**4th Translational Research Conference**
**Acute Lymphoblastic Leukaemia**
May 22-24, 2025 - Malahide (Dublin), Ireland
Chairpersons: Kathrin Bernt, Jan Cools, Hervé Dombret, Ulla Wartiovaara-Kautto

## Thursday, May 22nd, 2025

**08:30–08:40 Welcome**

**SESSION I – The Biology of T-ALL**
**Chair: Jan Cools (Leuven)**

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| 08:40-08:45 | Introduction | Jan Cools (Leuven) |
| 08:45-09:00 | Treatment resistant progenitor populations in T-ALL identified by single-cell muti-omics | David T. Teachey (Philadelphia) |
| 09:00-09:05 | *Discussion* | |
| 09:05-09:20 | Non-coding mutations in T-ALL | Marc R. Mansour (London) |
| 09:20-09:25 | *Discussion* | |
| 09:25-09:40 | Molecular pathogenesis of T-ALL: the TAL1 subtype | Takaomi Sanda (Nagoya) |
| 09:40-09:45 | *Discussion* | |
| 09:45-10:00 | T-ALL risk stratification: back to the future | Owen P. Smith (Dublin) |
| 10:00-10:05 | Discussion | |
| 10:05-10:12 | Brief oral communication: *A non-canonical lymphoblast in refractory childhood T-Cell acute lymphoblastic leukaemia* | Bram Lim (Hinxton) |
| 10:12-10:15 | *Discussion* | |
| 10:15-10:40 | *Panel discussion* | |

***10:40-11:10 Coffee Break***

**SESSION II – The Biology of B-cell Precursor ALL Subtypes**
**Chair: Kathrin Bernt (Philadelphia)**

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|---|---|---|
| 11:10-11:15 | Introduction | Kathrin Bernt (Philadelphia) |
| 11:15-11:30 | Discoveries from single cell RNA sequencing in B Cell ALL | Charles Mullighan (Memphis) |
| 11:30-11:35 | *Discussion* | |

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| 11:35-11:50 | Interrogating the biology of high-risk features in B-ALL using single cell multi-omic approaches | Kathrin Bernt (Philadelphia) |
| 11:50-11:55 | *Discussion* | |
| 11:55-12:10 | IG-MYC rearrangements in ALL | Lisa Russell (Newcastle) |
| 12:10-12:15 | *Discussion* | |
| 12:15-12:22 | Brief oral communication: *Evaluating RNA sequencing as a single-cost-effective-test for the comprehensive molecular characterization of B-Lineage Acute Lymphoblastic Leukemia* | Sreejesh Sreedharanunni (Chandigarh) |
| 12:22-12:25 | *Discussion* | |
| 12:25-12:55 | *Panel discussion* | |

***12:55-14:20 Lunch***

**SESSION III – Specific Genetic Entities**
**Chair: Ulla Wartiovaara-Kautto (Helsinki)**

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|---|---|---|
| 14:20-14:25 | Introduction | Ulla Wartiovaara-Kautto (Helsinki) |
| 14:25-14:40 | ALL associated with clonal hematopoiesis | Ilaria Iacobucci (Memphis) |
| 14:40-14:45 | *Discussion* | |
| 14:45-15:00 | Down syndrome-associated ALL | Sarah K. Tasian (Philadelphia) |
| 15:00-15:05 | *Discussion* | |
| 15:05-15:20 | Secondary ALL | Michal Bar-Natan (New York) |
| 15:20-15:25 | *Discussion* | |
| 15:25-15:32 | Brief oral communication*:* *Combined targeting of de novo pyrimidine synthesis and ATR promotes ferroptosis in TP53 deficient ALL* | Kari Grünewald (Utrecht) |
| 15:32-15:35 | *Discussion* | |
| 15:35-16:05 | *Panel discussion* | |

***16:05-16:35 Coffee break***

**SESSION IV – Host factors**
**Chair: Monique L. den Boer (Utrecht)**

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|---|---|---|
| 16:35-16:40 | Introduction | Monique L. den Boer (Utrecht) |
| 16:40-16:55 | Genetic predisposition to acute lymphoblastic leukaemia | Christian Kratz (Hannover) |
| 16:55 -17:00 | *Discussion* | |
| 17:00-17:15 | The leukemic bone marrow microenvironment: the interplay between leukemic cells, normal immune cells and supportive tissues | Monique L. den Boer (Utrecht) |
| 17:15-17:20 | *Discussion* | |

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| 17:20-17:35 | Systemic exposure to thiopurines in children with Acute Lymphoblastic Leukemia – How much is enough and when | Smita Bhatia (Birmingham, USA) |
| 17:35-17:40 | *Discussion* | |
| 17:40-17:47 | Brief oral communication:<br>*Inflammatory state defines high-risk T-cell Acute Lymphoblastic Leukemia subgroup* | Anastasia Tikhonova (Toronto) |
| 17:47-17:50 | *Discussion* | |
| 17:50-18:20 | *Panel discussion* | |

**18:20-19:30** **Mentored Poster Walks and Welcome Get Together**

- *Biology Poster Walk Leaders: Kathrin Bernt (Philadelphia), Jan Cools (Leuven)*
- *Clinical Poster Walk Leaders: Hervé Dombret (Paris), Ulla Wartiovaara-Kautto (Helsinki)*

## Friday, May 23rd, 2025

**09:00-10:00** **3 Simultaneous Meet the Expert sessions (non-clinical)**

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| Ph-like ALL classification | Monique L. den Boer (Utrecht), Sarah K. Tasian (Philadelphia) |
| Early T-cell precursor ALL significance | David Teachey (Philadelphia) |
| Rare mechanism of oncogene activation | Lisa Russell (Newcastle) |

***10:00-10:15*** ***Coffee break***

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| 10:15-10:30 | Activities of European group on adult ALL (an EHA scientific working group) | Philippe Rousselot (Versailles) |

**SESSION V – Measurable Residual Disease (MRD)**
**Chair: Sabina Chiaretti (Rome)**

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|---|---|---|
| 10:30-10:35 | Introduction | Sabina Chiaretti (Rome) |
| 10:35-10:50 | Contrasting values of KMT2A and BCR::ABL1 MRD | Emmanuelle Clappier (Paris) |
| 10:50-10:55 | *Discussion* | |
| 10:55-11:10 | Next-generation sequencing MRD? | Monika Brüggemann (Kiel) |
| 11:10-11:15 | *Discussion* | |
| 11:15-11:30 | Treating persistent MRD with immunotherapy | Nicola Gökbuget (Frankfurt) |
| 11:30-11:35 | *Discussion* | |
| 11:35-12:05 | *Panel discussion* | |

***12:05-13:45*** ***Lunch***

**SESSION VI – Targeted Therapy**
**Chair: Charles Mullighan (Memphis)**

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|---|---|---|
| 13:45-13:50 | Introduction | Charles Mullighan (Memphis) |
| 13:50-14:05 | Targeted protein degradation: design principles and opportunities in ALL | Izidor Sosič (Ljubljana) |
| 14:05-14:10 | *Discussion* | |
| 14:10-14:25 | Pharmacogenomics of inotuzumab response in ALL | Jun J. Yang (Memphis) |
| 14:25-14:30 | *Discussion* | |
| 14:30-14:45 | Personalized targeted treatment in relapsed refractory T-ALL | Philippe Rousselot (Versailles) |
| 14:45-14:50 | *Discussion* | |
| 14:50-14:57 | Brief oral communication: *Menin a therapeutic target in non-KMT2Ar T-ALL?* | Lisa Demoen (Ghent) |
| 14:57-15:00 | *Discussion* | |
| 15:00-15:07 | Brief oral communication: *Identification of WNK1 as a druggable target in TAL-related T-Cell Acute Lymphoblastic Leukemia* | Gregorio Monica (Parma) |
| 15:07-15:10 | *Discussion* | |
| 15:10-15:40 | *Panel discussion* | |
| ***15:40-16:10*** | ***Coffee break*** | |

**SESSION VII – Immunotherapy**
**Chair: Philippe Rousselot (Versailles)**

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|---|---|---|
| 16:10-16:15 | Introduction | Philippe Rousselot (Versailles) |
| 16:15-16:30 | Blinatumomab/TKI in Ph+ ALL | Sabina Chiaretti (Rome) |
| 16:30-16:35 | *Discussion* | |
| 16:35-16:50 | Targeting CD38 in T-ALL | Teena Bhatla (Newark) |
| 16:50-16:55 | *Discussion* | |
| 16:55-17:10 | Resistance to therapies antigen-targeted therapies | Nicolas Boissel (Paris) |
| 17:10-17:15 | *Discussion* | |
| 17:15-17:22 | Brief oral communication: *Acute lymphoblastic leukemia escapes immune surveillance by imposing a Type-1 regulatory program on neoantigen-specific CD4+ T cells* | Sean Tracy (Minneapolis) |
| 17:22-17:25 | *Discussion* | |
| 17:25-17:55 | *Panel discussion* | |

## Saturday, May 24th, 2025

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| **07:40-08:40** | **3 Simultaneous Breakfast Meet the Expert Sessions (Clinical):** | |
| | How I use blinatumomab? | Nicolas Boissel (Paris) |
| | How I use inotuzumab? | Philippe Rousselot (Versailles) |
| | How I use CAR T-cells? | Rong Fan (New Haven) |

**SESSION VIII – Cell Therapy**
**Chair: Marc Mansour (London)**

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|---|---|---|
| 08:45-08:50 | Introduction | Marc Mansour (London) |
| 08:50-09:05 | Dual CD19/CD22 CAR targeting of ALL | Sara Ghorashian (London) |
| 09:05-09:10 | *Discussion* | |
| 09:10-09:25 | Single-cell multi-omics reveals CAR T Cell heterogeneity underlying durable responses in B-ALL patients | Rong Fan (New Haven) |
| 09:25-09:30 | *Discussion* | |
| 09:30-09:45 | CAR T cells for relapsed, refractory T-Cell malignancies | Rayne H. Rouce (Houston) |
| 09:45-09:50 | *Discussion* | |
| 09:50-10:20 | *Panel discussion* | |
| ***10:20-10:50*** | ***Coffee break*** | |

**SESSION IX – Other potential ALL targets**
**Chair: Hervé Dombret (Paris)**

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|---|---|---|
| 10:50-10:55 | Introduction | Hervé Dombret (Paris) |
| 10:55-11:10 | Discovery of a novel HDAC6 inhibitor and how it regulates metabolism | Tríona Ní- Chonghaile (Dublin) |
| 11:10-11:15 | *Discussion* | |
| 11:15-11:30 | Role of BH3 mimetics against ALL | James Labelle (Chicago) |
| 11:30-11:35 | *Discussion* | |
| 11:35-11:42 | Brief oral communication: *FLT3 targeting strategy in pediatric PAX5r BCP-ALL* | Alessia Curto (Monza) |
| 11:42-11:45 | *Discussion* | |
| 11:45-12:15 | *Panel discussion* | |
| ***12:15-12:25*** | ***Closing Remarks*** | |

**MEETING CLOSURE**