Therapeutic Cancer Vaccines: Key Areas of Research and Innovation Driving Future Success

Marion Curtis, PhD, Assistant Professor, Immunology, Mayo Clinic

• What are the most promising strategies to identify and target tumor-specific antigens using cancer vaccines?

- What are the most effective vaccine delivery platforms for cancer therapy?
- What role do combination therapies play in overcoming immunosuppression and maximizing the effectiveness of cancer vaccines?
- How can cancer vaccines be successfully integrated into standard of care cancer treatment?

INNOVATIVE APPROACHES

10:55 An Off-the-Shelf "Personalized" Vaccine? A Flt3L-Primed *in situ* Vaccination Approach

Thomas Marron, MD, PhD, Director, Early Phase Trials Unit, Tisch Cancer Center; Professor, Medicine, Hematology and Oncology; Professor, Immunology and Immunotherapy, Icahn School of Medicine at Mount Sinai

Most patients fail to respond to checkpoint blockade, partly due to a lack of preexisting anti-tumor immunity, and cancer vaccines aim to induce *de novo* anti-tumor immune responses. *In situ* vaccines—creation of an immune response within a tumor, against tumor antigen—offer the potential for a polyclonal, inherently personalized priming of anti-tumor immunity against optimal targets. Flt3L augments DC1 infiltration, further augmenting the efficacy of *in situ* vaccinal effects.

11:25 Modi-2, a Vaccine Targeting Homocitrullinated Self-Epitopes, Stimulates Potent CD4-Mediated Anti-Tumor Responses as a Therapy for Solid Cancers

Abdullah Al-Omari, PhD, Scientist, T Cell Vaccine, Scancell Ltd.

Stresses within the tumor microenvironment mediate post-translational modifications of self-proteins. Homocitrullination is the conversion of lysine residues to homocitrulline which can generate neoepitopes and bypass self-tolerance. Modi2, a homocitrullinated peptide-SNAPvax vaccine, stimulates strong Th1 responses and anti-tumor immunity in three different murine tumor models. We propose the Modi-2 vaccine formulation has potential for translation into clinic in several cancer indications.

11:55 Sponsored Presentation (Opportunity Available)

12:25 pm Transition to Lunch

12:35 Luncheon Presentation (Sponsorship Opportunity Available) or Enjoy Lunch on Your Own

1:05 Session Break

CANCER VACCINES IN CLINICAL TRIALS

1:45 Chairperson's Remarks

Keith Knutson, PhD, Professor, Immunology, Mayo Clinic

1:50 PANEL DISCUSSION: Cancer Vaccine Clinical Trials

Moderator: Thomas Marron, MD, PhD, Director, Early Phase Trials Unit, Tisch Cancer Center; Professor, Medicine, Hematology and Oncology; Professor, Immunology and Immunotherapy, Icahn School of Medicine at Mount Sinai

In this panel we will discuss *optimal*:

- Substrate (peptides, RNA, DNA)
- Adjuvants (within LNP, payload in vector, innate immune stimuli, cytokines)
- Setting for vaccines (neoadjuvant, adjuvant, metastatic)
- Tumor types (immunogenic vs. non-immunogenic, high vs. low PDL1, high vs. low TMB)
- Class 1 vs. Class 2 epitopes

Panelists:

David Anderson, PhD, CSO, Research & Development, VBI Vaccines, Inc.

Mark Exley, PhD, CSO, Imvax

Jian Yan, PhD, Vice President, Research & Discovery, Geneos Therapeutics

Amanda Huff, PhD, Postdoctoral Research Fellow, Johns Hopkins University School of Medicine





THERAPEUTIC CANCER VACCINES

Innovative Vaccine Strategies to Advance Cancer Immunotherapy

2:20 Randomized Phase IIB Trial of a CMV Vaccine Immunotherapeutic Candidate (VBI-1901) in Recurrent Glioblastomas

David Anderson, PhD, CSO, Research & Development, VBI Vaccines, Inc.

Early, interim tumor response data will be presented from a randomized, controlled Phase IIB study evaluating a VLP-based vaccine immunotherapeutic for the treatment of recurrent GBM.

2:50 Sponsored Presentation (Opportunity Available)

3:20 Grand Opening Refreshment Break in the Exhibit Hall with Poster Viewing

STRATEGIES FOR COMBINATIONS

4:00 Personalized Neoantigen-Based DNA Vaccine in Combination with Pembrolizumab for Treating Patients with Advanced Hepatocellular Cancer

Jian Yan, PhD, Vice President, Research & Discovery, Geneos Therapeutics

PD-1 inhibitors have modest efficacy as monotherapy in hepatocellular carcinoma. A personalized therapeutic cancer vaccine (PTCV) tailored against neoantigens may enhance responses to PD-1 inhibitors through the induction of anti-tumor immunity. Clinical data highlighting objective responses and vaccine-induced immune responses will be presented. Critical factors for successful translation of personalized therapeutics into the clinic will also be discussed.

4:30 Therapeutic Vaccines for Ovarian Cancer

Keith Knutson, PhD, Professor, Immunology, Mayo Clinic

Immune checkpoint therapies targeting the PD-1/PD-L1 fail in most patients. While there are several reasons for failure, correlative research in many trials suggest that a lack of a pre-existent immune response is in large part responsible. One solution to augmenting pre-existing immunity is with cancer vaccines. This seminar will discuss recent studies evaluating the hypothesis that combination vaccine and immune checkpoint blockade therapy is more effective than either strategy alone.

5:00 An Off-the-Shelf Vaccine Targeting Mutant KRAS Neoantigens for Pancreatic Cancer

Amanda Huff, PhD, Postdoctoral Research Fellow, Johns Hopkins University School of Medicine

In this Phase I study, we tested the safety and immunogenicity of a peptide-based vaccine targeting the six most common KRAS mutations (G12V, G12A, G12R, G12C, G12D, G13D) in combination with ICIs in patients with resected PDAC. The vaccine induced mutant KRAS-specific Th1 CD4, and cytotoxic CD8 T cells with an acceptable safety profile. We also identified a novel repertoire of mono-, cross-reactive, and public mutant KRAS-specific T cell clonotypes.

5:30 Welcome Reception in the Exhibit Hall with Poster Viewing

WOMEN IN SCIENCE MEET-UP

6:10 pm Women in Science Meet-Up IN-PERSON ONLY



Theresa M. LaVallee, PhD, Chief Development Officer, Coherus Biosciences
Theresa L. Whiteside, PhD, Professor, Pathology, Immunology & Otolaryngology, UPMC Hillman Cancer Center, University of Pittsburgh Cancer Institute

- Which woman has been an inspiration/mentor to you in your career?
- How can we encourage young women in science?
- What were your biggest work-life balance challenges and what have you done to manage these?

6:30 Close of Day

THURSDAY, AUGUST 8

7:30 am Registration and Morning Coffee

ANTIGEN DISCOVERY

8:00 Chairperson's Remarks

Qiaobing Xu, PhD, Professor, Biomedical Engineering, Tufts University; Founder, Hopewell Therapeutics, Inc.

8:05 Computational Approaches to Identifying Targetable Antigens for Personalized Cancer Immunotherapies

Thomas Trolle, PhD, Director, Bioinformatics & AI/ML, Evaxion Biotech A/S

While cancer immunotherapies have revolutionized the treatment of cancer patients, there are still many patients who receive no clinical benefit. Several successful clinical trials utilizing personalized neoantigen vaccines have been conducted. However, these trials primarily target patients with high-TMB cancers, such as melanoma, as low-TMB cancers are less likely to have targetable neoantigens. Looking beyond neoantigens has the potential to make personalized cancer vaccines relevant for more patients.

8:35 Shining Light on Tumor-Specific Antigenic Dark Matter with Long-Read Sequencing

Alexander Rubinsteyn, PhD, Assistant Professor, Computational Medicine and Genetics, University of North Carolina at Chapel Hill

Neoantigen-directed immunotherapies typically rely on short-read exome sequencing to catalog the coding mutations in a cancer's genome. This original sin dooms all downstream filtering and predictive modeling to mostly consider SNVs while discarding the larger mutations which may better distinguish cancer from self. Long-read sequencing, on the other hand, allows us to resolve a broader spectrum of protein altering genomic events which serve as a richer basis for neoantigen discovery.

9:05 Sponsored Presentation (Opportunity Available)

9:35 Coffee Break in the Exhibit Hall with Poster Viewing

VACCINE DELIVERY SYSTEMS

10:15 Engineering Tumor Vaccines Using LNPs

Qiaobing Xu, PhD, Professor, Biomedical Engineering, Tufts University; Founder, Hopewell Therapeutics, Inc.

Here I will discuss the design and development of combinatorial synthetic bioreducible and biodegradable lipid nanoparticles (LNPs) with distinct chemical structures and properties for mRNA delivery with organ and cell selectivity. I will show an example of using this system for delivery of the mRNA cancer vaccine. mRNA cancer vaccine is based on our LNPs elicited robust CD8+ T cells response, excellent therapeutic effect, and long-term immune memory.

10:45 Combinatorial Approaches towards the Development of mRNA Vaccines and Therapies

Allen Jiang, PhD, Postdoctoral Associate, Laboratory of Professor David Liu, Broad Institute of Harvard and MIT

mRNA vaccines and therapies have transformed medical approaches to infectious diseases, genetic disorders, and oncology. We present two key advancements of the field: non-invasive mRNA delivery via stabilized, lung-optimized lipid nanoparticles for pulmonary applications, and the enhancement of immune responses in mRNA vaccines through integration of multiple, novel adjuvants. These studies combined significantly broaden the therapeutic scope of mRNA technology.

11:15 Transition to Plenary Keynote





INAUGURAL

THERAPEUTIC CANCER VACCINES

Innovative Vaccine Strategies to Advance Cancer Immunotherapy

AUGUST 7-8

PLENARY KEYNOTE SESSION

11:20 Organizer's Remarks

Nikki Cerniuk, Conference Producer, Cambridge Innovation Institute



11:30 Accelerating Cell and Gene Therapy: Current Challenges and Future Directions

Bruce L. Levine, PhD, Barbara & Edward Netter Professor, Cancer Gene Therapy, Center for Cellular Immunotherapies, University of Pennsylvania

New designs for genetically modified T cells include switches and potency enhancements that will be required for targeting solid tumors. Determining the critical quality attributes, dose, potency, and anticipating pharmacokinetics of a living, dividing drug presents unique challenges. Improving patient access depends not only on scientific progress in targeting, gene modification, and cellular manipulation, but also on meeting automation, engineering, clinical site onboarding, and health policy challenges.

12:00 pm Transition to Lunch



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Jiyong Zhang, PhD, Vice President Head of Business Development, Business Development, Nona Biosciences

HCAb Harbour Mice of Nona Biosciences is the first fully human heavy chain only antibody (HCAb) transgenic mice platform in history. It is optimized, clinically validated with global patent protection. Fully human heavy chain only antibodies have high affinity and have excellent biophysical characteristics. They are the ideal antibody format to generate a multitude of next-generation therapeutic modalities, including bispecific/multispecific antibodies, ADCs, CAR-based, and mRNA therapeutics.



12:45 Talk Title to be Announced

Jakob Dupont, MD, Executive Partner, R&D, Sofinnova Investments

1:15 Close of Therapeutic Cancer Vaccines Conference





THURSDAY, AUGUST 8

10:30 am Registration Open

PLENARY KEYNOTE SESSION

11:20 Organizer's Remarks

Nikki Cerniuk, Conference Producer, Cambridge Innovation Institute



11:30 Accelerating Cell and Gene Therapy: Current Challenges and Future Directions

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12:45 Talk Title to be Announced

Jakob Dupont, MD, Executive Partner, R&D, Sofinnova Investments

1:15 Transition to Sessions

DISCOVERY AND DESIGN FOR PRECISION IO

1:25 Chairperson's Opening Remarks

Sean P. Arlauckas, PhD, Associate Director, Cell Therapy Platform, Beigopharma Inc.

1:30 Breaking Innate Immune System Tolerance: A Novel Approach to Cancer Immunotherapy

Ethan Shevach, MD, Senior Investigator, Cellular Immunology, Laboratory of Immune System Biology, NIAID, NIH

Checkpoint blockade reverses the inhibitory pathways manifest by anti-tumor effector cells. Leukocyte-Ig-like receptors (LILRs) are immunomodulatory receptors which are expressed on cells of the innate immune system and bind to a determinant on HLA. Pan-HLA-mAbs block the binding of LILRs, do not block TCR recognition, activate

dysfunctional NK cells from human cancers, and enhance tumor immunity in humanized mice. HLA/LILR interactions thus represent a target for the treatment of cancers in humans.

2:00 Uncovering Heterogeneity in Specific Immune Cell Populations in the Tumor Microenvironment

Shahin Aslam, Associate Principal Scientist, Merck

This study explores the diversity within specific cell populations residing in the tumor microenvironment. Using advanced techniques, we identify distinct subgroups within these cells, shedding light on their varying functions and potential implications for cancer immunotherapy. Our findings underscore the complexity of immune responses within tumors and highlight the importance of understanding heterogeneity for developing targeted therapeutic strategies.

2:30 Presentation to be Announced

Metabolism is the key activity by which individual cells process nutrients and is closely associated with cell proliferation and differentiation. In the fields of stem cell research, immunotherapy, and cell processing, the understanding of metabolic mechanisms is crucial. To meet this need, PHC Corporation will launch a continuous metabolic analyzer, LiCellMo, which achieves real-time monitoring of the metabolic condition of living cells, and driving new insights into metabolic research.



3:00 Refreshment Break in the Exhibit Hall with Poster Viewing

SPEED-NETWORKING

3:20 pm How Many New Contacts Can You Make? IN-PERSON ONLY



Nikki Cerniuk, Conference Producer, Cambridge Innovation Institute
Virginia Maxwell, Senior Associate Producer, Cambridge Healthtech Institute
Join us for a dynamic speed networking session at the IO Summit. Make quick and impactful connections! Be yourself, share your background,

business cards (or LinkedIn), and connect with potential collaborators in a fun and focused environment. Briefly summarize your research in one minute and get ready to meet fellow attendees who share your interests. We'll provide the space, timers, and exciting group of researchers to make introductions a breeze.

3:40 Epigenetically Suppressed Tumor Cell Intrinsic STING Promotes Tumor Immune Escape

Jian Cao, PhD, Assistant Professor, Pathology, Rutgers Cancer Institute

STING activation for induced anti-tumor immunity is an attractive approach but shows limited efficacy in the clinic. The epigenetic silencing of STING in many tumors suggests that STING silencing contributes to immune escape and may limit STING agonists applications. Here we use a MC38 and CT26 mouse model to show STING loss accelerates tumor growth. KDM5 inhibitors activate STING expression in mouse cancers and suppress growth in a STING-dependent manner.

4:10 STING-Driven Activation of T Cells for the Adoptive Cell Therapy of Cancer

Lionel J. Apetoh, PhD, Professor, Microbiology & Immunology, Indiana University

Adoptive cell therapy (ACT) shows promise against some cancers, but limitations exist. We explore how stimulating a cellular pathway called STING can enhance ACT. This approach may improve T cell function within the tumor environment, leading to better infiltration, persistence, and ultimately, tumor cell-killing.



**4:40 Development of ex vivo Precision Gene-Engineered B Cell-Medicines That Produce Highly Active and Sustained Levels of Transgenic Anti-Tumor Biologics**

Sean P. Arlauckas, PhD, Associate Director, Cell Therapy Platform, Beigene Biopharma Inc.

BiTEs are highly effective in the treatment of relapsed/refractory ALL. However, the short half-life of BiTEs necessitates continuous intravenous administration at high doses for four-week increments. To overcome these pharmacokinetic shortcomings, we developed a method to engineer plasma cell precursors to continuously secrete transgenic biologics. Plasma cells were chosen for their high antibody production capacity and long-term survival, making them a highly attractive cell-based platform for continuous BiTE delivery.

5:10 Close of Day**5:15 Dinner Short Course Registration****5:30 Dinner Short Courses***

Recommended Short Course:

SCx: Short Course Title

*Separate registration required. See Short Courses page for details.

FRIDAY, AUGUST 9**7:30 am Registration Open****BREAKFAST BREAKOUT DISCUSSIONS****8:00 Breakfast Breakout Discussions**

Breakout Discussions are informal, moderated discussions, allowing participants to exchange ideas and experiences and develop future collaborations around a focused topic. Each discussion will be led by a facilitator who keeps the discussion on track and the group engaged. To get the most out of this format, please come prepared to share examples from your work, be a part of a collective, problem-solving session, and participate in active idea sharing. Please visit the Breakout Discussions page on the conference website for a complete listing of topics and descriptions.

BREAKOUT DISCUSSION: Leveraging Biomarker Technologies for Understanding PD-1 Innate and Adaptive Resistance to Inform New Targets and New Combinations.

Theresa M. LaVallee, PhD, Chief Development Officer, Coherus Biosciences

Immune Checkpoint Inhibitors (ICI) have had a profound impact on the survival of many cancer patients, however many patients do not benefit. Here we discuss:

- Approaches to characterize PD-1 resistance
- Applications of PD-1 resistance characterization for target discovery
- Uncovering novel and next-gen combination treatment approaches through PD-1 findings

COMPUTATIONAL TOOLS AND ML-DRIVEN APPROACHES**9:00 Chairperson's Remarks**

Yuguo Leo Lei, PhD, Associate Professor, Biomedical Engineering, Pennsylvania State University

9:05 Utilizing CRISPR Screening for Novel Target Discovery

Nir Chetrit, PhD, Associate Researcher, Weill Cornell Medicine

Immunotherapies are a transformative force in clinical oncology but are profoundly hindered by the accumulation of immunosuppressive tumor-associated macrophages (TAMs). This limitation highlights a therapeutic potential, but modulating their tumor-supporting functions has proved exceptionally difficult. We performed a CRISPR screen in TAMs and identified targets that reprogram TAMs into immunostimulatory macrophages. Macrophage reprogramming leads to the abrogation of established tumors, paving an actionable roadmap for innate immunotherapy in cancer patients.

9:35 Deep Learning-Based Prediction of Breast Cancer Tumor and Immune Phenotypes from Histopathology

Albert Kim, Assistant Professor, Harvard Medical School; Assistant Physician, Massachusetts General Hospital Cancer Center

Tumor and immune phenotypes mediate therapeutic efficacy for most solid tumors. However, there is not a widely available method to measure immune phenotypes for each patient's tumor. Here, we use deep learning to quantify expression of ten transcriptional signatures from the H&E slide of primary breast tumors. Our efforts illustrate the potential of computational H&E biomarkers that reflect facets of the TME, which hold promise for augmenting precision oncology.

10:05 Presentation to be Announced**10:35 Coffee Break in the Exhibit Hall with Last Chance for Poster Viewing****ENHANCING TARGETING AND DELIVERY****11:20 Ramifications of Tethering T Cell-Activating Cytokines to the Surface of Tumor Cells**

John B. Mumm, PhD, Founder & CEO, Dekka Biosciences

The combination of IL-2, IL-10 and EGFR (DK210 (EGFR)) binds to T cells via IL-2 and IL-10 receptors, and to the tumor cell via EGFR. Evaluation of the DK210 (EGFR) structure suggests the cytokines are oriented on the opposite sides of the molecule from the anti-EGFR CDRs. DK210 (EGFR) therefore enhances T cell avidity for tumor cells and is clustered in the T cell synapse, enhancing T cell cytolytic function.

11:50 Precision-Guided Bicycle IO Therapeutics for the Treatment of Cancer

Philip E. Brandish, PhD, Senior Vice President, Immuno-Oncology, Bicycle Therapeutics

Small constrained bicyclic peptides have PK and PD properties that are optimal for targeted delivery of toxins, radionuclides, or immune agonists for the treatment of cancer. This presentation will highlight the application of the Bicycle technology to anti-cancer immunity, in particular via the activating receptors CD137 and Nkp46.

**12:20 pm KEYNOTE PRESENTATION: Lipid-Mediated Intracellular Delivery of Recombinant bioPROTACs for the Rapid Degradation of Undruggable Proteins**

Andrew Tsourkas, PhD, Co-Director, Center for Targeted Therapeutics and Translational Nanomedicine; Professor, Bioengineering, University of Pennsylvania

A modular approach was developed that enables the efficient delivery of antibodies and proteins into the cytosol of cells. This approach was used to inhibit numerous cancer-associated proteins, including multidrug resistance Protein 1 and NFκB as well as the previously considered "undruggable" targets, Ras and Myc. More recently, BioPROTACs were delivered intracellularly, enabling the specific degradation of target proteins.

12:50 Transition to Lunch**1:00 LUNCHEON PRESENTATION: Advancing Immune-Targeted Cancer Therapies: Leveraging Human Primary Cell in vitro Assays**

Robert Benson, PhD, R&D, Antibody Analytics Ltd.

Human primary cell *in vitro* assays play a crucial role in evaluating immune-targeted cancer therapies. Our team has designed a diverse suite of platforms that utilize primary immune cells—T cells, macrophages, NK cells, B cells, neutrophils, and dendritic cells—to assess candidate therapies within the dynamic context of the TME. By integrating these platforms with our novel dual-inducible expression system, we can comprehensively elucidate a therapeutic's mechanism-of-action and safety profile.

**1:30 Session Break**



TOOLS FOR BRIDGING THE GAP: FROM BENCH TO BEDSIDE

2:10 Chairperson's Remarks

Sruthi Ravindranathan, PhD, Senior Scientist, Cellular Immunology, Coherus Biosciences

2:15 Scalable Microbioreactors for Cell and Virus Production

Yuguo Leo Lei, PhD, Associate Professor, Biomedical Engineering, Pennsylvania State University

Culturing cells at large scales remains challenging. We here present a microbioreactor to address this challenge. Cells are cultured in microscale alginate hydrogel tubes (AlgTubes). AlgTubes offer large improvements in cell viability, growth, yield, culture consistency, and scalability over current bioreactors. Cells have high viability, growth rate (3000-fold/passage), and yield (~ 5×10^8 cells/mL). AlgTubes significantly reduce the culture volume and time-and-production cost, making large-scale cell production feasible.

2:45 Casdozokitug, a Potent and Selective Anti-IL-27 Antibody That Has Demonstrated Clinical Activity in Overcoming PD-1 Resistance and Tumor Immune Suppression in Cancer Patients

Sruthi Ravindranathan, PhD, Senior Scientist, Cellular Immunology, Coherus Biosciences

IL-27, a heterodimeric cytokine expressed by macrophages and myeloid cells, regulates the intensity and duration of immune responses in several pathological conditions, including cancer. Upregulation of IL-27 promotes tumor growth and progression in preclinical models, and is implicated in resistance to PD-1 inhibitors. Casdozokitug is a potent and selective anti-IL-27 antibody that has demonstrated immune activation and single-agent tumor response in Phase 1 clinical trials.

3:15 Presentation to be Announced

3:45 PANEL DISCUSSION: Putting Patients First: Building Sustainable Models for IO Development

Moderator: Philip E. Brandish, PhD, Senior Vice President, Immuno-Oncology, Bicycle Therapeutics

- How can we improve collaboration between manufacturing teams and the clinic?
- Balancing affordability, quality, and throughput
- Patient-centric models for IO development: managing patient needs against manufacturing constraints

Panelists:

Yuguo Leo Lei, PhD, Associate Professor, Biomedical Engineering, Pennsylvania State University

Sruthi Ravindranathan, PhD, Senior Scientist, Cellular Immunology, Coherus Biosciences

4:15 Conference Wrap-Up

4:25 Close of Summit





THURSDAY, AUGUST 8

10:30 am Registration Open

PLENARY KEYNOTE SESSION**11:20 Organizer's Remarks***Nikki Cerniuk, Conference Producer, Cambridge Innovation Institute***11:30 Accelerating Cell and Gene Therapy: Current Challenges and Future Directions***Bruce L. Levine, PhD, Barbara & Edward Netter Professor, Cancer Gene Therapy, Center for Cellular Immunotherapies, University of Pennsylvania*

New designs for genetically modified T cells include switches and potency enhancements that will be required for targeting solid tumors. Determining the critical quality attributes, dose, potency, and anticipating pharmacokinetics of a living, dividing drug presents unique challenges. Improving patient access depends not only on scientific progress in targeting, gene modification, and cellular manipulation, but also on meeting automation, engineering, clinical site onboarding, and health policy challenges.

12:00 pm Transition to Lunch

**12:15 LUNCHEON PRESENTATION: HCAb Harbour Mice Advances Multispecific, CAR T, and ADC Therapy to a New Level***Jiyong Zhang, PhD, Vice President Head of Business Development, Business Development, Nona Biosciences*

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**12:45 Talk Title to be Announced***Jakob Dupont, MD, Executive Partner, R&D, Sofinnova Investments*

1:15 Transition to Sessions

MODULATIONS FOR POTENT AND PERSISTENT IMMUNE EFFECTORS**1:25 Chairperson's Opening Remarks***An-Ping Chen, PhD, Associate Director, R&D, Cytovia Therapeutics***1:30 TALEN-Based Platform for Generation of Gene-Edited iPSC-Derived Natural Killer Cells with Improved Functions***An-Ping Chen, PhD, Associate Director, R&D, Cytovia Therapeutics*

The iPSC-derived natural killer cells showed great promise for treating cancers. Here, the efficiency and off-target effects of candidate TALENs in iPSCs were analyzed before use. The IL15^{+/+}/TGFβR2^{-/-} dual-edited iPSCs kept their pluripotency, exhibited normal morphology and karyotype, and were able to differentiate and expand into NK cells with high efficiency. These dual-edited iNK cells showed enhanced persistence without exogenous cytokines and are resistant to suppressive TGFβ signaling.

2:00 Combined PD-L1/TGFβ Blockade Allows Expansion and Differentiation of Stem Cell-Like CD8 T Cells in Immune-Excluded Tumors*Alessandra Castiglioni, PhD, Scientific Manager, Cancer Immunology, Genentech Inc.*

Previous research indicates the necessity of attenuating PD-L1 and TGFβ signaling to trigger efficacious anti-tumor responses. Our study reveals that TGFβ and PD-L1 restrict expansion of stem cell-like CD8 T cells (TSCL), blocking both expanded TSCL and enhanced motility and accumulation of IFNγhi cells—transforming the tumor ecosystem to be broadly immune-supportive—and underlying the role of TGFβ and PD-L1 in maintaining intratumoral CD8 T cells in a dysfunctional state.

2:30 Sponsored Presentation (*Opportunity Available*)

3:00 Refreshment Break in the Exhibit Hall with Poster Viewing

SPEED-NETWORKING**3:20 pm How Many New Contacts Can You Make? IN-PERSON ONLY***Nikki Cerniuk, Conference Producer, Cambridge Innovation Institute*
Virginia Maxwell, Senior Associate Producer, Cambridge Healthtech Institute

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business cards (or LinkedIn), and connect with potential collaborators in a fun and focused environment. Briefly summarize your research in one minute and get ready to meet fellow attendees who share your interests. We'll provide the space, timers, and exciting group of researchers to make introductions a breeze.

3:40 An Autologous Process Generates Genetically Engineered T Cells with Enriched T Memory Stem Cells and Improved Quality Attributes*Yijun Liu, PhD, Associate Director, Cell Biology, Kite Pharma*

An autologous process is developed to generate juvenile CAR T cells in high purity, independent of the variations from incoming leukapheresis. It is demonstrated that not only do juvenile CAR T cells have superior metabolic fitness, but the juvenile feature of T cells also contributes to several product quality attributes, including a higher transduction efficiency, an improved CAR T cell yield, and better T cell proliferation with antigen stimulation.

4:00 Improving Efficacy and Minimizing Safety Risks of TIL Cell Therapy by Rational Engineering of TIL*Madan H. Jagasia, MS, Chief Executive Officer, R&D, Obsidian Therapeutics*
OBX-115 engineered TIL cell therapy utilizes cytoDRiVE® platform to enable regulation of functional membrane-bound IL15 by reversibly modulating protein stability, enabling a lower dose of lymphodepletion than conventional TIL therapy, obviating the need for IL2, and allowing regulation of antigen-reactive TIL expansion. In a first-in-human study, OBX-115 has produced promising response rates in patients with immune checkpoint inhibitor-refractory advanced melanoma, without any dose-limiting toxicities or Gr 4 treatment-emergent non-hematologic toxicity.**BREAKTHROUGHS IN SOLID TUMOR TARGETING****4:20 Utilizing Tumor-Reactive-Selected CD8+ TILs for the Treatment of Solid Tumors***Colin Thalhofer, PhD, Director of Research and Development, AgonOx, Inc.*

Tumor-reactive CD8+ T cells are predominantly found in the tumor microenvironment with an exhausted phenotype. We sort CD8+ TIL that coexpress CD39 and CD103, and expand these cells from thousands to billions to generate adoptive T cell products that are highly enriched for cells that can recognize and kill autologous tumors. We have tested the utility of this approach with coculture assays, PDX models, and in patients with metastatic cancer.





3RD ANNUAL

AUGUST 8-9

EMERGING CELL-BASED IMMUNOTHERAPIES

Breakthroughs in Cell Therapy & Solid Tumors

4:40 Engineered Tumor-Infiltrating Lymphocytes (eTIL) for the Treatment of Solid Tumors

Karrie Wong, PhD, Director Cell Therapy, Cell Therapy, KSQ Therapeutics Inc.

This research explores modifying a patient's tumor-infiltrating lymphocytes (TILs) to enhance their ability to fight solid tumors. This approach holds promise for a more targeted and effective immunotherapy, potentially offering a new weapon against a wide range of cancers.

5:10 Close of Day

5:15 Dinner Short Course Registration

5:30 Dinner Short Courses*

Recommended Short Course:

SCx: Short Course Title

*Separate registration required. See Short Courses page for details.

FRIDAY, AUGUST 9

7:30 am Registration Open

BREAKFAST BREAKOUT DISCUSSIONS

8:00 Breakfast Breakout Discussions

Breakout Discussions are informal, moderated discussions, allowing participants to exchange ideas and experiences and develop future collaborations around a focused topic. Each discussion will be led by a facilitator who keeps the discussion on track and the group engaged. To get the most out of this format, please come prepared to share examples from your work, be a part of a collective, problem-solving session, and participate in active idea sharing. Please visit the Breakout Discussions page on the conference website for a complete listing of topics and descriptions.

BREAKTHROUGHS IN SOLID TUMOR TARGETING

9:00 Chairperson's Remarks

Karrie Wong, PhD, Director Cell Therapy, Cell Therapy, KSQ Therapeutics Inc.

9:05 NK-Cell-Mediated Targeting of Various Solid Tumors Using a B7-H3 Tri-Specific Killer Engager *in vitro* and *in vivo*

Nicholas A Zorko, PhD, Assistant Professor, Hematology & Oncology & Transplant, University Of Minnesota Twin Cities

In this presentation we discuss a molecule (TriKE) to link natural killer (NK) cells to cancer cells expressing B7-H3. This molecule activates and expands NK cells, killing B7-H3 positive cancer cells in lab tests and shrinking tumors in mice.

9:35 Lymph Node-Targeted Vaccine-Boosting of TCR T Cell Therapy Enhances Antitumor Function and Eradicates Solid Tumors

Peter C. DeMuth, PhD, CSO, Elicio Therapeutics

This research investigates a new strategy for treating solid tumors. It combines therapy using TCR T cells with a vaccine that targets lymph nodes. The study explores how this approach improves the effectiveness of T cell therapy against cancer.

10:05 Sponsored Presentation (Opportunity Available)

10:35 Coffee Break in the Exhibit Hall with Last Chance for Poster Viewing

11:20 Novel Engineering Approaches for Gamma/Delta T Cell Therapies in Hematologic and Solid Cancers

Lawrence Lamb, Jr., PhD, Executive Vice President & CSO, IN8Bio

Gamma delta T cells, a lymphocyte population that bridges the innate and adaptive immune systems, are first responders to malignant disease. As such, they exercise broad MHC-unrestricted recognition of stress receptors not generally present on healthy tissues. These properties have enabled gamma delta T cell-specific engineering

approaches to improve their natural anti-tumor functions. We present the biologic rationale for gamma delta T cell-specific engineering and accompanying clinical and translational findings.

CELL THERAPY OPTIMIZATION: FROM SCALE-UP SOLUTIONS TO CLINIC SUCCESS

11:50 Analytical Development Support of Product Characterization for Autologous TCR-Engineered T Cell Therapies

Joseph M. Lee, PhD, Senior Director, Product Sciences, Affini-T Therapeutics

Immune cell-based therapeutics are rapidly evolving to additionally target solid tumors. However, with promising new medicines entering into the clinic, there is also a greater need to address the challenges associated with drug product characterization. This presentation will bring to light some of the regulatory requirements and challenges associated with establishing an analytical control strategy supporting drug product manufacture.

12:20 pm The Unique Challenges of Translating ProtoNK Therapies

Allen Qiang Feng, PhD, Founder and CSO, HebeCell Corp.

Human pluripotent stem cells (PSCs) offer unlimited cell source for cell therapies. Major challenges are (1) complexity of bioprocessing, and (2) outdated regulatory guidelines. HebeCell's proprietary protoNK platform is a first-in-class technology enabling large-scale PSC-derived NK cell production. To translate protoNK platform into clinic, we have (1) successfully established internal manufacturing capability, and (2) we are working towards the 1st IND using protoNK to treat pulmonary metastasis of Ewing sarcoma.

12:50 Transition to Lunch

1:00 Luncheon Presentation (Sponsorship Opportunity Available) or Enjoy Lunch on Your Own

1:30 Session Break

2:10 Chairperson's Remarks

Ivone Bruno, PhD, Vice President, Preclinical Affairs and Process Development, Cytoimmune Therapeutics

2:15 Intensification of iPSC GdT/NK Product Manufacturing for IO

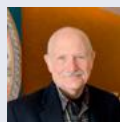
Yu Qian, PhD, Senior Scientist & Analytical Lead, Cellular Product Development, Takeda Pharmaceuticals Inc.

Large-scale manufacturing remains a hurdle for many cell therapies, limiting their reach in cancer treatment. Here, we discuss strategies to intensify the production of specific immunotherapy products. We apply this in the context of product gamma-delta T (GdT) and natural killer (NK) cells derived from induced pluripotent stem cells (iPSCs).

2:35 High-Throughput Strategies for Scalable CAR NK Cell Manufacturing

Ivone Bruno, PhD, Vice President, Preclinical Affairs and Process Development, Cytoimmune Therapeutics

This research explores high-efficiency methods for large-scale production of CAR NK cells. CAR NK cells are a promising immunotherapy approach, but large-scale manufacturing is a hurdle. This study examines strategies to overcome this bottleneck, paving the way for wider use of CAR NK cell therapies.



2:55 FEATURED PRESENTATION: Robustly Measuring Repertoire & Potency of Optimally Expanded Gamma-Delta TILs for IO

Michael T. Lotze, Vice Chair Research & Professor, Surgery, University of Pittsburgh

Effectively evaluating gamma-delta tumor-infiltrating lymphocytes (TILs) for immunotherapy (IO) requires reliable methods. This study investigates methods to accurately assess the diversity (repertoire) and effectiveness (potency) of gamma-delta TILs after expansion for use in cancer treatment.





3RD ANNUAL

EMERGING CELL-BASED IMMUNOTHERAPIES

Breakthroughs in Cell Therapy & Solid Tumors

AUGUST 8-9

3:25 Translational Science Informing Clinical Development: How Adaptimmune Drives Translational Insights in Commercial Cell Therapy R&D

Chris Evans, PhD, Vice President, Translational Sciences, Adaptimmune

This talk explores how translational science informs the development of cell therapies. It will examine how researchers bridge the gap between basic research and clinical trials, using Adaptimmune as a case study. This approach helps ensure new cell-based treatments are effectively tested and developed.



3:45 KEYNOTE PRESENTATION: Deciphering and Improving TIL Adoptive Therapy, from Bedside to Bench and Back

George Coukos, MD, PhD, Director, Department of Oncology, Lausanne University Hospital, and Director, Ludwig Institute for Cancer Research Lausanne Branch, University of Lausanne

4:15 Conference Wrap-Up

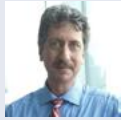
4:25 Close of Summit





THURSDAY, AUGUST 8

10:30 am Registration Open

PLENARY KEYNOTE SESSION**11:20 Organizer's Remarks***Nikki Cerniuk, Conference Producer, Cambridge Innovation Institute***11:30 Accelerating Cell and Gene Therapy: Current Challenges and Future Directions***Bruce L. Levine, PhD, Barbara & Edward Netter Professor, Cancer Gene Therapy, Center for Cellular Immunotherapies, University of Pennsylvania*

New designs for genetically modified T cells include switches and potency enhancements that will be required for targeting solid tumors. Determining the critical quality attributes, dose, potency, and anticipating pharmacokinetics of a living, dividing drug presents unique challenges. Improving patient access depends not only on scientific progress in targeting, gene modification, and cellular manipulation, but also on meeting automation, engineering, clinical site onboarding, and health policy challenges.

12:00 pm Transition to Lunch**12:15 LUNCHEON PRESENTATION: HCAb Harbour Mice Advances Multispecific, CAR T, and ADC Therapy to a New Level***Jiyong Zhang, PhD, Vice President Head of Business Development, Business Development, Nona Biosciences*

HCAb Harbour Mice of Nona Biosciences is the first fully human heavy chain only antibody (HCAb) transgenic mice platform in history. It is optimized, clinically validated with global patent protection. Fully human heavy chain only antibodies have high affinity and have excellent biophysical characteristics. They are the ideal antibody format to generate a multitude of next-generation therapeutic modalities, including bispecific/multispecific antibodies, ADCs, CAR-based, and mRNA therapeutics.

**12:45 Talk Title to be Announced***Jakob Dupont, MD, Executive Partner, R&D, Sofinnova Investments***1:15 Transition to Sessions****MODELING THE TUMOR MICROENVIRONMENT****1:25 Chairperson's Remarks***Theresa L. Whiteside, PhD, Professor, Pathology, Immunology & Otolaryngology, UPMC Hillman Cancer Center, University of Pittsburgh Cancer Institute***1:30 Unraveling Pancreatic Tumor Defenses: Inside the Stromal Orchestra with HOST-Factor***Edna (Eti) Cukierman, PhD, Marvin & Concetta Greenberg Chair in Pancreatic Cancer Research; ACS Willmott Family Professor of Pancreatic Cancer—Tumor Microenvironment Lab, Fox Chase Cancer Center*

Dive into desmoplasia, the dense "shield" surrounding tumors, with the Cukierman Lab. Their 3D model unveils the hidden "symphony" of fibroblasts and fibroblastic cell-generated ECM, revealing how these units influence cancer, immune, and other cells.

Their key? The Harmonic Output of Stromal Traits, or HOST-Factor, a tool to understand the stromal "score" and rewrite it for treatment. Witness the Cukierman Lab's quest to reorchestrate pancreatic cancer onset and progression!

2:00 Development of a High-Throughput 3D Culture Model of Immune-Excluded Tumor Microenvironments*Joanna Y. Lee, PhD, Principal Scientist, Biochemical & Cellular Pharmacology, Genentech*

There is a significant need for therapeutics that drive immune cells into tumors. For drug discovery, this requires high-throughput models of the tumor microenvironment (TME) that recapitulate physiologically-relevant barriers to immune infiltration. Here, we attempt to induce formation of an immune-excluded TME by co-culturing relevant cell types in 3D culture. A high-throughput, human TME model would enable drug screening and identification of new targets broadly applicable to solid tumors.

2:30 Sponsored Presentation (Opportunity Available)**3:00 Refreshment Break in the Exhibit Hall with Poster Viewing****SPEED-NETWORKING****3:20 pm How Many New Contacts Can You Make? IN-PERSON ONLY***Nikki Cerniuk, Conference Producer, Cambridge Innovation Institute*
Virginia Maxwell, Senior Associate Producer, Cambridge Healthtech Institute

Join us for a dynamic speed networking session at the IO Summit. Make quick and impactful connections! Be yourself, share your background,

business cards (or LinkedIns), and connect with potential collaborators in a fun and focused environment. Briefly summarize your research in one minute and get ready to meet fellow attendees who share your interests. We'll provide the space, timers, and exciting group of researchers to make introductions a breeze.

INSIGHTS FROM CLINICAL TRIALS**3:40 A Phase 1/2 Clinical Trial of KVA12123, an Engineered IgG1 Targeting VISTA, as Monotherapy and in Combination with Pembrolizumab in Patients with Advanced Solid Tumors***Thierry Guillaudeux, PhD, CSO, Kineta, Inc.*

The VISTA-101 clinical trial is a first-in-human, Phase 1/2 open-label, safety, PK, and pharmacodynamic evaluation of KVA12123, both as monotherapy and in combination with pembrolizumab, in adult patients with advanced solid tumors. KVA12123 is a human IgG1 monoclonal antibody that specifically binds to VISTA at neutral and acidic pHs. It was designed to improve pharmacokinetic characteristics as well as reduce the risk of cytokine release syndrome.

4:10 Regulation of Myeloid Cells to Induce Tertiary Lymphoid Structures in the TME*Elizabeth Evans, PhD, COO & Senior Vice President, Discovery & Translational Medicine, Vaccinex*

Efficient immune cell communication in the TME is suppressed upon binding of Semaphorin 4D (SEMA4D) to receptors on myeloid cells to inhibit the migration and maturation of dendritic cells (DC). SEMA4D blocking antibody pepinex has been reported to improve trafficking of DC and T cells and reduce myeloid suppressor cells. Importantly, new clinical data from two independent trials demonstrates that pepinex induces the formation of lymphoid structures within treated tumors.

4:40 Defining the Tumor Microenvironment in the Context of Clinical Trials*Robert Anders, MD, PhD, Associate Professor, Pathology, Johns Hopkins*



Translational research efforts to define the tumor microenvironment and uncover biomarkers in clinical trials samples depends on variables such as trial design, tissue sampling plan, and available technologies. Considerations and examples of these variables will be discussed.

5:10 Close of Day

5:15 Dinner Short Course Registration

5:30 Dinner Short Courses*

Recommended Short Course:

SCx: Short Course Title

*Separate registration required. See Short Courses page for details.

FRIDAY, AUGUST 9

7:30 am Registration Open

BREAKFAST BREAKOUT DISCUSSIONS

8:00 Breakfast Breakout Discussions

Breakout Discussions are informal, moderated discussions, allowing participants to exchange ideas and experiences and develop future collaborations around a focused topic. Each discussion will be led by a facilitator who keeps the discussion on track and the group engaged. To get the most out of this format, please come prepared to share examples from your work, be a part of a collective, problem-solving session, and participate in active idea sharing. Please visit the Breakout Discussions page on the conference website for a complete listing of topics and descriptions.

BREAKOUT DISCUSSION: Immunosuppression in the Tumor Microenvironment

Thierry Guillaudeux, PhD, CSO, Kineta, Inc.

- What are the major drivers of immunosuppression in the tumor microenvironment?
- What are the strategies to overcome immunosuppression?
- What are the promising new targets?
- Which combination strategies should be considered to restore an effective antitumor immune response?

BREAKOUT DISCUSSION: Tumor Microenvironment (TME) Models for Mechanistic Studies

Jason Yu, PhD, Senior Postdoctoral Associate, Koch Institute for Integrative Cancer Research, Massachusetts Institute of Technology

- What aspects of the TME require *ex vivo* modeling?
- What are the challenges in modeling tumor immune responses?
- What are the unique advantages of *ex vivo* TME models?
- How do we advance *ex vivo* TME models for drug discovery and mechanistic studies?

TARGETING THE TUMOR MICROENVIRONMENT

9:00 Chairperson's Remarks

Krzysztof Wicher, PhD, Senior Vice President, Drug Discovery & Development, Macomics



9:05 KEYNOTE PRESENTATION: Metabolism-Based Therapies for Liver Cancer

M. Celeste Simon, PhD, Scientific Director, The Abramson Family Cancer Research Institute; Arthur H. Rubenstein, MBCh Professor, Cell and Developmental Biology, University of Pennsylvania Perelman School of Medicine

Availability of the essential amino acid methionine affects cellular metabolism and growth, and dietary methionine restriction has been implicated as a cancer therapeutic strategy. Nevertheless, how liver cancer cells respond to methionine deprivation and underlying mechanisms remain unclear. I will present how human

liver cancer cells undergo irreversible cell cycle arrest upon methionine deprivation *in vitro*. I will also discuss how metabolic approaches can augment immunotherapy treatments in this disease.

9:35 Discovery and Development of MACO-355, a Unique Pan-LILR Monoclonal Antibody that Reprograms and Stimulates Immuno-Suppressive Macrophages in a Novel Ligand-Binding Blocking Independent Manner

Krzysztof Wicher, PhD, Senior Vice President, Drug Discovery & Development, Macomics

MACO-355 is a unique receptor-ligand non-blocking pan-LILR monoclonal antibody highly potent in pro-inflammatory reprogramming of immuno-suppressive macrophages, both *in vitro* and *in vivo*. Molecular studies showed MACO-355 binds a novel membrane proximal epitope and requires both bi-valent binding and Fc effector for full activity. This results in a pronounced modulation of intracellular kinase signalling. Altogether, the data support the future clinical development of MACO-355 as a cancer therapeutic.

10:05 Sponsored Presentation (*Opportunity Available*)

10:35 Coffee Break in the Exhibit Hall with Last Chance for Poster Viewing

11:20 Reprogramming the Tumor Microenvironment with an Anchored IL-12 Therapy (ANK-101)

Robert Tighe, CSO, Ankyra Therapeutics

We have developed a novel therapeutic platform for durably retaining immunostimulatory agents within tumors through complexation with aluminum hydroxide; this retention leads to improved efficacy and safety. Following local delivery of an IL-12 based therapy, known as ANK-101, potent anti-tumor activity is observed with abscopal effects; these effects are associated with profound reprogramming of the tumor microenvironment, leading to activation of both innate and adaptive immunity.

11:50 Detoxifying and Improving IL-2 Potency through Combination with IL-10 and Targeting to the TME

John B. Mumm, PhD, Founder & CEO, Deka Biosciences

Deka Biosciences has developed a tumor microenvironment-targeted therapeutic platform that combines highly potent but toxic cytokines with IL-10 to concentrate the cytokines in the TME to improve potency and reduce toxicity. The lead asset that combines IL-2, IL-10 with EGFR targeting (termed DK210 (EGFR)) has been dosed in 28 patients and illustrates toxicological proof of concept, achieving high exposures with no vascular/capillary leak nor cytokine release syndromes.

12:20 pm Deep Tumor and Proteomic Analyses Uncover Novel Biomarkers to Intra-Tumoral TLR9 Agonist—Lessons from a Phase II Trial of Neoadjuvant CpG/PD-1 in Resectable Melanoma

Diwakar Davar, MD, Associate Professor, Medicine, University of Pittsburgh

Intratumoral TLR9 agonists produce durable responses in PD-1 R/R melanoma. Studying biospecimens from a Phase II neoadjuvant trial of neoadjuvant TLR9/PD-1 with spatial transcriptomics, we identified key biomarkers of response, including intra-tumoral myeloid cells, activated T cells, and pDCs peripherally. Deep proteomics identified a PD biomarker. Our findings support that combined neoadjuvant vidutolimod and nivolumab stimulates a broad antitumor immune response and is associated with distinct baseline gene signatures.

12:50 Transition to Lunch

1:00 Luncheon Presentation (*Sponsorship Opportunity Available*) or Enjoy Lunch on Your Own

1:30 Session Break

OVERCOMING IMMUNOTHERAPY RESISTANCE

2:10 Chairperson's Remarks

Saad Kenderian, PhD, Assistant Professor, Medicine and Oncology, Mayo Clinic College of Medicine



**2:15 Characterizing and Targeting Immune Exclusion in the Tumor Microenvironment to Overcome Immunotherapy Resistance**

Laura Dillon, PhD, Vice President, Translational Medicine & Bioinformatics, Incendia Therapeutics

Immune exclusion, characterized by the presence of lymphocytes in the tumor bed which are unable to interact with and kill tumor cells, has been associated with resistance to immunotherapy. Spatial biology approaches can be used to measure immune cell and stromal features in the tumor microenvironment which contribute to immune exclusion to better understand drug response and target therapies to the patients most likely to benefit.

2:45 Cytotoxic PD-L1/PD-L2 Dual-Specific Antibodies Effectively Treat Both Immune “Hot” and “Cold” Cancers

Michael A. Curran, PhD, Founder and SAB Chairman, ImmunoGenesis; Associate Professor, Immunology, MD Anderson Cancer Center

Blockade of the PD-1 immune checkpoint has revolutionized therapy of immune-infiltrated “hot” tumors but lacks efficacy in “cold” tumors. We developed a dual-specific PD-L1/PD-L2 that provides the equivalent of combined PD-1 and PD-L1 antibody blockade in a single drug. By engineering this antibody to also mediate killing of PD-L1 and PD-L2+ target cells, we found that it could efficiently deplete immune suppressive and T cell exclusionary stroma.

3:15 Overcoming TME-Induced Resistance to CAR T Cell Therapy

Saad Kenderian, PhD, Assistant Professor, Medicine and Oncology, Mayo Clinic College of Medicine

Despite its promising potential, CAR T cell therapy faces challenges due to the tumor microenvironment (TME), which harbors immunosuppressive factors and physical barriers that hinder CAR T cell efficacy. To overcome this resistance, strategies are being developed to enhance CAR T cell fitness, engineer them to resist the TME, and target multiple tumor antigens.

3:45 Oncogenic Signatures of Tumor Sensitivity and Resistance to IFN-Gamma

Anna Tocheva, PhD, Assistant Professor, Genetics & Genomic Sciences, Icahn School of Medicine at Mount Sinai

Tumor interferon gamma (IFN γ) transcriptional signatures are associated with the efficacy of cancer immunotherapy. Yet, our knowledge as it pertains to cancer cell-intrinsic plasticity in response to IFN γ in the context of tumor genetic and transcriptional heterogeneity can be summarized as little to none. We leverage >70 patient-derived organoid models and paired primary tumors across different cancers to identify tumor-intrinsic molecular signatures of IFN γ sensitivity.

4:15 Conference Wrap-Up**4:25 Close of Summit**



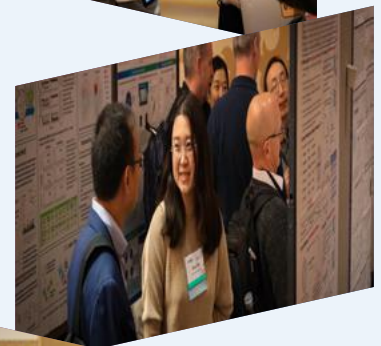
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