DG-GT Deutsche Gesellschaft für Gentherapie e.V.

ANNUAL MEETING

NUCLEIC ACID THERAPEUTICS: GENETIC INDICATIONS AND BEYOND

TRANSLATUM, MUNICH | 6-8 MARCH 2024

PROGRAMME

WEDNESDAY 6 MARCH

12:00-13:00	**Registration**
13:00-13:10	**Presidential Welcome Address & Welcome of Organizer**
13:10-14:30	**Session 1: Targeting delivery of RNA Therapeutics** Chair: **Ernst Wagner,** *LMU, Munich* 13:10-13:30 **Olivia Merkel,** *LMU, Munich* **INV01:** Artificial Intelligence for the Design of New RNA Nanocarriers 13:30-13:50 **Ulrich Lächelt,** *University of Vienna* **INV02:** Xenopeptides for the delivery of CRISPR/Cas9 ribonucleoproteins 13:50-14:10 **Christian Plank,** *Ethris, Munich* **INV03:** Modulation of host immunity in the airways with interferon lambda encoding mRNA 14:10-14:20 **Mina Yazdi**, *LMU, Munich* **OR01:** In vivo endothelial cell gene silencing by siRNA-LNPs tuned with lipoamino bundle chemical and ligand targeting 14:20-14:30 **Olympia Bikou,** *LMU, Munich* **OR02:** Aerosolized gene and oligonucleotide therapy targeting microRNA-224 ameliorates pulmonary hypertension by orchestrating the BMP pathway
14:30-15:00	**Session 2: Inflammation Therapeutics** Chair: **Ulrike Protzer,** *TUM, Munich* 14:30-14:50 **Stefan Engelhardt,** *LMU, Munich* **INV05:** Inhalation RNA therapeutics targeted to macrophages 14:50-15:00 **Lea Krutzke**, *University of Ulm* **OR03:** Extracellular vaccine- or virus-derived SARS-CoV-2 spike protein: a potential link between reported pathologies
15:00-15:40	**Wolfram Ostertag Lecture** Chair: **Manuel Grez** 15:00-15:05 Introduction by chair 15:05-15:40 **Dorothee von Laer**, *Medical University of Innsbruck* **INV06:** A rhabdovirus for oncolysis and immunotherapy of cancer
15:40-16:10	**Coffee Break**

16:10-17:50	**Session 3: Novel concepts in editing** Chair: **Julian Grünewald,** *TUM Munich* 16:10-16:30 **Toni Cathomen,** *University of Freiburg* **INV08:** New insights in on- and off-target effects of genome editing 16:30-16:50 **Zoltan Ivics,** *PEI, Langen* **INV09:** Next generation Sleeping Beauty transposases for nonviral engineering of therapeutic cells 16:50-17:10 **Frank Buchholz,** *Dresden University* **INV10:** Engineering Designer-Recombinases for therapeutic genome editing 17:10-17:30 **Angelo Lombardo,** *SR Tiget, Milan* **INV11:** Exploiting Targeted Epigenome Editing for Therapeutic Applications 17:30-17:40 **Victor Glaser**, *Charité University Berlin* **OR04:** Enhanced safety in multiplex-edited T cells through combined use of distinct CRISPR enzymes for knock-in and base editing 17:40-17:50 **Sibtain Haider**, *University Medical Center, Freiburg* **OR05**: Peptide-assisted tethering of DNA repair effectors to Cas9 for precise genome editing
17:50-18:40	**Session 4: Keynote** Chair: **Zoltan Ivics,** *PEI, Langen* 17:50-18:40 **Laura Sepp-Lorenzino,** *Intellia, Boston* **INV12:** Advances in Therapeutic CRISPR Cas9 Applications
18:40-20:00	**Afterglow & posterwalk**

THURSDAY 7 MARCH

08:30-09:00	**Registration**
09:00-10:20	**Session 5: Editing cardiomyopathies** Chair: **Christian Kupatt,** *TUM, Munich* 9:00-9:20 **Julian Grünewald,** *TUM, Munich* **INV13:** Engineering CRISPR technologies for application in cardiovascular medicine 9:20-9:40 **Mauro Giacca,** *Kings College London* **INV14:** RNA Therapies for Cardiac Regeneration and Gene Editing 9:40-10:00 **Simon Lebek,** *University Clinic Regensburg* **INV15:** CRISPR-Cas9 gene editing as a therapy for common cardiovascular diseases 10:00-10:20 **Charles Gersbach,** *Duke University* **INV16:** Genome Editing for Duchenne Muscular Dystrophy
10:20-10:50	**Coffee Break**

10:50-12:10	**Session 6: New preclinical and clinical cancer concepts** Chair: **Roland Rad,** *TUM, Munich* 10:50-11:10 **Claudio Mussolino,** *University of Freiburg* **INV17:** Multiplexed epigenome editing to protect CAR T cells from cancer-induced activation of inhibitory checkpoints 11:10-11:30 **Liane Preußner,** *BioNTech, Mainz* **INV18:** BNT211-01: Interim results from a repeat dose escalation study of CLDN6 CAR-T cells manufactured with an automated process ± a CLDN6-encoding CAR-T cell-Amplifying RNA Vaccine (CARVac) 11:30-11:50 **Ben Kleinstiver,** *Harvard Medical School, Boston* **INV19:** Engineering Improved CRISPR Technologies 11:50-12:00 **Lea-Isabell Schwarze**, *University Medical Center Hamburg-Eppendorf* **OR06:** Translation of advanced cell therapies for HIV+ patients 12:00-12:10 **Jonas Kath**, *Charité University Berlin* **OR07:** CD3-zeta gene editing to reprogram T or NK cells with chimeric antigen receptors
12:10-13:40	**Lunch & posters**
13:40-14:50	**Session 7: Cancer cell and virotherapy** Chair: **Dirk Nettelbeck,** *DFKZ, Heidelberg* 13:40-14:00 **Alan Melcher**, *The Institute of Cancer Research, London* **INV20:** T cell receptor-antigen engagement dynamics with oncolytic virotherapy defines a novel subset of functionally active anti-tumour CD8 cells 14:00-14:20 **Per Sonne Holm,** *Medical University Innsbruck* **INV21:** Cell cycle inhibition and epigenetic modulation meets YB-1 based virotherapy 14:20-14:40 **Guy Ungerechts,** *NCT, Heidelberg* **INV22:** Viral Vectors for Cancer Immunotherapy 14:40-14:50 **Frederik Wienen**, *University of Ulm* **OR08:** An oncolytic HAdV-5 with reduced surface charge combines diminished toxicity and improved tumour targeting
14:50-15:20	**Coffee Break**
15:20-17:00	**Session 8: Novel cell therapeutics** Chair: **Florian Bassermann,** *TUM, Munich* 15:20-15:40 **Andrea Schmidts,** *TUM, Munich* **INV23:** Engineering new CAR-T platforms 15:40-16:00 **Christine Spitzweg,** *LMU, Munich* **INV24:** The sodium iodide symporter (NIS) as theranostic gene: its emerging role in new imaging modalities and non-viral gene therapy 16:00-16:20 **Winfried Wels,** *GSH, Frankfurt* **INV25:** CAR-engineered NK cells: Empowering the first line of defense against cancer 16:20-16:40 **Evelyn Ullrich**, *Goethe University Frankfurt* **INV26:** Engineering of primary CAR-NK cells paves the way for next generation immunotherapies 16:40 -16:50 **Kerstin Geiger**, *University of Freiburg* **OR09:** Base editing restore cellular phenotype of T cells of patients with Hyper-IgE-Syndrome 16:50-17:00 **Jiri Eitler**, *Dresden University of Technology* **OR10:** Dual targeting of PD-L1 and ErbB2 by CAR-NK cells enables specific elimination of solid tumor cells and overcomes immune escape via antigen loss
17:00-18:30	**Afterglow & posterwalk**
19:00-23:00	**Networking event**

FRIDAY 8 MARCH

08:30-09:00	**Registration**
09:00-10:40	**Session 9: *In vivo* gene therapeutics** Chair: **Stefan Kochanek,** *University of Ulm* 9:00-9:20 **Stylianos Michalakis,** *LMU, Munich* **INV27:** Development of retina-targeted gene therapy: new concepts and remaining challenges 9:20-9:40 **Tarik Bozoglu,** *TUM, Munich* **INV28:** Affinity peptide mediated retargeting of AAV9 to cardiac interstitial cells 9:40-10:00 **Hildegard Büning,** *MHH, Hannover* **INV29**: Tailoring Adeno-associated virus (AAV) vectors for in vivo gene therapy 10:00-10:20 **Dirk Grimm,** *University of Heidelberg* **INV30:** AAV (finally) flexes its muscles: Evolution and application of myotropic AAV capsid variants 10:20-10:30 **Marco Radukic,** *Bielefeld University* **OR11:** ITR instability in E. coli? The answer is 42 (°C) for improving quantity and quality of rAAV 10:30-10:40 **Ceren Kimna,** *Helmholtz Center Munich* **OR12:** Cell Level Imaging of Nucleic Acid Therapeutics in Whole Mouse Bodies
10:40-11:10	**Coffee Break**
11:10-11:20	**Session 10: Introduction of the National Network Office for Gene and Cell Therapies** 11:10-11:20 **Elke Luger**, *National Network Office for Gene and Cell Therapy* The National Network for Gene and Cell Therapies – just another network?
11:20-12:35	**Session 11: Young investigator session** Chair: **Hildegard Büning,** *MHH, Hannover* 11:20-11:35 **Daniela Paasch**, *MHH, Hannover* **OR13:** Scalable generation of functional human iPSC-derived CAR-macrophages that efficiently eradicate CD19- positive leukemia 11:35-11:50 **Samuel Theuerkauf**, *Paul Ehrlich Institute, Langen* **OR14:** AAV vectors displaying bispecific DARPins enable dual-control targeted gene delivery 11:50- 12:05 **Juliane Schott**, *MHH, Hannover* **OR15:** Third-generation lentiviral gene therapy rescues function in a mouse model of Usher 1B 12:05-12:20 **Martin Bentler**, *MHH, Hannover* **OR16:** Modifying immune responses to adeno-associate virus vectors by capsid engineering 12:20-12:35 **Max Wichmann,** *University Medical Center Hamburg-Eppendorf, Hamburg* **OR17:** Deep characterization and comparison of different retrovirus-like particles preloaded with CRISPR/Cas9 RNPs
12:35-13:35	**Session 12: Ethical considerations** Chair: **Christopher Baum,** *Berlin Institute of Health* 12:35-12:55 **Klaus Tanner,** *University of Heidelberg* **INV31:** Ethics through bureaucracy? The limits of formal rationality 12:55-13:15 **Jens Kersten**, *LMU, Munich* **INV32:** A strategy of obsolete law? 13:15-13:35 **Gerd Maass,** *Roche, Munich* **INV33:** Challenges and opportunities of CGT - the industrial perspective

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