



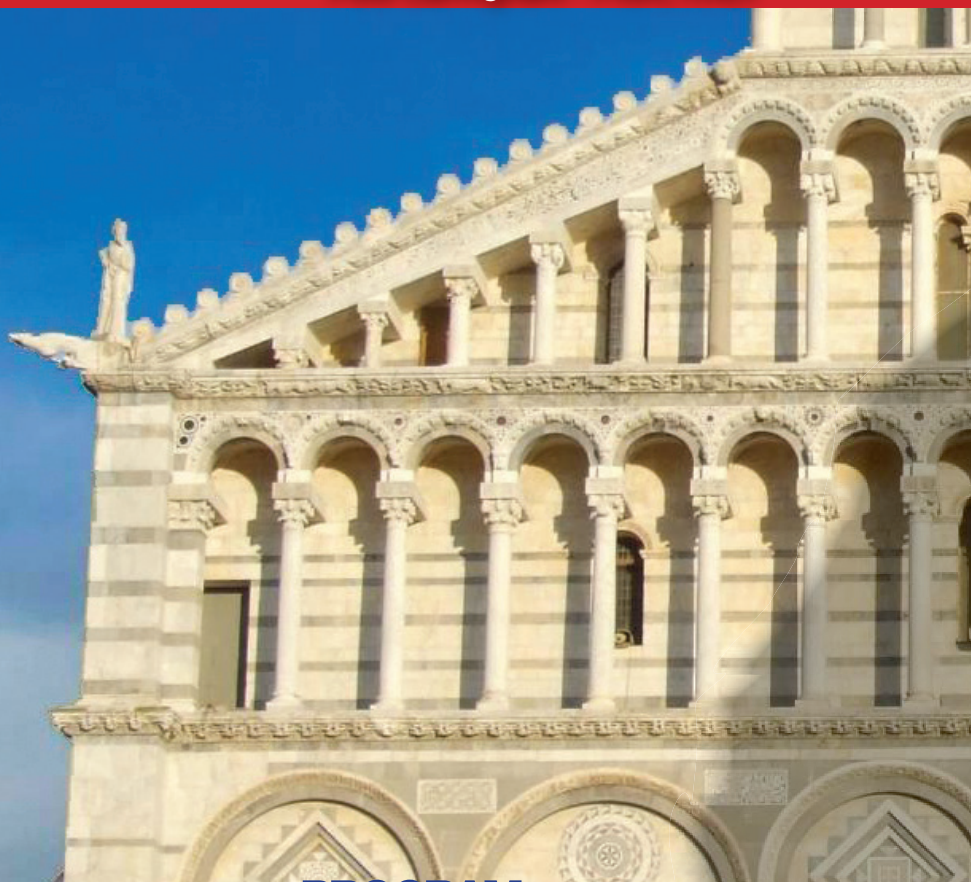
Joint Meeting

of the

**European Society for Microcirculation (ESM)
European Vascular Biology Organisation (EVBO)**

June 3 - 6, 2015

Polo Carmignani - PISA, ITALY



PROGRAM

Under the auspices of



Università di Pisa



Azienda Ospedaliero-Universitaria Pisana



Comune di Pisa



FONDAZIONE
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WELCOME NOTE FROM THE CONFERENCE PRESIDENTS

Dear Friends and Colleagues,

We warmly welcome all of you to the Joint Meeting of the European Society for Microcirculation and the European Vascular Biology Organization.

We are convinced, thanks to the presentations by many excellent and internationally renowned speakers (to whom go our acknowledgments), that we will offer you an interesting program which reflects the fascinating progress of microvascular and vascular biology science, including the latest developments in the various fields of interest.

Our special acknowledgments also go to the Scientific Committees, the Coordinators of the symposia, the ESM and EVBO Executive Committees, as well as to the Meeting Secretariat.

We think that the planned symposia, the oral communication sessions and poster presentations will stimulate and promote the exchange of ideas relating to the various scientific topics of the Meeting.

This Meeting will also focus on presentations given by students and postdocs, to whom go our acknowledgments for their pivotal role for the success of this Meeting and present and future success of our societies.

We wish a pleasant stay in Pisa to all the participants of the Meeting, being aware that we can count on the “complicity” of a very beautiful town which offers impressive artistic, historical and architectural heritages to its visitors, besides the more famous “Piazza dei Miracoli”, near to which our Congress will take place.

We are delighted to welcome you here in Pisa. Enjoy its visit and the scientific program of the Meeting!

Best regards,

Jozef Dulak
President of EVBO



Marco Rossi
President of ESM



Presidents of the Meeting

Marco Rossi (Pisa, Italy)
President of ESM

Jozef Dulak (Krakow, Poland)
President of EVBO

Local Organizer

Marco Rossi

Core Scientific Committee

Jozef Dulak (Krakow, Poland)
Akos Koller (Budapest, Hungary)
Giovanni Mann (London, UK)
Anna Randi (London, UK)
Marco Rossi (Pisa, Italy)

Local Scientific Committee

Eleuterio Ferrannini (Pisa, Italy)
Carlo Palombo (Pisa, Italy)
Mario Petri (Pisa, Italy)
Gino Santoro (Pisa, Italy)
Stefano Taddei (Pisa, Italy)

International Scientific Committee

Yvonne Alexander (Manchester, UK)
Giuseppe Maria Andreozzi (Padova, Italy)
Ferenc Bari (Szeged, Hungary)
Ed van Bavel (Amsterdam, Netherland)
Benedetta Bussolati (Torino, Italy)
Gregorio Caimi (Palermo, Italy)
Antonio Colantuoni (Napoli, Italy)
Raffaele De Caterina (Chieti, Italy)
Elisabetta Dejana (Milano, Italy)
Britta Engelhardt (Bern, Switzerland)
Paul Evans (Sheffield, UK)
Ingrid Fleming (Frankfurt, Germany)
Sandro Forconi (Siena, Italy)
Sarah George (Bristol, UK)
Daniel Henrion (Anger, France)
Boy Houben (Maastricht, Netherland)
Paolo Madeddu (Bristol, UK)
Andriana Margariti (Belfast, UK)
Romeo Martini (Padova, Italy)
Daniela Negrini (Varese, Italy)
Andrew Newby (Bristol, UK)
Geerten P. van Nieuw Amerongen (Amsterdam, Netherland)
Salvatore Novo (Palermo, Italy)
Jeremy Pearson (London, UK)
Ulrich Pohl (Munich, Germany)
Axel Pries (Berlin, Germany)
Harald Schmidt (Maastricht, Netherland)
Angela Shore (Exeter, UK)
Richard Siow (London, UK)
Adriana Visonà (Castelfranco Veneto, Italy)
Johannes Waltenberger (Münster, Germany)
Seppo Ylä-Herttua (Kuopio, Finland)
Zsolt Pécsvárady (Budapest, Hungary)



Congress Venue

Polo Carmignani
Piazza dei Cavalieri, 6
56126 Pisa - IT

Organizing Secretariat

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Registration

On site registration will start on Wednesday, June 3 from 12,00 until 19,00.
In the subsequent days registration office will open at 08,00.

On site registration fees (22% VAT Included)

ESM-EVBO Members	Eur 440,00
Non Members	Eur 490,00
Student*	Eur 240,00
Day Rate	Eur 150,00

* *Student registration must be accompanied by a letter or a scanned document issued by a University Organization, confirming student status*

Registration fee includes: Access to the scientific session, Conference kit, Welcome Cocktail, Coffee breaks as specified in the program.

Registration fee does not include the attendance to the Social Dinner. Tickets can be purchased at the registration desk for Eur 90,00.

Badges

Delegates will receive their personalized name badge upon registration. They are kindly requested to wear it throughout the meeting.

Certificate of attendance

A certificate of attendance is available on a request basis. Please visit the registration desk.

Language

The official language of the conference is English. No simultaneous translation will be provided.

Speaker Ready Room

The Speaker Ready Room is available for all the speakers who are requested to load their slides in the Speaker Ready Room at least three hours before their presentation.

Use of speakers' own computer is discouraged, as it may cause significant delay and out-phasing of the parallel session.

Posters

The Poster Session is scheduled for 4 June 2015 from 17,00 to 18,30.

The presenting author will be requested to be available for discussion during the poster viewing session. Posters cannot exceed these dimensions: 96 cm wide and 150 cm high.

Fixing material will be provided. The congress organizers take no responsibility for posters that are not removed after the conference.

WiFi

The Congress venue, Polo Carmignani is an Eduroam-enabled institution as it belongs to Pisa University. Please visit the website for further information www.eduroam.org

CME Credit (for Italian delegates only)

Provider Meridiana Events & Education srl (Nr. 1006) has assigned to the conference 1,5 CME credits according to the Italian Health Ministry's criteria.

CME credits will only be awarded to Italian delegates (Physicians) who will attend all the CME Accredited Sessions.

Awards

The following Awards will be given during the conference:

- Malpighi Award
- ESM Servier Award in Microcirculation 2015
- Young Investigator Awards
- International Travel Award for developing Countries
- JVR/ESM Award Lecture

PROGRAM AT A GLANCE

DATE	PROGRAM	ROOM
3 June		
09.00-11.00	ESM Executive Committee Meeting	Grand Hotel Duomo
11.00-12.00	JVR Publication Committee Meeting	
From 12.00	Registration	Polo Carmignani
14.00-14.30	<i>Opening ceremony</i>	
14.30-16.10	Parallel Session 1	Galileo
	Whatever happened to the endothelium-derived hyperpolarizing Factors?	
	Organ specific relationship between blood flow and metabolism	
	MicroRNA regulation in vascular disease	Fibonacci
16.10-16.50	Opening Plenary Lecture - Antonio Colantuoni	Auditorium
16.50-17.20	<i>Coffee break</i>	
17.20-19.00	Parallel Session 2	Galileo
	Tumor angiogenesis: mechanisms and drugs	
	Flowmotion, as a result of vasomotion, in clinical studies. Where do we stand?	Auditorium
	Extracellular vesicles: from to cell mediators to biomarkers	Fibonacci
19.00-20.00	<i>Welcome Cocktail</i>	

4 June		
08.30-09.00	Plenary Lecture - Ralf Adams	Auditorium
09.00-10.40	Parallel Session 3	Auditorium
	Platelets and the microcirculation	
	Vascular Calcification	
	Laser Doppler flowmetry in experimental and clinical settings	Fibonacci
10.40-11.10	<i>Coffee break</i>	
11.10-12.50	Parallel Session 4	Auditorium
	The Role of Red Blood Cell (RBC) Flow-affecting Properties in Blood Circulation: implications for Blood Flow Disorders and Blood Transfusion	
	Novel mechanisms regulating angiogenesis and vascular development	
	Lymphatic vessel function – translational aspects	Galileo
12.50-14.30	<i>Break</i>	
14.30-16.10	Parallel Session 5	Auditorium
	Endothelial activation and endothelial-leukocyte interaction	
	Improving microvascular function in diabetic patients: from the lab to the bedside	
	Novel Bioengineering approaches for regenerative medicine	Galileo
16.10-16.30	<i>Coffee break</i>	
16.30-17.00	Plenary Lecture: Peter Carmeliet	Auditorium
17.00-18.30	Poster session	

5 June		
08.30-09.00	Plenary Lecture - Coen Stehouwer	Auditorium
09.00-10.40	Parallel Session 6	
	Hemorheology and microcirculation: the main mechanisms of interaction	Auditorium
	Novel functions of antioxidant genes in vasculature	Fibonacci
	Non-invasive imaging techniques (in addition to LDF) to assess novel aspects of Microcirculation	Galileo
10.40-11.00	<i>Coffee break</i>	
11.00-11.30	Plenary Lecture - Martin Bennett	Auditorium
11.30-13.00	Oral Communications	
13.00-13.10	International Travel Award for developing Countries	Auditorium
13.10-14.30	<i>Break</i>	
13.10-13.40	Italfarmaco Sponsored Session	Auditorium
13.30-14.30	EVBO Council Meeting	Galileo
14.00-14.30	European Research Council	Fibonacci
14.30-14.40	ESM Servier Award in Microcirculation 2015	Auditorium
14.40-14.50	Young Investigator Awards	Auditorium
14.50-16.30	Parallel Session 7	
	Microvascular changes in systemic sclerosis: the approach to the patients	Fibonacci
	Leukocyte adhesion and migration: the key to the inflammatory response	Auditorium
	MIDAS Symposium	Galileo
16.30-16.50	<i>Coffee break</i>	
16.50-17.20	Malpighi Award Lecture	Auditorium
17.30-18.30	Business Meeting of ESM	Auditorium
17.30-18.30	Business Meeting of EVBO	Fibonacci
20.00	Social Dinner	

6 June		
08.30-10.10	Parallel Session 8	
	Targeting ischemia/reperfusion injury with complex compounds: mechanistic approaches	Auditorium
	von Willebrand factor in the vasculature	Fibonacci
	Leukocyte trafficking in development and inflammation	Galileo
10.10-10.30	<i>Coffee break</i>	
10.30-12.10	Parallel Session 9	
	Control of vascular permeability	Auditorium
	Microvascular alterations and vascular aging	Fibonacci
	Vascular progenitors: novel strategies and mechanisms	Galileo
12.10-12.50	Closing Plenary Lecture - Lena Claesson-Welsh	Auditorium
12.50-13.00	Closing Ceremony	Auditorium

Symposium 2 - ROOM FIBONACCI

Organ specific relationship between blood flow and metabolism

Chairs: *Eleuterio Ferrannini (Italy), Angela Shore (United Kingdom)*

Relationship between blood flow and metabolism at the level of adipose tissue
Patricia Iozzo (Italy)

Relationship between blood flow and metabolism at the level of myocardial muscle
Mario Marzilli (Italy)

Relationship between blood flow and metabolism at the level of skeletal muscle
Andrea Natali (Italy)

Influence of glucagon-like peptide-1 on skeletal muscle microvasculature and insulin resistance
Eugene J. Barrett (USA)

Symposium 3 - AUDITORIUM

MicroRNAs - mediators of function and regeneration of cardiovascular systems

Chairs: *Jozef Dulak (Poland), Rainier Boon (Germany)*

Cardiovascular ageing: the role of non-coding RNA
Rainier Boon (Germany)

MicroRNAs in atherosclerosis
Christian Weber (Germany)

Inhibition of microRNA-92a prevents endothelial dysfunction and atherosclerosis in mice
Xavier Loyer (France)

Short talks selected from abstracts:

Microrna-21 promotes matrix metalloproteinase-1 expression but does not modulate vascular smooth muscle cell invasion
Alshanwani A., Riches K., Wood I., Turner N., Porter K. (United Kingdom)

TGFB triggers mir-143/5 transfer from smooth muscle cells to endothelial cells via tunneling nanotubes
Climent M., Quintavalle M., Miragoli M., Condorelli G., Elia L. (Italy)

Session CME Accredited

16.10 - 16.50 **Opening Plenary Lecture - AUDITORIUM**

Chairs: *Ulrich Pohl (Germany), Akos Koller (Hungary)*

Arteriolar vasomotion and regulation of microvascular blood flow
Antonio Colantuoni (Italy)

16.50 - 17.20 *Coffee break*

PARALLEL SESSION 2

17.20 - 19.00

Symposium 4 - ROOM GALILEO

Tumor angiogenesis: mechanisms and drugs

Chairs: *Claudine Kieda (France), Yasufumi Sato (Japan)*

Role of vasohibin family in the regulation of angiogenesis and more
Yasufumi Sato (Japan)

Novel dual-action combination therapy enhances angiogenesis whilst reducing tumor growth and spread
Ping-Pui Wong (United Kingdom)

Targeting Angiopoietin/Tie signaling during tumor angiogenesis: where do we stand?
Hellmut Augustin (Germany)

Short talks selected from abstracts:

Trail armed with VEGF receptor antagonist overcomes trail-resistance and forcefully inhibits tumor growth

Grochot-Przeczek A., Pieczykolan J., Rozga P., Badyra B., Kloska D., Teska-Kaminska M., Pieczykolan A., Zolnierkiewicz O., Kachamakova-Trojanowska N., Dulak J., Jozkowicz A. (Poland)

Sunitinib but not VEGF blockade inhibits cancer stem cell endothelial differentiation
Brossa A., Grange C., Mancuso L., Mazzone M., Camussi G., Bussolati B. (Italy)



Symposium 5 - AUDITORIUM

Flowmotion, as a result of vasomotion, in clinical studies. Where do we stand?

Chairs: *Boy Houben (Netherland), Marco Rossi (Italy)*

Local control of vasomotion
Christian Aalkjaer (Denmark)

Central control of vasomotion
Gemma Lancaster (United Kingdom)

Skin flowmotion in sedentary elderly
Martina Di Maro, Antonio Colantuoni (Italy)

Flowmotion changes in obesity and hypertension: opposite directions of adaptation?
Boy Houben (Netherland)

Symposium 6 - ROOM FIBONACCI

Extracellular vesicles: from to cell mediators to biomarkers

Chairs: *Benedetta Bussolati (Italy), Yvonne Alexander (United Kingdom)*

Stem cell-derived vesicles in tissue repair and angiogenesis
Giovanni Camussi (Italy)

Circulating extracellular vesicles
Edit Buzas (Hungary)

Endothelial microparticles as biomarkers of inflammation
Yvonne Alexander (United Kingdom)

Short talks selected from abstracts

Regulation of MIRNA expression under conditions of hypoxia in pericytes
Slater S., Rodriguez-Arabaolaza I., Alvino V., Madeddu P. (United Kingdom)

Circulating microvesicles in peripheral artery occlusive disease
Giarretta I., Marcantoni M., Gatto I., Lupi G., Iezzi R., Pitocco D., Pola R. (Italy)

19.00 - 20.00 *Welcome Cocktail*

Session CME Accredited

08.30 - 09.00 **Plenary Lecture - AUDITORIUM**

Chair: *Anna Randi (United Kingdom)*

Cellular and molecular principles of organ-specific blood vessel growth
Ralf Adams (Germany)

PARALLEL SESSION 3

09.00 - 10.40

Symposium 7 - AUDITORIUM

Platelets and the microcirculation

Chairs: *Ingrid Fleming (Germany), Steve Watson (United Kingdom)*

Role of chemokine receptor CXCR4/CXCR7 and their ligands for platelet function
Meinrad Gawaz (Germany)

Diabetes-induced alterations in platelet function
Voahanginirina Randriambovonjy (Germany)

A novel inflammation driven mechanism of thrombosis
Steve Watson (United Kingdom)

Short talks selected from abstracts:

Platelet-localized FXI plays a pivotal role in angiotensin II-induced hypertension by promoting a coagulation inflammatory circuit and vascular injury
Kossmann S., Jäckel S., Jurk K., Schönfelder T., Lagrange J., Ehken M., Knorr M., Brandt M., Karbach S.H., Daiber A., Oelze M., Reinhardt C., Lackner K., Monia B., Walter U., Ruggeri Z., Renné T., Ruf W., Münzel T., Wenzel P. (Germany)

Human platelet lysate gel as a substrate for isolation and delivery of endothelial colony-forming cells
Fortunato T., Debank P., Pula G. (United Kingdom)

Symposium 8 - ROOM GALILEO

Vascular Calcification

Chairs: *Yvonne Alexander (United Kingdom), Carlo Palombo (Italy)*

Common aspects between bone health and vascular calcification

Cristina Vassalle (Italy)

New roles for Bone Morphogenetic Proteins in aortic medial calcification

Vicky E. Macrae (United Kingdom)

Advanced glycation endproducts in vascular calcification and atherosclerosis

Caspar G. Schalkwijk (Netherlands)

Short talks selected from abstracts:

Gla-Rich Protein (GRP) is a new player in mineralization-competence of extracellular vesicles involved in vascular calcification

Viegas C., Rafael M., Enriquez J., Teixeira A., Vitorino R., Costa R., Santos L., Neves J., Macedo A., Vermeer C., Simes D. (Portugal)

Premature aging and DNA damage in smooth muscle cells from type 2 diabetes patients: role of Microrna-145

Riches K., O'Regan D., Porter K. (United Kingdom)

Symposium 9 - ROOM FIBONACCI

Laser Doppler flowmetry in experimental and clinical settings

Chairs: *Andrey Fedorovich (Russian Federation), Adriana Visonà (Italy)*

Optical imaging of intracellular pH changes with spreading depolarization in the intact and ischemic rat brain

Ferenc Bari (Hungary)

Vasomotor activity skin microcirculation as assessed by laser Doppler flowmetry in patients with microvascular angina

Galina Soboleva (Russian Federation)

Photoreactivity of microvessels of rat mesenteric vascular bed

Nikolay Petrishchev (Russian Federation)

Synchronization of polyfrequency oscillations of the microvascular blood flow under normal conditions

Arina Tankanag (Russian Federation)

10.40 - 11.10 *Coffee break*

Symposium 10 - AUDITORIUM

The Role of Red Blood Cell (RBC) Flow-affecting Properties in Blood Circulation: implications for Blood Flow Disorders and Blood Transfusion

Chairs: *Saul Yedgar (Israel), Axel Pries (Germany)*

Biomechanical properties of RBC in health and disease towards microfluidics
Giovanna Tomaiuolo (Italy)

RBC hemodynamic functionality in the development of necrotizing entero-colitis (NEC) in premature neonates
Dan Arbell (Israel)

RBC storage duration in the clinical outcomes in pediatric cardiac surgery
Helmut Habazettl (Germany)

Hemodynamic functionality of transfused RBC in the microcirculation of transfusion recipients
Saul Yedgar (Israel)

Short talk selected from abstract:

The possibility of using of hemorheological parameters to predict recurrent stroke
Kruchinina M., Gromov A., Generalov V., Rabko A. (Russian Federation)

Concluding remarks and discussion
Axel Pries (Germany)

Symposium 11 - ROOM FIBONACCI

Novel mechanisms regulating angiogenesis and vascular development

Chairs: *Arjan Griffioen (Netherlands), Johannes Waltenberger (Germany)*

Metabolic regulation of endothelial growth and quiescence
Michael Potente (Germany)

From identification of differing tie2 mutations with distinct cellular characteristics in four types of venous anomalies towards a murine model and a therapeutic pilot study
Miikka Vikkula (Belgium)

Regulation of vascular development and angiogenesis by the transcription factor ERG
Graeme Birdsey (United Kingdom)

Short talks selected from abstracts:

Deletion of the AMPKA1 subunit in endothelial cells impairs angiogenesis and endothelial function

Fisslthaler B., Abdel Malik R., Zippel N., Fleming I. (Germany)

Frizzled7 controls blood vessel formation through WNT/beta-catenin canonical signaling in DLL4/notch dependent and independent pathways

Peghaire C., Bats M.L., Jeanningros S., Couffinhal T., Dupl a C., Dufourcq P. (France)

Symposium 12 - ROOM GALILEO

Lymphatic vessel function – translational aspects

Chairs: *Helge Wiig (Norway), Daniela Negrini (Italy)*

Organ-specific origins of lymphatic vasculature

Taija M kinen (Sweden)

Sodium in interstitial fluids - from “done deal” equilibrium physiology to active control of biological barriers

Jens M. Titze (USA)

Therapeutic insights to lymphangiogenic growth factors

Alexanteri Aspelund (Finland)

Characterization of the electrical and contractile properties of human collecting lymphatics

Donna Briggs B dkjer (Denmark)

12.50 - 14.30 *Break*

PARALLEL SESSION 5

14.30 - 16.10

Symposium 13 - AUDITORIUM

Endothelial activation and endothelial-leukocyte interaction

Chairs: *Ines Drenjančević (Croatia), Akos Koller (Hungary)*

Endothelial cell adhesion molecules as markers of endothelial activation
Alberto Francisco Rubio-Guerra (Mexico)

Mitochondria regulation of vascular function: beyond ATP production
David William Busija (USA)

Neutrophils induce Alzheimer's-like disease via LFA-1-integrin
Elena Zenaro (Italy)

Endothelial activation and endothelial-leukocyte interaction in hypertension
Ines Drenjančević (Croatia)

Symposium 14 - ROOM FIBONACCI

Improving microvascular function in diabetic patients: from the lab to the bedside

Chairs: *Markos Klonizakis (United Kingdom), Marco Rossi (Italy)*

Influence of G6PD on vascular phenotype in obese, obese-diabetics and T2D
Sachin A. Gupte (USA)

Exploring the effect of Diabetic microvascular dysfunction in Peripheral Arterial Disease prognosis
Markos Klonizakis (United Kingdom)

Hyperosmolarity as a mechanism for vascular disease in diabetes
Raffaele De Caterina (Italy)

Early microcirculatory changes with loss of glycocalyx in children with diabetes mellitus type I
Claudia Nußbaum (Germany)

Symposium 15 - ROOM GALILEO

Novel Bioengineering approaches for regenerative medicine

Chairs: *Anna Randi (United Kingdom), Timothy O'Brien (Ireland)*

Therapeutic Angiogenesis from Vascular Biology to Regenerative Medicine

Andrea Banfi (Switzerland)

Therapeutic potential of MSCs in critical limb ischemia

Timothy O'Brien (Ireland)

3D printing for blood vessels engineering

Günter Tovar (Germany)

Short talks selected from abstracts:

Lineage tracing of vascular smooth muscle cells in atherosclerosis

Albarran Juarez J., Wettschureck N., Offermanns S. (Germany)

Murine iPSC differentiate towards endothelial cells more efficiently than MSC

Kachamakova-Trojanowska N., Nowak W., Stepniewski J., Dulak J., Jozkowicz A. (Poland)

16.10 - 16.30 *Coffee break*

Session CME Accredited

16.30 – 17.00 **Plenary Lecture - AUDITORIUM**

Chair: *Jeremy Pearson (United Kingdom)*

Targeting endothelial metabolism: principles and strategies

Peter Carmeliet (Belgium)

17.00 - 18.30 **Poster session**

**Session CME Accredited**

08.30 - 09.00 **Plenary Lecture - AUDITORIUM**

Chair: *Stefano Taddei (Italy)*

Microcirculatory dysfunction: a core feature of the metabolic syndrome-
insights from physiology and epidemiology
Coen Stehouwer (Netherlands)

PARALLEL SESSION 6

09.00 - 10.40

Symposium 16 - AUDITORIUM**Hemorheology and microcirculation: the main mechanisms of interaction**

Chairs: *Carlota Saldanha (Portugal), Gregorio Caimi (Italy)*

Diabetes mellitus: evaluation of erythrocyte and polymorphonuclear leukocyte rheology
Rosalía Lo Presti (Italy)

Vasculopathy in Thalassemia: new approaches to an old problem
Patrizia Caprari (Italy)

Red blood cell (RBC) microrheology and microcirculation under physiological and
pathological conditions: molecular change mechanisms
Anna Akhapkina (Russian Federation)

Hemorheological and Biochemical Parameters in Amyotrophic Lateral Sclerosis
Carlota Saldanha (Portugal)

Symposium 17 - ROOM FIBONACCI**Novel functions of antioxidant genes in vasculature**

Chairs: *Alicja Józkwicz (Poland), Agnes Görlach (Germany)*

Nitric oxide synthase phosphorylation and redox signaling
Ingrid Fleming (Germany)

Regulation and therapeutic manipulation of anti-oxidant enzymes in the vasculature
Justin Mason (United Kingdom)

Skeletal muscle and vessel regeneration: role of antioxidant genes and microRNAs
Jozef Dulak (Poland)

Short talks selected from abstracts:

Deregulation of Thioredoxin system contributes to monocyte dysfunction in diabetes mellitus
Waltenberger J., Godfrey R., Schulten H., Shanmuganathan S., Boehmer F.D. (Germany)

Redox-dependent stimulation of angiogenesis and tissue repair by pentose phosphate derivatives
Vara D., Mace K., Mellor H., Wheeler-Jones C., Pula G. (United Kingdom)

Symposium 18 - ROOM GALILEO

Non-invasive imaging techniques (in addition to LDF) assessing novel aspects of Microcirculation

Chairs: *Francesca Ingegnoli (Italy), Ariane Herrick (United Kingdom)*

Nailfold capillaroscopy to detect microangiopathies
Francesca Ingegnoli (Italy)

Emerging technologies
Andrea Murray (United Kingdom)

Use of infrared thermography in the assessment of peripheral microvascular dysfunction in Raynaud's phenomenon and systemic sclerosis
John D. Pauling (United Kingdom)

Applications of laser speckle contrast analysis in microvascular disease: the case of systemic sclerosis
Barbara Ruaro (Italy)

10.40 - 11.00 *Coffee break*

Session CME Accredited

11.00 - 11.30 **Plenary Lecture - AUDITORIUM**

Chair: *Andrew Newby (United Kingdom)*

Vascular smooth muscle cell senescence in vascular disease
Martin Bennett (United Kingdom)

ORAL COMMUNICATIONS

11.30 - 13.00

SESSION 1 - ROOM GALILEO

Chairs: Zsold Pécsvárady (Hungary), Giuseppe Maria Andreozzi (Italy)

- OC 1 Prediabetes is associated with impaired retinal vasodilation: the Maastricht Study
Sörensen B., Houben B., Berendschot T., Schouten J., Kroon B., Van Der Kallen C., Henry R., Koster A., Dagnelie P., Schaper N., Schram M., Stehouwer C. (Netherlands)
- OC 2 Short-term high salt diet impairs microvascular endothelial function in young healthy salt-resistant women
Cavka A., Rasic L., Cosic A., Lenasi H., Jukic I., Drenjancevic I. (Croatia)
- OC 3 Hemorheological and Sublingual Microcirculation Profiles in Patients with Sepsis
Potapova E., Oliveira I., Napoleão P., Messias A., Saldanha C. (Portugal)
- OC 4 Hypocaloric diet effects on microvascular dysfunction
Mastantuono T., Nasti G., Battiloro L., Starita N., Chiurazzi M., Cesarelli M., D'Addio G., Iuppariello L., Lapi D., Colantuoni A. (Italy)
- OC 5 Potential role of endothelin-1 in pericardial fluid of cardiac patients in eliciting arterial constriction
Nemeth Z., Cziraki A., Szabados S., Seffer I., Horvath I., Koller A. (Hungary)
- OC 6 Cutaneous microvascular response during local cold exposure - the effect of female sex hormones
Cankar K., Music M., Finderle Z. (Slovenia)
- OC 7 Skin microcirculation and intrathyroid arteries in women with graves disease
Lenasi H., Bedernjak N., Zaletel K., Gaberšcek S. (Slovenia)
- OC 8 Microcirculation and blood rheology in cancer
Tikhomirova I., Malysheva Y., Kislov N., Lileev D., Gordeev I., Schekaleva M., Petrochenko E. (Russian Federation)
- OC 9 Endothelial microparticles; a novel biomarker of carotid disease?
Wilkinson F., Schiro A., Weston R., Smyth V., Ferdinand S.I., Alexander Y. (United Kingdom)
- OC 10 Comparing different non-invasive methods to the study of human in vivo peripheral microcirculation
Silva H., Ferreira H., Antunes J., Bujan J., Rodrigues L. (Portugal)



SESSION 2 - ROOM FIBONACCI

Chairs: *Patrizia Caprari (Italy), Richard Siow (United Kingdom)*

- OC 11 Non-canonical role of NRF2 transcription factor in GDF-15 and SDF-1-induced angiogenesis
Kloska D., Kopacz A., Augustyniak A., Dulak J., Jozkowicz A., Grochot-Przeczek A. (Poland)
- OC 12 Gene expression analysis in small arteries of spontaneously hypertensive rats
Palao T., Swärd K., Jongejan A., Moerland P.D., De Vos J., Arribas S.M., Groma G., Vanbavel E., Bakker E.N.T.P. (Netherlands)
- OC 13 Insulin receptor marks the tumor endothelium; its role during tumor angiogenesis and angiostatic treatment
Nowak-Sliwinska P., Van Beijnum J., Mans L., Kapel S., Wong T., Griffioen A. (Switzerland)
- OC 14 HTATIP2 and MAPK3: potential targets for enhancing the angiogenic activity of monocytes from critical limb ischaemia (CLI) patients
Ludwinski E., Patel A., Saha P., Furmston J., Bajwa A., Smith A., Modarai B. (United Kingdom)
- OC 15 Enhancement of VEGF-mediated angiogenesis by inhibition of the plasma membrane calcium ATPase 4 protein with aurointricarboxylic acid
Kurusamy S., Baggott R., Lopez-Maderuelo D., Little R., Oceandy D., Cartwright E., Rowther F., Wang W., Neyses L., Redondo J.M., Armesilla A.L. (United Kingdom)
- OC 16 Cleaved high molecular weight kininogen counteracts the inflammatory response and neointima formation following vascular injury
Dutzmann J., Daniel J.M., Reich F., Bauersachs J., Preissner K., Sedding D. (Germany)
- OC 17 Sonic hedgehog controls adventitial fibroblast activation and neointima formation
Dutzmann J., Koch A., Bauersachs J., Sedding D., Daniel J.M. (Germany)
- OC 18 VEGFC acts as a glomerular protectant and ameliorates the progression of diabetic nephropathy
Buckner N., Baker S., Gamez M., Onions K., Ramnath R., Bates D., Welsh G., Satchell S., Foster R. (United Kingdom)
- OC 19 Stromal cell-derived factor 2 is required for Enos activation
Siragusa M., Fröhlich F., Park E.J., Schleicher M.J., Walther T.C., Sessa W.C. (Germany)
- OC 20 Development of MIRNA eluting stents
Stepoto H., Dakin R., McDonald R., Kennedy S., Cronin L., Oldroyd K., Baker A. (United Kingdom)

SESSION 3 - AUDITORIUM

Chairs: *Benedetta Bussolati (Italy), Justin Mason (United Kingdom)*

- OC 21 Angiotensin-(1-9) in vascular remodeling: effects on vascular smooth muscle cell proliferation, migration and neointima formation
Mckinney C.A., Kennedy S., Baillie G., Milligan G., Nicklin S.A. (United Kingdom)
- OC 22 Sympathetic inhibition improves inflammation and endothelial dysfunction in brain microcirculation of rats with metabolic syndrome
Estado V., R Nascimento A., Antunes B., Gomes F., Obadia N., Freitas F., Daliry A., Bousquet P., Tibiriçá E. (Brazil)
- OC 23 Inhibition of the soluble epoxide hydrolase attenuates diabetic retinopathy in ins2akita mice
Hu J., Popp R., Dziumbala S., Devraj K., Lin J., Hammes H.P., Fleming I. (Germany)
- OC 24 Acutely elevated luminal glucose levels disrupt conducted dilation in mouse resistance arteries
Sepulveda Kattan E., Ding H., Triggle C., Dora K., Garland C. (United Kingdom)
- OC 25 Cerebral and systemic microangioarchitectural impairments precede cognitive deficits in an app/ps1 mouse model of Alzheimer's disease
Kelly P., Ackermann M., Konerding M., Mitchell C. (United Kingdom)
- OC 26 Acute exhausting exercise session affects microvascular endothelial function in young healthy athletes
Stupin M., Cavka A., Rasic L., Cosic A., Lenasi H., Drenjancevic I. (Croatia)
- OC 27 Mechanisms of vascular responses to changes in flow in cerebral resistance arteries of healthy sprague-dawley rats
Cosic A., Jukic (ex Grizelj) I., Cavka A., Novak S., Mihalj M., Drenjancevic I. (Croatia)
- OC 28 Viscosity induced hematocrit partition in microcirculation
Shen Z., Coupier G., Podgorski T., Kaoui B., Harting J., Misbah C. (France)
- OC 29 Hydrogen sulfide (H₂S)-induced arterial relaxation: differential modes of action of sodium hydrogen sulfide and metal organic frameworks as putative H₂S
Kelsall C., McCormick L., Whitfield P., Doherty M., Morris R., Megson I. (United Kingdom)
- OC 30 Challenging the paradigm that NRF2 always protects endothelial cells at elevated shear stress
Teasdale J., Hazell G., Newby A., White S. (United Kingdom)



13.00 - 13.10 International Travel Award for developing Countries - AUDITORIUM
Chairs: *Marco Rossi (Italy), Jozef Dulak (Poland)*

13.10 - 14.30 *Break*

13.10 - 13.40 **SPONSORED SESSION - AUDITORIUM**

Restenosis after endovascular therapy: the role of cilostazol
Gianmarco de Donato (Italy)

With an unrestricted educational grant of ITALFARMACO

A packet lunch will be offered to the participants of the session

13.30 - 14.30 EVBO Council Meeting - ROOM GALILEO

14.00 - 14.30 **EUROPEAN RESEARCH COUNCIL - ROOM FIBONACCI**

European Research Council modus operandi, tips, rumors and the truth
Elisabeth Renney (Sweden)

14.30 - 14.40 ESM Servier Award in Microcirculation 2015 - AUDITORIUM
Chairs: *Akos Koller (Hungary), Angela Shore (United Kingdom)*

14.40 - 14.50 Young Investigator Awards - AUDITORIUM
Chairs: *Anita Cosic (Croatia), Helena Lenasi (Slovenia)*

PARALLEL SESSION 7

14.50 - 16.30

Symposium 19 - ROOM FIBONACCI

Microvascular changes in systemic sclerosis: the approach to the patients

Chairs: *Gabriele Valentini (Italy), Giovanni Mann (United Kingdom)*

Pre-Systemic Sclerosis: the need for an early approach
Gabriele Valentini (Italy)

Clinical and Capillaroscopic Features predictive of severe disease
Yannick Allanore (France)

Serological Features predictive of severe disease
Gabriela Riemekasten (Germany)

Prevention and treatment of scleroderma ulcers
Antonella Marcoccia (Italy)

Symposium 20 - AUDITORIUM

Leukocyte adhesion and migration: the key to the inflammatory response

Chairs: *Jeremy Pearson (United Kingdom), Britta Engelhardt (Switzerland)*

Peptide Inhibitor of Trans-Endothelial Migration: PEPITEM
A new immune-regulatory peptide and its roles in homeostatic and pathogenic T-cell trafficking
Ed Rainger (United Kingdom)

Genetic defects in leukocyte migration
Raffaele Badolato (Italy)

Molecular mechanisms controlling the cellular pathway of immune cell diapedesis across the blood-brain barrier
Britta Engelhardt (Switzerland)

Short talks selected from abstracts:

F-Actin-Rich endothelial pores prevent vascular leakage during leukocyte diapedesis through local rhoA signaling in vivo
Van Buul J. (Netherlands)

Role of the transcriptional co-regulator RIP140 in the regulation of inflammation in endothelial cells
Calay D., Nadkarni S., Dufton N., Parker M., Haskard D., Mason J. (United Kingdom)



Symposium 21 - ROOM GALILEO

3rd International MiDAS Microcirculation Meeting:

“Microcirculation - from the lab to the bedside”

Chairs: *Christian Lehmann (Canada), Vladimir Cerny (Czech Republic)*

Microcirculation in the lab - what you see is what you get?

Christian Lehmann (Canada)

Microcirculation at the bedside - why and when?

Vladimir Cerny (Czech Republic)

LDF measurement – from the lab to the bedside

Kim Gooding (United Kingdom)

First experiences with automated microcirculation analysis software

Nivin Sharawi (Egypt)

16.30 - 16.50 *Coffee break*

Session CME Accredited

16.50 - 17.20 **Malpighi Award Lecture - AUDITORIUM**

Chair: *Akos Koller (Hungary), Marco Rossi (Italy)*

From Capillary to End Organ Damage

Angela Shore (United Kingdom)

17.30 - 18.30 Business Meeting of ESM - AUDITORIUM

Business Meeting of EVBO - ROOM FIBONACCI

20.00 - 23.00 *Social Dinner*

PARALLEL SESSION 8

08.30 - 10.10

Symposium 22 - AUDITORIUM

**Targeting ischemia / reperfusion injury with complex compounds:
mechanistic approaches****Chairs:** *Akos Koller (Hungary), Jing Yan Han (China)*

Cardiotonic pills®, a compound chinese medicine, ameliorates ischemia-reperfusion induced rat myocardial microcirculatory disturbances, myocardial damage and fibrosis
Jin-Yan Han (China)

Caffeic Acid Attenuated Liver Microcirculation Dysfunction and Liver Injury induced by Ischemia/ Reperfusion in Rat
Hong-Na Mou (China)

Microvascular effects and mechanisms of action of *Salvia miltiorrhiza*: a literature review
Akos Koller (Hungary)

Cerebralcare Granule® and its major ingredients ameliorated microcirculatory disturbance and neuron injury induced by middle cerebral artery occlusion
Xiao-Wei Mao (China)

Symposium 23 - ROOM FIBONACCI

von Willebrand factor in the vasculature**Chairs:** *Anna Randi (United Kingdom), Stefan Schneider (Germany)*

Role of VWF in tumor progression and inflammation
Stefan Schneider (Germany)

A new role for VWF in the control of angiogenesis
Anna Randi (United Kingdom)

Endothelial control of the functional architecture of VWF
Daniel Cutler (United Kingdom)



Short talks to be selected from abstracts:

Enhanced cardiac MCP-1 and monocyte expansion impede the injured heart recovery in heme oxygenase-1-deficient mice

Tomczyk M., Bukowska-Strakova K., Szade K., Jozkowicz A., Dulak J., Jazwa A. (Poland)

Hedgehog signaling in brain arteriovenous malformations

Pola R., Gatto I., Giarretta I., Marcantoni M., Sturiale C., Puca A. (Italy)

Symposium 24 - ROOM GALILEO

Leukocyte trafficking in development and inflammation

Chairs: *Markus Sperandio (Germany), Barbara Walzog (Germany)*

Sequential maturation process towards hematopoietic stem cell production in the mouse embryo

Catherine Robin (Netherlands)

Direct and indirect roles of leukocyte signaling in inflammatory cell recruitment

Attila Mocsai (Hungary)

Integrin signaling and neutrophil trafficking in innate immunity

Barbara Walzog (Germany)

The role of Mrp8/14 on leukocyte recruitment during inflammation in vivo

Markus Sperandio (Germany)

10.10 -10.30 *Coffee break*

PARALLEL SESSION 9

10.30 - 12.10

Symposium 25 - AUDITORIUM

Control of vascular permeability

Chairs: *Dorian Haskard (United Kingdom), Dietmar Vestweber (Germany)*

Control of leukocyte extravasation and vascular permeability by endothelial junctions
Dietmar Vestweber (Germany)

New insights into control of vascular permeability by VEGF
Patric Turowski (United Kingdom)

Role of JAMs in leukocyte transendothelial migration and stem cell niche maintenance:
two sides of the same coin?
Michel Aurrand-Lions (France)

Short talks to be selected from abstracts:

Forced expression of TIE2 enhances the angiogenic potential of monocytes/macrophages
*Furmston J., Patel A., Ludwinski F., Prakash S., Adnan B., De Palma M., Smith A., Modarai B.,
(United Kingdom)*

ABL2 mediates endothelial barrier disruption by modulating integrin $\alpha 5 \beta 1$ distribution
*Aman J., Van Bezu J., Valent E., Eringa E.C., Van Hinsbergh V.W., Van Nieuw Amerongen G.P.,
(Netherlands)*

Symposium 26 - ROOM FIBONACCI

Microvascular alterations and vascular aging

Chairs: *Stefano Taddei (Italy), Ed van Bavel (Netherlands)*

Pathophysiology of cerebrovascular aging
Zoltan Ungvari (USA)

Assessment of microvascular functional and structural changes
Damiano Rizzoni (Italy)

Vascular aging in humans: mechanism and clinical significance
Agostino Virdis (Italy)

Insulin-like growth factor (IGF)-1: a potential early life therapeutic intervention for
cerebrovascular diseases
William Sonntag (USA)



Symposium 27 - ROOM GALILEO

Vascular progenitors: novel strategies and mechanisms

Chairs: Andrew Newby (United Kingdom), Geerten P. van Nieuw Amerongen (Netherlands)

Therapeutic Implication of Vascular Stem Cells in Restenosis
Qingbo Xu (United Kingdom)

Pericyte treatment of myocardial ischemia: pathway to the clinic
Paolo Madeddu (United Kingdom)

Heme oxygenase-1 in endothelial cells: beyond angiogenesis
Alicja Józkowicz (Poland)

Short talks to be selected from abstracts:

Soluble CD146 priming boosts survival and regenerative properties of endothelial colony-forming cells
Stalin J., Nollet M., Essaadi A., Leroyer A., Guillet B., Bardin N., Dignat-George F., Blot-Chabaud M. (France)

Vasculogenic properties of endothelial colony forming cells (ECFCS) in hypoxia are regulated by MIR-130
Guduric-Fuchs J., O'Neill C., James B., Chambers S., Medina R., Stitt A. (United Kingdom)

Session CME Accredited

12.10 - 12.50 **Closing Plenary Lecture - AUDITORIUM**

Chair: *Jozef Dulak (Poland)*

New frontiers in VEGF/VEGFR biology
Lena Claesson-Welsh (Sweden)

12.50 - 13.00 Closing Ceremony

POSTER SESSION

The Poster Session is scheduled for 4 June 2015 from 17,00 to 18,30.

The presenting author will be requested to be available for discussion during the poster viewing session. Posters cannot exceed these dimensions: 96 cm wide and 150 cm high. Fixing material will be provided. The congress organizers take no responsibility for posters that are not removed after the conference.

- P01 EXPRESSION OF RENIN-ANGIOTENSIN SYSTEM COMPONENTS IN THE BROWN AND WHITE PERIVASCULAR ADIPOSE TISSUE IN OBESE MICE
Inada A., Hashimoto C., Silva R., Santos R., Carvalho M.H., Akamine E. (Brazil)
- P02 ACTIVATION OF MROS-AMPK-CREB-NRF2 BY CELECOXIB INDUCES ENDOTHELIAL HO-1 AND ATTENUATES NF-KB ACTIVITY
Alrashed F., Calay D., Thornton C., Kiprianos A., Haskard D., Boyle J., Mason J. (United Kingdom)
- P03 USE OF MICROFLUIDICS TO DETERMINE VASCULATURE BEHAVIOR DURING AN INFLAMMATORY RESPONSE
Ambruzová B., Vitecek J., Kolarova H., Bino L., Kubala L. (Czech Republic)
- P04 ROLE OF PI3K/AKT AND MEK/ERK SIGNALLING IN CAMP/EPAC-MEDIATED ENDOTHELIAL BARRIER STABILISATION
Guenduez D., Aslam M. (Germany)
- P05 OPPOSING EFFECTS OF CAMP/PKA AND CAMP/EPAC SIGNALLING ON IN VITRO ANGIOGENESIS: ROLE OF RHO GTPASES
Aslam M., Hamm C., Guenduez D. (Germany)
- P06 EFFECT OF HYPOTHERMIA AND N-ACETYL CYSTEINE ON MICROCIRCULATION AFTER CARDIAC ARREST IN PIGS
Astapenko D., Skulec R., Pinterova N., Hovanec T., Truhlar A., Cerna Parizkova R., Lehmann C., Cerny V. (Czech Republic)
- P07 IMPACT OF ACTOVEGIN ON MICROCIRCULATION IN PATIENTS SUFFERING CHRONIC OBLITERATING DISEASES OF LOWER LIMB ARTERIES
Bagdasaryan A., Uchkin I., Zudin A., Fedorovich A. (Russian Federation)
- P08 SENESCENCE-INDUCED OXIDATIVE STRESS CAUSES ENDOTHELIAL DYSFUNCTION
Bhayadia R. (Germany)
- P09 EPIGENETIC CHANGES ASSOCIATED WITH BICUSPID- AND TRICUSPID AORTIC VALVE ANEURYSMS
Björck H.M., Du L., Paloschi V., Pulignani S., Maleki S., Franco-Cereceda A., Eriksson P. (Sweden)



- P10 EFFECT OF RESVERATROL AND ORCHIDECTOMY ON THE VASORELAXING INFLUENCE OF PERIVASCULAR ADIPOSE TISSUE
Boydens C. , Pauwels B., Van De Voorde J. (Belgium)
- P11 THE STORAGE ALTERATIONS OF RED BLOOD CELLS WITH HEREDITARY SPHEROCYTHOSIS: A RHEOLOGICAL APPROACH
Caprari P, Bozzi C., Panicale S., Caforio M.P., Tarzia A., Luchetti L., Girelli G., Grazzini G. (Italy)
- P12 ATOMIC FORCE MICROSCOPY (AFM): MODULATION OF BREAST CANCER CELL AND BONE MICROENVIRONMENT ADHESION IN VITRO
Albon J., Hobbs J., Meininger G., Sun L., Reeves K., Brown N.J. (United Kingdom)
- P13 SHORT-TERM IN VIVO ADMINISTRATION OF CABOZANTINIB INDUCES RAPID MODIFICATION OF THE BONE MARROW VASCULARITY
Haider M.T., Holen I., Brown N.J., Hunter K. (United Kingdom)
- P14 A NOVEL OBESTATIN ANALOGUE IMPROVES METABOLIC AND ENDOTHELIAL FUNCTION IN A DIET-INDUCED MODEL OF PRE-DIABETES
Burch K., Cowan E., Green B., Grieve D. (United Kingdom)
- P15 THE CHRONIC HYPERTENSIVE ACTIONS OF VANDETANIB AND PAZOPANIB IN VIVO
Carter J.J., Woolard J. (United Kingdom)
- P16 DELETERIOUS EFFECTS OF AGING ON CAROTID REACTIVITY AFTER LATE-ONSET OF ESTROGEN TREATMENT IN SENESCENT FEMALE MICE
Costa T., Dantas A.P., Jimenez-Altayó F., Fortes Z., Akamine E., Vila E., Carvalho M.H. (Brazil)
- P17 DOES GLYCAEMIC CONTROL AFFECT MICROVASCULAR FUNCTION INDEPENDENT OF BLOOD PRESSURE IN TYPE 2 DIABETES?
Casanova F., Adingupu D., Gooding K., Strain D., Shore A. (United Kingdom)
- P18 TEMPORAL EVALUATION OF SMC PHENOTYPE AND FUNCTION IN A BIOREACTOR MODEL OF ABDOMINAL AORTIC ANEURYSM (AAA)
Clark E., Riches K., Jennings L., Porter K. (United Kingdom)
- P19 CUTANEOUS IONTOPHORESIS OF TREPROSTINIL INCREASES MICROVASCULAR BLOOD FLUX IN DIABETIC MALLEOLUS AREA
Hellmann M., Roustit M., Gaillard-Bigot F., Cracowski J. (France)
- P20 EFFECTS OF COMBINED THERAPY WITH METFORMIN AND INSULIN IN LIVER DISEASE DUE TO DIABETES: THE ROLE OF AGE-RAGE PATHWAY
Daliry A., Rangel Silveas R., Eduardo Ilaquita Flores E., Nunes Pereira E., Estato V., Ribeiro Garzoni L., Tibiriça E. (Brazil)
- P21 ROLE OF HYDROGEN PEROXIDE IN MEDIATION OF MYOGENIC RESPONSE OF RAT SKELETAL MUSCLE VENULES
Debreczeni B., Tamas R., Koller A. (Hungary)

- P22 A NOVEL ISOLATED GLOMERULAR ALBUMIN PERMEABILITY ASSAY BASED ON QUANTITATIVE FLUORESCENCE MICROSCOPY
Desideri S., King M., Salmon A., Satchell S., Foster R. (United Kingdom)
- P23 OVEREXPRESSION OF CALCIFICATION-RELEVANT FACTORS: RUN2 AND SOST IN HUMAN ABDOMINAL AORTIC ANEURYSM
Dubis J., Zuk N., Litwin M., Baczynska D., Michalowska D., Grendziak R., Witkiewicz W. (Poland)
- P24 PUTATIVE MECHANISMS UNDERLYING TRANSMIGRATION OF HUMAN UMBILICAL MESENCHYMAL STEM CELLS ACROSS UTERINE MICROVASCULAR ENDOTHELIAL CELLS
Ebrahim N., Leach L. (United Kingdom)
- P25 EXERCISE TRAINING IMPROVES FUNCTIONAL AND STRUCTURAL MICROVASCULAR ALTERATIONS IN A RAT MODEL OF DIABETES
Fernando Lanza Martins R., Pereira Borges J., Vinicius Machado M., Estató De Freitas Almeida V., Ribeiro Antunes B., Vera Tibiriçá E. (Brazil)
- P26 THE IMPACT OF EARLY OR LATE EXERCISE TRAINING ON THE CEREBRAL MICROVASCULAR ALTERATIONS INDUCED BY CEREBRAL HYPOPERFUSION
Tristão M., Estató V., Borges J., Freitas F., Tibiriçá E. (Brazil)
- P27 AGONIST-DEPENDENT UTILISATION OF NAD⁺ FOR METABOLIC REGULATION OF TUBULOGENESIS BY HUMAN ENDOTHELIAL CELLS
Faulkner A., Jones C., Watts S., Purcell R., Carr C., Board M., Wheeler-Jones C., Bishop-Bailey D. (United Kingdom)
- P28 FEATURES OF CUTANEOUS MICROCIRCULATORY BLOOD FLOW IN PATIENTS WITH IDIOPATHIC PULMONARY ARTERIAL HYPERTENSION ASSESSED BY LASER DOPPLER FLOWMETRY
Dolgova E., Fedorovich A., Martynyuk T., Rogoza A., Chazova I. (Russian Federation)
- P29 MYOGENIC TONE OF THE MICROVASCULAR RESISTANT ARTERIES AND MUSCULO-ELASTIC VESSELS RIGIDITY
Mordvinova E., Fedorovich A., Oschepkova E., Rogoza A. (Russian Federation)
- P30 SYSTEMS BIOLOGY APPROACHES FOR DISCOVERING NEW GLUCOCORTICOID-MEDIATED PATHWAYS AT THE BLOOD-BRAIN BARRIER
Shityakov S., Foerster C. (Germany)
- P31 SIMVASTATIN IMPROVES CEREBRAL ARTERIOLAR ENDOTHELIAL FUNCTION AND REVERSES CEREBRAL FUNCTIONAL MICROVASCULAR RAREFACTION IN A MODEL OF PRIMARY HYPERTENSION
Freitas F., Estató V., Lessa M.A., Reis P., Castro-Faria H., Tibiriçá E. (Brazil)
- P32 PHYSICAL ACTIVITY PREVENTS NITROSATIVE STRESS IN ELDERLY PEOPLE
Fusi J., Guidotti E., Rossi M., Galetta F., Santoro G., Franzoni F. (Italy)
- P33 NITRIC OXIDE (NO) AND MICROCIRCULATION CHANGES DURING CRUSH SYNDROME
Gamkrelidze N., Otarashvili R., Pavliashvili N., Kipiani V., Sanikidze T. (Georgia)



- P34 MICROVASCULAR ACTIONS OF GLUCAGON-LIKE PEPTIDE-1 AND ITS ANALOGUES IN LEAN AND OBESE PARTICIPANTS AND PARTICIPANTS WITH TYPE 2 DIABETES
Gooding K., Aung M.M., Kos K., Shore A. (United Kingdom)
- P35 MICROVASCULAR ENDOTHELIAL GLYCOCALYX AND CONDITION OF BLOOD VESSELS IN PATIENTS WITH ARTERIAL HYPERTENSION
Gorshkov A., Sergey B., Natalia G. (Russian Federation)
- P36 ARTERIAL STIFFNESS IS ASSOCIATED WITH TELOMERE LENGTH IN HYPERTENSIVE PATIENTS
Vladimir G., Olesya I., Gorshkov A. (Russian Federation)
- P37 THE DYSREGULATION OF THE AXIS BACE1/BACE1-AS IN HEART FAILURE
Greco S., Voellenkle C., Zaccagnini G., Manteiga J., Martelli F. (Italy)
- P38 HOW A GESTATIONAL DIABETES MELLITUS AFFECTS NEWBORNS' MICROCIRCULATION AND VASOMOTION
Grzybowski A.K., Puchwein-Schwepecke A., Genzel-Boroviczeny O. (Germany)
- P39 IDENTIFICATION OF ACTIN-REMODELING REGULATORS CRITICAL FOR EPINEPHRINE-INDUCED VON WILLEBRAND FACTOR (VWF) SECRETION
Han X., Lee P., Yang Z., Wei G., Huo Y., Luo J. (China)
- P40 INVOLVEMENT OF PROSTANOIDS IN SKIN POSTOCCLUSIVE HYPEREMIA IN HUMANS
Hellmann M., Gaillard-Bigot F., Roustit M., Cracowski J. (Poland)
- P41 RECRUITMENT OF RGS5 TO MECHANICALLY ACTIVATED AT1R IN VSMC
Hong K., Li M., Meiningner G., Hill M. (United States)
- P42 SERUM CXCL4 IS INCREASED IN PATIENTS WITH PRIMARY SJÖGREN'S SYNDROME AND IS ASSOCIATED WITH FEATURES OF MICROVASCULAR IMPAIRMENT
Irace R., Riccardi A., Iacono D., Valentini G., Vettori S. (Italy)
- P43 ALTERNATING RELAXATION TO PACAP 1-38 AND 1-27 IN ARTERIES OF PACAP DEFICIENT MICE
Ivic I., Vamos Z., Tamas A., Reglodi D., Koller A. (Hungary)
- P44 ADAPTATION TO PHYSIOLOGICAL O₂ LEVELS ALTERS AGONIST-INDUCED SIGNAL TRANSDUCTION IN HUMAN ENDOTHELIAL CELLS: IMPLICATIONS FOR NO AND PGI₂ SYNTHESIS
Keeley T.P., Chapple S.J., Jacob R., Siow R.C., Mann G.E. (United Kingdom)
- P45 EFFECT OF CONTINUOUS VS PULSED IONTOPHORESIS OF TREPROSTINIL ON SKIN BLOOD FLOW
Kotzki S., Roustit M., Arnaud C., Godin-Ribuot D., Cracowski J.L. (France)
- P46 DOES THE SEX MATTER IN VASCULAR RESEARCH?
Kowalewska M., Zegrocka-Stendel O., Dutkiewicz M., Maciejko D., Fogtman A., Koziak K. (Poland)

- P47 RAT MODEL OF PARKES WEBER SYNDROME
Bojakowski K., Janusz G., Grabowska I., Zegrocka-stendel O., Surowiecka-Pastewka A., Kowalewska M., Maciejko D., Koziak K. (Poland)
- P48 INTERACTION OF MYELOPEROXIDASE WITH ENDOTHELIAL CELL SURFACE
Kubala L., Kolárová H., Jan V., Barbora A., Silvie K., Anna K., Stephan B. (Czech Republic)
- P49 ISCHEMIA REPERFUSION BLOOD FLOW OSCILLATORY PATTERNS IN SINGLE VESSELS ON RAT PIAL MICROCIRCULATION
Lapi D., Mastantuono T., Cesarelli M., D'Addio G., Gorbach A., Starita N., Verone P., Colantuoni A. (Italy)
- P50 EFFECTS OF MANDIBULAR EXTENSION ON CEREBRAL MICROCIRCULATION IN HYPERTENSIVE RATS
Lapi D., Colantuoni A., Varanini M., Scuri R. (Italy)
- P51 THE REGULATION OF ETS FACTORS IN THE DIFFERENTIATION AND MAINTENANCE OF PLURIPOTENT STEM CELL-DERIVED ENDOTHELIAL CELLS
Lawlor K., Harding S., Randi A., Foldes G. (United Kingdom)
- P52 THE EFFECT OF CANNABINOID 2 RECEPTOR ACTIVATION AND ABSENCE DURING OCULAR INFLAMMATION
Toguri James T., Szczesniak A., Kelly M., Lehmann C. (Canada)
- P53 IMPACT OF CB2 RECEPTOR INHIBITION ON LEUKOCYTE RECRUITMENT WITHIN THE MICROCIRCULATION IN CNS-INJURY INDUCED IMMUNODEFICIENCY
Burkovskiy I., Zhou J., Robertson S G., Lehmann C. (Canada)
- P54 DIBI, A NOVEL IRON CHELATOR, REDUCES OCULAR INFLAMMATION AND IMPROVES THE MICROVASCULAR PERFUSION IN ENDOTOXIN-INDUCED UVEITIS IN MICE
Arora N., Wafa K., Szczesniak A., Zhou J., Islam S., Lehmann C. (Canada)
- P55 CANNABINOID 2 RECEPTOR ACTIVATION IMPROVES INTESTINAL MICROCIRCULATION IN EXPERIMENTAL SEPSIS
Yang H., Zhou J., Cerny V., Lehmann C. (Canada)
- P56 ASSESSMENT OF THE NAILFOLD SKIN MICROCIRCULATION BY HIGH-FREQUENCY ULTRASOUND DOPPLER FLOWMETRY: A COMPARISON TO LASER DOPPLER FLOWMETRY
Lenasi H., Potočnik N., Egorkina A., Papp M., Girina M. (Slovenia)
- P57 ENDOTHELIAL PROGENITOR CELLS AS A PREDICTIVE MARKER OF THE RESPONSE TO NEOADJUVANT SUNITINIB IN METASTATIC RENAL CELL CARCINOMA (MRCC) PATIENTS (PREINSUT TRIAL)
Mauge L., Bouaboula M., Pereira H., Gille A.S., Tartour E., Fournier L., Oudard S., Helley D. (France)
- P58 ADHESION DYNAMICS OF BREAST CARCINOMA CELLS TO BONE MARROW ENDOTHELIAL CELLS ASSESSED BY ATOMIC FORCE MICROSCOPY
Xie L., Sun Z., Hong Z., Brown N., Glinski O., Meininger G., Glinsky V. (United States)

- P59 SUBSTRATE STIFFNESS ALTERS THE MECHANICAL AND PHYSIOLOGICAL FUNCTION OF VASCULAR SMOOTH MUSCLE CELLS
Meininger G., Hong Z., Jin M., Li Z. (United States)
- P60 THE ROLE OF CAFFEINE ON CUTANEOUS MICROCIRCULATION IN MEN
Melik Z., Satej M., Cankar K. (Slovenia)
- P61 SHORT TERM HIGH SALT DIET SUPPRESSES T CELL ACTIVATION AND TREG EXPANSION IN SPRAGUE DAWLEY RATS
Mihalj M., Novak S., Cosic A., Drenjancevic I. (Croatia)
- P62 PANNEXIN CHANNELS -THE PATHWAY TO SMOOTH MUSCLE COMMUNICATION IN RESISTANCE ARTERIES
Mokori E., Ralevic V., Dunn W. (United Kingdom)
- P63 MAINTENANCE OF ENDOTHELIAL NO RELEASE AFTER INHIBITION OF NADPH OXIDASE 4
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