3rd International Congress on Responsible Stem Cell Research (RSCR)

Vatican City, April 25-28, 2012

www.stemcellsrme2012.org
COMMITTEES

ORGANIZERS

PONTIFICAL ACADEMY FOR LIFE
H.E. Msgr. Ignacio Carrasco De Paula

FONDATION JEROME LEJEUNE
Mr. Jean-Marie Le Méné

WORLD FEDERATION OF CATHOLIC MEDICAL ASSOCIATIONS (FIAMC)
Dr. José María Simón Castellví

IN COOPERATION WITH

COMITE CONSULTATIF BIOETHIQUE MONACO
Mrs. Fabienne Mourou

ORGANIZING COMMITTEE

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Jean Jacques Lataillade Paris - France
Colin Mcguckin Lyon - France
Maurizio Muraca Rome - Italy
Jacques Suaudeau Rome - Italy
This Conference will review the present and perspective clinical use of stem cells, with emphasis on the ethical aspects of their applications. Recent progress in the study of induced pluripotent stem cells (iP-SCs) obtained by reprogramming ordinary, differentiated cells of the adult organism will be discussed, including the creation of cellular models of diseases and potential developments in the field of regenerative medicine.

Advances in umbilical cord blood stem cells will also be reviewed, together with the new sources of stem cells, including placenta, amniotic fluid and gingival fibroblasts. Additional topics will include pluripotency, maintenance, migration, differentiation, the niche, and the paracrine effect of adult stem cell

PONTIFICAL ACADEMY FOR LIFE (PAV)
The Pontifical Academy for Life, founded by Pope John Paul II, exists for the promotion and defense of human life, especially regarding bioethics as it regards Christian morality. Its statutes are defined by the motu proprio Vitae Mysterium of Pope John Paul II on 11 February 1994.

FONDATION JÉRÔME LEJEUNE
The Jérôme Lejeune Foundation was established in 1996, two years after Jérôme Lejeune’s death. While the foundation’s principal area of research has been Down syndrome, it also conducts and funds research into other genetic intelligence disabilities such as cri du chat, Rett’s syndrome, fragile X, and others. The Lejeune Medical Institute in Paris has a staff of eleven physicians of various specialties and manages a patient load of approximately 3,500 annually. The Jérôme Lejeune Foundation also maintains www.genethique.org, the leading French-language website for daily information and analysis on developments in bioethics. Gènéthique offers a free monthly newsletter with analysis in French and English defending and promoting human life in different cultures. Intelligent, well-planned, generous and ongoing group work is required in each country as well as on the international level. Worldwide coordination facilitates more effective defence of the Christian commitment of thousands of medical professionals in scientific research and in practising their profession.

WORLD FEDERATION OF CATHOLIC MEDICAL ASSOCIATIONS (FIAMC)
The International Federation of Catholic Medical Associations (FIAMC) comprises approximately sixty national associations of Catholic physicians from throughout the world. The mission of the FIAMC focuses on safeguarding,
### WEDNESDAY, APRIL 25, 2012

<table>
<thead>
<tr>
<th>14:30 - 18:30</th>
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<tbody>
<tr>
<td><strong>SESSION 1</strong></td>
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<tr>
<td><strong>STEM CELL NICHE</strong></td>
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<tr>
<td>Hematopoietic and mesenchymal stem cell niche</td>
</tr>
<tr>
<td><strong>MESENCHYMAL STEM CELL BIOLOGY</strong></td>
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<tr>
<td>Paracrine effect</td>
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<tr>
<td>Facilitation of adult stem cell engraftment</td>
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<tr>
<td>Trachea engineering</td>
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</tbody>
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### THURSDAY, APRIL 26, 2012

<table>
<thead>
<tr>
<th>09:00 - 13:00</th>
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<tbody>
<tr>
<td><strong>SESSION 2</strong></td>
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<tr>
<td>a) Various Approaches for Obtaining iPSCs</td>
</tr>
<tr>
<td>b) Direct Reprogramming</td>
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<tr>
<td>c) iPSCs for Disease Modeling</td>
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<tr>
<td>d) iPSCs for Clinical Application</td>
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<tr>
<td>iPSCs derived photoreceptors for restauration of retinal structure and function</td>
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<tr>
<td>Zinc finger nucleases gene therapy with iPSCs for the treatment of sickle cell anemia</td>
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<th>14:00 - 18:00</th>
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<tbody>
<tr>
<td><strong>SESSION 3</strong></td>
</tr>
<tr>
<td>a) The Heart</td>
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<td>b) Limb Ischemia</td>
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<thead>
<tr>
<th>14:00 - 18:00</th>
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<tbody>
<tr>
<td><strong>SESSION 4</strong></td>
</tr>
<tr>
<td>a) Neurology</td>
</tr>
<tr>
<td>b) Liver</td>
</tr>
<tr>
<td>c) Skin</td>
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<tr>
<td>d) Bone</td>
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<tr>
<td>e) Cornea</td>
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<tr>
<td>f) Gingival Stem Cells</td>
</tr>
<tr>
<td>g) Burns</td>
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</tbody>
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<tr>
<th>14:00 - 18:00</th>
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<tbody>
<tr>
<td><strong>b) IMMUNOMODULATION</strong></td>
</tr>
<tr>
<td>Immune capacities of mesenchymal stem cells</td>
</tr>
</tbody>
</table>
### FRIDAY, APRIL 27, 2012

**SESSION 5 CLINICAL APPLICATIONS OF STEM CELLS**

**a) TISSUE ENGINEERING WITH SOMATIC STEM CELLS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>Bone engineering</td>
</tr>
<tr>
<td>10:30</td>
<td>Fetal tissue engineering</td>
</tr>
</tbody>
</table>

- Bone engineering: Bone engineering with stem cells
- Fetal tissue engineering: Fetal tissue engineering from amniotic mesenchymal stem cells

**b) CORD BLOOD STEM CELLS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>11:00</td>
<td>Results of hematopoietic stem cell transplantation for haematological diseases: a comparison between cord blood HSCs and HSCs from other origin</td>
</tr>
<tr>
<td>13:00</td>
<td>Umbilical cord blood stem cells in regenerative medicine</td>
</tr>
</tbody>
</table>

- Results of hematopoietic stem cell transplantation for haematological diseases: a comparison between cord blood HSCs and HSCs from other origin
- Umbilical cord blood stem cells in regenerative medicine
- Umbilical cord blood stem cells in children with neurological diseases
- Ethical issues in umbilical cord blood banking: a comparative analysis of documents from national and international institutions

**SESSION 6 TRANSLATION TO CLINICS**

**a) REGULATIONS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td>09:00</td>
<td>Stem cells banking</td>
</tr>
<tr>
<td>13:00</td>
<td>Italian biobanks network: ethical and legal aspects</td>
</tr>
<tr>
<td>14:00</td>
<td>European regulations on experimental and clinical use of stem cells</td>
</tr>
</tbody>
</table>

- Stem cells banking
- Italian biobanks network: ethical and legal aspects
- European regulations on experimental and clinical use of stem cells

**b) INDUSTRY PERSPECTIVE**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>14:00</td>
<td>Human stem cells in translation and clinical trials</td>
</tr>
<tr>
<td>18:00</td>
<td>The point of view of industry on human stem cells</td>
</tr>
</tbody>
</table>

- Human stem cells in translation and clinical trials
- The point of view of industry on human stem cells

**SESSION 7 ETHICS OF STEM CELL RESEARCH IN VIEW OF CLINICAL APPLICATIONS**

**ETHICS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>14:00</td>
<td>Research ethics committees and ethical review of clinical trials of stem cell therapy</td>
</tr>
<tr>
<td>18:00</td>
<td>Ethics and recent trends in stem cell research</td>
</tr>
</tbody>
</table>

- Research ethics committees and ethical review of clinical trials of stem cell therapy
- Ethics and recent trends in stem cell research
- Stem cells and clinical ethics

**SATURDAY, APRIL 28, 2012**

**SYNTHESIS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>The lessons from stem cell biology</td>
</tr>
<tr>
<td>10:30</td>
<td>Stem cells at bedside</td>
</tr>
<tr>
<td>11:00</td>
<td>AUDIENCE WITH THE HOLY FATHER</td>
</tr>
</tbody>
</table>
KEY LECTURE
A GENERAL OVERVIEW OF STEM CELL RESEARCH, TODAY
Stem cell therapeutics: from HSC to iPSCs
G. Daley (Boston - USA)

SESSION 1  STEM CELL BIOLOGY I

STEM CELL NICHE
Hematopoietic and mesenchymal stem cell niche
C. Verfaillie (Leuven - B)

Neural regulation of the cell stem niche
P.S. Frenette (New York - USA)

NOTCH SIGNALING - WNT SIGNALING IN THE REGULATION OF
STEM CELL SELF-RENEWAL AND DIFFERENTIATION
A.Wagners (Harvard - USA)

MENSENCYMAL STEM CELL BIOLOGY
W.W. Fibbe (Leiden - NL)

PARACRINE EFFECT
Paracrine effects of adult stem cells in heart repair
M. Gnechi (Pavia - I)

FACILITATION OF ADULT STEM CELL ENGRAFTMENT
H.E. Broxmeyer (Indianapolis - USA)

TRACHEA ENGINEERING
Restauration of trachea with stem cell engineering
P. Macchiarini, (Stockholm - SW)
SESSION 2  CELL REPROGRAMMING - iPSCs

a) **VARIOUS APPROACHES FOR OBTAINING iPSCs**
   Chemical approach, small molecules
   *S. Ding (La Jolla - USA)*

b) **DIRECT REPROGRAMMING**
   Direct reprogramming of skin fibroblasts to dopaminergic neurons
   *V. Broccoli (Milan - I)*

c) **iPSCs FOR DISEASE MODELING**
   iPSCs for Parkinson’s modeling
   *T. Kunath (Edimburgh - UK)*

d) **iPSCs FOR CLINICAL APPLICATION**
   Using iPSCs to study and possibly treat diabetes 1
   *D. A. Melton (Boston - USA)*

   iPSCs derived photoreceptors for restauation of retinal structure and fuction
   *M. Young (Boston - USA)*

   Production of functional red blood cells from iPSCs
   *L. Douay (Paris - F)*

   Zinc finger nucleases gene therapy with iPSCs for the treatment of sickle cell anemia
   *K. H. Joung (Boston - USA)*
SESSION 3  CLINICAL APPLICATIONS OF SOMATIC STEM CELLS - I

a) The Heart
   Bone marrow cell mobilization in ST-segment elevation acute anterior myocardial infarction
   M. Capogrossi (Rome - I)

b) Limb Ischemia
   Endothelial progenitor cell therapy for organ regeneration
   T. Asahara (Kobe - J)

SESSION 4  CLINICAL APPLICATIONS OF SOMATIC STEM CELLS - II

a) Neurology
   Stem cell in multiple sclerosis
   N. Scolding (Bristol - UK)

   Non embryonic stem cells in stroke: from bench to bedside
   C. D. Hess (Augusta - USA)

b) Liver
   Stem cells for liver repair and regeneration
   E. Sokal (Belgium - B)

c) Skin
   Stem cells in Epidermolysis bullosa
   J. Wagner (Minneapolis - USA)

d) Bone
   Mesenchymal stem cells in osteogenesis imperfecta
   EH. Horwitz (Philadelphia - USA)
e) **CORNEA**
   
   Stem cells for repair and regeneration of human cornea  
   
   *P. Rama (Milan - I)*  

f) **GINGIVAL STEM CELLS**  

   Gingival fibroblasts for the treatment of aneurisms  
   
   *A. Lafont (Paris - F)*  

g) **BURNS**  

   Stem cells for treatment of severe burns  
   
   *J. J. Lataillade (Clamart - F)*  

h) **IMMUNOMODULATION**  

   Immune capacities of mesenchymal stem cells  
   
   *O. Rindgen (Stockholm - SW)*  

   Immunosuppressive capacities of mesenchymal stem cells for clinical applications  
   
   *K. Leblanc (Stockholm - SW)*  

   Mesenchymal stem cells in resistant tuberculosis  
   
   *M. Maurer (Stockholm - SW)*
SESSION 5  CLINICAL APPLICATIONS OF STEM CELLS

a) TISSUE ENGINEERING WITH SOMATIC STEM CELLS

BONE ENGINEERING
Bone engineering with stem cells
R. Cancedda (Genova - I)

FETAL TISSUE ENGINEERING
Fetal tissue engineering from amniotic mesenchymal stem cells
D. Fauza (Boston - USA)

b) CORD BLOOD STEM CELLS

Results of hematopoietic stem cell transplantation for haematological diseases: a comparison between cord blood HSCs and HSCs from other origine
E. Gluckman (Paris - F)

Umbilical cord blood stem cells in regenerative medicine
C. Mc Guckin (Lyon - F)

Umbilical cord blood stem cells in children with neurological diseases
J. Kutzberg (Durham - USA)

Ethical issues in umbilical cord blood banking: a comparative analysis of documents from national and international institutions
C. Petrini (Rome - I)

SESSION 6  TRANSLATION TO CLINICS

a) REGULATIONS

Stem cells banking
P. Rebulla (Milan - I)

Italian biobanks network: ethical and legal aspects
A. Nanni Costa (Rome - I)

European regulations on experimental and clinical use of stem cells
C. Pintus (Rome - I)
b) INDUSTRY PERSPECTIVE

Human stem cells in translation and clinical trials
Trounson (San Francisco - USA)

The point of view of industry on human stem cells
M. Hennig (Basel - CH)

SESSION 7 ETHICS OF STEM CELL RESEARCH IN VIEW OF CLINICAL APPLICATIONS

ETHICS

Research ethics committees and ethical review of clinical trials of stem cell therapy
A. G. Spagnolo (Rome - I)

Ethics and recent trends in stem cell research
J. Suaudeau (Rome - I)

Stem cells and clinical ethics
R. Pegoraro (Rome - I)
Saturdays April, 28

09:00
SYNTHESIS
The lessons from stem cell biology
T. Brevini (Milan - I)

10:30
Stem cells at bedside
M. Muraca (Rome - I)

11:00
AUDIENCE WITH THE HOLY FATHER

13:00
FACULTY

ASAHARA T., Kobe - Japan
BREVINI T., Milan - Italy
BROCCOLI V., Milan - Italy
BROXMEYER H.E., Indianapolis - United States of America
CANCEDDA R., Genoa - Italy
CAPOGROSSI M., Rome - Italy
DALEY G., Boston - United States of America
DING S., San Francisco - United States of America
DOUAY L., Paris - France
FAUZA D., Boston - United States of America
FIBBE W. E., Leiden - Netherlands
FRENETTE PS., New York - United States of America
GLUCKMAN E., Paris - France
GNECCHI M., Pavia - Italy
HENNING M., Basel - Switzerland
HESS D. C., Augusta - United States of America
HORWITZ E.H., Philadelphia - United States of America
JOUNG K.H., Boston - United States of America
KUNATH T., Edinburgh - United Kingdom
KUTZBERG J., Durham - United States of America
LAFONT A., Paris - France
LATAILLADE J. J., Clamart - France
LEBLANC K., Stockholm - Sweden
MACCHIARINI P., Stockholm - Sweden
MAUERER M., Stockholm - Sweden
MCGUCKIN C., Lyon - France
MELTON D. A., Boston - United States of America
MIGLIACCIIO G., Rome - Italy
MURACA M., Rome - Italy
NANNI COSTA A., Rome - Italy
PEGORARO R., Rome - Italy
PETRINI C., Rome - Italy
PINTUS C., Rome - Italy
RAMA P., Milan - Italy
REBULLA P., Milan - Italy
RINGDEN O., Stockholm - Sweden
SCOLDING N., Bristol - United Kingdom
SOKAL E., Bruxelles - Belgium
SPAGNOLO A. G., Rome - Italy
SUAUDEAU J., Rome - Italy
TROUNSON A., San Francisco - United States of America
VERFAILLIE C., Louvain - Netherlands
WAGERS AJ., Boston - United States of America
WAGNER J., Minneapolis - United States of America
YOUNG M., Boston - United States of America
CME and UEMS Credits

UEMS Credits
As in our previous congresses, an application will be made to the (EACCME) European Accreditation Council for Continuing Medical Education Institution of The European Union of Medical Specialists (UEMS). Further details will be made available on the congress web site.

CME for Italian delegates
The Congress will be accredited to the Ministry of Health for Continuing Medical Education, for the following professionals:

- Medical doctor
- Biologist
- Psychologist
- Nurse

Attendance Certificates
Attendance certificates will be delivered on request to all registered participants at the end of the Congress.

Abstract Submission
Please contact the official web site for more information.

Topics
- Biology
- Tissue Engineering
- Clinical Application of Stem Cells
- Cord Blood Stem Cells
- Ethics
- Networking
- Advanced Therapies

Deadline for submission: February 26, 2012
**GENERAL INFORMATION**

**VENUE**
Aula Nuova del Sinodo - Vatican City

**LANGUAGE**
The official languages will be English, French and Italian; simultaneous translation will be provided.

**VISA & INVITATION LETTER**
Participants are requested to check with the Italian Consulate or diplomatic mission in their home country for VISA requirements.
It is the responsibility of the participant to obtain a VISA if required.

**Conference invitation letter**
Please send an e-mail with your full name (as printed in your passport), full postal address and passport number to the 3rd RSCR Organizing Secretariat at: stemcellsrme2012@keycongress.com and an official invitation letter (PDF) will be prepared and sent to your e-mail. Invitation letters are prepared solely for individuals and are mailed directly to them.

**PRESS REGISTRATION**
All media representatives are kindly requested to register well in advance; please contact the official web site to get more information.

**SPONSORSHIP & EXHIBITION**
A professional exhibition will be held within the framework of the Congress.
For details regarding sponsorship opportunities and/or exhibition space, please contact:
Ms. Arianna Caldon, Industry Liaison & Sales
E-mail: a.caldon@keycongress.com
Tel: +39 049 8729511 Fax: +39 049 8729512

**REGISTRATION FEES** (Please contact the official web site to get more information)

<table>
<thead>
<tr>
<th></th>
<th>From October 1, 2011 up to March 31, 2012</th>
<th>From March 31, 2012 up to April 1, 2012</th>
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<tbody>
<tr>
<td>FIAMC, PAV, Fondation LEJEUNE Members</td>
<td>€ 200,00</td>
<td>€ 250,00</td>
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<tr>
<td>DELEGATES</td>
<td>€ 300,00</td>
<td>€ 400,00</td>
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<td>DELEGATES FROM SPECIAL AREAS (1)</td>
<td>€ 100,00</td>
<td>€ 150,00</td>
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<tr>
<td>STUDENTS/NURSES (2)</td>
<td>€ 150,00</td>
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<tr>
<td>SATURDAY APRIL 28, 2012 (one day participation) (3)</td>
<td>€ 100,00</td>
<td>€ 150,00</td>
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All registration fees are quoted in Euro and include 21% VAT.
(1) Eastern European Countries and Specific Areas: Poland, Hungary, Romania, Bulgaria, Albania, Serbia, Russian Federation, Moldova, Latvia, Ukraine, Lithuania, Estonia. South Mediterranean Areas: Libya, Tunisia, Morocco, Egypt, Algeria, Iran. Specific Areas: India, China and South America.
(2) Please provide a certificate - (3) Single day registration is available on Saturday

Delegate registration fee includes: Admission to all scientific sessions; Congress kit with Final Programme and Abstract book; Certificate of Attendance; Coffee breaks.