



**DG-GT**

Deutsche  
Gesellschaft für  
**Gentherapie** e.v.

**LEIPZIG**

**16 & 17 SEPTEMBER 2019**

**CAR-T CELLS AND BEYOND**

**FRAUNHOFER IZI**



### The Fraunhofer Institute for Cell Therapy and Immunology

The Fraunhofer IZI investigates and develops solutions to specific problems at the interfaces of medicine, life sciences and engineering. One of the institute's main tasks is to conduct contract research for companies, hospitals, diagnostic laboratories and research institutes operating in the field of biotechnology, pharmaceuticals and medical engineering.

The Fraunhofer IZI develops, optimises and validates methods, materials and products for the business units Cell and Gene Therapy, Drugs and Diagnostics. Its areas of competence lie in cell biology, immunology, drug biochemistry, bioanalytics and bioproduction as well as process development and automation. In these areas, research specifically focuses on the indications oncology, immunological diseases as well as infectious diseases and neurodegenerative diseases.

The institute works in close cooperation with hospital institutions and performs quality tests besides carrying out the GMP-compliant manufacture of clinical test samples. Furthermore, it helps partners obtain manufacturing licenses and permits.

[www.izi.fraunhofer.de/en.html](http://www.izi.fraunhofer.de/en.html)

**Fraunhofer Institute for Cell Therapy and Immunology**  
Perlickstraße 1  
04103 Leipzig  
Germany

### Registration

Registration is located near the entrance of the building

#### We will be available:

Monday 16 September: 11:00 to 20:30

Tuesday 17 September: 08:30 to 17:30

### Wi-Fi access

Wi-Fi is available throughout the building. Look out for the access code on the day.

### Useful contacts

**Leipzig taxi:** +49 341 4884  
([www.taxi4884.de](http://www.taxi4884.de))

**City Taxi Leipzig:** +49 341 2222 4444

### Delegate list

The delegate list (based on consent) is available online in your DG-GT account: My Congress Materials.

### For urgent queries

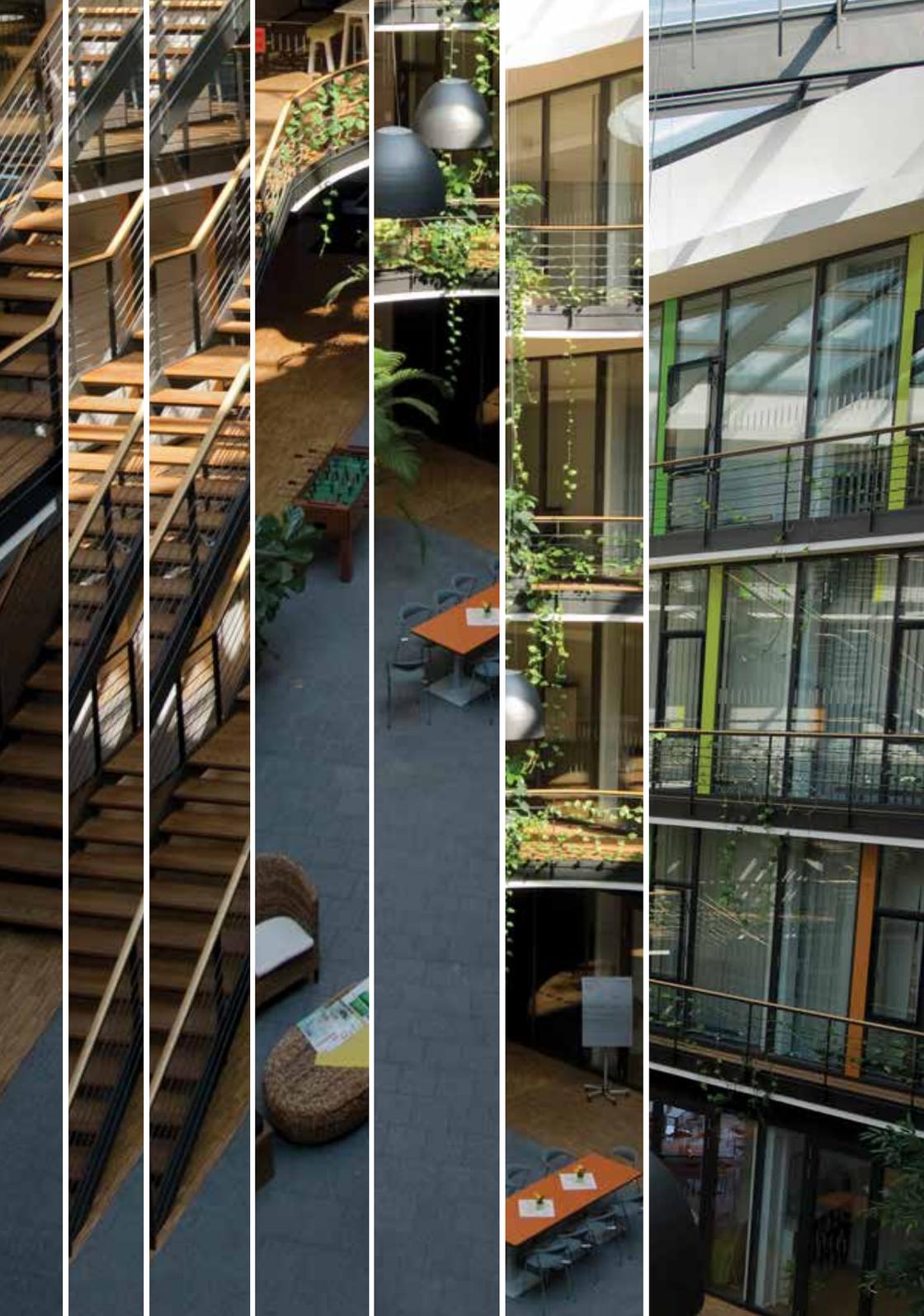
Please contact:

Gaëlle Jamar

**DG-GT Manager**

[gaelle@wats-on.co.uk](mailto:gaelle@wats-on.co.uk)

+44 7766 475379



Wir folgen der Wissenschaft

Wir stellen den  
Patienten an die erste Stelle

AstraZeneca   
Jetzt auch in der Hämatologie

DE-21263/19

Your Experts in  
GMP Manufacturing



Viral Vectors



Cellular  
Products



mRNA

[www.biontech-imfs.de](http://www.biontech-imfs.de)

**BIONTECH**  
Innovative Manufacturing Services



Please  
visit us at  
booth  
#3

new  
production  
facility  
opening mid  
2020

Partners

We could not run this theme day  
without the help of all of our partners.  
Thank you for your support.

Platinum



Silver



Bronze





## Weckruf für das Immunsystem

Celgene forscht an indolenten und aggressiven Non-Hodgkin-Lymphomen.  
**Für die Patienten – weltweit.**



Celgene GmbH, München [www.celgene.de](http://www.celgene.de) Tel.: 089 / 451519 - 010



eexpert™

MaxCyte®

## Not getting the results you want?

**MaxCyte's EXPERT ATx system can ramp up your research yield**

- High cell efficiency, viability and reliability
- Time-saving, regulation-ready technology
- Continuous, local customer support

Visit us at DG-GT or see the new ATx at [www.myexpertplatform.com](http://www.myexpertplatform.com)

With special thanks to



## Boards



**President**  
Prof. Dr. Boris Fehse,  
*Hamburg*

**President Elect**  
Prof. Toni Cathomen,  
*Freiburg*

**General Secretary**  
Prof. Dr. Hildegard  
Büning, *Hannover*

**Board**  
Dr. Zoltán Ivics, *Langen*

Prof. Dr. Christian Kupatt,  
*München*

Prof. Dr. Stefan Kochanek, *Ulm*  
Prof. Dr. Axel Schambach,  
*Hannover*

Prof. Dr. Ute Modlich,  
*Frankfurt/M*

Dr. Dirk Nettelbeck,  
*Heidelberg*

Dr. Manfred Schmidt,  
*Heidelberg*

Prof. Dr. Ernst Wagner,  
*München*

Prof. Dr. Wolfgang Uckert,  
*Berlin*

Prof. Dr. Thomas Moritz,  
*Hannover*

Dr. Claudio Mussolino,  
*Freiburg*

Prof. Dr. Dr. Ulrike Köhl,  
*Leipzig*

### Local organising committee

Prof. Dr. Dr. Ulrike Köhl,  
*Leipzig*

Prof. Dr. Gerhard Behre,  
*University of Leipzig  
Medical Center*

Prof. Dr. Andreas Dietz,  
*University of Leipzig  
Medical Center*

Dr. Stephan Fricke,  
*Fraunhofer IZI*

Prof. Dr. Ulrich Hacker,  
*Leipzig University Cancer  
Center (UCCL)*

Prof. Dr. Reinhard Henschler,  
*University of Leipzig  
Medical Center*

Prof. Dr. Florian Lordick,  
*University Cancer Center  
Leipzig*

Prof. Dr. Uwe Platzbecker,  
*University of Leipzig Medical  
Center*

Dr. Gerno Schmiedeknecht,  
*Fraunhofer IZI*

Powered by:



# Dear speakers, participants, partners and supporters of the DG-GT Theme Day 'CAR-T cells and beyond'

**In recent years cancer immunotherapy, also referred to as immuno-oncology, has achieved enormous clinical breakthroughs resulting in its establishment as a fourth pillar in cancer treatment.**

This progress has also resulted in the ever-increasing expectations of the public, but particularly cancer patients. In consequence, high-level basic, translational and clinical research in this field are of the utmost importance and one of the hottest topics in oncology as well as gene therapy.

The Fraunhofer Institute for Cell Therapy and Immunology IZI, as a manufacturing centre for Advanced Therapeutic Medicinal Products (within and beyond the field of cancer immunotherapy), has already been involved in various clinical studies and approval procedures for ATMPs, including CAR-T cell therapies. Based on the joint efforts of the Fraunhofer IZI with the Leipzig University Cancer Centre (UCCL), as part of the University hospital and the Alma mater, Leipzig is thus on its way to becoming a centre of excellence for cancer research

and therapy. Starting next year, this development will be documented by a series of annual conferences that will highlight the latest progress in selected aspects of immuno-oncology. The first "LION - Leipzig Immune ONcology Conference" ([www.lion-conference.com](http://www.lion-conference.com)), jointly organised by Fraunhofer IZI and UCCL, will take place on November 10-11, 2020. So please feel invited to come back to Leipzig in November next year!

Founded in 1994, the DG-GT is one of the oldest gene therapy societies. It currently has approximately 230 members working in different fields of this highly active area of biomedicine. We meet once per year to discuss the latest developments in the different fields of gene therapy. Several years ago, the idea was born to introduce a novel format of "theme days" and alternate those with the classical (now biennial) annual meetings. However, the DG-GT board and its advisory committee were a bit unsure whether the novel format would be successful or at least accepted by our membership and the scientific community. To increase the likelihood of success, we decided to go for a highly relevant topic and a location with an excellent reputation. Therefore, it was not by chance that Leipzig and the Fraunhofer IZI became the hosts of this premiere. However, we wouldn't have dreamed of such an overwhelming response with so many registered participants. Thus, already before the start of this event, the Leipzig team has raised the bar quite high for all the, hopefully many, theme days to come.

While we hope that you will enjoy a meeting full of great science, we cordially

invite all of you to find a bit of time before or after the sessions to get to know the beautiful city of Leipzig a little better. The easiest way will be by joining us during the guided tour at the end of the first half-day. Finally, we would like to thank the local organisers and the WATS.ON team for their huge efforts in organising this event, as well as all our sponsors for their kind contributions.



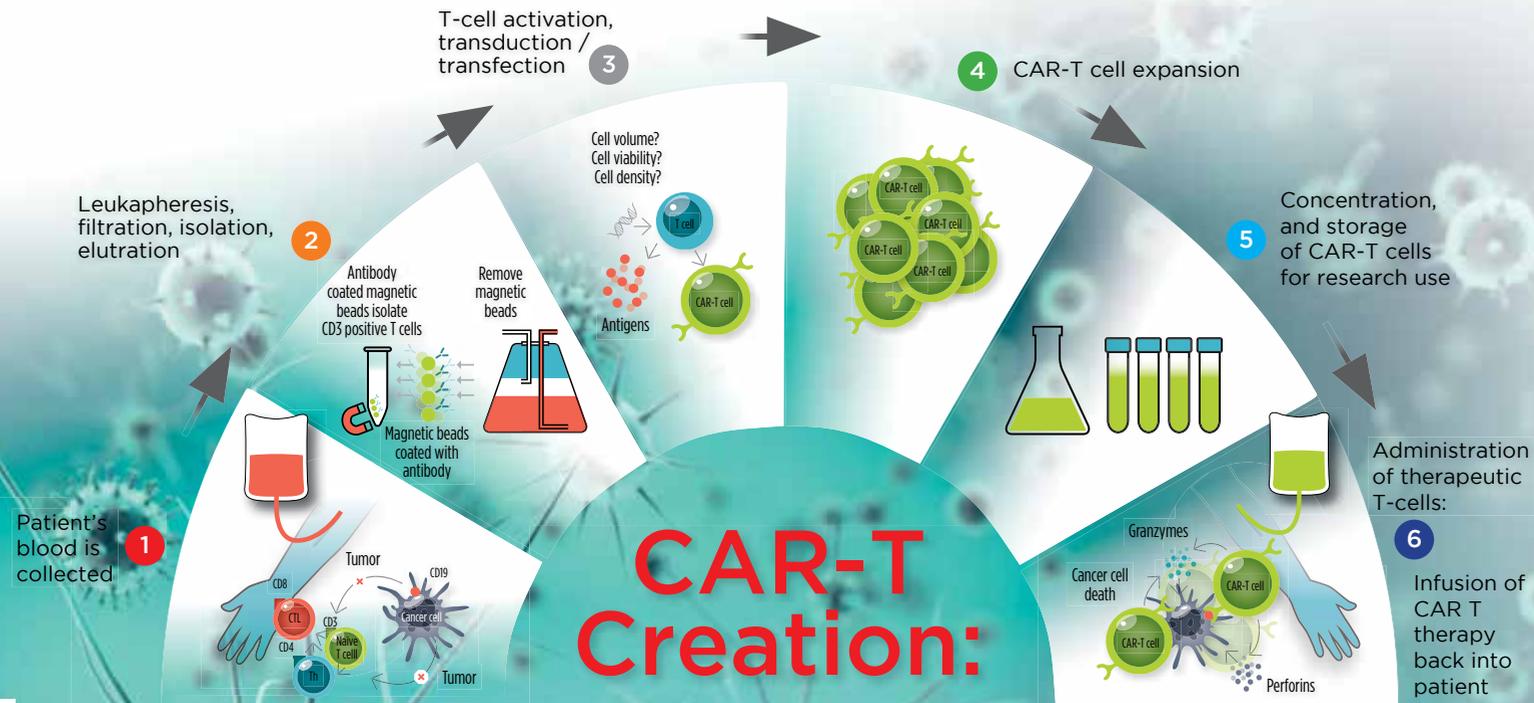
**Boris Fehse**  
**President**  
German Society for Gene Therapy



**Ulrike Köhl**  
**President**  
Local organising committee



# Engineered T-Cell Therapy – CAR-T



## CAR-T Creation: The Journey of a T-Cell

Vi-CELL XR (2, 3, 4)    DURA Innovations (2, 4)    MULTISIZER 4e (2, 3, 4, 5)    Environmental Monitoring (2, 3, 4, 5)    Vi-CELL MetaFLEX (2, 3, 4)    CytoFLEX (2, 3, 4)  
 Biomek i5 (2, 3, 4)    Avanti J-26S XP Elutriation (2)    Avanti (5)    Automated Data Analysis Kaluza (3, 4, 5)

CytoFLEX, Kaluza and DuraOne are for research use only. Not for diagnostic purposes.  
 All other products identified are not for use in diagnostic procedures. The CytoFLEX, MET ONE 3400, PAT700, Multisizer 4e, Vi-CELL XR, Vi-CELL MetaFLEX, and Kaluza are designed to support GMP compliance.  
 The Multisizer 4e, Vi-CELL XR, and Vi-CELL MetaFLEX are for Laboratory Use Only.  
 © 2018 Beckman Coulter, Inc. All rights reserved. Beckman Coulter, the stylized logo, and the Beckman Coulter product and service marks mentioned herein are trademarks or registered trademarks of Beckman Coulter, Inc.



## Platinum

**Booth 7**

Beckman Coulter Life Sciences is dedicated to developing and providing advanced technologies and equipment for research and discovery to explore new treatment methods. Our products include Liquid Handling and Genomic solutions, Particle Counting and Characterization, Centrifugation and Flow Cytometry, which are implemented in all major areas of Life Sciences such as biology, biochemistry, biophysics, nanotechnology and molecular biology to simplify and automate existing processes in the lab.

Our vision: Advancing science through discovery. Our mission: Delivering innovative and trusted scientific solutions across the globe.

[www.beckman.com](http://www.beckman.com)

**Booth 1**

Gilead Sciences, Inc. is a research-based biopharmaceutical company that discovers, develops and commercializes innovative medicines in areas of unmet medical need. The company strives to transform and simplify care for people with life-threatening illnesses around the world. Gilead has operations in more than 35 countries worldwide, with headquarters in Foster City, California, USA. Kite, a Gilead Company, is a biopharmaceutical company based in Santa Monica, California, USA. Kite is engaged in the development of innovative cancer immunotherapies. The company is focused on chimeric antigen receptor and T cell receptor engineered cell therapies. For more information, please visit our website:

[www.gilead.com](http://www.gilead.com)

**Booth 2**

Novartis is reimagining medicine to improve and extend people's lives. As a leading global medicines company, we use innovative science and digital technologies to create transformative treatments in areas of great medical need. We consistently rank among the world's top companies investing in research and development. Novartis products reach more than 800 million people globally and we are continuously searching for innovative ways to expand access to our innovative treatments. About 130 000 people of nearly 150 nationalities work at Novartis around the globe.

[www.novartis.com](http://www.novartis.com)

## Silver

**Booth 3**

**BioNTech Innovative Manufacturing Services GmbH - CDMO for cell and gene therapy.** BIONTECH IMFS is a Contract Development and Manufacturing Organisation specialized in the industrialization of cell and gene therapy products (viral vectors, cells and ivt mRNA). For 20 years, BIONTECH IMFS has been developing and manufacturing retroviral vectors and cellular products for clinical supply in a variety of monogenetic diseases and different cancer indications.

Based on extensive expertise in scientific, technical and regulatory prerequisites, we develop and manufacture your products in a safe and cost-efficient way in our state-of-the-art GMP facility.

Based on extensive expertise in scientific, technical and regulatory prerequisites, we develop and manufacture your products in a safe and cost-efficient way in our state-of-the-art GMP facility.

We offer a complete service spectrum from process development through clinical trial to in-market supply. All services are fully integrated and supervised by our QA department, ensuring efficient and compliant manufacturing.

[www.biontech.de](http://www.biontech.de)

**Booth 4**

MaxCyte is a global cell-based medicines and life sciences company applying its patented cell engineering technology to help patients with high unmet medical needs in a broad range of conditions. The company leverages its Flow Electroporation® Technology to enable its partners across the biopharmaceutical industry to advance the development of innovative medicines, particularly in cell therapy, including gene editing and immuno-oncology. MaxCyte has placed its cutting-edge flow electroporation instruments worldwide, including with nine of the top 10 global biopharmaceutical companies, and has more than 55 partnered program licenses in cell therapy including more than 25 licensed for clinical use. With its robust delivery technology, MaxCyte helps its partners to unlock the full potential of their products.

[www.maxcyte.com](http://www.maxcyte.com)

## Silver

**Booth 5**

Miltenyi Biotec is a global provider of products and services that advance biomedical research and cellular therapy. Our innovative tools support research at every level, from basic research to translational research to clinical application. Used by scientists and clinicians around the world, our technologies cover techniques of sample preparation, cell isolation, cell sorting, flow cytometry, and cell culture. Our more than 25 years of expertise spans research areas including immunology, stem cell biology, neuroscience, and cancer. Today, Miltenyi Biotec has more than 2,000 employees in 28 countries – all dedicated to helping researchers and clinicians make a greater impact on science and health.

[www.miltenyibiotec.com](http://www.miltenyibiotec.com)

**Booth 6**

NanoString provides life science tools for translational research and molecular diagnostic products. The company's nCounter Analysis System has been employed in life sciences research since it was first introduced in 2008 and has been cited in more than 2,000 peer-reviewed publications. The nCounter Analysis System offers a cost-effective way to easily profile the expression of hundreds of genes, proteins, miRNAs, or copy number variations, simultaneously with high sensitivity and precision, facilitating a wide variety of basic research and translational medicine applications, including biomarker discovery and validation. Recently Nanostring launched the new nCounter® CAR\_T Characterization panel, which measures eight essential components of CAR-T biology with 780 human genes.

[www.nanostring.com](http://www.nanostring.com)

**Booth 8**

Polyplus-transfection applies its 15+ year expertise to the development of novel transfection solutions up to GMP grade for high yield transient protein and antibody production in CHO and HEK- 293 cells, as well as for viral vector production for Gene and Cell Therapy (PEIpro product range).

[www.polyplus-transfection.com](http://www.polyplus-transfection.com)

## Silver

**Booth 9****VITA 34 – The future lies in Leipzig**

Being the largest cell bank in the German-speaking countries, Vita 34 is the expert in storing stem cells collected from the umbilical cord at birth. Stem cells are already being the basis of numerous medicinal treatments and they will shape the medicine of the future with personalized therapies tailored to individual needs. Since 1997, Vita 34 has been part in making this vision become reality. Being a full-range supplier with about 100 employees, we provide services ranging from the collection to the processing and preservation to the professional release for application. Over 230,000 customers from more than 20 countries have already taken care of their family's health by means of a cell deposit with Vita 34.

40 applications so far in treatment attempts, studies, and individual cases put Vita 34 in a top position and prove the excellent quality of its preparations. We take pride in what have reached. And we take the status quo as our steppingstone for new ideas, services, and products available to everyone.

[www.vita34.de](http://www.vita34.de)

## Bronze



AstraZeneca Plc. is a global pharmaceutical company with a major UK presence and is a FTSE 100 company. Our mission is to push the boundaries of science to deliver life-changing medicines and healthcare systems. We are committed to making a meaningful difference to patient health and we believe the best way we can do this is to be led by the translation of science. We are continuously working to make the most of the opportunities that frontier science and technologies bring to the search for new medicine and we share this passion with the scientific, healthcare and business community.

[www.astrazeneca.co.uk](http://www.astrazeneca.co.uk)

## Bronze



Bio-Techne brings together some of the most referenced brands in life science - R&D Systems, Novus Biologicals, Tocris Bioscience, and ProteinSimple providing innovative, high-quality research tools, including:

- Bioactive proteins – R&D Systems premiere bioactive proteins, • Application-qualified Antibodies – a diverse and extensive analyte selection from Novus and R&D Systems, • Immunoassays – Legendary R&D Systems Quantikine ELISAs, our huge selection of Luminex Assays and cost effective Proteome Profiler Arrays, • High quality small molecules – a unique collection of over 3,500 Tocris reagents. Together we are Bio-Techne. Find out how we can be your partner and help you attain your research goals by visiting our stand.

[www.bio-techne.com](http://www.bio-techne.com)



Celgene is a global biopharmaceutical company. The Celgene Corporation was founded in 1986 in New Jersey, USA. The company focuses on research, development and commercialization of innovative therapies for the treatment of hematological, oncological and severe immune and inflammatory diseases. Celgene invests more than 30 percent of its annual revenue in research and development activities to help patients live longer, better and more productive lives through new treatment options. For more information, please visit the Celgene GmbH website at:

[www.celgene.de](http://www.celgene.de)

**Booth 19**

JPT provides products and services for all the development phases of next generation immunotherapeutics. With sound knowledge in immunology and peptide chemistry, we offer peptides and peptide pools (PepMix™) for antigen-specific stimulation of cells, humoral and cellular epitope mapping, viral transduction, and development of immunotherapies. Thanks to an enhanced production protocol, our peptides are the product of choice for the development of cell therapies such as adoptive cell transfer or dendritic cell pulsing independent if you are aiming for an individualized neo-epitope approach or working with shared and common antigens.

With our novel transduction enhancer Protransduzin™ the generation of CAR-Ts or TCR-Ts can be streamlined by enhancement of viral transduction in a simple one-step protocol. Humoral immune response is addressed with our PepStar™, high-content microarrays for seromarker discovery and multiwell microarrays for profiling up to 20 samples.

[www.jpt.com](http://www.jpt.com)

## Bronze

**Booth 21**

With a portfolio of more than 4,000 products covering the fields of genomics, protein analysis and expression, cellular analysis, drug discovery and genetic identity, Promega is a global leader in providing innovative solutions and technical support to life scientists in academic, industrial and government settings. Promega products are used by life scientists who are asking fundamental questions about biological processes as well as by scientists who are applying scientific knowledge to diagnose and treat diseases, discover new therapeutics, and use genetics and DNA testing for human identification.

Promega holds significant intellectual property rights and licenses in several key areas that form a foundation for its diverse portfolio including:

Bioluminescence, including engineered luciferases, luciferase reporter vectors and luciferase substrates | Short tandem repeat (STR) detection for STR-based cell line authentication, human identification, cell and tissue characterization, and mixed sample detection | HaloTag® protein labeling and capture technology

Originally, founded in 1978 in Madison, Wisconsin, USA, Promega has branches in 16 countries and more than 50 global distributors serving 100 countries. If you are looking for your local Promega sales office, manufacturing facility or product distributor, you can find contact information here. A cornerstone of Promega business practice is supporting customers, community and employees. [www.promega.co.uk](http://www.promega.co.uk)

**Booth 20**

SGS is the world's leading inspection, verification, testing and certification company. SGS operates a network of over 1,500 offices and laboratories around the world. The Life Science division serves pharmaceutical, biopharmaceutical, and medical device companies along the entire drug development pathway. With over 35 years' experience as a global contract service organization, SGS provides integrated (bio) pharmaceutical development and testing solutions including clinical research, pharmaceutical development, biologics characterization, biosafety, and quality control testing for small and large molecules, raw materials, containers and finished products. SGS Vitrology provides a comprehensive range of biosafety services such as: virology, cell and molecular biology as well as microbiology and electron microscopy. Health Authorities, including the US FDA and the EMA, require companies to undergo safety testing demonstrating that cell banks, viral banks, raw materials, bulk harvests, and batches of clinical drug are free of bacteria, fungi, mycoplasma, viruses and other potential contaminants. SGS Vitrology helps clients by ensuring product safety in satisfying these regulatory requirements. Our GLP/GMP facility is MHRA certified and US FDA audited. [www.sgs.co.uk](http://www.sgs.co.uk)



## CliniMACS Prodigy® T Cell Transduction Process

A leap towards commercial-scale CAR T cell manufacture

- Automated process optimized for CAR T cell manufacturing
- Entire workflow in a closed single-use tubing set
- GMP-compliant ancillary/raw materials for cell manufacture
- Highly reproducible results through a verified and robust process

► [miltenyibiotec.com/tct](http://miltenyibiotec.com/tct)

Miltenyi Biotec provides products and services worldwide. Visit [www.miltenyibiotec.com/local](http://www.miltenyibiotec.com/local) to find your nearest Miltenyi Biotec contact.

Unless otherwise specifically indicated, Miltenyi Biotec products and services are for research use only and not for therapeutic or diagnostic use. MACS® GMP Products are for research use and *ex vivo* cell culture processing only, and are not intended for human *in vivo* applications. For regulatory status in the USA, please contact your local representative. MACS GMP Products are manufactured and tested under a quality system certified to ISO 13485 and are in compliance with relevant GMP guidelines. They are designed following the recommendations of USP <1043> on ancillary materials. The CliniMACS® System components, including Reagents, Tubing Sets, Instruments, and PBS/EDTA Buffer, are designed, manufactured and tested under a quality system certified to ISO 13485.

In the EU, the CliniMACS System components are available as CE-marked medical devices for their respective intended use, unless otherwise stated. The CliniMACS Reagents and Biotin Conjugates are intended for *in vitro* use only and are not designated for therapeutic use or direct infusion into patients. The CliniMACS Reagents in combination with the CliniMACS System are intended to separate human cells. Miltenyi Biotec as the manufacturer of the CliniMACS System does not give any recommendations regarding the use of separated cells for therapeutic purposes and does not make any claims regarding a clinical benefit. For the manufacturing and use of target cells in humans the national legislation and regulations – e.g. for the EU the Directive 2004/23/EC ("human tissues and cells"), or the Directive 2002/98/EC ("human blood and blood components") – must be followed. Thus, any clinical application of the target cells is exclusively within the responsibility of the user of a CliniMACS System.

In the US, the CliniMACS Prodigy® T Cell Transduction Process is available for research use only.

CliniMACS, CliniMACS Prodigy, MACS, and the MACS logo are registered trademarks or trademarks of Miltenyi Biotec GmbH and/or its affiliates in various countries worldwide. Copyright © 2019 Miltenyi Biotec GmbH and/or its affiliates. All rights reserved.

Partners

### Exhibitors



#### Booth 17

BD is one of the largest global medical technology companies in the world and is advancing the world of health by improving medical discovery, diagnostics and the delivery of care. The company develops innovative technology, services and solutions that help advance both clinical therapy for patients and clinical process for health care providers. BD and its 65,000 employees have a passion and commitment to help improve patient outcomes, improve the safety and efficiency of clinicians' care delivery process, enable laboratory scientists to accurately detect disease and advance researchers' capabilities to develop the next generation of diagnostics and therapeutics. BD has a presence in virtually every country and partners with organizations around the world to address some of the most challenging global health issues. BD helps customers enhance outcomes, lower costs, increase efficiencies, improve safety and expand access to health care.

[www.bd.com](http://www.bd.com)



#### Booth 11

CellGenix is a leading global supplier of high quality reagents and tools in the expanding market of cell and gene therapy and regenerative medicine. As the first company to obtain a GMP manufacturing authorization for cell processing in Europe, CellGenix has more than 20 years of expertise in the development and GMP manufacturing of cell therapy products. Our products are used worldwide in clinical trials by academia and industry partners. To ensure a seamless transition from research to commercialization we offer our customers a comprehensive product portfolio together with expert regulatory and technical support. Included in our product portfolio are cytokines, serum-free media and closed cell culture systems. Our products combine a maximum of quality and safety with excellent performance due to the state-of-the-art production, stringent in-house quality control and comprehensive documentation. All these factors help to simplify qualification and validation for your market authorization. CellGenix operates a state-of-the-art GMP facility for production of recombinant proteins and cell processing in Freiburg, Germany. A subsidiary is located near Boston in Portsmouth, NH, USA.

[www.cellgenix.com](http://www.cellgenix.com)



## Accelerate Your Antibody Development and CAR-T Cell Therapy

Quantitative, Sensitive and  
Consistent Reporter Bioassays

Visit us at  
booth 21,  
first floor

## Exhibitors

**Booth 12**

ChemoMetec is a Danish founded company specializing in the development, manufacturing and sales of high-quality automated Cell Counters, Advanced Cell Analyzers and Image Cytometers to help streamline research and production processes for maximum efficiency. ChemoMetec instruments are based on a patented, unique technology platform that ensures a high quality of analysis results and reliability. The instruments are known for their robustness and high precision as well as the easy to use yet advanced analysis capabilities.

[www.chemometec.com](http://www.chemometec.com)

**Booth 13**

GeneWerk GmbH is a German startup company. The team has long-lasting experience in the area of hematology, oncology and virology with focus on integration site analysis, sequencing and bioinformatics. GeneWerk provides quality controlled custom-tailored service based on 20 years of experience in the field of gene therapy, gene editing, immunotherapy and related areas.

[www.genewerk.com/en/home.html](http://www.genewerk.com/en/home.html)

**Lonza****Booth 14**

Lonza offers world-class technology platforms in the areas of GMP cell culture and viral-based therapeutic manufacturing, custom bio-therapeutic culture media, a large selection of primary and stem cells and a full line of custom bioassays. Our extensive experience in cell therapy process optimisation and scale-up innovation helps clients to safely and effectively advance their products through all phases of the commercial pipeline and maximise their return on investment. Our new viral-based therapeutics group provides viral vaccine manufacturing as well as viral vector mediated gene therapies. Our staff can design, develop and implement a manufacturing process that meets your autologous or allogeneic therapeutic applications.

[www.lonza.com](http://www.lonza.com)

**Booth 15**

We focus and are highly specialized on applications in cell culture, stem cell expansion and differentiation, cell counting, sample preparation and cell assays. We continuously monitor the world's most innovative life science markets to expand our portfolio for your benefit. Visit our homepage [www.ols-bio.ch](http://www.ols-bio.ch) for an overview. With our customer-centric philosophy, we provide comprehensive support and advice before and after instrument installation.

## Exhibitors

*OLS continued:*

In fact, this is the starting point of a valuable relationship for the benefit of our customers. For us, application support as well as service and maintenance of the systems is highly important and our daily business. We maintain a close contact with the manufacturers of our systems and our application specialists are continuously trained and kept up-to-date. This ensures optimal support with respect to all of your technical and applicative needs. Any of our systems are available for demonstration in your laboratory. Get in touch with us, we look forward to meeting you!

[www.ols-bio.ch](http://www.ols-bio.ch)

**Booth 16**

Supporting life science research since 1988, PeproTech is a privately owned biotechnology company focusing on the development and manufacture of high quality cytokine products for the life-science and cell therapy markets. Over the past 30 years the company has grown into a global enterprise with state-of-the-art manufacturing facilities in the US, and offices around the world. Our mission is to provide the highest quality products that address the needs of today's scientists and researchers, and we pride ourselves on being a trusted partner within the scientific community. With over 2,000 products PeproTech has developed and refined innovative protocols to ensure quality, reliability and consistency.

Our product range includes: Research Grade Proteins and Antibodies | GMP-Compliant products for Cell, Gene and Tissue Therapy | Animal Free Cytokine Range | ELISA kits | Cell Culture Media Kits / Supplements

Please contact PeproTech to discuss your research requirements: + 44 (0)20 7610 3062 [www.peprotech.com](http://www.peprotech.com)

**Booth 10**

World Courier is a global pharmaceutical services company specialising in tailor-made GxP-logistics and services. As part of AmerisourceBergen, World Courier has a global footprint with 150 own offices and about 5000 specially-trained logistics staff. Evolving from our rich history as supplier of choice for over 15000 clinical trials, we developed a strong track record in the Cell & Gene Therapy industry and adjacent fields of research. We develop one-of-a-kind logistics concepts for cell therapies with a patient-centric perspective. World Courier is excited to be part of a lively and innovative industry. We are open to your thoughts and insights and we are happy to listen to your logistic needs and challenges.

[www.worldcourier.com](http://www.worldcourier.com)

**Referenzen:** 1. Kymriah® 1,2 × 10<sup>6</sup> bis 6 × 10<sup>6</sup> Zellen  
Infusionsdispersion Fachinformation.

## Kymriah® 1,2 x 10<sup>6</sup> bis 6 x 10<sup>6</sup> Zellen Infusionsdispersion

▼ **Dieses Arzneimittel unterliegt einer zusätzlichen Überwachung.**

**Wirkstoff:** Tisagenlecleucel. **Zus.-setz.:** Arzneil. wirks. Bestandt.: Jeder Ethylvinylacetat(EVA)-Infusionsbeutel m. Kymriah enthält d. Tisagenlecleucel-Zell-Dispersion in einer chargenabhäng. Konz. an genet. veränderten autologen T-Zellen, d. einen gegen CD19 gerichteten chimären Antigenrezeptor exprimieren (CAR-positive lebensfähige T-Zellen). 1 bis 3 Infusionsbeutel enth. insg. 1,2 x 10<sup>6</sup> bis 6 x 10<sup>6</sup> CAR-positive lebensfähige T-Zellen. Sonstige Bestandteile: Glucose, Natriumchlorid, Humanalbumin-Lsg., Dextran 40 zur Injekt., Dimethylsulfoxid, Natriumgluconat, Natriumacetat, Kaliumchlorid, Magnesiumchlorid, Natrium-N-Acetyltryptophanat, Natriumcaprylat, Aluminium, Wasser f. Injektionszwecke. **Anwend.:** Behandl. v. Kdr. u. Jugendl. u. jungen erw. Pat. im Alter bis zu 25 Jahren mit refraktärer od. rezidivierender (Rezidiv nach Transplantation od. zweites od. späteres Rezidiv) akuter lymphat. B Zell Leukämie (ALL), sowie von erw. Pat. mit rezidivierendem od. refraktärem diffus großzelligen B Zell Lymphom (DLBCL) nach zwei od. mehr Linien einer syst. Therapie. **Geg.-anz.:** Überempfindl. gegen d. Wirkstoff od. einen d. sonst. Bestandteile. Geg.-anz. d. Chemotherapie zur Lymphozytendepletion sind zu beachten. **Nebenw.:** *Sehr häufig:* Infektionen - nicht näher spezifizierte Pathogene, virale Infektionen, bakterielle Infektionen, Pilzinfektionen. Febrile Neutropenie, Leukopenie, Lymphopenie, Anämie, Thrombozytopenie (>28 Tage anhaltende Zytopenien mögl.), Zytokin-Freisetzungssyndrom (häuf. 1-10 Tage nach Infusion), Hypogammaglobulinämie. Verminderter Appetit, Hypokaliämie, Hypophosphatämie, Hypokalzämie, Hypomagnesiämie, Hypoalbuminämie, Hyperurikämie, Hyperglykämie. Delirium, Angst, Schlafstörungen. Kopfschmerzen, Enzephalopathie, Schwindel. Tachykardie. Hypotonie, Hypertonie. Husten, Hypoxie, Dyspnoe, Lungenödem, Pleuralerguss, Tachypnoe. Diarrhö, Übelkeit, Erbrechen, Verstopfung, Abdominalschmerzen. Ausschlag. Rückenschmerzen, Myalgie, Arthralgie. Akute Nierenschädigung. Fieber, Müdigkeit, Ödem, Schmerzen, Schüttelfrost. Verringertes Hämoglobin, Verringerte Anzahl v. Lymphozyten, weißen Blutzellen, Neutrophilen u. Thrombozyten, Erhöhte Aspartat-Aminotransferase, Erhöhte Alanin-Aminotransferase, Erhöhtes Bilirubin im Blut, Erhöhter INR-Wert (*international normalised ratio*), Gewichtsverlust. *Häufig:* Disseminierte intravasale Gerinnung, Koagulopathie, Hämophagozytische Lymphohistiozytose, Panzytopenie. Graft-versus-Host-Reaktion. Hypervolämie, Hypermagnesiämie, Hyponatriämie, Hyperphosphatämie, Tumor-Lyse-Syndrom. Tremor, Periphere Neuropathie, Sprachstörungen, Krampfanfälle. Zerebrale Blutungen, Neuralgie, Ischämischer Hirninfarkt. Herzversagen, Arrhythmie, Herzstillstand. Kapillarlecksyndrom, Hitzewallungen. Epistaxis, Lungeninfiltration. Trockener Mund, Mundblutungen, Stomatitis, Blähungen, Aszites, Abdominales Kompartmentsyndrom. Hyperbilirubinämie. Pruritus, Erythem, Nachtschweiß, Pefechien, Hyperhidrose. Asthenie, Grippeähnliche Symptome, Multiorganversagen. Verlängerte aktivierte partielle Thromboplastinzeit, Verringertes Fibrinogen im Blut, Erhöhtes Serum-Ferritin, Erhöhte alkalische Phosphatase im Blut, Erhöhtes Fibrin-D-Dimer, Verlängerte Prothrombinzeit. **Warnhinw.:** Enthält Natrium. Enthält Dextran 40 und Dimethylsulfoxid. Beh. Pat. dürfen kein Blut u. keine Organe, Gewebe u. Zellen f. Transpl. spenden. **Verschreibungspflichtig.** **Weit. Hinweise:** Siehe Fachinformation(en). Stand: September 2018 (MS 09/18.2). **Novartis Pharma GmbH, Roonstr. 25, 90429 Nürnberg.** Tel.: (0911) 273-0, Fax: (0911) 273-12 653. [www.novartis.de](http://www.novartis.de)



**KYMRIAH®**  
(Tisagenlecleucel) Infusions-  
dispersion

**Die erste CAR-T-ZELLTHERAPIE**  
bei ALL und DLBCL<sup>1</sup>

Monday 16 September

**12:00-12:15** **Opening**  
**LOC President:** Ulrike Köhl, *Fraunhofer IZI, Leipzig*  
**DG-GT President:** Boris Fehse, *University Hospital Hamburg-Eppendorf*

**12:15-14:00** **Session I: Pre-clinical development I**  
**Chairs:** Axel Schambach, Gerd Behre

**INV01**  
**New targets and technologies for CAR-T?**  
 Michael Hudecek, *University of Würzburg*

**INV02**  
**CARs, TRUCKs and beyond: the next generation of CAR T cells**  
 Hinrich Abken, *Regensburg Center for Inverventional Immunology*

**OR01**  
**Switch-mediated costimulation in trans enhances the functionality of inducible universal chimeric antigen receptor T cells for safely redirection against CD123-expressing acute myeloid leukemia**  
 Jens Erik Meyer, *Cellex Patient Treatment GmbH, Dresden*

**OR02**  
**Characterization of MHC class II-restricted T-cell receptors for T-cell therapy of HBV infection**  
 Sophia Schreiber, *Institute of Virology, Technical University of Munich / Helmholtz Zentrum München*

**OR03**  
**CAR-T cells directed against B cell surface antigens for the targeting of multiple myeloma and B cell non-Hodgkin's lymphoma**  
 Mario Bunse, *Max-Delbrück-Center for Molecular Medicine (MDC), 13125 Berlin*

**14:00-14:15** **Comfort break**

Monday 16 September

**14:15-15:45** **Session II: Pre-clinical development II**  
**Chairs:** Ulrich Hacker, Toni Cathomen

**INV03**  
**Retargeting of immune effector cells: From BiTEs to theranostic modular universal CAR platforms**  
 Michael Bachmann, *Helmholtz Center Dresden Rossendorf*

**OR04**  
**Adapter chimeric antigen receptor (AdCAR)-engineered NK-92 cells: An off-the-shelf cellular therapeutic for universal tumor targeting**  
 Stefan Grote, *Children's Hospital Tuebingen*

**OR05**  
**A novel chimeric antigen receptor (CAR) T cell approach eliminates prostate cancer in a mouse tumor model**  
 Jamal Alzubi, *Institute for Transfusion Medicine and Gene Therapy & Center for Chronic Immunodeficiency, Medical Center, University of Freiburg*

**OR06**  
**CAR-engineered T cells to control Epstein-Barr virus-associated tumors**  
 Anna Christina Dragon, *Institute for Transfusion Medicine, Hannover Medical School (MHH)*

**OR07**  
**Adapter mediated transduction with lentiviral vectors: A novel tool for cell-type specific gene transfer**  
 Nicole Cordes, *Miltenyi Biotec, Bergisch-Gladbach*

**15:45-16:15** **Coffee break**

**16:15-17:45** **Session III: Vector production and manufacturing**  
**Chair:** Hildegard Büning

**INV04**  
**Development of optimized processes for vector production and T cell transduction?**  
 Klaus Kühlicke, *BioNTech, Mainz*

## Programme

### Monday 16 September

**16:15-17:45** **INV05**  
**Getting TCR modified T cells into the clinic: early manual process development with automation in mind**  
Kai Pinkernell, *Medigene, Planegg*

**INV06**  
**Manufacturing challenge: CAR T and CAR NK cells for cancer retargeting**  
Ulrike Köhl, *Fraunhofer IZI, Leipzig*

**17:45-22:00** **Networking reception and guided tour of Leipzig**

### Tuesday 17 September

**09:00-10:15** **Session IV: Regulation**  
Chair: Boris Fehse

**INV07**  
**Cell therapy reimbursement**  
Cornelie Haag, *Technical University Dresden*

**INV08**  
**Academic view on the involvement in commercial ATMP manufacturing performed by pharma**  
Nina Worel, *Medical University of Vienna*

**INV09**  
**Regulatory roundtable with regulatory professionals, clinicians and ethicists**  
Matthias Renner, *Paul Ehrlich Institute*

**Regulatory roundtable**  
with regulatory professionals, clinicians and ethicists

**10:15-10:45** **Coffee break**

## Programme

### Tuesday 17 September

**10:45-12:45** **Session V: Clinical studies I**  
Chairs: Florian Lordick, Andreas Dietz

**INV10**  
**Pan-ErbB CAR T-cell immunotherapy of head and neck cancer: phase I clinical trial**  
John Maher, *King's College London*

**INV11**  
**CD19 CARs: Bridge to allo or definitive therapy in r/r ALL and DLBCL?**  
Stephan Mielke, *Karolinska Institute, Stockholm*

**INV12**  
**Optimising TCR Gene Therapy**  
Hans Stauss, *University College London*

**INV13**  
**CAR-T-cell therapy in pediatric patients with ALL – The Frankfurt experience**  
Andrea Jarisch, *University Hospital Frankfurt*

**12:45-13:45** **Lunch and poster session**

**13:45-14:15** **DG-GT General Assembly**

**14:15-14:45** **Keynote**  
Chair: Ulrike Köhl

**INV14**  
**Ethics of CAR-T cells**  
Christiane Woopen, *University of Cologne*

**14:45-16:30** **Session VI: Clinical studies II**  
Chairs: Uwe Platzbecker, Stephan Fricke

**INV15**  
**CAR-engineered NK cells: off-the-shelf therapeutics bridging innate and adaptive immunity**  
Winfried Wels, *Georg Speyer Haus, Frankfurt*

## Programme

Tuesday 17 September

14:45-  
16:30

**INV16**  
**Universal CAR T cell generation through multiplexed vector coupled and uncoupled base editing mediated deamination**  
Christos Georgiades, *University College London*

**INV17**  
**Genome editing for cancer immunotherapy**  
Chiara Bonini, *San Raffaele Hospital, Milan*

**OR08**  
**Single agent talacotuzumab demonstrates limited efficacy but considerable toxicity in elderly high-risk MDS or AML patients failing hypomethylating agents**  
Anne Sophie Kubasch, *Department of Medicine I, Hematology and Cellular Therapy, Leipzig University Hospital*

16:30-  
17:00

**Closing drinks**

VITA34

# RETHINKING HEALTHCARE

Vita 34 – your partner in cell banking



www.vita34.de



## Cell and Gene Therapy Logistics

Implement a new innovative model that minimizes risk and connects your therapies to your patients at both clinical and commercial scale.

Download our free Logistics by Design white paper and get the tools to:

- Identify risks
- Utilize your provider's expertise
- Coordinate the solution
- Create logistics platforms



bit.ly/CGT\_LbD

worldcourier.com

 World Courier  
AmerisourceBergen

## Posters

### Clinical studies

P01

#### Automated closed manufacturing of regulatory T cells: paving the way for CAR-Treg therapy

José Manuel Marín Morales, *Technische Universität Dresden*

### Pre-clinical development

P02

#### TheraVision – Platform technology for the development, production and testing of oncolytic viruses

Christina Funk, *Fraunhofer Institute for Interfacial Engineering and Biotechnology, Stuttgart*

P03

#### A time-resolved meta-analysis of consensus gene expression profiles during human naïve T-cell activation

Michael Rade, *Fraunhofer Institute for Cell Therapy and Immunology IZI, Leipzig*

P04

#### Adapter CAR T cells – A new versatile platform for controllable CAR T cell function

Britta Drees, *Miltenyi Biotec GmbH, Bergisch Gladbach*

P05

#### Twin-track strategy for the development of CD4-CARs against T cell malignancies

Sandy Tretbar, *Fraunhofer Institute for Cell Therapy and Immunology IZI, Leipzig*

P06

#### The role of spacer elements in the design of chimeric antigen receptors

Maximilian Jung, *University Medical Centre Hamburg-Eppendorf*

P07

#### Generation of Chimeric Antigen Receptor (CAR)-T cells with improved efficacy for the treatment of pediatric Germ Cell Tumors

Andriana Stamopoulou, *Hannover Medical School*

P08

#### Optimising TALEN-mediated CCR5 knockout in human T cells for large-scale production

Lea-Isabell Schwarze, *University Medical Centre Hamburg-Eppendorf*

P09

#### Developing a CAR-cell efficacy test using chip-cytometry

Ronald Weiß, *Leipzig University*

P10

#### Development of methods for the *in vitro* characterization of the NK-92 cell line after electron beam-based inactivation

Gustavo R. Makert dos Santos, *Fraunhofer Institute for Cell Therapy and Immunology IZI, Leipzig*

P11

#### Functional vector safety studies for immune gene- and cell-based therapies

Marco Zahn, *GeneWerk GmbH, Heidelberg*

P12

#### Head and neck cancer therapy with CAR-NK cells

Ioana-Sonya Ciulean, *Fraunhofer Institute for Cell Therapy and Immunology IZI, Leipzig*

P13

#### Electron beam irradiation-based inactivation of CAR NK-92 cells for AML therapy

Lia Walcher, *Fraunhofer Institute for Cell Therapy and Immunology IZI, Leipzig*

P14

#### Microfluidic system for high precision cell processing at single-cell resolution

Michael Kirschbaum, *Fraunhofer Institute for Cell Therapy and Immunology IZI, Leipzig*

P15

#### ADGRE2 shows a favorable expression profile for CAR-Targeting in acute myeloid Leukemia

Rabia Shahswar, *Hannover Medical School*

P16

#### Automated large-scale manufacturing of gene-engineered T cells in a closed system

Marion Braun, *Miltenyi Biotec GmbH, Bergisch Gladbach*

### Regulation

P17

#### Current and future good practice of sterility testing

Oliver Valet, *Mibic GmbH*

### Vector production and manufacturing

P18

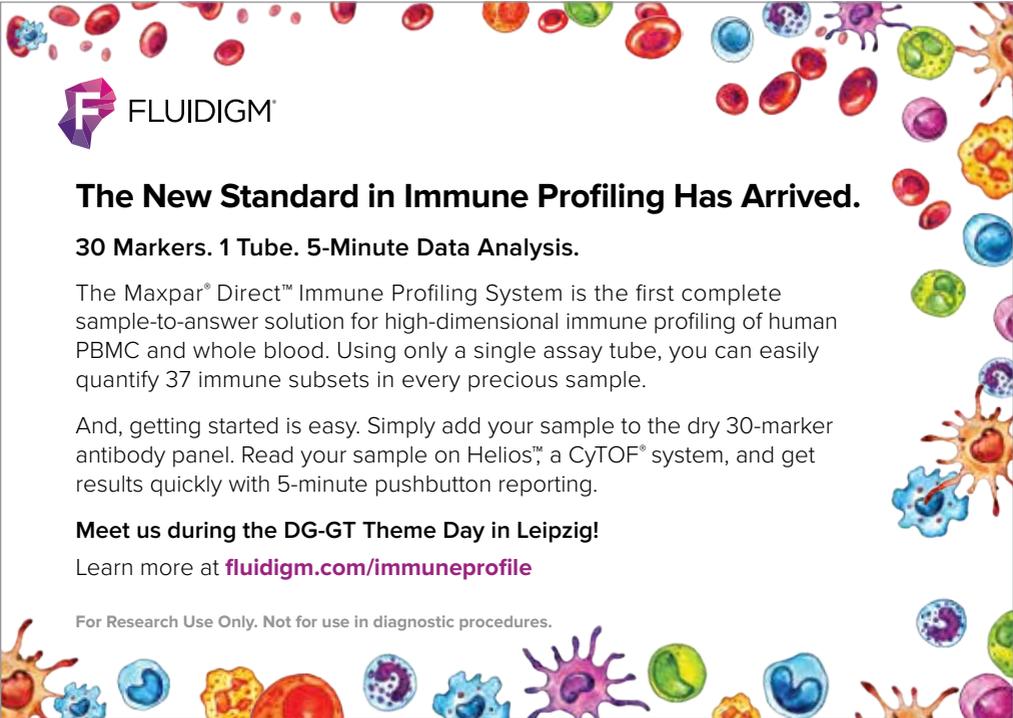
#### Minicircle DNA – new tool for cell therapy

Marco Schmeer, *PlasmidFactory GmbH & Co. KG*

P19

#### Scalable single-use technology for viral vectors production

Sebastian Püngel, *Univercells SA*



**F FLUIDIGM**

### The New Standard in Immune Profiling Has Arrived.

**30 Markers. 1 Tube. 5-Minute Data Analysis.**

The Maxpar® Direct™ Immune Profiling System is the first complete sample-to-answer solution for high-dimensional immune profiling of human PBMC and whole blood. Using only a single assay tube, you can easily quantify 37 immune subsets in every precious sample.

And, getting started is easy. Simply add your sample to the dry 30-marker antibody panel. Read your sample on Helios™, a CyTOF® system, and get results quickly with 5-minute pushbutton reporting.

**Meet us during the DG-GT Theme Day in Leipzig!**

Learn more at [fluidigm.com/immuneprofile](https://fluidigm.com/immuneprofile)

For Research Use Only. Not for use in diagnostic procedures.



**SAVE THE DATE!**

November 10–12, 2020 | Leipzig, Germany  
[www.LION-conference.com](http://www.LION-conference.com)

Organization



Scale up your viral vector production with the leader in Gene & Cell Therapy transfection!

**PEIpro® product range, up to GMP grade:**

- + Best-in-Class PEI based transfection reagent for viral vector production
- + Seamless transition from process development up to commercialization
- + Highest virus yields in producer cell lines
- + Customized regulatory support to meet compliance requirements
- + Chemically defined and animal derived component free



Come and meet us at our booth #8

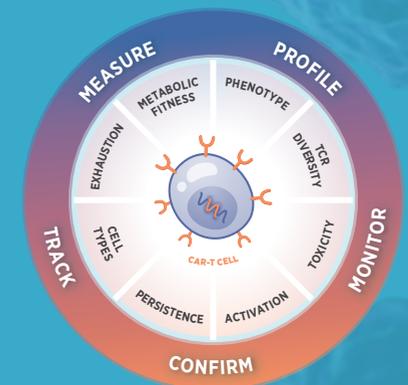
Visit our website: [www.polyplus-transfection.com](http://www.polyplus-transfection.com)



**nCounter® CAR-T Characterization Panel:**

Streamline the CAR-T workflow and help reduce vein to vein time

- Optimize CAR-T method development
- Create manufacturing acceptance criteria
- Measure metabolic fitness and persistence
- Monitor post-infusion exhaustion and toxicity



FOR RESEARCH USE ONLY. Not for use in diagnostic procedures.  
 ©2019 NanoString Technologies, Inc. All rights reserved.

BARCELONA 2019

# ESGCT 27<sup>th</sup> ANNUAL CONGRESS

IN COLLABORATION  
WITH SETGYC

**22-25 OCTOBER 2019**  
BARCELONA INTERNATIONAL  
CONVENTION CENTRE



EUROPEAN SOCIETY OF  
GENE & CELL THERAPY



Sociedad Española  
Terapia Génica y Celular