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At the end of the event a certificate of participation will be issued on request.

For further information, please contact the Scientific Secretariat:**Luisa Leone; Fabrizio Martelli**

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luisa.leone@iss.it; fabrizio.martelli@iss.it**CENTRO NAZIONALE SANGUE****International Workshop****“Making Blood from Progenitors Ex-vivo”
September 19th, 2011**

Organized by
ISTITUTO SUPERIORE DI SANITÀ
and
ITALIAN NATIONAL BLOOD CENTRE
ROME, ITALY

In collaboration with
TISCH CANCER INSTITUTE
MOUNT SINAI SCHOOL OF MEDICINE
NEW YORK (NY), USA

Aula Pocchiari
Istituto Superiore di Sanità
Viale Regina Elena, 299 - Roma

**International Workshop
“Making Blood from Progenitors Ex-vivo”
September 19th 2011**

N° ID: 074D11

Source of the event: This event is an integral part of the Italian Project “Progetto di fattibilità per la produzione industriale di eritroblasti umani per trasfusione, programma biennale 209/2011”. This event aims to disseminate the latest information on research concerning the use of ex-vivo expanded red cells as alternative transfusion products and to increase scientific collaboration among the most prominent scientists active in this field.

Purpose and objectives: The normal supply of blood is dependent on the constant availability of donors. For alloimmunized patients and patients with rare blood types there remain chronic shortages that have prompted development of alternative transfusion products. New technologies have been developed that allow ex-vivo generation of erythroid cells from adult or cord blood cells in numbers sufficient for 3-50 transfusions. Animal models have provided proof-of-concept data showing that ex-vivo generated red cells protect from lethal anemia. Other sources of stem cells such as embryonic or induced pluripotent stem cells, as well as CD34positive cells treated with chromatin modifying agents hold great promise for manipulation into transplantable erythroid cells. In this workshop, the state-of-the art of this rapidly developing area of translational research will be discussed, summarizing progress already made, future possibilities, and the possible barriers still to be overcome.

PROGRAM

09.00 Welcome address

Session I: The need for Alternative Transfusion Products
(Chairpersons: to be named)

09.30 Talk 1 - **Giuliano Grazzini**

Self-sufficiency and safety of the blood supply in Italy

10.00 Talk 2 – **Giancarlo Maria Liumbruno**

Strategies to limit transfusion requirements

10.30 Keynote Talk - **Luc Douay**

Expansion of red cells for transfusion

11.15 Coffee break

Session II: Stem cell sources for optimal ex-vivo expansion
(Chairpersons: to be named)

11.45 Talk 4 - **Anna Rita Migliaccio**

Production of red cells from cord blood and adult blood progenitor cells

12.15 Talk 5 - **Ronald Hoffman**

Chromatin modifying agents promote the expansion of progenitor cells

12.45 Lunch

13.30 Talk 6 – **Yuko Nakamura**

Production of red blood cells from immortalized erythroid progenitor cells

14.00 Talk 7 – **Thalia Papayannopoulou**

iPS generated erythrocytes for autologous transfusion in thalassemia

Session III: Properties of ex-vivo expanded erythroid cells
(Chairpersons: to be named)

14.30 Talk 8 – **Carolyn Whitsett**

Blood group antigens in ex-vivo expanded erythrocytes

15.00 Talk 9 – **John Crispino**

Mechanisms of erythroblast enucleation

15.30 Talk 10 – **Clara Camaschella**

Iron genes in erythroid differentiation

16.00 Talk 11 – **Narla Mohandas**

Membrane assembly during terminal erythroid differentiation

16.30 Talk 12 - **Michelle Sadelain/Isabelle Riviere**

Developing a clinical grade production process for first in man administration of ex-vivo expanded red cells

17.00 Extensive Coffee break and poster viewing

Session IV:

18.00 Oral Presentations - 10 min chosen from the posters by

George Stamatoyannopoulos and Ihor Lemischka

19:00 Meeting adjourn

Speakers

Clara Camaschella, University “Vita-Salute”, Scientific Institute H. San Raffaele, Milan

John Crispino, Northwestern University, Chicago (IL)

Luc Douay, Hôpital Saint Antoine, Paris

Giuliano Grazzini, Italian National Blood Centre, Istituto Superiore di Sanità, Rome

Ronald Hoffman, Tisch Cancer Institute, Mount Sinai School Of Medicine, New York (NY)

Ihor Lemischka, Icahn Medical Institute, The Mount Sinai Medical Center, New York (NY)

Giancarlo Maria Liumbruno, Fatebenefratelli Hospital, Rome

Mohandas Narla, Kimball Research Institute, The Mount Sinai Medical Center, New York (NY)

Anna Rita Migliaccio, Istituto Superiore di Sanità, Rome and Tisch Cancer Institute, Mount Sinai School Of Medicine, New York (NY)

Kateri Moore, Icahn Medical Institute, The Mount Sinai Medical Center, New York (NY)

Yukio Nakamura, RIKEN BioResource Center, Tsukuba, Ibaraki, Japan

Thalia Papayannopoulou, University of Washington, Seattle (WA)

Isabelle Riviere, Memorial Sloan-Kettering Cancer Center, Paris

Michelle Sadelain, Memorial Sloan-Kettering Cancer Center, Paris

George Stamatoyannopoulos, University of Washington, Genome Sciences School of Medicine, Seattle (WA)

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