

2025 THEME DAY

FROM LAB TO LIFE: GENOME EDITING TOWARDS THERAPIES

GERMAN HYGIENE MUSEUM, DRESDEN | 10-11 MARCH 2025

PROGRAMME

MONDAY 10 MARCH

12:00-12:45	Registration, Lunch & Posters
12:45-13:00	Presidential Welcome Address & Welcome of Organizer Frank Buchholz, <i>Technical University Dresden</i> & Zoltan Ivics, <i>Fraunhofer Institute for Cell Therapy and Immunology, Leipzig</i>
13:00-14:25	Session 1: CRISPR Screens Chair: Boris Fehse , <i>University of Hamburg</i> 13:00-13:20 Michael Boutros , <i>Heidelberg University</i> INV01: Dissecting context-dependent genetic vulnerabilities 13:20-13:40 John Fielden , <i>ETH Zürich</i> INV02: Comprehensive Interrogation of Synthetic Lethality in the Human DNA Damage Response 13:40-13:55 Pratik Mallick , <i>Technische Universität München</i> OR01: Establishment of a stable episomal replicon system for HBV to screen novel RNA-based antiviral gene therapies 13:55-14:10 Sebastian Erkens , <i>Witten/Herdecke University</i> OR02: A direct comparison of the Sleeping Beauty Transposon system and the CRISPR/Cas9 machinery for genetic engineering 14:10-14:25 Martina Ruby , <i>Cytiva</i> OR03: Using High-Throughput Genetic Screening to Improve Stable AAV Producer Cell Lines and to enhance viral vector production
14:25-14:45	Comfort Break
14:45-16:15	Session 2: Delivery Chair: Sandy Tretbar , <i>Fraunhofer Institute for Cell Therapy and Immunology, Leipzig</i> 14:45-15:05 Achim Aigner , <i>University of Leipzig</i> INV03: Polymeric nanoparticles for RNA delivery: genome editing and beyond 15:05-15:25 Ansgar Santel , <i>Pantherna, Hennigsdorf</i> INV04: Beyond the Liver: Lipidnanoparticles (LNP) for Precise mRNA Delivery 15:25-15:45 Hildegard Büning , <i>Hannover Medical School</i> INV05: Capsid engineered AAV vectors as next generation in vivo delivery tools

	<p>15:45-16:00 Paul Scholz, <i>Akribion Therapeutics</i> OR04: Programmable genome disruption enables selective elimination of cancer cells using a novel CRISPR-Cas nuclease</p> <p>16:00-16:15 Jonas Kath, <i>Charité University Medicine</i> OR05: 'One-pot' PASTA - Advanced T cell Engineering through Precise Integration of Super-Large Exogenous DNA</p>
16:15-16:45	Coffee Break
16:45-18:10	<p>Session 3: Clinics</p> <p>Chair: Ulrike Köhl, <i>Fraunhofer Institute for Cell Therapy and Immunology, Leipzig</i></p> <p>16:45-17:05 Jürgen Foell, <i>Universitätsklinikum Regensburg</i> INV06: CRISPR/Cas9: therapeutic application in sickle cell anemia (SCD) and transfusion-dependent β-thalasemia</p> <p>17:05-17:25 Axel Schambach, <i>Hannover Medical School</i> INV07: Clinical translation of safer vectors and precision gene editing tools</p> <p>17:25-17:40 Malte Ritter, <i>University Hospital Tuebingen</i> OR06: Gene editing for pre-leukemia bone failure syndrome, severe congenital neutropenia, – current advances and critical considerations</p> <p>17:40-17:55 Tobias Bexte, <i>Goethe University</i> OR07: CRISPR-edited allogeneic BCMA-CAR NK cells to overcome loss-of-target in multiple myeloma</p> <p>17:55-18:10 Ina Luksch, <i>Technische Universität München</i> OR08: AAV-mediated gene therapy in a porcine model of Duchenne Muscular Dystrophy</p>
18:30-20:00	Guided Tour of DHMD
20:00	<p>Dinner at Pulverturm an der Frauenkirche</p> <p>An der Frauenkirche 12, 01067 Dresden</p>

TUESDAY 11 MARCH

09:00-09:15	Registration & Welcome with coffee
09:15-09:50	<p>Keynote</p> <p>Chair: Toni Cathomen, <i>University of Freiburg</i></p> <p>9:15-9:50 Kathleen Collins, <i>Berkeley University</i> INV08: Harnessing R2 retrotransposon machinery for site-specific safe-harbor transgene addition to the human genome</p>
09:50-11:25	<p>Session 4: Genome editing technologies</p> <p>Chair: Zoltan Ivics, <i>Fraunhofer Institute for Cell Therapy and Immunology, Leipzig</i></p> <p>09:50-10:10 Toni Cathomen, <i>University of Freiburg</i> INV09: Safer Genome Editing: Innovations in Off-Target Management</p> <p>10:10-10:30 Felix Lansing, <i>Seamless Therapeutics, Dresden</i> INV10: Programmable recombinases to treat genetic diseases</p> <p>10:30-10:50 Zoltan Ivics, <i>Fraunhofer Institute for Cell Therapy and Immunology, Leipzig</i> INV11: Advances in Sleeping Beauty transposon engineering of therapeutic cells</p>

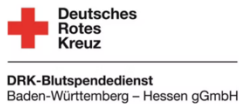
	<p>10:50-11:10 Marc Güell, <i>Pompeu Fabra University, Barcelona</i> INV12: Levering bioprospecting and generative AI to create new gene writers</p> <p>11:10-11:25 Evangelia Anagnostou, <i>University of Freiburg</i> OR09: An enhanced Single-Strand Break-Based Strategy for safer and more efficient Genome Editing</p>
11:25-12:00	Coffee Break & Posters
12:00-13:30	<p>Session 5: Ethics</p> <p>Chair: Frank Buchholz, <i>Technical University Dresden</i> Moderator: Nadia Primc, <i>University of Heidelberg</i></p> <p>12:20-12:40 Karla Alex, <i>University of Heidelberg</i> INV13: The ethics of human genome editing</p> <p>12:40-13:00 Klaus Tanner, <i>University of Heidelberg</i> INV14: Ethics through bureaucracy. The limits of formal rationality</p> <p>13:00-13:30 Panel discussion</p>
13:30	Lunch & Posters

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