
Progress in bioengineering and the vascular endothelium

Basic and clinical aspects
Fifth International Congress
Pisa (Italy) , October 13-14, 2004

Centro Polifunzionale A. Maccarrone
Via S. Pellico

Organized by
DEPARTMENT OF REPRODUCTION AND AGEING
INSEGNAMENTO DI SEMEIOTICA E METODOLOGIA CLINICA
U.O. DI ANDROLOGIA, UNIVERSITY OF PISA

DEPARTMENT OF RADIATION ONCOLOGY, DREXEL UNIVERSITY
PHILADELPHIA, PENNSYLVANIA

FONDAZIONE INTERNAZIONALE MENARINI

Wednesday, October 13, 2004 - Afternoon

- 14.30 Registration
15.00 Opening Ceremony
15.30 **J.C. Kirkpatrick** (Mainz, D)
The challenge of vascularisation in tissue engineering concepts

Bioengineering I

- Chairpersons: **L. Ambrosio** (Naples, I)
J.C. Kirkpatrick (Mainz, D)
- 15.50 **A. Cigada** (Milan, I)
Biomimetical treatment of titanium
- 16.05 **L. Ambrosio** (Naples, I)
Bioactive scaffolds for tissue engineering
- 16.20 **H. Richter** (Aachen, D)
3D-proliferation of cells for the fixation of implants and medical devices
- 16.35 **R. Giardino** (Bologna, I)
Reabsorbable chamber for guided nerve and bone regeneration
- 16.50 Discussion

Bioengineering II

- Chairpersons: **A. Cigada** (Milan, I)
H. Richter (Aachen, D)
- 17.00 **S. Mantero, S.A. Ribaldi, M. Sampaolesi, P. Neuenschwander, F.M. Montevecchi, G. Cossu** (Milan, I)
Skeletal muscle tissue engineering: a challenge for novel dynamic bioreactors
- 17.10 **M. von Knoch, F. von Knoch, A. Heckelei, C. Widemeyer, G. Saxler, G. Hilken, F. Henschke, F. Löer** (Duisburg-Essen, D)
Fc-OPG suppresses biomaterial-induced bone resorption
- 17.20 **E. Briganti, P. Losi, S. Kull, I. Martinelli, G. Soldani** (Massa, I)
A new procedure to obtain *in vitro* endothelialization of small-diameter vascular grafts
- 17.30 **N. Yucel, R. Lefering, M. Max, R. Rossaint, A. Koch, R. Schwarz, M. Korenkov, J. Bach, A. Bach, J. Schierholz, H. Troidl, G. Pulvere, E. Neugebauer** (Germany)
Reduction of central venous catheter related infections using miconazole and rifampin loaded catheter:
results of randomized controlled clinical multicenter study
- 17.40 Discussion

Atherosclerosis

- Chairpersons: **M. Collins** (London, UK)
S. Dodds (Birmingham, UK)
- 17.45 **M. Collins** (London, UK)
Introductory remarks
- 17.50 **M. Collins, M.A. Atherton, S.R. Dodds** (London, UK)
Atherogenesis, wall shear stress and the haemodynamics of spiral arteries
- 18.10 **A. Remuzzi** (Bergamo, I)
Blood flow dynamics in carotid bifurcation and vessel wall changes
- 18.30 **G. Ruotolo, P. Gareri, M.E. Arcorace, P. Pietragalla, S. Galasso, A.M. Condito, D. Galasso** (Catanzaro, I)
Homocysteine levels and subclinical hypothyroidism
P. Gareri, G. Ruotolo, A.M. Condito, A. Corapi, S. Galasso, D. Galasso (Catanzaro, I)
Subclinical hypothyroidism and coronary artery disease in hospitalized elderly patients
- 18.40 Discussion
- 19.10 Welcome party
Town Hall, Sala delle Baleari
Via degli Uffizi, Pisa

Microvascular haemodynamics and skin microcirculation

Chairpersons: **S. Forconi** (Siena, I)

A. Shore (Exeter, UK)

08.30 **A. Shore** (Exeter, UK)

The role of the endothelium in microvascular haemodynamics

08.45 **S. Dodds** (Birmingham, UK)

Skin microcirculation, haemodynamics and biomechanics of chronic venous insufficiency

09.00 **M. Rossi** (Pisa, I)

Leg skin blood perfusion in peripheral arterial disease

09.15 **S. Mazzuca, R. Cimino, S. Giancotti, P. Iannazzo, S. Paravati, S. Galasso, R. Lopilato,**

M. Mazza, C. Pintaudi, A. Pietragalla, D. Galasso (Catanzaro, I)

Microvascular abnormalities in smokers with primary Raynaud's phenomenon

S. Mazzuca, R. Cimino, S. Giancotti, P. Iannazzo, S. Paravati, M. Mazza, A. Pietragalla,

S. Galasso, C. Pintaudi, D. Galasso (Catanzaro, I)

Treatment of hyperlipidemia with rosuvastatina in patients with rheumatoid arthritis and quantification of microcirculatory abnormalities by video-capillaroscopy

09.25 Discussion

Endothelium and ageing

Chairpersons: **S. Dodds** (Birmingham, UK)

F. Franzoni, F. Galetta, L. Ghiadoni, Y. Plantinga, F. Regoli, S. Taddei,

09.35 **A. Salvetti, G. Santoro** (Pisa, I)

Effect of age and physical activity on endothelial function and plasma antioxidant activity in healthy men

09.45 **F. Franzoni, F. Galetta, Y. Plantinga, L. Ghiadoni, A. Viridis, F.R. Femia, S. Taddei, A. Salvetti, G. Santoro** (Pisa, I)

Effect of age and physical activity on carotid wall characterization and endothelial function in normal subjects

09.55 Discussion

Coronary microcirculation

Chairpersons: **F. Coceani** (Pisa, I)

A. L'Abbate (Pisa, I)

10.00 **G.M. Sambuceti, C. Kusmic** (Pisa, I)

New insights in coronary microvascular physio-pathology

10.20 **G. Folco** (Milan, I)

The cross-talk between leukocytes and endothelial cells: a dangerous liaison that controls leukotrienes formation and affects coronary function

10.40 **F. Recchia** (New York, USA)

Dysfunctional coronary microcirculation in an experimental model of dilated cardiomyopathy

- 11.00 **D. Neglia** (Pisa, I)
Role of the coronary microcirculation in the clinical model of heart failure due to dilated cardiomyopathy
- 11.20 **M. Giacca** (Trieste, I)
Perspectives of gene transfer for cardiac angiogenesis and myocardial cells regeneration
- 11.40 Discussion

Systemic endothelial activation

Chairpersons:

S. Bombardieri (Pisa, I)
G. Remuzzi (Bergamo, I)

- 11.50 **G. Remuzzi** (Bergamo, I)
Activation of endothelial cells in the context of xenotransplantation
- 12.10 **C. Ferri, C.M. Magro, G. Nuovo, D. Giuggioli, K. Zakrzewska, M. Sebastiani, R. Magistero, M. Colaci, M.T. Mascia, A. Azzi** (Modena, I)
Parvovirus B₁₉ and human cytomegalovirus as possible triggering factors of endothelial injury and diffuse microangiopathy in systemic sclerosis
- 12.30 Discussion

Cancer microcirculation

- 12.40 **P. Netti** (Naples, I)
Cancer microcirculation and drug delivery to solid tumors: a bioengineering approach
- 12.55 Discussion

The tradition continues

Dear Colleague,

please receive the program of the fifth International Congress 'PROGRESS IN BIOENGINEERING AND VASCULAR ENDOTHELIUM: BASIC AND CLINICAL ASPECTS' and the eighth International Congress 'ADVANCES IN MANAGEMENT OF MALIGNANCIES'.

If you participated in the previous meetings or received their program you can note that in this edition the principal scientific and organizing characteristics are maintained. In fact the program intends to stimulate research and clinical progress in important medical social fields with a multidisciplinary approach. Once more the program originates from an international aggregation of researchers made of familiar and new colleagues.

To better achieve this aim, we emphasize the example of a colleague who was a leader in his professional and scientific field.

This year the cancer meeting is dedicated to Dr. Torsten Löwagen who gave an important contribution to the progress of medical science and profession. His genuine passion for his job, his great teaching ability and his strong personality permitted him to create an excellent 'family' of physicians and researchers who are active in many countries over the world.

I had the opportunity to learn from him and I hope that this meeting will be useful to enlarge this special 'family'.

Within the tradition of these meetings are the patronage of the Italian Association of Nuclear Medicine and the support of the Menarini International Foundation which continue since 1988 as well as the presence of the Volunteer associations of San Romano as local organizers.

In this congress edition the multidisciplinary approach is particularly emphasised because the event will follow the meeting of the Italian Society for Biomaterials (SIB-GIB , October 11-13 , same place).

I really hope that the topics here presented and the friendly atmosphere in which we intend to discuss them 'as usually', will stimulate your participation, not only in the meeting, but also in specific collaborative research projects.

*Sincerely,
Angelo Carpi*

Under the Patronage of

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