# PROGRAM
# JUNE 1-4, 2022

| Wednesday, June 1 | Thursday, June 2 | Friday, June 3 | Saturday, June 4 |
|---|---|---|---|
| | 9:00-10:30 Molecular mechanisms of disease I | 9:00-10:30 Omics II | 9:00-10:15 Molecular mechanisms of disease III |
| | 11:00-12:30 Biomarkers, diagnostics and omics I | 10:45-11:30 Invited Lecture II S. Behjati | 10:30-11:45 Molecular mechanisms of disease IV |
| | 12:30-14:00 Lunch at Heidemuseum | 11:30-13:00 Biomarkers and diagnostics II | 11:45-12:00 Wilsede Award |
| | 14:00-15:30 Immunotherapy and precision medicine I | 13:00-14:30 Lunch at Heidemuseum | 12:00-13:00 Lunch at Heidemuseum |
| 15:00 Bus transfer from Hannover / 15:30 Bus transfer from Hamburg | 16:00-18:00 Emerging therapies | 14:30-16:30 Molecular mechanisms of disease II | 13:00 coaches to Undeloh<br>14:00 Bus transfer to Hannover/ HH |
| 16:00-17:45 Registration<br>Horse carriages from Undeloh | | 17:00-19:00 Immunotherapy and precision medicine II | |
| 17:45-19:00 Appetizers | 18:30-19:15 Invited Lecture II T. Oellerich | | |
| 19:00-19:45 Invited Lecture I O. Haas | 19:15 Barbecue | 19:00 Dinner | |
| 19:45 Dinner | | | |

# WEDNESDAY, JUNE 1

*17.45 – 18.00* **Welcome by Rolf Marschalek (1)**

*18.00 – 19.00* **Appetizers** *Chair: Evelyn Ullrich*

Beyond GD2 – Glycolipids as immunotherapeutic targets in neuroblastoma
*Rekowski L, Bley I, Schattling B, Möller YS, Hunczek A, Cornils K, Müller I*

The immune checkpoint ICOSLG is a relapse-predicting biomarker and therapeutic target in infant t(4;11) ALL
*Külp M, Larghero P, Dietz A, Cario G, Eckert C, Caye-Eude A, Cazzaniga G, Bonig H, Meyer C, Marschalek R*

Mutational impact of chemotherapy on hematopoietic cells and evolution towards therapy-related pediatric AML
*Bertrums E J M, de Kanter J K, Rosendahl-Huber A K M, Zwaan C M, van den Heuvel-Eibrink M M, Goemans B F, van Boxtel R*

A single-cell expression atlas of human AML-LSCs unravels the contribution of HIF pathway and its therapeutic potential
*Velasco-Hernandez T, Trincado J L, Vinyoles M, Closa A, Molina O, Velten L, Bueno C, Eyras E, Heyn H, Menendez P*

*19.00 – 19.45* **Invited lecture I** *Chair: Martin Stanulla*

„Serendipity": Wer nicht sucht, der findet. Zufallscoups in Wissenschaft und Medizin
*Haas O*

*19.45* **Dinner**

# THURSDAY, JUNE 2

*9.00 – 10.30* **Molecular mechanisms of disease** *Chair: Irmela Jeremias*

Deciphering the molecular mechanism of NUP98-KDM5A chromosomal translocation in pediatric non-DS-AMKL
*Cifarelli LN, Issa H, Schuschel K, Menge K, Gack L, Klusmann JH, Heckl D*

Identification of direct target genes of NUP98-KDM5A reveals regulatory gene networks in Acute Myeloid Leukemia
*Troester S, Schmoellerl J, Eder T, Manhart G, Winter G, Zuber J, Grebien F*

Designing specific chromosomal translocations of the MLL/KMT2A gene
*Benz T, Kowarz E, Marschalek R*

MLL-r fusion transcripts in healthy individuals by induced gene proximity
*Streb P, Kowarz E, Marschalek R*

Modeling congenital neutropenia, a pre-leukemic bone marrow failure syndrome in zebrafish
*Aghaallaei N, Doll L, Skokowa J, Walte K, Bajoghli B*

Identification of RBMS1 in the amplified region 2q24 as a major driver of cellular growth in childhood hepatoblastoma.
*Rodemann M, Dreschmann V, Dörner E, von Schweinitz D, Vokuhl C, Pietsch T*

Contribution of aneuploidy to the initiation and progression of childhood B-cell acute lymphoblastic leukemia
*Thampi N,Bueno C, Rodríguez-Cortez V, Martínez A, Vinyoles M, Camps J, Menendez P, Molina O*

*11.00 – 12.30* **Biomarkers, diagnostics and omics I** *Chair: Markus Metzler*

Genetic landscape of large cell/anaplastic medulloblastoma – more than one disease
*Krause K, Goschzik T, Dörner E, Pietsch T*

The extended potential of optical genome mapping (OGM) in pediatric AML compared to classical cytogenetics
*Suttorp J, Lühmann JL, Steinemann D, Reinhardt D, von Neuhoff N, Schneider M*

IKZF1plus under investigation: Optical Genome Mapping to detect additional alterations
*Lühmann JL, Kater J, Wendeburg L, Möricke A, Cario G, Schrappe M, Schlegelberger B, Stanulla M, Steinemann D*

Unravelling the recombinome of IKZF1 deletions in B-ALL
*Lopes B, Meyer C, Maciel AL, Barbosa T, Venn NC, Sutton R, Fazio G, Cazzaniga G, Marschalek R, Emerenciano M*

Diagnostic and functional role of extracellular vesicles (EV) from blood and CSF in pediatric medulloblastoma (MB)
*Reetz L, Ghanam J, Chetty VK, Reinhardt D, Thakur BK*

Different isolation techniques for isolation of extracellular vesicles
*Schultheis L, Stückle J, Rajab H, Fuchs J, Warmann SW, Schmid E*

Back to the roots – multi-omics as a road atlas to the cell-of-origin in rare childhood leukemia
*Hartmann M*

*14.00 – 15.30* **Immunotherapy & precision medicine I** *Chair: Martin Sauer*

Primary CD33-targeting CAR-NK cells for the treatment of acute myeloid leukemia
*Albinger N, Pfeifer R, Kreyenberg H, Schubert R, Schneider D, Kühn M W M, Penack O, Zhang C, Möker N, Ullrich E*

Drug Repositioning for MLL-rearranged B-cell Acute Lymphoblastic Leukaemia
*Che N, Cantilena S, Looi-Somoye R, de Boer J, Williams O*

ErbB2-CAR mediated immunotherapy for the treatment of high-risk rhabdomyosarcoma
*Heim C, Moser LM, Merker M, Wels WS, Ivics Z, Bönig H, Ullrich E, Klusmann J-H, Bader P, Rettinger E*

Improving NK-cell immunotherapy against rhabdomyosarcoma
*Reindl LM, Grèze V, Wendel P, Särchen V, Wels WS, Vogler M, Ullrich E*

High antileukemic efficiency of CD19-CAR NK cells engineered with Sleeping Beauty transposon vectors
*Bexte T, Botezatu L, Miskey C, Reindl LM, Campe J, Mertlitz S, Gebel V, Schubert R, Cremer A, Rettinger E, Prommersberger S, Penack O, Wels WS, Hudecek M, Ivics Z, Ullrich E*

Efficient Expansion of Immature Acute Myeloid Leukaemia Cells in an Ex Vivo Co-culture System
*Tuk D, Nelson R, Heidenreich O, Krippner-Heidenreich A*

Flow Cytometry to detect Dasatinib sensitive T-ALL
*Poll AA, Shi Y, Bell H, Irving J, van Delft F*

*16.00 – 18.00* **Emerging therapies** *Chair: Owen Williams*

Targeting metabolism effectively complements tyrosine kinase inhibitor treatment of chronic myeloid leukemia
*Häselbarth L, Saul D, Krumbholz M, Mougiakaos D, Metzler M, Karow A*

Novel therapeutic avenues for MLL-AF4+ pro-B ALL patients based on a unique microRNA expression signature
*Malouf C, Duguid A, Ottersbach K*

Targeting the MLL/Menin interaction in NUP98-rearranged AML
*Rasouli M, Blair H, Szoltysek K, Cameron R, Krippner-Heidenreich A, Zwaan CM, McGeehan G, Heidenreich O*

Silencing the leukaemic fusion gene RUNX1/ETO by siRNA-loaded lipid nanoparticles restores myeloid differentiation
*Swart L, van Oort A, Ashtiani M, Krippner-Heidenreich A, Kooijmans S, Tuk D, Koekman A, Seinen C, Issa H, Blair H, Schiffelers R, Heidenreich O*

Epigenetic perturbation by BMI-1 inhibitors as a novel therapeutic approach for hepatoblastoma
*Demir S, Bentrop M, Cairo S, Kappler R*

Mebendazole inhibits growth of hepatoblastoma cells by cell cycle arrest
*Li Q, Demir S, Bao X, Wagner A, Fan Y, Cairo S, Kappler R*

De novo design of growth factor inhibiting proteins
*Maksymenko K, Skokowa J, Lupas AN, Aghaallaei N, Müller P, el Gamacy M*

De novo Design of Cytokines, Antikines, and Novokines
*el Gamacy M,Ullrich T, Maksymenko K, Lupas AN, Hernandez B, Skokowa J*

Selinexor, a selective inhibitor of XPO-1, shows antitumor activity in rhabdomyosarcoma cell lines
*Hoefler L, Fuchs J, Schmid E, Ellerkamp V*

A selection free ex vivo gene therapy approach to congenital neutropenia causing HAX1 mutations
*Ritter MU, Nasri M, Dannenmann B, Kaufmann MM, Zeidler KA, Zeidler C, Klimiankou M, Cathomen T, Welte K, Skokowa J*

*18.30 – 19.15* **Invited lecture II** *Chair: Jan-Henning Klusmann*

Proteogenomics in leukemia: a new era
*Oellerich T*

*19.15* **Barbecue**

# FRIDAY JUNE 3

*9.00 – 10.30* **Omics II** *Chair: Meinolf Suttorp*

RUNX1/ETO effects on the interactions with t(8;21) AML with bone marrow niche: lessons from scRNAseq
*Derevyanko PK, Swart LE, Blair HJ, Heidenreich O*

Altered extrinsic and intrinsic factors synergistically accelerate the thymic T-ALL development
*Dick AM, Tsingos E, Aghaallaei N, Bajoghli B*

Identification of Functional Defects Promoting Leukemogenesis in GATA2-deficient Individuals
*Yigit BI, Fernandez-Orth J, Weiss JM, Molnar C, Andrieux G, Gonzalez-Mendez I, Borries M, Niemeyer C, Teichert-von Lüttichau I, Erlacher M*

Characterization of cooperating mechanisms in GATA2 syndrome
*Hagenbourger F, Fernandez-Orth J, Bohler S, Weiss JM, Andrieux G, Börries M, Niemeyer CM, Erlacher M*

Characterizing Alternative Splicing Landscape by RUNX1/ETO Reveals Novel Vulnerabilities in t(8;21) Leukemia
*Barneh F, Grinev VV, van Oort A, Heidenreich O*

Identification of novel fusion transcripts in Acute Myeloid Leukaemia
*Schuschel K, Bhayadia R, J Klusmann J-H*

*10.45 – 11.30* **Invited lecture III** *Chair: Olaf Heidenreich*

Reconstructing the embryology of childhood cancer
*Sam Behjati*

*11.30 – 13.00* **Biomarkers and diagnostics II** *Chair: Katrin Ottersbach*

A multifunctional tracking approach to study clonal heterogeneity in leukemia by flow cytometry and scRNA-seq
*Steding H, Mätzig T*

Comprehensive bone marrow analysis integrating deep learning-based pattern discovery (BMDeep)
*Pontones M, Höfener H, KockF, Schwen L, Westphal M, Dickel N, Kunz M, Metzler M*

Prognostic significance of minimal residual disease prior to reinduction in intermediate risk patients with ALL
*Dzajic E, Kaupat-Bleckmann, Alten J, Zimmermann M, Möricke A, Schrappe M, Cario G*

Prognostic relevance of persisting minimal residual disease in children with ALL and slow early response to chemotherapy
*Nofcz L, Alten J, Zimmermann M, Koehler R, Möricke A, Schrappe M, Cario G*

Application of mediator probe PCR chemistry in multiplex target assays for monitoring MRD of high-risk neuroblastoma
*Schroeer A, Frietsch A L, Fillies M, Winkler A, Egger A, Henssen A G, Lehnert M, Schulte J, Szymansky A, Eckert C*

CtDNA release mechanisms in a therapeutic Ewing Sarcoma mouse model
*Eiblwieser J, Krumbholz M, Semper S, Frey B, Nagel L, Bäuerle T, Metzler M*

Identification and isolation of homogenous AML derived extracellular vesicles for MRD detection in pediatric AML
*Lesch MJ, Giebel B, Reinhardt D, Thakur BK*

*14.30 – 16.30* **Molecular mechanisms of disease II** *Chair: Torsten Pietsch*

SOD2 Promotes Acute Leukemia Adaptation to Amino Acid Starvation Through the N-Degron Pathway
*Ibrahim NK, Schreek S, Cinar B, Loxha L, Bourquin J-P, Bornhauser B, Forster M, Stanulla M, Gutierrez A, Hinze L*

Understanding the role of ontogeny for the development of MLL-AF9 infant leukaemia
*Antunes E, Schwaller J, Ottersbach K*

Mutations in KRAS and DNMT3A are not related to dependency in established tumors, in PDX acute leukemia model in vivo
*Gao Y, Ghalandary M, Becker M, Amend D, Rothenberg-Thurley M, Metzeler K, Jeremias I*

Identifying Gene Targets for Drug repurposing to preventing Myeloid Malignancies
*Schmell A-L, Meier K, Alejo O, Bhayadia R, Heckl D, Klusmann J-H*

A CRISPR-based platform to model AML progression using primary human cells
*Issa H, Heckl D, Klusmann J-H*

Understanding the FLT3-ITD maintenance and relapse pathways by RNAi screens
*Luque-Martin R, Coleman D, Blair H, Bonifer C, Heidenreich O*

Clonal Hematopoiesis in Patients with Severe Congenital Neutropenia
*Klimiankou M, Kandabarau S, Zeidler C, Pogozhykh D, Hettich-Woggon I, Hähnel K, Welte K, Skokowa J*

New Insights into the pathophysiology of cyclic neutropenia
*Zeidler A, Dannenmann B, Klimiankou M, Zeidler C, Skokowa J, Welte K*

Establishing the mechanism for RUVBL2 essentiality in acute myeloid leukaemia.
*Virely C, Armenteros-Monterroso E, Gasparoli L, Martens JHA, Mansour MR, Williams O*

*17.00 – 19.00* **Immunotherapy & precision medicine II** *Chair: Julia Skokowa*

Ex vivo and in vivo complex drug combination analysis for improved efficacy and specificity in high-risk childhood acute lymphoblastic leukaemia
*Law E, McKenzie L, Blair H, Szoltysek K, Singh M, Bomken S, Lunec J, Irving J, Vormoor J, Heidenreich O*

Streamlining preclinical in vivo treatment trials by multiplexing genetically labelled PDX models in a single mouse
*Hunt K, Amend D, Ludwig R, Vick B, Wirth AK, Herold T, Jeremias I*

Adapting CRISPR Cas9 dropout screens to in vivo PDX models of acute leukemias
*Ludwig R, Amend D, Bahrami E, Jeremias I*

Modulation of Daratumumab efficacy by Decitabine in pediatric T-cell lymphoblastic leukemia (T-ALL)
*Autenrieb M-P, Vogiatzi F, Winterberg D, Gelehrt C L, Lenk L, Baumann N, Wolf S, Valerius T, Peipp M, Schewe D M*

Prevention of relapse in juvenile myelomonocytic leukemia (JMML) by inhibition of immune checkpoint CD47
*Jun W, Jovana R, Bertram B, Niemeyer C M, Erlacher M*

Development of idiotype-specific vNAR-CAR-immune cells for the treatment of clonal malignancies
*Wendel P1, Palacios A M, Oberoi P, Habermann J, Schoenfeld K, Gierschek F, Kolmar H, Wels W S, Ullrich E*

A new T cell-redirecting strategy for the treatment of relapse/refractory T cell acute lymphoblastic leukemia
*Tirado N, Trincado JL, Bataller A, Petazzi P, Bueno C, Sánchez-Martínez D, Menendez P*

An innovative tailored CAR-T cell-redirecting immunotherapy for the treatment of metastatic and refractory Ewing Sarcoma
*Panisello C, Bueno C, Amaral AT, Carcaboso AM, de Álava E, Menendez P*

CRISPR/Cas9-based generation of CAR-expressing natural killer-like cells against acute myeloid leukemia
*Baatz F, Herbst J, Schambach A, Hust M, Mätzig T, Meyer J, Sauer MG*

*19.00* **Dinner**

# SATURDAY JUNE 4

*9.00 – 10.15* **Molecular mechanisms of disease III** *Chair: Roland Kappler*

A meningeal preleukemic niche promotes the homing of B-cell Precursor Acute Lymphoblastic Leukaemia cells to the CNS
*Mayar A, Ibuli O, Bultmann M, Winterberg D, Jeremias I, Dietterle A, Münch G, Bastian L, Schewe D N, Lenk L*

ADAM10's sheddase function augments the interaction of leukemia cells with the bone marrow niche in PDX models in vivo
*Schmid JP, Bahrami E, Becker M, Jayavelu KA, Wirth A, Jurinovic V, Öllinger R, Vick B, Herold T, Jeremias I*

Epigenetic modifiers direct lineage switch in MLL-AF4 leukemia
*Szoltysek K, Tirtakusuma R, Ashtiani M, Nakjang S, Grinev V, Hehir-Kwa J, Schweighart EK, Bomken S, Heidenreich O*

Deep learning-based cell segmentation identifies T cell infiltration and spatial distribution in de novo pediatric AML
*Koedijk JB, van der Werf I, Vermeulen MA, PALGA-group, Nierkens S, Zwaan CM, Heidenreich O*

hiPSC disease modeling to study leukemia development in HAX1 vs ELANE associated congenital neutropenia
*Dannenmann B, Klimiankou M, Oswald B, Solovyeva A, Mardan J, Zeidler C, Welte K, Skokowa J*

*10.30 – 11.45* **Molecular mechanisms of disease IV** *Chair: Raj Bhayadia*

Breaking the pump: targeting the sodium-potassium pump as a therapeutic strategy in acute myeloid leukemia
*Schneider C, Spaink H, Alexe G, Dharia NV, Khalid D, Scheich S, Haeupl B, Oellerich T, Stegmaier, K*

Functional characterization of aberrant GATA1 protein complexes in normal and leukemic human erythroblasts
*Tauchmann S, Bagger F O, Bock T, Sivalingam R, Eder T, Fagnan A, von Lindern M, Mercher T, Grebien F, Schwaller J*

LncRNA SOX21-AS1 is specifically expressed and essential in trisomy 21-associated leukemia cells
*Winkler R, Heckl D, Bhayadia R, Klusmann JH*

A new inherited syndrome with severe neutropenia and neurological involvement due to autosomal recessive COPZ1 mutation
*Borbarán-Bravo N, Deordieva E, Bräuning S, Dannenmann B, Doll L, ElGamacy M, Zeidler C, Bajoghly B, Maschan A, Shcherbina A, Welte K, Skokowa J, Klimiankou M*

Upstream regulation of DLK1-DIO3 locus in hematopoiesis and pediatric leukemia
*Verboon L , Issa H, Bräuer-Hartmann D, Regenyi E, Heckl D, Klusmann JH*

*11.45 – 12.00* **Wilsede Award 2022** *Stanulla M, Marschalek R, Heidenreich O*

*12.00 – 13.00* **Lunch**

*13.00* **Departure**