INDUSTRY AND ACADEMIC ADVANCES IN THIS EXCITING AND RAPIDLY DEVELOPING FIELD

Immuno-Oncology Summit Europe 2019

Cambridge Healthtech Institute’s Fourth Annual


2019 Conference Programmes

18-19 March

- Immunomodulatory Approaches
- Biomarkers for Immuno-Oncology

20-21 March

- Combination Immunotherapy
- Oncolytic Virus Immunotherapy

21-22 March

- Adoptive T-Cell Therapy
- Preclinical & Translational Immuno-Oncology

4 Short Courses

Monday 18 March | 9:30 - 12:30

- The Tumour Microenvironment and Response to Cancer Immunotherapy
- Next Generation Immunotherapies

Thursday 21 March | 18:30 - 21:30

- Managing the Challenges of Bioassays for Immuno-Oncology
- T Cell Therapies: Current Field, Challenges and Future Directions

Featured Speakers

- Frank Tufaro, PhD, CEO, DNAtrix, Inc.
- Roy Baynes, MD, Senior Vice President, Global Clinical Development & CMO, Merck Research Labs
- Ed Schuuring, PhD, Professor & Head, Molecular Pathology, University Medical Center Groningen
- Sara Colombetti, PhD, Head of Oncology Discovery Pharmacology, Pharmacology, Roche Innovation Center Zurich
- Christian Klein, PhD, Distinguished Scientist & Head, Oncology Programs, Roche Innovation Center Zurich
- Andre Choulika, Chairman, CEO, Cellectis, Inc.

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Immuno-OncologyEurope.com
Dear Colleague

Following year-on-year success, CHI is excited about presenting a much-enlarged SIX-TRACK Immuno-Oncology Summit Europe for March 2019. The track on Immunomodulatory Approaches examines the multiple factors that interact in the tumour microenvironment and presents case studies from experts in the field for stimulating the immune response and overcoming inhibitory factors.

The Combination Immunotherapy conference track presents successful results with combinations ranging from double immunotherapy to immune checkpoint inhibitors combined with conventional cancer therapy. Important factors such as predictive biomarkers, therapeutic mechanisms, and reducing toxicity are all addressed.

Following the recent FDA approval of two CAR-T therapies, interest in Adoptive T-Cell Therapy has intensified. At this event experts present progress in the clinic and address strategies to optimize development. Cambridge Healthtech Institute’s inaugural Biomarkers for Immuno-Oncology conference provides cutting-edge technologies for development of accurate predictive biomarkers such as genomics, transcriptomics, proteomics and metabolomics, as well as studies of circulating tumour cells and exosomes.

Our Inaugural Oncolytic Virus Immunotherapy conference showcases this approach as a valuable therapeutic. It brings together leading industry and academic leaders to discuss the critical steps needed to accelerate oncolytic virus immunotherapy into the clinic.

The inaugural Preclinical and Translational Immuno-Oncology conference delves into the advantages and disadvantages of a variety of immune system models and presents strategies employed to help translate positive results to clinical trials. Don’t miss the short courses on highly relevant topics. We continue to hold this event in London's Canary Wharf, a thriving, modern and up-beat part of London that has worked very well for us in recent years.

Nicole Lyscom, PhD
Senior Conference Director
Cambridge Healthtech Institute

Presenting Organisations

- Adapimmune Ltd.
- AgenTus Therapeutics, Inc.
- Alligator Bioscience
- Amgen Research Munich
- Antikor Biopharma
- AstraZeneca
- Cambridge UK
- Cancer Research UK
- Catapult
- Celllectis Inc.
- Celzyad
- Chinese University of Hong Kong
- Christie Hospital NHS Foundation Trust
- Dana-Farber Cancer Institute
- German Cancer Research Centre (DKFZ)
- D耐Arix, Inc.
- Dublin City University
- Erasmus MC-Cancer Institute
- ETH Zürich
- Fred Hutchinson Cancer Research Center
- F-star
- GammaDelta Therapeutics Ltd
- Genentech
- Gustave Roussy Comprehensive Cancer Center
- Health Sciences North Research Institute, Canada
- iBET
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- Immune Bio
- Karolinska University Hospital, Sweden
- King's College London
- Kymab
- Lokon Pharma AB
- Ludwig Institute of Cancer Research
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- Nektar Therapeutics
- Nottingham Trent University
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- Ottawa Hospital Research Institute
- Oxford Biotherapeutics
- Peter MacCallum Cancer Centre, Australia
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- Prolimmune
- PsiOxus Therapeutics
- Regeneron Pharmaceuticals
- Replimune
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- San Raffaele Hospital Scientific Institute
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- University Regensburg
- Vyriad, Inc.
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- Western Oncolytics
- Xencor, Inc.
**SC1: The Tumour Microenvironment and Response to Cancer Immunotherapy**

**Stephen A. Beers, PhD, Professor of Immunology and Immunotherapy, Centre for Cancer Immunology, University of Southampton**

The tumour microenvironment (TME) is a complex, dynamic environment in which the behaviour of tumour cells alters in response to cues from the extracellular matrix (ECM), cytokines, immune cells, and stromal cells. As well as propagating tumour growth and spread, the TME may also influence the response to immunotherapy. For example, stromal cells such as fibroblasts may drive cancer growth through production of TGFβ whilst macrophages display immunosuppressive and tumour promoting properties, through driving tumour cell proliferation and survival. In this short-course we will discuss the nature of the TME and the multiple ways in which it promotes an immunosuppressive environment. Opportunities to alter the TME in order to more effectively deliver immunotherapy will also be discussed.

**SC2: Next Generation Immunotherapies**

A short course featuring the exciting approaches being used by today’s immune-oncology scientists. You will learn about current successes and future potential, and how the leaders in the field overcame the challenges encountered.

1. **Bispecific Antibodies: Formats, Considerations, Developability and Opportunities**
   
   **Laura von Schanz, Director, Alligator Biosciences**

2. **Immunocytokines: New Formats and New Strategies**
   
   **Dario Neri, PhD, Professor, Biomacromolecules, Chemistry and Applied Biosciences, ETH Zürich**

3. **Cellular Therapies: Current Successes and New Directions**
   
   **Ryan McCoy, Lead Technical Scientist, Cell and Gene Therapy, Catapult**

4. **The Yin and the Yang of the Innate Immune System in Cancer Therapy**
   
   **R.J. Tesi, MD, CEO and CMO, Inmune Bio**

5. **In vitro/ex vivo Models and Adapting in vivo Models to Study Immuno-Oncology and Antibody Functions**
   
   **Sophia N. Karagiannis, BA, MS, PhD, Reader, Translational Cancer Immunology, St. John’s Institute of Dermatology, School of Basic & Medical Biosciences**

**Please see website for more details.**

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**SC3: Managing the Challenges of Bioassays for Immuno-Oncology**

**Sofie Pattijn, CTO, ImmunXperts**

During the last years, significant advancement has been made in the clinical application of cancer immunotherapies. Molecules directed against immune checkpoints and combination therapies can be done using mouse models and in vitro bioassays with primary mouse or human immune cells.

**Part One: Bioassays for Non-Cellular Products**

This part will present experiences and data regarding bioassays for immune-modulatory antibodies and combination approaches. It will include the challenges with understanding the question you want answered and designing and interpreting an appropriate assay, as well as translating the results and managing expectations. It will examine prediction versus documenting MOA, what the bioassay does, what it is measuring, what it means and its value. Technical challenges will be addressed and case studies with data will be provided.

**Part Two: Bioassays for Cellular Products**

This second part will focus on bioassays used to support clinical development of cell-based immunotherapies, specifically CAR or TCR T-cell therapies. It will address the challenges linked with the choice/design of assays for toxicity and potency assessment. It will focus on risk assessment, particularly incoming material and genetic engineering steps; assessment of off-target effects; assessment of tumorigenicity with a focus on viral vector insertion; predictivity of current in vitro tumorigenicity assays, and animal models for safety and toxicity. Regarding efficacy and potency assays, it will focus on recapitulating a mode of action in animal and in vitro models; in vitro assays, and technical challenges.

**Please see website for more details.**

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**SC4: T Cell Therapies: Current Field, Challenges and Future Directions**

**Fiona Thistlethwaite, Consultant, Medical Oncology, Experimental Cancer Medicine, and Honorary Senior Lecturer, Cancer Sciences, Biology Medicine & Health, University of Manchester**

Reno Debes, PhD, Associate Professor, Tumor Immunology, Medical Oncology, Erasmus MC Cancer Institute

The field of Adoptive T cell (ACT) therapy is advancing rapidly and the EMA approval of products expressing CD19-specific Chimeric Antigen Receptor (CAR) to treat B cell malignancies marks the start of a new era. However, significant challenges need to be addressed including the safety assessment of target antigen and corresponding CARs or T cell receptors (TCRs), optimisation of T cell fitness, and the search for combinatorial approaches to enable T cells to target solid tumors. In addition it is important to include steps such as the manufacture and testing of clinical grade vector, development of efficient and reliable manufacturing methods, and delivering the therapies to patients safely, effectively and at a cost that is considered reasonable. This workshop will explore these important issues as we look to transition ACT from the laboratory into mainstream medicine.

*Separate registration required*
selective TNF inhibitors.

By protecting transmembrane TNF function, INB03 does not cause resistance. INB03, a second-generation TNF inhibitor targets soluble TNF with INB03 in patients with increased MDSC should reverse CPI resistance. INB03, a second-generation TNF inhibitor targets soluble TNF to decrease MDSC while improving NK/DC crosstalk and T cell recruitment. By protecting transmembrane TNF function, INB03 does not cause immunosuppression, a known off-target effect of currently approved non-selective TNF inhibitors.

15:15 Networking Refreshment Break

**FOCUS ON Fc ENGAGEMENT FOR EFFECTIVE TARGETING**
10:35 Coffee Break in the Exhibit Hall with Poster Viewing

BISSPECIFIC AGONISTS WITH CHECKPOINT BLOCKADE

11:15 Development of an ICOS/PD-L1 Bispecific
Matthew McCourt, PhD, Vice President, Immuno-Oncology, Kymab
We have developed a mAb2 bispecific antibody called KY1055 as a human IgG1 targeting ICOS and a modified Fc(Fcab) containing binding sites to PD-L1, and demonstrated potent binding to ICOS and PD-L1. We will present in vitro characterization demonstrating potential novel biology of the mAb2 and in vivo efficacy data supporting further development. Clonal cell lines suitable for manufacture have achieved initial titres of ~2g/L.

11:45 Dual T Cell Costimulation and PD-1 Blockade via the Bispecific Antibody XmAb23104: Hitting the Accelerator and Releasing the Brakes on TILs
Michael Hedvat, PhD, Group Leader, Cell Biology, Xencor, Inc.
Xencor is developing several bispecific antibodies that engage two targets on tumor-infiltrating lymphocytes (TILs). Examples include XmAb20717 (PD1 plus CTLA4 blockade), XmAb22841 (CTLA4 plus LAG3 blockade) and XmAb23104 (PD1 blockade plus ICOS agonism). I will also discuss preclinical development of these and of XmAb24306, a potency-tuned IL15/IL15R -Fc fusion that is itself immunostimulatory, and also a platform for engineering novel immune activators such as a TIL-targeted PD1 x IL-15 bispecific.

12:15 Luncheon Presentation (Sponsorship Opportunity Available) or Enjoy Lunch on Your Own

12:45 Dessert Break in the Exhibit Hall with Poster Viewing

13:15 Session Break

9:05 Key Clinical Learnings and Advancing the Pipeline of the ImmTAC TCR-Based Bi-specific Biologic Platform
Joseph Dukes, PhD, Director & Head, Biology, Immunocore, Ltd.
This presentation will introduce the TCR-based ImmTAC platform, giving insight into the key features that distinguishes the platform technology from other immunotherapies. The latest clinical data available for advanced trials in metastatic uveal melanoma will be summarised and the observation of signs of clinical benefit in immunologically cold tumours will be explored. Finally, subsequent candidates emerging from the pipeline will be discussed and presented, to illustrate the potential of the ImmTAC platform.

9:35 Problem Solving Roundtable Discussions
Importance of Fc Receptor Functions and Isotype Selection for the Development of Therapeutic Antibodies for Cancer
Moderator: Stephen A. Beers, PhD, Professor of Immunology and Immunotherapy, Centre for Cancer Immunology, University of Southampton
Challenges and Immunosuppressive Mechanisms that Restrict Anti-Tumour Functions of Monoclonal Antibodies in the Tumour Microenvironment
Modemtors: Sophia N. Karagiannis, BA, MS, PhD, Reader, Translational Cancer Immunology, King's College London
Christian Klein, Ph.D., Distinguished Scientist, Head, Oncology Programs, Roche Innovation Center Zurich
Checkpoint Refractory Patients – Solving the Problem
R.J. Tesi, MD, CEO and CMO, INmuneBio
Challenges with Targeting Immune Checkpoint Inhibitors
Moderator: Matthew McCourt, PhD, VP, Immuno-Oncology, Kymab

14:00 Chairperson's Remarks
Christian Klein, PhD, Distinguished Scientist, Head, Oncology Programs, Cancer Immunotherapy Discovery, Roche Pharmaceutical Research and Early Development, Roche Innovation Center Zurich

14:05 Simultaneous Multiple Interaction T Cell Engaging (SMITE) Bispecifics: Silence and Synergy through T-Cell Costimulation
Colin Correnti, PhD, Senior Scientist, Fred Hutchinson Cancer Research Center
We are developing pairs of synergistic T cell engagers that simultaneously bind two cancer antigens and two T cell co-receptors. Importantly, each singleton is selected to be inactive until paired, providing T cell co-stimulation and improved cancer specificity. In this presentation I'll describe our approach for generating silent and synergistic T cell engagers, highlighting our use of the Trianni™ mouse and automated methods for protein expression and T cell cytotoxicity assays.

14:35 New Developments with a BiTE® Antibody Construct Targeting CD33 in AML
Roman Kischel, PhD, Director, Research, Amgen Research Munich

15:05 Sponsored Presentation (Opportunity Available)

15:35 Refreshment Break in the Exhibit Hall with Poster Viewing

IMPORTANCE OF CYTOKINES/INNOVATIVE APPROACHES WITH CLINICAL BENEFITS

16:15 Next Generation Antibody-Cytokine Fusion Proteins
Dario Neri, PhD, Professor, Biomacromolecules, Chemistry and Applied Biosciences, ETH Zürich
Antibody-cytokine fusions ("immunocytokines") are being considered as therapeutics for the treatment of cancer and of chronic inflammatory conditions. In this lecture, I will present new concepts and experimental results for the development of products with preferential activity at the site of disease. This will include the generation of split-cytokine fusions and of potency-matched dual cytokine fusion proteins.

16:45 Exploratory Studies up to IND with NKTR255, a Memory T-Cell Stimulating Cytokine
Jonathan Zalevsky, PhD, Senior Vice President, Biology and Clinical Development, Nektar Therapeutics
This presentation will outline the mode of action in engaging the IL-15 pathway to induce long-term T cell activation and a T cell memory response and demonstrate the impact of the product on CDB T cells and NK cells. Means of optimizing biological activity will be discussed.

17:15 A Therapeutic Antibody Targeted Approach for Triple-Negative Breast Cancer
Sophia N. Karagiannis, BA, MS, PhD, Reader, Translational Cancer Immunology, St. John's Institute of Dermatology, School of Basic & Medical Biosciences, King's College London
We demonstrate that aggressive high-grade triple negative breast carcinomas (TNBC), including post-neoadjuvant chemotherapy residual disease, overexpress the tumor-associated antigen Folate Receptor alpha (FRα) and feature dysregulated folate metabolism in the tumor microenvironment. We reveal FRα, the folate metabolism and associated signaling pathways as promising targets by different inhibitor and monoclonal antibody therapy approaches. These offer opportunities to treat patients with poor prognosis who may not benefit from available targeted treatments.

17:45 Close of Immunomodulatory Approaches
and monitor patient responses to anti-PD-1 monotherapy in melanoma and effector memory) and sPD-L1 levels provide a new non-invasive way to predict immunotherapy. We report that measurements of T cell biomarkers (Bim and ligand 1 (PD-L1) expression confound its use as a predictive biomarker in cancer immunotherapy, but blood-based biomarkers have the potential to predict responders and detect mechanisms of resistance to immunotherapy. We report that measurements of T cell biomarkers (Bim and effector memory) and sPD-L1 levels provide a new non-invasive way to predict and monitor patient responses to anti-PD-1 monotherapy in melanoma and lung cancers.
TUESDAY 19 MARCH

MONITORING IMMUNOTHERAPY RESPONSE

8:00 Registration and Morning Coffee

8:30 Chairperson’s Opening Remarks
Graham Pawelec, MA, PhD, FGSA, Professor of Experimental Immunology, Second Department of Internal Medicine, University of Tuebingen Clinical School, Germany; Affiliated Scientist, Cancer Solutions Program, Health Sciences North Research Institute, Canada

8:35 Aging and the Human Immune System in the Era of Immunomodulatory Antibody Therapy for Cancer: Is It All Downhill?
Graham Pawelec, MA, PhD, FGSA, Professor of Experimental Immunology, Second Department of Internal Medicine, University of Tuebingen Clinical School, Germany; Affiliated Scientist, Cancer Solutions Program, Health Sciences North Research Institute, Canada

It is “common knowledge” that the human immune system deteriorates over time, resulting in an increased frequency of and susceptibility to infectious disease, autoimmunity and cancer, and in poorer responses to vaccines in the elderly (immunosenescence). This presentation will consider the clinically highly relevant question of the impact of immune aging on the responses of cancer patients to immunomodulatory antibody therapy that is currently revolutionizing medical oncology (2018 Nobel Prize).

9:05 Immune-Stroma-Tumor Cell Interactions in Understanding Immune Blockade Drug Response

Jun Zhu, PhD, Professor, Genetics and Genomic Sciences, Icahn School of Medicine at Mount Sinai and Sema4, a Mount Sinai Venture

Immune cell infiltration is positively associated with immune blockade drug response in general. However, high proportion of immune cell infiltration may not necessarily lead to good immune blockade drug response. We recently showed that immune and stroma cell interaction can predict PD-L1 response in bladder cancer (Wang et al, Nature Communications, 2018). Our single cell sequencing and computational modeling provide further insights of how immune-stroma-tumor cell interactions can determine immune blockade drug response.

9:35 Problem Solving Roundtable Discussion
Biomarkers to Predict Response and Toxicity to Immunotherapy
Moderator: Roxana Dronca, MD, Associate Professor of Oncology, Consultant and Chair, Division of Hematology-Oncology, Mayo Clinic

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

11:15 Systems Approach to Cancer Immunology Biomarker Discovery
Matthew Albert, MD, PhD, Principal Scientist, Cancer Immunology, Genentech

Germline genetic polymorphisms influence tumor gene expression and immune cell infiltration.

11:45 Applying Immune Receptor Sequencing in the Discovery and Profiling of Immuno-Oncology ‘Living Drugs’

Jan H. Bergmann, PhD, MD, Senior Scientist, Genomics Platform Technologies and Immune Receptor Discovery, AgenTus Therapeutics

Recent developments in sequencing technologies both on bulk and in particular the single cell level open up tremendous opportunities in functional immune receptor discovery, preclinical R&D as well as treatment monitoring in the field of immuno-oncology. Collectively, genomics technologies paired with innovative cell and molecular strategies are leveraging increased sensitivity and specificity to complement this rapidly developing therapeutic field.

12:15 Luncheon Presentation (Sponsorship Opportunity Available) or Enjoy Lunch on Your Own

12:45 Dessert Break in the Exhibit Hall with Poster Viewing

13:15 Session Break

THE MICROBIOME AND METABOLOMIC BIOMARKERS

14:00 Chairperson’s Remarks
Tina J. Hieken, MD, FACS, Associate Professor of Surgery, Surgery, Mayo Clinic

14:05 The Breast Tissue Microbiome, Stroma and Immune Cells in Association with Benign and Malignant Breast Disease
Tina J. Hieken, MD, FACS, Associate Professor of Surgery, Surgery, Mayo Clinic

Stromal changes, as well as alterations in the immune cell composition of benign breast lobules, encompassing both innate and adaptive immune effectors, have been described in association with future breast cancer risk. In tandem, pilot data suggests that the composition of the innate microbiome of stellately obtained histologically normal breast tissues is different between women with and without breast cancer. Associations between the breast tissue microbiome, microenvironment and disease state (benign versus malignant) suggest potential novel biomarkers of breast cancer risk and targets for primary prevention.

14:35 Multiplexing of Tryptophan and Its Metabolites for Patient Stratification and Monitoring in Immuno-Oncology
Christiane Opitz, PhD, Group Leader, Brain Cancer Metabolism, German Cancer Research Center, DKFZ

Tryptophan degradation is a potent immunosuppressive mechanism regulating anti-tumor immune responses. As treatments modulating tryptophan degradation are becoming available, methods to efficiently and precisely measure tryptophan degradation are becoming increasingly relevant both for stratification of patients to treatments as well as assessment of therapeutic efficacy. We employed isobaric mass tags to develop a method that enables quantitative comparison of tryptophan degradation simultaneously in up to 11 different samples. Using this method we studied the effects of the tryptophan pathway modulator indoximod on tryptophan metabolism in human cancer and immune cells. A proof of principle study comparing tryptophan degradation in 40 glioblastoma patients to age- and sex-matched healthy controls revealed reduced levels of tryptophan and downstream tryptophan metabolites in the glioblastoma patients.

15:05 Sponsored Presentation (Opportunity Available)

15:35 Refreshment Break in the Exhibit Hall with Poster Viewing

TRANSLATIONAL BIOMARKERS AND SUCCESS IN THE CLINIC

16:15 Omic Insights into Immune Resistance Mechanisms
Jim Eyles, PhD, Principal Scientist, Translational Medicine (Oncology), MedImmune

The program presents an overview of microsatellite instability (MSI) and mismatch repair defect (dMMR), and how it fits into the tumor immunogenicity-inflammation pathway. It reviews the history and clinical evidence for MSI and dMMR as a predictive biomarker for response to pembrolizumab. It discusses the unprecedented − and unorthodox − path to FDA approval of pembrolizumab. Finally, it discusses MSI and dMMR in the broader context of biomarkers in immuno-oncology.

16:45 The First Biomarker-Defined Tumor Indication: FDA Approval of Pembrolizumab for MSI-High Cancer
Kenneth Emancipator, DABP MD, Executive Medical Director and Head of Companion Diagnostics, Translational Medicine, Merck & Co.

The program presents an overview of microsatellite instability (MSI) and mismatch repair defect (dMMR), and how it fits into the tumor immunogenicity-inflammation pathway. It reviews the history and clinical evidence for MSI and dMMR as a predictive biomarker for response to pembrolizumab. It discusses the unprecedented − and unorthodox − path to FDA approval of pembrolizumab. Finally, it discusses MSI and dMMR in the broader context of biomarkers in immuno-oncology.

17:15 Biomarkers for the Translation of a Novel Small Molecular Immunomodulatory Therapy
Stephanie Traub, PhD, Biomarker Development Specialist, Drug Development Center, Cancer Research UK

17:45 Close of Biomarkers for Immuno-Oncology
**Combination Immunotherapy**  
**Distinguishing Promising Cancer Immunotherapy Combinations from the Crowd**

**WEDNESDAY 20 MARCH**

**ANTIBODY AND CHECKPOINT INHIBITOR COMBINATIONS**

7:45 Registration and Morning Coffee

8:30 Chairperson's Opening Remarks  
*Daniel S. Chen, MD, PhD, Chief Medical Officer, IGM Biosciences*

8:35 **FEATURED PRESENTATION:** Engineering Therapeutics and the Future of Cancer Immunotherapy  
*Daniel S. Chen, MD, PhD, Chief Medical Officer, IGM Biosciences*  
Single agent and combination cancer immunotherapy with PD-L1/PD-1 inhibitors have generated durable responses in a subset of patients and a survival benefit in a broad group of patients suffering from terminal cancers. However, the next generation of cancer immunotherapeutics have not yet led to a similar therapeutic impact, potentially supporting the complexity and highly regulated nature of the human immune system. However, advances in engineered therapeutics, from cellular therapy to highly modified multispecific molecules, are enabling novel methods to modulating biology and the immune system to eradicate cancer.

9:05 **KEYNOTE PRESENTATION:** PD-1 Antibodies Are Transforming Cancer Therapy Both as Mono- and Combination Therapies  
*Roy D. Baynes, MD, PhD, Senior Vice President and Head, Global Clinical Development, CMO, Merck Sharpe & Dohme*  
PD-1 antibodies have shown significant activity across more than 25 major cancer types. PD-1 antibody activity in monotherapy may be enriched with precision medicine tools. Precision medicine may help define resistance biology and enable rational combinations. Certain combinations (e.g. chemotherapy + PD-1 antibodies) may be broadly active without regard for biomarker-based selection.

9:35 Sponsored Presentation (Opportunity Available)

10:05 Coffee Break in the Exhibit Hall with Poster Viewing

10:45 **ANTIBODY AND CHECKPOINT INHIBITOR COMBINATIONS (CONT.)**

10:45 IgA as an Alternative Isotype to Treat Cancer, and Combination with Innate Checkpoint Inhibition  
*Jeanette Leusen, PhD, Associate Professor, Laboratory for Translational Immunology, Immunotherapy Group, University Medical Center Utrecht*  
All clinically used mAbs are of the IgG class but IgA can be very effective *in vitro* and *in vivo*, with a distinct mechanism of action: IgA has the unique capacity to activate neutrophils, our most abundant but often underappreciated white blood cell. For a long time, it was hard to produce and purify enough IgA for preclinical experiments. Furthermore, IgA has a short half-life and mice lack the IgA receptor which hampers the preclinical research. In the presentation these issues will be addressed and answered, with preclinical examples for lymphoma and neuroblastoma.

11:15 **Bispecific Antibodies for Tumor-Directed Blockade of CD47, a Ubiquitously Expressed Immune Checkpoint**  
*Krzysztof Masternak, PhD, Head of Biology, Research, Novimmune SA*  
To evade the immune system, cancer cells overexpress CD47, a ubiquitous innate immune checkpoint. Bispecific antibodies afford selective tumor-directed CD47 targeting, allowing for an improvement of therapeutic window as compared to monospecific strategies, such as anti-CD47 mAbs and SIRP alpha-Fc fusion proteins. In vivo translational studies demonstrate that tumor-directed blockade of CD47 with bispecific antibodies results in enhanced anti-tumor activity and a modification of the properties of the tumor microenvironment.

11:45 **The Use of Bispecific Antibodies to Modulate Anti-Tumour Immune Responses**  
*Neil Brewis, PhD, DSc, CSO, Research and Development, F-star mAb™ is a bispecific antibody format that allows a “plug and play” modular strategy F-star product strategy to address heterogeneity of tumour phenotypes in vitro and in vivo efficacy of F-star bispecific antibodies targeting oncology pathways.*

12:15 **Luncheon Presentation (Sponsorship Opportunity Available) or Enjoy Lunch on Your Own**

12:45 **Dessert Break in the Exhibit Hall with Poster Viewing**

13:15 **Session Break**

**MULTIPLE IMMUNOTHERAPY COMBINATIONS**

14:00 **Chairperson’s Remarks**  
*Johan Lanto, PhD, Project Director, Immuno-Oncology, Symphogen*

14:05 **On the Requirement to Induce Immune Modulation Prior to Checkpoint Inhibitor Therapy: Lessons from Mice and Men**  
*Angus Dalgleish, MD, FRCP, FRACP, FRCPath, FMedSci, Foundation Professor of Oncology SGUL, Principal of the Institute of Cancer, Vaccines and Immunotherapy, Institute of Infection and Immunity, St George’s University of London*  
Checkpoint inhibitors (CPIs) have revolutionized the treatment of several cancer types, however, the majority of patients do not benefit on single agent CPIs. Mouse studies show that response to CPIs do not occur unless innate immune cells are activated and other markers are reduced. IMM-101 activates innate immune responses and has been reported to enhance clinical responses to CPIs in melanoma patients.

14:35 **Regulatory Challenges and Opportunities for Combination Development**  
*Elena Spanjaard, PhD, Global Head of Regulatory Affairs, Regulatory Affairs, Celyad*  
Efficient co-development of novel combination therapies presents complex regulatory challenges. Regulatory guidelines provide a framework for development of investigational agents that are intended for use in combination. Key considerations for selecting combination agents and modality-specific considerations will be highlighted. Current special regulatory designations and expedited pathways will be reviewed, including qualifying criteria, features, and benefits.
8:35 NK Cell-Based Therapy for the Treatment of Tumours Expressing Membrane Hsp70
Graham Pockley, PhD, CEO, multimmune GmbH; Professor of Immunobiology, John van Geest Cancer Research Centre, Nottingham Trent University
Despite progress, significant numbers of individuals continue to die of aggressive, therapy-resistant disease. Professor Pockley will introduce a new natural killer (NK) cell-based approach for the treatment of aggressive cancers which express a membrane form of Hsp70 – ‘one drug could indeed fit all’.

9:05 Novel RNA-Transfected Dendritic Cells as a Universal Vaccine Platform to Induce T Cells Recognizing Shared Antigens as well as Mutated and Non-Mutated Neoantigens
Gerold Schuler, PhD, MD, Head of Department, Dermatology, University Hospital Erlangen
Our novel NFkB-activated RNA-transfected dendritic cells (DCs) induce effector and memory T cells, and also stimulate NK cells for innate immune attack. A unique advantage is that we can not only load these DCs with shared or mutated antigens but via transfection with total tumor mRNA also arm the DC with non-mutated neo-antigens including cryptic peptides. This exceptional vaccine platform has recently produced convincing clinical benefit in various tumor entities.

9:35 Sponsored Presentation (Opportunity Available)

10:05 Coffee Break in the Exhibit Hall with Poster Viewing

10:45 The Exercise of Taming the Immune System
Per Thor Straten, PhD, Professor, Department of Hematology, Center for Cancer Immune Therapy, University Hospital Herlev
We have characterized a novel co-stimulatory pathway in CD8 T cells. The stimulatory signal goes via activation induced surface expression of both the receptor as well as the soluble ligand. Importantly, increased signaling via this pathway leads to increased cytokine release and proliferation, whereas blocking of the pathways by monoclonal antibody or siRNA technology leads to diminished production of TNF-α and INF-γ, as well as and reduced proliferation.

11:15 Macrophages: Immunosuppressive Cells in the Tumour Microenvironment
Jeffrey Pollard, PhD, Professor, University of Edinburgh

11:45 Rational Immuno-Oncology (IO) Combination Therapy
Robert Wilkinson, PhD, Director, Oncology Research, MedImmune
Immuno-Oncology (IO) therapy, such as immune checkpoint blockade antibodies, has created a paradigm shift in the treatment of some cancers. Our understanding around biomarkers of which patients will benefit from IO therapy continues to evolve; alongside how best to modulate the anti-cancer immune response through rational/data driven combinations with other IO therapies (targeting innate and/or adaptive immune cells), targeted therapies and/or standard of care treatments, such as chemo- and radio-therapy.

12:15 Luncheon Presentation (Sponsorship Opportunity Available) or Enjoy Lunch on Your Own

12:45 Dessert Break in the Exhibit Hall with Poster Viewing

13:30 Close of Combination Immunotherapy
Designing Candidate Products to Match Tumor Phenotypes

anti-CTLA4 antibody, membrane tethered IL-12 and the antigen presenting cell modulators that are safest and most effective when expressed within the TME: of SKV we have been able to engineer and express three potent immune activity and improved tumor selectivity. Due to the exquisite tumor selectivity containing a large genome deletion which exhibited augmented oncolytic strategy to generate a novel oncolytic vaccinia backbone (termed SKV) Immunotherapy

10:45 10:05 9:35 8:30

Building a Battleship to Treat Cancer: Next-Generation Viral Immunotherapy

Michael F. Burgess, PhD, President, Research and Development, Turnstone Biologics Oncolytic viruses are well positioned to deliver multimodal therapy. We used a combination of functional genomics and bio-selection strategies to generate a novel oncolytic vaccinia backbone (termed SKV) containing a large genome deletion which exhibited augmented oncolytic activity and improved tumor selectivity. Due to the exquisite tumor selectivity of SKV we have been able to engineer and express three potent immune modulators that are safest and most effective when expressed within the TME: anti-CTLA4 antibody, membrane tethered IL-12 and the antigen presenting cell activating ligand FLT3-L.

11:15 T-SIGn Gene Therapy Vectors for Solid Tumor Therapy: Designing Candidate Products to Match Tumor Phenotypes

John Beadle, MD, MBA, CEO, PsiOxus Therapeutics Enadenotucirev is an Ad11p/Ad3 chimeric adenovirus with potent and selective anti-tumor activity, with a blood stability profile that enables systemic dosing. It has been administered intravenously to over 100 cancer patients. Tumor-Specific Immuno-Gene Therapy (T-SIGn) gene therapy vectors are modified viruses that retain all the functional properties of enadenotucirev, while also mediating the expression of therapeutic transgenes. Each T-SIGn virus is designed to target a different immunological phenotype of tumor.

11:45 Second-Generation Non-Attenuated Oncolytic HSVs: An Opportunity for Checkpoint Blockade

Gabriella Campadelli-Fiume, Sc. Dr., Professor, University of Bologna OVs in clinical trials did not meet to the expectations raised by preclinical studies. Less attenuated OVs are needed. The second-generation non-attenuated tropism retargeted α-HSVs selectively infect cancer cells, preserve the full-blown virulence of wt-HSV. In essence, they are fully virulent in their target cells and highly safe. The retargeted α-HSVs deeply modify the suppressive tumor microenvironment, exert strong abscopal effect and greatly increase the efficacy of checkpoint inhibitors. They can be tailored to specifically counteract a variety of solid tumor indications and, given the ample genome space, can be armed simultaneously with multiple immunomodulatory molecules to potentiate the antitumor effects.

12:15 Luncheon Presentation (Sponsorship Opportunity Available) or Enjoy Lunch on Your Own

12:45 Dessert Break in the Exhibit Hall with Poster Viewing

13:15 Session Break

ADVANCES IN CLINICAL TRIALS

14:00 Chairperson’s Remarks

Stephen J. Russell, MD, PhD, CEO, Vyriad, Inc.

14:05 FEATURED PRESENTATION: Advancing Treatment for Brain Tumors with Oncolytic Adenoviruses

Frank Tufaro, PhD, CEO, DNAtrix, Inc. DNX-2401 (tasadenoturev), which encodes an RGD motif in its fiber to target tumor cells, is the basis for DNAtrix’s adenovirus OV platform. DNAtrix is conducting several clinical trials with armed and unarmed viruses with or without CPIs, in the US, Canada and EU: two ongoing studies for recurrent GBM (rGBM) in adults and one for DIPG in children. The CAPTIVE study, now fully enrolled, in collaboration with Merck, is investigating the use of DNX-2401 adenovirus followed by pembrolizumab for rGBM. Early analysis indicates an excellent safety profile and encouraging efficacy. Clinical data will be discussed.

14:35 Adenovirus-Mediated CD40L and 4-1BBL Gene Therapy – From Bench to Bedside

Angelica Loskog, CEO, Lokon Pharma AB Immunostimulatory gene therapy utilizing viruses to deliver immune stimulation in the tumor microenvironment is an appealing method to stimulate anti-tumor immunity. We have developed an oncolytic adenovirus that encodes a designed trimerized CD40L and a full length 4-1BBL. These transgenes are expressed by both tumor and stroma post intratumoral injection and drive DC and T cell activation. Two Phase I/II trials are ongoing.
19:05 Virotherapy for Peritoneal Carcinomatosis
Moderator: Ulrich M. Lauer, MD, Professor & Vice Chairman, Internal Medicine VIII, Medicine, University Hospital Tübingen
• Types of oncolytic viruses to be employed
• Modalities of locoregional application (single shot vs. repetitive)
• Combination therapies with immune checkpoint inhibitors
• Resistance phenomena including complement inhibition of virotherapeutics
• Real-time monitoring possibilities existing state-of-the-art marker genes

The Power of Reporter Gene Imaging: The Pharmacologists Dream
Moderator: Stephen J. Russell, MD, PhD, CEO, Vyrad, Inc.
• Tailoring of OV doses, routes and regimens to address the unpredictability and heterogeneity of clinical responses
• Pharmacokinetic and pharmacodynamic correlates in clinical trials
• Determining the impact of dose, route, method of administration, tumor histology, tumor genetics and immunomodulatory drugs

16:05 Refreshment Break in the Exhibit Hall with Poster Viewing

ADVANCES IN CLINICAL TRIALS (CONT.)
16:35 Oncolytic Virus Vaccines and Immune Checkpoint Inhibitors
John Bell, PhD, Senior Scientist, Center for Innovative Cancer Research, Ottawa Hospital Research Institute
Oncolytic viruses are designed to infect and kill cancer cells, however an important and critical component of their therapeutic activity is the stimulation of anti-tumour immunity. We have engineered oncolytic viruses to be potent stimulators of anti-tumour immunity and therapeutics that are optimally active when combined with immune checkpoint inhibitor antibodies.

17:05 ParvOryx02: A Phase II Trial of Intravenous and Intratumoral Administration of Parvovirus H-1 in Patients with Metastatic Pancreatic Cancer
Guy Ungerechts, MD, PhD, Deputy Director, Medical Oncology Department, National Center for Tumor Diseases (NCT), University Hospital Heidelberg
ParvOryx02 trial with parvovirus H-1 for patients with metastatic pancreatic cancer treated with repeated intravenous and subsequent intralesional (liver metastases) administration has been completed. Primary endpoint was safety and feasibility. To identify immunological and molecular signatures of responses/non-responses, three serial liver biopsies (before, during, and after treatment) allowed for in-depth analyses of pathological tumor characteristics, tumor-infiltrating immune cells, quantification of cytokines and chemokines, and investigation of viral replication and tropism.

17:35 Virotherapy for Peritoneal Carcinomatosis - Update on Preclinical & Clinical Studies
Ulrich M. Lauer, MD, Professor & Vice Chairman, Internal Medicine VIII, Medicine, University Hospital Tübingen
Malignancies often disseminate throughout the lining of the abdominal cavity which is referred to as peritoneal carcinomatosis. Oncolytic viruses, employed as a locoregional treatment in these patients, hold great promise for improving treatment results obtained with conventional (non-immunological) therapeutic interventions, such as systemic or regional chemotherapies with/without cytoreductive peritonectomy. In this context, an update on preclinical & clinical studies for virotherapy in peritoneal carcinomatosis is provided.

18:05 Networking Reception in the Exhibit Hall with Poster Viewing
19:05 Close of Day

THURSDAY 21 MARCH

MODULATING THE IMMUNE SYSTEM
8:00 Morning Coffee
8:30 Chairperson’s Opening Remarks
Frank Tufaro, PhD, CEO, DNAtrix, Inc.

8:35 Oncolytic Viruses and Adoptive Natural Killer Cell Therapy: A Match Made in Heaven?
Evrn Alici, MD, PhD, Head, Gene and Cell Therapy Group, Division of Hematology, Medicine, Karolinska University Hospital

9:05 Using Oncolytic Adenovirus Armed with TNFa and IL-2 to Modulate the Tumor Microenvironment for Effective T-Cell Therapy
Aksei Hemminki, MD, PhD, Founder, CEO & Chairman of the Board, TILT Biotherapeutics
I will talk about the observations and patient data from Advanced Therapy Access Program treated with different oncolytic viruses and share our latest results for TILT Biotherapeutics lead product TILT-123: TNFa and IL-2 armed oncolytic adenovirus.

9:35 Sponsored Presentation (Opportunity Available)
10:05 Coffee Break in the Exhibit Hall with Poster Viewing

DISCOVERING NEW OV PLATFORMS
10:45 Novel Poxviruses for Oncolytic Virotherapy
Eric Quemeneur, PharmD, PhD, CSO, Transgene
Vaccinia has proven to be an efficient platform for the engineering of armed oncolytic viruses, and many Vaccinia-based products are currently in clinical development. Other poxviruses are also considered to generate new platforms with improved therapeutic index or biodistribution profiles. In this perspective, we recently studied cowpox, pseudocowpox, and deV5, a novel virus obtained after shuffling 4 Vaccinia strains. They display interesting complementary features to existing OV platforms.

11:15 Preclinical Development of Next-Generation Oncolytic Vaccinia Viruses for Use as Immunotherapies
Steve H. Thorne, CSo, Western Oncolitics
Vaccinia virus represents a potent backbone for use in oncolytic viral vectors due to its immune activating properties and systemic delivery potential. Although several oncolytic vaccinia vectors have demonstrated this potential in a clinical setting, a next generation of viruses in preclinical development may more effectively combine with existing IO therapies. Several approaches to developing enhanced and more effective vaccinia-based OV therapies will be discussed.

11:45 Replicating Retroviral Vectors as Targeted Immuno-Oncology Agents with Significant Clinical Therapeutic Potential and Safety Record
Douglas J. Jolly, PhD, Executive Vice President, Research & Pharmaceutical Development, Tocagen, Inc.
Toca 511 is a gammaretroviral replicating vector encoding cytosine deaminase that selectively infects tumor cells and converts the antifungal drug 5-fluorocytosine into the antineoplastic drug 5-fluorouracil, which directly kills tumor cells and stimulates antitumor immune responses. As part of clinical monitoring of Phase I clinical trials in recurrent high-grade glioma, we have performed extensive molecular analyses of patient specimens to track vector fate.

12:15 Luncheon Presentation (Sponsorship Opportunity Available) or Enjoy Lunch on Your Own
12:45 Dessert Break in the Exhibit Hall with Poster Viewing
13:30 Close of Oncolytic Virus Immunotherapy
Infiltrating Lymphocytes (TIL) for Solid Tumor Indication

16:30 TCR-Engineered T Cells Combined with T Cell Co-Stimulation to Treat Solid Tumors

Reno Debets, PhD, Associate Professor, Laboratory of Tumor Immunology, PI, Medical Oncology, Erasmus MC-Cancer Institute

To ensure further clinical development of TCR gene therapy, it is necessary to accurately select TCRs and, at the same time, include strategies that restore or enhance accumulation and activation of T cells in tumor tissues. Here, we present our recent preclinical and translational studies to enhance TCR-engineered T cell therapy, its combination with T cell co-stimulation, and, when available, first data of a clinical T cell therapy trial to treat patients with melanoma and head-and-neck cancer (starts in 2018 Q4).

17:00 TCR-Engineered T Cells Combined with T Cell Co-Stimulation to Treat Solid Tumors

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18:00 Close of Day
neurotoxicity. Herein, we describe a mouse model recapitulating key features of CRS and neurotoxicity. Understanding the nature of these pathologies and developing treatments for them are hampered by the lack of appropriate animal models. How to Use CAR T Cells Effectively in a Solid Cancer Setting

Moderator: Phil Darcy, PhD, Professor, NHMRC Principal Research Fellow, Laboratory Head Cancer Immunotherapy, Peter MacCallum Cancer Centre

- Immunosuppressive tumor microenvironment
- Target antigens
- Combination approaches
- Trafficking of T cells

Adaptive T Cell Therapy for Solid Tumor: The Challenges to Face

Moderator: Anna Mondino, PhD, Head, Lymphocyte Activation Unit, Immunology, Transplantation and Infectious Diseases, San Raffaele Scientific Institute, DIBIT

- Strategies to overcome physical and functional barriers
- Vessel remodeling/targeting
- Immunosuppressive mechanisms
- Improving intratumoral T cell representation
- Optimize delivery of cells and drugs

11:00 Networking Coffee Break

SAFETY AND POLICY FOR T CELL THERAPY (CONT.)

11:20 Targeting Cytokines to the Tumor Vasculature to Improve the Therapeutic Efficacy of Adaptive T-Cell Therapy

Anna Mondino, PhD, Head, Lymphocyte Activation Unit, Immunology, Transplantation and Infectious Diseases, San Raffaele Scientific Institute, DIBIT

T-cell engineering with T-cell receptors (TCR) or chimeric antigen receptors (CAR) specific for tumor-associated antigens has been employed in anti-tumor adoptive T-cell therapy. Remarkable clinical success has been reached against hematological malignancies. Physical and functional barriers still limit efficacy against solid tumors. Data supporting the beneficial effects of targeting cytokines to the tumor vessels to improve intratumoral T-cell effector representation and function will be discussed.

11:50 Monocyte-Derived IL-1 and IL-6 Are Differentially Required for Cytokine-Release Syndrome and Neurotoxicity Due to CAR T Cells

Attilio Bondanza, Novartis; Innovative Immunotherapies Unit, San Raffaele Hospital Scientific Institute

In the clinic, chimeric antigen receptor-modified T (CAR T) cell therapy is frequently associated with life-threatening cytokine-release syndrome (CRS) and neurotoxicity. Understanding the nature of these pathologies and developing treatments for them are hampered by the lack of appropriate animal models. Herein, we describe a mouse model recapitulating key features of CRS and neurotoxicity.

12:20 PANEL DISCUSSION: Safety Management of Cytokine Release and Toxicity

Moderator: Michaela Sharpe, PhD, Head of Nonclinical Safety and Immunotherapy Strategy, Cell and Gene Therapy Catapult

Panelists: Fiona Thistlethwaite, MB, PhD, Consultant, Medical Oncology, The Christie NHS Foundation Trust

Anja Liebeskind-Englbrecht, Head of Market Access Strategy, Novartis Pharmaceuticals UK Limited

Additional Panelists to be Announced

- How do we prepare an institution for a multidisciplinary approach to managing gene-modified T-cell therapy-related AEs?
- The role of the new FACT standards for immune effector cells
- Establishment of common CRS management algorithms

12:50 Networking Refreshment Break with Light Snack

NEXT-GENERATION T CELL THERAPY

13:30 Chairperson’s Remarks

Mark A. Exley, PhD, Vice President, Cellular Immunology, AgenTus Therapeutics, Inc.

13:35 Cars, Trucks and Beyond: The Next Generation of Adaptive T-Cell Therapy

Phil Darcy, PhD, Professor, NHMRC Principal Research Fellow, Laboratory Head Cancer Immunotherapy, Peter MacCallum Cancer Centre

- One of the immunosuppressive pathways which has largely been ignored is the generation of adenosine by CD73 expressed on tumor cells. In this study, we investigated whether blockade of this pathway could enhance ACT using CAR T cells. The study shows that dual blockade of adenosine and PD-1 suppressive pathways can potently enhance CAR T-cell therapy and this has significant implications for potentially improving therapeutic outcomes of CAR T-cell therapy for patients.

14:05 New Horizons for Adaptive T-Cell Therapy

Attilio Bondanza, Novartis; Innovative Immunotherapies Unit, San Raffaele Scientific Institute, DIBIT

- Reduced the tumor burden in early phase trials and induced spectacular and lasting remissions. We discuss recent developments in the fourth generation of CAR T cells, so-called TRUCKs, which release an inducible IL-12 and/or IL-18 upon CAR engagement in the targeted tumor lesion and present a new CAR format to shape the T cell maturation in a specific fashion.

14:35 Novel Targets, Receptors & Cellular Platforms for Cancer Immuno-Therapy

Mark A. Exley, PhD, Vice President, Cellular Immunology, AgenTus Therapeutics, Inc.

Adaptive cell therapy is making inroads into previously untreatable cancers. However, toxicities along with emerging relapses, high cost of goods and logistical issues with autologous ACT suggest there is much to do. AgenTus is developing novel tumor target identification, T cell receptor and CAR platforms, and allogeneic cellular delivery systems. A new class of phospho-tumor targets, TCRs recognizing PTTs, and our cell platform will be described. Clinical trials are planned.

15:05 Novel Methods of Transgene Delivery, CAR Design, Optimization and Target Validation

Thomas Narreter, PhD, Senior Research Fellow, Internal Medicine II, University Hospital Wuerzburg

While CD19, approved for the therapy of several hematologic malignancies, is still by far the best-studied target for CAR T therapy, other candidates are just around the corner, addressing hematologic and solid tumors that are not susceptible to CD19 CAR T treatment. We will hear on these candidates and novel methods of transgene delivery, CAR design and optimization as well as target validation.

15:35 End of Summit

“Great talks; great networking”

EVP and CSO, Innate Pharma
Preclinical & Translational Immuno-Oncology
Advanced Preclinical Models of Immuno-Oncology and Translational Strategies in Preparation for the Clinic

THURSDAY 21 MARCH

12:15 Registration
12:45 Dessert Break in the Exhibit Hall with Poster Viewing

ADVANCED MODELS FOR IMMUNO-ONCOLOGY

14:00 Chairperson’s Opening Remarks
Catarina Brito, PhD, Lab Head, Animal Cell Technology Unit, IBET

14:05 FEATURING PRESENTATION: Sharpening Preclinical Insight to Improve Clinical Relevance
Sara Colombetti, PhD, Head of Oncology Discovery Pharmacology, Research and Early Development (PRED), Roche Pharma
Preclinical mouse models are key tools to evaluate the activity of cancer immunotherapies. They are instrumental to understand the mechanism of action of tested compounds, and help identifying rationale combination partners for best anti-tumor efficacy. We show here how the Pharmacology Group at the Roche Innovation Center Zurich has been developing over the past years cutting edge mouse models platform with improved clinical relevance and predictive value.

14:35 3D-3-Culture: A Tool to Unveil Macrophage Plasticity in Tumor Microenvironment
Catarina Brito, PhD, Lab Head, Animal Cell Technology Unit, IBET
We have been exploring culture strategies based on alginate microencapsulation and stirred culture systems to develop tools to study macrophage plasticity in response to therapy. In 3D-3-cultures (co-culture of tumor cell spheroids, fibroblasts and monocytes), immunosuppressive features of cancer microenvironment are recapitulated, with infiltration of macrophages in the tumor mass and trans-polarization into M2-like phenotypes. Challenging of the system with therapeutic compounds induced modulation of the M2-like phenotype.

15:05 Somatically Engineered Preclinical Models for Immunotherapy Studies
Danilo Maddalo, PhD, Lab Head, Oncology, Novartis
Generation of animal models with a fully functional immune system is key for the study and the development of treatments targeting the tumor microenvironment. The implementation of genome editing technologies such as the CRISPR/Cas9 system has revolutionized the field of disease modeling as it allows the precise induction of specific oncogenic signatures in somatic cells of a specific organ. In this talk, a short overview of the current and future applications of in vivo somatic genome editing will be presented.

15:35 Immunogenicity Assessment for Immuno-Oncology Programs
Margot El-Khour, PhD, Immunology Sales Specialist, Sales, ProImmune Ltd.
Whether immunogenicity is desired as for cancer epitopes or unwanted in the context of later drug development safety, immunogenicity assessment is critical for every step of anticancer therapy development. As the market leader in the field, ProImmune has developed expert, standardised, consistent in-house assays which provide a deep understanding of antigenicity of epitopes and whole compounds. We will describe our capabilities using selected case studies placed in the context of epitope identification and immunogenicity assessment.

16:05 Networking Refreshment Break
16:30 Therapeutic Combination Benefits of IDO1 Inhibition with T Cell Activation Approaches in Preclinical Models
Manfred Kraus, PhD, Director In Vivo Pharmacology & Oncology, In Vivo Pharmacology & Oncology, Pfizer

17:00 Advanced Human in vitro Models for Preclinical Safety Assessment of Immunomodulatory Drugs
Cristina Bertinetti-Lapatki, PhD, Principal Scientist, Investigative Safety, Roche
In recent years, the development of advanced cellular models growing in 3 dimensions, displaying improved physiology, involving multiple cell types and platforms incorporating flow and shear forces has raised hopes of improving the de-risking approaches of potential drug induced adverse effects using human relevant systems. The challenges and opportunities of using such novel in vitro models to better understand the inherent risks of immunomodulation at an early stage of drug development to enable better strategic decision making will be highlighted.

17:30 Tissue Slice Culture: A Slice of Reality in Drug Development
Fabien Garcon, PhD, Scientist I, MedImmune

18:00 Close of Day

Dinner Short Course Registration
RECOMMENDED DINNER SHORT COURSE*
18:30 - 21:30 SC3: Managing the Challenges of Bioassays for Immuno-Oncology
*Separate registration required, please see page 3 for details

FRIDAY 22 MARCH

ENTERING THE CLINIC

8:00 Morning Coffee
8:30 Chairperson’s Remarks
Mahendra Deonarain, BSc, PhD, CEO and CSO, Antikor Biopharma

8:35 Rational Design to Combine with Checkpoint Immunotherapy
Siu Tim Cheung, PhD, Associate Professor, Surgery, The Chinese University of Hong Kong
Majority of the studies have shown the interaction of PD-L1/PD1 between tumor cells and T-lymphocytes with unclear involvement of other immune components. Natural killer (NK) cells have been progressively used in the treatment of hematologic malignancy with unclear efficacy in solid tumors. The present study will discuss the role of PD-L1/PD1 targeting on NK cell-mediated cytotoxic function.
Clinical trials of combined anti-GITR and anti-PD-1 immunotherapy in human cancer. These results provide a mechanistic rationale for conducting further studies in mouse cancer models, we have identified a receptor-ligand axis involved in an active immune response. TNF receptors mediate a number of costimulatory functions and can be activated using monoclonal antibodies. However, the rules of engagement for these receptors are not yet clear with careful dissection of their mechanisms of action still required. Our current understanding of these various aspects will be discussed.

Evasion of the host’s immune system by tumor cells is a well-established mechanism of tumor establishment and progression. Using proteomic analysis of membrane-associated proteins from whole tumors, tumor infiltrating lymphocytes (TIL), and activated/exhausted T-cell models, we have identified a receptor-ligand axis involved in an active immune escape mechanism. We have generated an antibody targeting this axis with potential therapeutic benefit.

Immune checkpoint inhibitor therapies bolster the antitumor activity of CD8+ T lymphocytes. We used single-cell analysis of tumor-infiltrating lymphocytes to probe the mechanisms responsible for the synergy of PD-1 blocking and GITR agonist antibodies in enhancing tumor control in mouse cancer models. This combination immunotherapy resulted in a synergistic increase in memory precursor effector T cells that depended on availability of specific costimulatory pathways. These results provide a mechanistic rationale for conducting further clinical trials of combined anti-GITR and anti-PD-1 immunotherapy in human cancer.
Present a Research Poster

Share Your Advancements and Discover the Latest Opportunities in Cancer Research in the Exhibit Hall

Cambridge Healthtech Institute encourages attendees to gain further exposure by presenting their work at Immuno-Oncology Summit Europe. To secure a poster board and inclusion in the conference materials, please submit your abstract and coordinate registration by 8 February 2019.

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HOTEL & TRAVEL INFORMATION

CONFERENCE VENUE & HOTEL: Hilton London Canary Wharf
Marsh Wall, South Quay, London, E14 9SH, UK, T: 44 (0) 203-002-2300
Discounted Room Rate: £214 Single / £226 Double (includes breakfast and Wi-Fi)
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