

# Program

## Day 1 8.03.2019 Friday

**16.00-19.30** Registration and posters

**18.30** Greetings from Congressi Stefano Franscini (CSF)

**19.00-20.30** Dinner

20.30-21.30 N. Mohandas (keynote speaker) *Insights into Reticulocyte Biology*

**21.30 -** Getting together

## **Day 2 09.03.2019 Saturday**

- 08.15-08.30 Greetings from the organizers
- 08.30-08.45 **Intro Section Erythropoiesis** (Chair Marieke von Lindern)
- 08.45-09.30 J. Palis (keynote speaker) *BMI-1 regulates ex vivo self-renewal of human erythrocytes (abstract 1.1)*
- 09.30-10.15 T. Schroeder (speaker) *Long-term single-cell quantification: New tools for old questions (1.2)*
- 10.15-11.00 R. Skoda (speaker) *Molecular pathogenesis of erythrocytosis and polycythemia (3.2)*
- 11.00-11.30 coffee**
- 11.30-12.15 C. Camaschella (speaker) *Hepcidin and anemia (1.4)*
- 12.15-13.00 D. Girelli (speaker) *Anemia of the elderly (1.5)*
- 13.00-13.15 L. Blanc *HMGB1 Causes Anemia of Inflammation By Modulating Erythropoietin Signal Transduction (1.6)*
- 13.15-13.30 G.W. Bornkamm *The Role of glutathione peroxidase 4 and vitamin E in reticulocyte maturation and iron homeostasis (1.7)*
- 13.30-14.30 lunch**
- 14.30-15.00 M. von Lindern (speaker) *Large scale culture differentiation of erythrocytes for transfusion purposes (1.8)*
- 15.00-15.30 A. D'Alessandro (speaker) *RBC storage: from Omics technologies to personalized transfusion medicine (1.9)*
- 15.30-16.00 coffee**
- 16.00-16.15 **Intro Section 2 Adaptation** (Chairs Anna Bogdanova and Sasa Svetina)
- 16.15-16.45 H. Mairbaurl (speaker) *What are the normal hemoglobin values in high altitude residents? (2.1)*
- 16.45-17.15 A. Schechter (speaker) *The new biology of nitrate and nitrite as precursors of nitric oxide (2.2) canceled*
- 17.15-17.45 C. Noguchi (speaker) *The many faces of erythropoietin response (2.3)*
- 17.45-18.00 E. Nader *Effect of a 10km running trial on blood rheology, red blood cell electrophysiology, eryptosis and microparticles emission in endurance trained athletes (2.4)*
- 18.00-18.20 E. Fibach *Red blood cells as redox modulators (2.5)*
- 18.30-20.00 **wine tasting**
- 20.00-21.30 dinner**

### **Day 3 10.03.2019 Sunday**

8.15-8.30 **Intro Section 3 Clinical Hematology** (Chairs Richard van Wijk and Marije Bartels)

8.30-9.15 S.-L. Thein (keynote speaker) *Recent Advances in Treatment of Sickle cell disease (3.1)*

9.15-10.00 M. Zylinska (speaker) *ER stress response and RBC-platelet differentiation in myeloproliferative neoplasms (1.3)*

10.00-10.45 E. van den Akker (speaker) *Regulation of globin genes upon KLF1 haploinsufficiency (3.3)*

10.00-10.15 I. Hegemann *MemSID clinical trial: safety and tolerability and clinical outcome of the memantine therapy for sickle cell disease patients (3.4)*

10.15-10.30 R. Renella *Surfaceome Mapping of Healthy and Sickle Cell Disease Erythropoiesis: preliminary data (3.5)*

**10.30-11.00 coffee**

11.00-11.30 P. Connes (speaker) *Blood Rheology: key parameters, impact on blood flow and role in sickle cell disease (3.6)*

11.30-11.45 M. Rab *Rapid and reproducible characterization of sickling during automated deoxygenation in sickle cell disease patients (5.6)*

11.45-12.00 R. Buks *ABCG2 is an Importer of Ruxolitinib, and Hydroxyurea Treatment Increases ABCG2 Levels in Polycythemia Vera Red Blood Cells (3.8)*

12.00-12.15 A. Koren *Fetal Red Blood Cells in Sickle Cell Anemia (SCA) and Sickle Cell  $\beta$  Thalassemia ( $S\beta$ -Thal). The effect of Hydroxyurea treatment (3.9)*

12.15.-12.30 C. Levin *Serum levels of Hemopexin, Heat Shock Protein 70 and Erythroferrone in  $\beta$ -Thalassemia Major Patients and their Correlation with Clinical and Laboratory Parameters (3.11)*

**13.00-14.00 lunch**

**14.00-15.30 Excursions Monte Verita/museum**

16.00-16.15 **Intro Section 4 Membranes and Channels** (Chair Stephane Egee)

16.15-17.00 G. Minetti (speaker) *Membrane processes in the maturation of circulating reticulocytes: involvement of membrane rafts (4.1)*

17.00-17.45 C. Wagner (speaker) *3D tomography of blood flow (5.1) **cancelled***

17.45-18.00 V. Pretini *Red Blood Cells: Chasing Interactions (3.7)*

18.00-18.15 F. Agliarolo *A Novel Role for PIEZO1 in Calcium Homeostasis During Erythropoiesis (4.3)*

18.15-18.30 V. Picard *Genotype-phenotype relationship in Piezo1 versus Gardos hereditary stomatocytosis : A retrospective series of 104 patients (4.4)*

18.30-18.45 D. Monedero Alonso *Membrane potential measurements enable fine characterization of channelopathies*

**19.00-20.30 dinner/20.30-22.00 Posters**

## **Day 4 11.03.2019 Monday**

### **08.15-08.30 Intro Membranes and Channels part 2**

08.30-08.50 D. Tyteca (speaker) *Oxidative stress and plasmatic sphingomyelinase impair calcium exchange and erythrocyte morphology and deformability in elliptocytosis (4.5)*

08.50-09.10 S. Svetina (speaker) *On red blood cell non-genetic variability (4.6)*

09.10-09.55 P. Bianchi (speaker) *Diagnosis of RBC hydrations defects (4.7)*

09.55-10.10 M.G. Rotordam *A high-throughput patch clamp method to investigate Piezo1 channels from healthy and anaemic red blood cells (4.8)*

### **10.10-10.45 coffee**

10.45-11.00 **Intro Section 5 Physics meets red blood cells** (Chairs Lars Kaestner and Asena Abay)

11.00-11.45 L. Kaestner *Diagnostic tools and their future (5.2)*

11.45-12.30 Yu. Feldman (speaker) *Water and its dielectric signature. New markers for biosensing (5.3)*

12.30-12.50 G. Bouyer *New Permeation Pathways in the host red cell during Plasmodium falciparum gametocytogenesis: greater than expected (4.9)*

12.50-12.20 L.Garçon *PIEZO1 gain of function mutations in Hereditary Xerocytosis lead to a delay of in vitro erythroid differentiation (4.10)*

### **12.30-13.30 lunch**

15.00-15.15 G. Simionato *Automatic 3D classification of red blood cell shapes by artificial neural networks (5.5)*

15.15-15.30 M. Robert *Comprehensive proteomic profiling of erythrocytes following hypotonic dialysis-based drug encapsulation process (3.10)*

### **15.30-16.00 Meeting of ERCS members**

16.00-17.00 “Good researching practices” for working with RBC (RELEVANCE and friends: podium discussion)

### **17.00-17.30 coffee**

### **17.30-18.30 Young researchers meet the experts**

### **19.00-20.30 Gala-dinner**

### **20.30-22.30 Young investigators: short poster presentations and poster contest**

**Awards to win: Stefano Franscini Award (translational research), Frontiers in Physiology Award (basic research), Vifor Pharma Award (new technologies).**

**Day 5 12.03.2019 Tuesday**

8.15-8.30     **Intro Technologies for RBC investigation**

8.30-9.00     A. Bogdanova (speaker) *Clinical significance of red blood cell heterogeneity (5.7)*

9.00-9.20     A. Makhro *Discontinuous nature of red blood cell density and shape: implication for image analysis (5.8)*

9.20-9.40     J. Delobel *Validation of a Rapid, Open-Source, Paper-Based Screening Assay for Sickle Cell Disease: from retrospective global health annotation to prospective neonatal detection (5.9)*

9.40-10.10    *MeCheM – first announcement and introduction (N. Kilcawley 5.10) and first results of clinical testing (L. Livshits 5.11)*

**10.10-10.30    coffee**

10.30         **Final remarks**

10.30-11.30    Anna Bogdanova *Red blood cell research: the outlook*

*Announcement of the next ERCS meeting and introduction of the location by the organizers*

**Awards ceremony**

**12.00           lunch and departure**

**The awardees:**

**Stefano Franscini Award:** Julien Delobel

**Vifor Pharma Award:** Claudia Bernecker

**Frontiers in Physiology Award:** Marwa Almosaileakh