

23rd Annual John Goldman E-Conference on Chronic Myeloid Leukemia: Biology and Therapy

October 7-10, 2021

Chairs: J. Cortes, T.P. Hughes, D.S. Krause

Co-Organizers: R. Bhatia, T. Brümmendorf, M. Copland, M. Deininger, O. Hantschel, F-X. Mahon, D. Perrotti,
J. Radich, D. Réa

Advisory Committee: J. Apperley, S. Branford, C. Gambacorti-Passerini, F. Guilhot, R. Hehlmann,
P. Laneuville, G. Saglio, C. Schiffer, S. Soverini, P. Valent, R. Van Etten

This program is presented according to Central European Summer Time (CEST). Please check the corresponding hours in your time zone.

Thursday, October 7, 2021

14:00-14:10	WELCOME	Jorge Cortes (Augusta)
14:10-14:20	iCMLF - A REVIEW	Tim P. Hughes (Adélaide)
14:20-14:53	SPECIAL INTRODUCTORY LECTURE Chair: Tomasz Skorski (Philadelphia)	
14:20-14:23	<i>Introduction</i>	
14:23-14:43	Detection and Targeting of Malignant Deaminase Activation in Chronic Myeloid Leukemia	Catriona Jamieson (La Jolla)
14:43-14:53	<i>Discussion</i>	
14:53-16:30	SCIENTIFIC SESSION 1: TOP SCORING ABSTRACTS 2021 Chairs: Susan Branford (Adelaide), Bac Viet Le (Philadelphia)	
14:53-14:56	<i>Introduction</i>	
14:56-15:08	Targeting Integrated Stress Response By Isrib Combined with Imatinib Attenuates STAT5 Signaling and Eradicates Therapy-Resistant Chronic Myeloid Leukemia Cells	Katarzyna Piwocka (Warsaw)
15:08-15:20	Final Analysis of a Pan European Stop Tyrosine Kinase Inhibitor Trial in Chronic Myeloid Leukemia : The EURO-SKI Study	Johan Richter (Lund)
15:20-15:32	Impact of Inhibition of Folate Metabolism in Leukaemic Stem Cells	Martha M. Zarou (Glasgow)
15:32-15:44	Ponatinib in Combination with FLAG-IDA Chemotherapy for	Mhairi Copland (Glasgow)

	Blast-Phase Chronic Myeloid Leukemia: The Seamless Phase I/II Dose-Finding Matchpoint Trial	
15:44-15:56	Chemical Factors and Their Signaling in the Leukemic Bone Marrow Microenvironment	Raquel Pereira (Frankfurt)
15:56-16:08	COVID-19 in Patients with Chronic Myeloid Leukemia: Update of the International CML Foundation (iCMLf) CML and COVID-19 (CANDID) Study	Katia Pagnano (Campinas)
16:08-16:30	<i>Discussion</i>	
16:30-16:40	<i>Break</i>	
16:40-17:08	TESSA HOLYOAKE MEMORIAL LECTURE: SPECIAL LECTURE Chair: Brian Huntly (Cambridge)	
16:40-16:43	<i>Introduction</i>	
16:43-16:58	Bcl2-mediated metabolic properties of leukemia stem cells	Craig Jordan (Aurora)
16:58-17:08	<i>Discussion</i>	
17:08-18:30	SCIENTIFIC SESSION 2: STEM CELLS AND THE MICROENVIRONMENT Chair: Connie Eaves (Vancouver)*	
17:08-17:11	<i>Introduction</i>	
17:11-17:26	<i>Keynote presentation</i> Evolution of our learning in stem cell	Ravi Bhatia (Birmingham)
17:26-17:36	<i>Discussion</i>	
	<i>Selected Abstracts</i>	
17:36-17:48	Deep Single Cell RNA-Seq Profiling Reveals an Embryonic Regulome That Defines the Molecular Programmes of Cycling and Quiescent Leukaemic Stem Cells.	Wei Liu (Glasgow)
17:48-18:00	Bone Marrow Stromal Cells Upregulate Oxphos Pathway in CML Cells Via Direct Leukemia-Stroma Interactions	Piotr Chroscicki (Warsaw)
18:00-18:12	The Lysophospholipid Metabolism Enzyme Gdpd3 Maintains Chronic Myelogenous Leukemia Stem Cells	Kazuhito Naka (Hiroshima)
18:12-18:30	<i>Discussion</i>	
18:30-18:58	SPECIAL LECTURE (2): Chair: Stéphane Prost (Fontenay aux Roses)	
18:30-18:33	<i>Introduction</i>	
18:33-18:48	Does Ph+ in AML exist or not? vs CML	Catherine Smith (San Francisco)

18:48-18:58 *Discussion*

Friday, October 8, 2021

10:20-11:50 **SCIENTIFIC SESSION 3: IMMUNOLOGY**

Chair: Agnes Yong (Adelaide)

10:20-10:23 *Introduction*

10:23-10:38 **Keynote Presentation**

The immune landscape in CML

Dominik Wolf (Innsbrück)

10:38-10:48 *Discussion*

Selected Abstracts

10:48-11:00 Leukemic Extracellular Vesicles Upregulate Highly Suppressive Regulatory T Cells By Modulating mTOR and STAT5 Signaling, Leading to Progression of CML

Julian Swatler (Warsaw)

11:00-11:12 Perturbed Function of Natural Killer Cells By Inflammatory Cytokines in Chronic Myeloid Leukemia

Valeriya Kuznetsova (Birmingham)

11:12-11:24 Leukemic Cytokines Co-Opt Regulatory T Cell and Th17 Immunity to Promote Disease Progression

Virginia Camacho (Birmingham)

11:24-11:36 KIR Polymorphism, Expression on NK Cells and Regulation By microRNAs Associated with Tyrosine Kinase Inhibitor Therapy in Chronic Myeloid Leukemia

Paulo Rodrigues-Santos (Coimbra)

11:36-11:50 *Discussion*

11:50-12:00 **JANET ROWLEY PRIZE PRESENTATION**

Presenter: Jerry Radich (Seattle)

Awardee 2021: Susan Branford (Adelaide)

12:00-12:25 **JANET ROWLEY PRIZE: SPECIAL LECTURE (3)**

Chair: Jerry Radich (Seattle)

12:00-12:15 *BCR-ABL1* dependent and independent molecular factors that influence treatment outcome

Susan Branford (Adelaide)

12:15-12:25 *Discussion*

12:25-14:10 **Lunch**

14:10-16:00	SPECIAL SYMPOSIUM ON BLAST PHASE Chair: Rüdiger Hehlmann (Mannheim)	
14:10-14:20	Introductory overview – concepts and challenges	Rüdiger Hehlmann (Mannheim)
14:20-14:32	<i>Current concepts in the biology of blast phase CML</i>	Tiong Ong (Singapore)
14:32-14:44	<i>Mutations, genetics, cytogenetics and their prognostic role in blast phase</i>	Simona Soverini (Bologna)
14:44-14:56	<i>Challenges and controversies in the diagnosis and classification of blast phase CML</i>	Robert Hasserjian (Boston)
14:56-15:08	<i>Treatment of myeloid in blast phase</i>	Mhairi Copland (Glasgow)
15:08-15:20	<i>Treatment of lymphoid in blast phase</i>	Koji Sasaki (Boston)
15:20-15:32	<i>The role and outcome of stem cell transplant for blast phase CML</i>	Aleksandar Radujkovic (Heidelberg)
15:32-16:00	General Discussion	

16:00-16:28	SPECIAL LECTURE (4): Chair: Giovanni Martinelli (Bologna)	
16:00-16:03	<i>Introduction</i>	
16:03-16:18	Lineage ambiguous leukemias	Charles Mullighan (Memphis)
16:18-16:28	<i>Discussion</i>	
16:28-16:40	Break	
16:40-17:40	Biology Posters – Mentored Poster Walk 1 Biology Poster Walk Leaders: Feyruz Rassool (Baltimore), Veronika Sexl (Vienna)*	

16:40 – 17:40 **MEET-THE-EXPERT SESSION (pre-registration required)**
Jane Apperley (London), Neil Shah (Chicago)

17:50-19:50	WORKSHOP FOR NON-CLINICAL SCIENTISTS #1 EPIGENETICS Chairs: Ravi Bhatia (Birmingham), David Vetrie (Glasgow)	
17:50-17:55	Introduction	Ravi Bhatia (Birmingham), David Vetrie (Glasgow)
17:55-18:20	Profiling of chromatin regulatory factors by CUT&RUN and CUT&TAG	Greg Wang (Chapel Hill)
18:20-18:45	Use of chromatin conformation capture assays (3C/4C)	Michelle West (Brighton)
18:45-19:10	Multimodal single-cell analysis delineates the evolution of myeloid leukemia	Peter van Galen (Boston)
19:10-19:40	Discussion	
19:40-19:50	Conclusion	

17:50-18:50 SATELLITE SYMPOSIUM (already booked)

Saturday, October 9, 2021

11:00-12:35	SCIENTIFIC SESSION 4: MOLECULAR MECHANISMS OF DISEASE AND RESPONSE TO TREATMENT Chair: Andreas Hochhaus (Jena)	
11:00-11:03	<i>Introduction</i>	
11:03-11:18	Keynote Presentation Molecular Mechanisms of TKI Action, Resistance and BCR-ABL Signaling	Oliver Hantschel (Marburg)
11:18-11:28	<i>Discussion</i>	
	Selected Abstracts	
11:28-11:40	Mitochondrial DNA Mutations Are Associated with Reduced Oxphos and Response to Imatinib in Chronic Myeloid Leukaemia Patients	Ilaria Pagani (Adelaide)
11:40-11:52	Identifying Novel Mechanisms Involved in Circumventing Tyrosine Kinase Inhibition in CML	Caroline Busch (Glasgow)
11:52-12:04	A Comprehensive Analyses of Ph+ ALL Paediatric/AYA and Adult Patients Using Next Generation Sequencing and Flow Cytometry.	Deborah L. White (Adelaide)

12:04-12:16	DNMT1 Inhibitor and TKI Combination for Deeper Response and Depleting Stem Cell Self-Renewal in CML	Kazuharu Kamachi (Saga)
12:16-12:35	<i>Discussion</i>	
12:35-13:40	<i>Lunch</i>	
13:40-13:50	JOHN GOLDMAN PRIZE PRESENTATION Presenter: Robert Gale (London) Awardee 2021: Giuseppe Saglio (Turin)	
13:50-14:15	JOHN GOLDMAN PRIZE: SPECIAL LECTURE (5) Chair: Robert Gale (London)	
13:50-14:05	CML beyond TKI therapy	Giuseppe Saglio (Turin)
14:05-14:15	<i>Discussion</i>	
14:15-14:43	SPECIAL LECTURE (6): Chair: Thoas Fioretos (Lund)*	
14:15-14:18	<i>Introduction</i>	
14:18-14:33	NK cell therapy for myeloid malignancies	Todd Fehniger (St Louis)
14:33-14:43	<i>Discussion</i>	
14:43-16:15	SCIENTIFIC SESSION 5: NEW TREATMENT STRATEGIES Chair: Franck Nicolini (Lyon)	
14:43-14:46	<i>Introduction</i>	
14:46-15:01	Keynote Presentation The future of CML Therapy : Are more TKIs needed ?	Delphine Réa (Paris)
15:01-15:11	<i>Discussion</i>	
	Selected Abstracts	
15:11-15:23	Optic Primary Analysis: A Dose-Optimization Study of 3 Starting Doses of Ponatinib (PON)	Jorge Cortes (Augusta)
15:23-15:35	Mathematical Modelling of Immune Response in CML Patients Suggests Potential for TKI Reduction Prior to Cessation	Ingo Roeder (Dresden)
15:35-15:47	Updated Results from Phase 1 Study of Vodobatinib, a Novel Oral BCR-ABL1 Tyrosine Kinase Inhibitor (TKI), in Chronic Myeloid Leukemia (CML) and Philadelphia	Jorge Cortes (Augusta)
15:47- 15:59	Efficacy and Safety of Bosutinib in Previously Treated Patients with Chronic Myeloid Leukemia: Final Results from the Beyond Trial	Carlo Gambacorti-Passerini (Monza)
15:59-16:15	<i>Discussion</i>	

16:15- 16:25

Break

16:25-17:55

SCIENTIFIC SESSION 6: TREATMENT-FREE REMISSION

Chair: Philippe Rousset (Versailles)

16:25-16:28

Introduction

16:28-16:43

Keynote Presentation

What's stopping us from stopping TKI for more people with CML? David Ross (Adelaide)

16:43-16:53

Discussion

Selected Abstracts

16:53-17:05

Molecular Relapse after TKI Cessation for Treatment-Free Remission Can be Predicted By RNA-Sequencing

Vincent Alcazer (Lyon)

17:05-17:17

Allelic Polymorphisms of Killer Immunoglobulin-like Receptor and Human Leukocyte Antigen Determine Successful Achievement of Treatment-Free Remission in Patients with CML

Hiroshi Ureshino (Saga)

17:17-17:29

First Interim Results of the "Russian Prospective Study of Reduction and Discontinuation Treatment of TKI (READIT-2020)" in Patients with Chronic Myeloid

Margarita Gurianova (Moscow)

17:29-17:45

Discussion

17:45-18:05

ESH INTERNATIONAL JOHN GOLDMAN RESEARCH AWARD CEREMONY 2021

17:45-17:55

Presenter: Hervé Dombret (Paris), ESH President

17:55-18:05

Announcing the Awardee 2021:

Biological significance of BCR-ABL1 clonal hematopoiesis in Ph-positive acute lymphoblastic leukemia (Ph+ ALL): relevance for treatment-free remission

Emmanuelle Clappier (Paris)

18:20

Clinical Posters - Mentored Poster Walk 2

Clinical Poster Walk Leaders: Dragana Milojkovic (London), Douglas Smith (Baltimore)

18:20 – 19:20

MEET-THE-EXPERT SESSION (pre-registration required)

Michael Mauro (New York), Gianantonio Rosti (Meldola)

11:00-13:00	WORKSHOP FOR NON-CLINICAL SCIENTISTS #2 SINGLE CELL ANALYSIS Chairs: Mhairi Copland (Glasgow), Satu Mustjoki (Helsinki)	
11:00-11:05	Introduction	Mhairi Copland (Glasgow), Satu Mustjoki (Finland)
11:05-11:30	Application of single cell technologies	Ana Cvejic (Cambridge)
11:30-11:55	Defining CML stem cells using single-cell genomics	Göran Karlsson (Lund)
11:55-12:20	Use of single cell technologies in the study of myeloproliferative neoplasms	Rebekka Schneider (Rotterdam)
12:20-12:50	Discussion	
12:50-13:00	Conclusion	

13:00-13:25 **ESH INTERNATIONAL JOHN GOLDMAN RESEARCH AWARD 2019 : PRESENTATION OF RESULTS**
Chair: Hervé Dombret (Paris), ESH President

13 :00-13 :05	<i>Introduction</i>	
13 :05-13 :20	Use of machine learning to integrate clinical data and biomarkers to optimize prediction of TFR	Ilaria Pagani (Adelaide)
13:20-13:25	<i>Discussion</i>	

13:25-14:00 **Lunch**

14:00- 14:30 **ROUNDTABLE: IS TFR THE RIGHT ROAD TO CURE WE SHOULD BE PURSUING?**
Chair: Richard Clark (Liverpool)*
Discussants: Jan Geissler (Munich), François-Xavier Mahon (Bordeaux), Moshe Talpaz (Ann Arbor)

14:30- 14:58 **SPECIAL LECTURE (7):**
Chair: Tim Brümmendorf (Aachen)

14:30-14:33	<i>Introduction</i>	
14:33-14:48	The biology and implications of clonal hematopoiesis	Benjamin Ebert (Boston)
14:48-14:58	<i>Discussion</i>	

14:58-16:15 **SCIENTIFIC SESSION 7: QUALITY OF LIFE AND CO-MORBIDITIES**
Chair: Susanne Saussele (Mannheim)

14:58-15:01	<i>Introduction</i>	
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15:01-15:16	Keynote presentation The role of patient reported outcomes in the management of patients with CML: Are we doing it right? Are we doing it enough?	Fabio Efficace (Chicago)
15:16-15:26	<i>Discussion</i>	
	Selected Abstracts	
15:26- 15:38	The Effect of Comorbidities on Response Outcomes with First-Line Dasatinib Versus Imatinib in Chronic Myeloid Leukemia in Chronic Phase (CML-CP): Exploratory Post Hoc Analysis of DASISION	Massimo Breccia (Rome)
15:38-15:50	COVID-19 – a Survey Among Brazilian Chronic Myeloid Leukemia Patients	Katia Pagnano (Campinas)
15:50-16:02	Health-Related Quality of Life (HRQoL) in CML-Patients at Diagnosis Compared to General Population	Marcel Lorch (Mannheim)
16:02-16:20	<i>Discussion</i>	
16:20-16:30	Break	
16:30-16:40	iCMLf PRIZE PRESENTATION: Presenter: Gianantonio Rosti (Bologna) Awardee 2021: Damira Bayzakova (Bishkek)	
16:40- 17:05	iCMLf PRIZE: SPECIAL LECTURE (8) Chair: Gianantonio Rosti (Bologna)	
16:40-16:55	TBA	
16:55-17:05	<i>Discussion</i>	
17:05-18:25	SCIENTIFIC SESSION 8: TKI SAFETY Chair: Stephen O’Brien (Newcastle)*	
17:05-17:08	<i>Introduction</i>	
17:08-17:23	Keynote presentation A deeper dive into the safety of TKIs	Carlo Gambacorti-Passerini (Monza)
17:23-17:33	<i>Discussion</i>	
	Selected abstracts	
17:33- 17:45	Incidence of Pleural Effusion with Dasatinib and the Effect of Switching Therapy to Bosutinib in Patients with Chronic Phase CML	Akriti Jain (Tampa)
17:45-17:57	Diminished Skeletal Muscle Insulin Sensitivity in CML Patients Treated with Nilotinib	Lando Janssen (Nijmegen)
17:57- 18:09	Are Myeloid Mutations Associated with the Development of Vascular Events in Patients with Chronic Myeloid Leukemia?	Ruth Stuckey (Las Palmas)

18:09-18:21 Metabolism in Muscle Cells Is Influenced By Carnitine Pavel Burda (Prague)
Intracellular Concentration Decrease Caused By Imatinib Treatment

18:21- 18:35 *Discussion*

18:35 *Closing remarks*

**Pending confirmation*