

- 10:00–11:30 **Symposium S2: HEMORHEOLOGICAL PROPERTIES OF INFLAMMATORY PROCESSES (Hungarian Society of Hemorheology)** Room 2
Chairpersons: L. Bogar / E. Roth
- S2-1 What may happen with hemorheological parameters during ischemia-reperfusion? An overview of experimental data
N. Nemeth, I. Furka and I. Miko
- S2-2 Reperfusion injuries in peripheral vascular diseases
M. Kurthy, E. Arato, G. Jancso, L. Sinay, J. Lantos, Zs. Miklos, E. Ranczinger, T. Nagy, P. Hardy, V. Kovacs, Sz. Javor, Zs. Verzar and E. Roth
- S2-3 Septic shock
L. Bogar and L. Szelig
- S2-4 Aspirin resistance after kidney transplantation
B. Sandor, K. Biro, A. Toth, I. Juricskay, A. Varga, M. Rabai, J. Papp, K. Toth and P. Szakaly
- 10:00–11:30 **Free Communications F1: HEMORHEOLOGICAL ASPECTS OF PHYSICAL TRAINING** Room 3
Chairpersons: J.F. Brun / T. Higgins
- F1-1 Inter-individual variation in predictors of CVD risk following high intensity interval training
C. Cobbold, M. Baker, R. Adams and T. Higgins
- F1-2 Hemorheologic effects of low intensity endurance training in type 2 diabetic patients: A pilot study
J.F. Brun, E. Varlet-Marie, E.R. Mauverger, C. Fedou and M. Pollatz
- F1-3 Versatility of ‘hemorheologic fitness’ according to exercise intensity: Emphasis on the “healthy primitive lifestyle”
J.F. Brun, E. Varlet-Marie, G. Chevance, M. Pollatz, C. Fedou and E.R. Mauverger
- F1-4 Prognostic significance of the blood flow dynamics in the microcirculatory bloodstream for the assess of body reserves during load tests
M. Skedina
- F1-5 Heavy-intensity cycling does not alter red blood cell deformability
M. Simmonds, P. Connes and S. Sabapathy
- F1-6 The effect of a high intensity interval training intervention on physiological predictors of cardiovascular risk
T. Higgins, S.A. Evans, C. Cobbold, M. Baker and R. Adams
- 11:45–12:30 **Scientific Program: Plenary Lecture L2** Room 1
G. Caimi: Erythrocyte and polymorphonuclear leukocyte rheology in diabetes mellitus
Chairperson/laudation: S. Forconi

12:30–14:00 **Lunch**

14:00–15:30 **Symposium S3: INTERACTION OF BLOOD CELLS**

Room 1

(German Society for Clinical Microcirculation and Hemorheology)

Chairpersons: F. Jung / L. Prantl

- S3-1 Effect of radiographic contrast media (Iodixanol, Iopromid) on the spectrin/band3-network of the membrane skeleton of erythrocytes
R.P. Franke, T. Scharnweber, R. Fuhrmann, C. Mrowietz and F. Jung
- S3-2 A co-culture model of adipose-derived stem cells, fibroblasts and endothelial cells
L. Prantl
- S3-3 The influence of polymer substrates differing in their chemical structure on survival, proliferation, and activation of primary human B cells
T. Roch, S. Schmidt, K. Kratz, N. Ma and A. Lendlein
- S3-4 Interaction of human mesenchymal stem cells with soft hydrophobic poly(n-butyl acrylate) networks with elastic moduli comparable to arteries
W. Wang, K. Kratz, X. Xu, Z. Li, F. Jung, N. Ma and A. Lendlein
- S3-5 PDGF regulates migration of adipose tissue derived stem cells towards malignancy in a dose dependent fashion by PI3 signaling
S. Gehmert, S. Gehmert, X. Bai, M. Loibl, A. Link, S. Schreml and L. Prantl
- S3-6 Angiogenically stimulated intermediate monocytes maintain their proangiogenic and non-inflammatory phenotype in long time co-cultures with HUVEC
A. Kruger, A. Mayer, T. Roch, C. Schulz and F. Jung

14:00–15:30 **Symposium S4: CLINICAL APPLICATION OF HEMORHEOLOGY IN KOREA**

Room 2

(Korean National Symposium)

Chairpersons: B.K. Lee / S. Shin

- S4-1 Computational analysis of wall shear stress at the distal left main coronary artery bifurcation
S.W. Kim, W.S. Lee, G.S. Mintz, N.J. Weissman, S.W. Kim, C.J. Kim, S.W. Cho, H.S. Ryou and T.H. Kim
- S4-2 Feasibility of tissue oxygen delivery index, a blood-viscosity-based new parameter for predicting outcome in peripheral arterial occlusive disease patients
D. Kim, D.J. Cho and Y.I. Cho
- S4-3 In vitro effects of propofol on RBC aggregation, RBC deformability and platelet aggregation
C.H. Lim, H.G. Chung, Y.H. Kim and S. Shin

S4-4 Hemorheological measurement system (Rheoscan) for medical use in diabetic angiopathy

J. Ha, S. Shin, J. Kim, Y. Lee, M.K. Kim, N.T. Woong, S.A. Kang, J. Park, B.K. Lee, C.W. Ahn and K.R. Kim

S4-5 Microfluidic measurements of hemorheological properties: Critical stress and yield stress

S. Shin, A. Karimi, H. Jeon, C.S. Lim, B.K. Lee, M. Jo and S.H. Song

S4-6 Critical Shear Stress in stabilized patients of acute coronary syndrome and stable angina

B.K. Lee, M. Jo, A. Karimi and S. Shin

14:00–15:30

Free Communications F2: HEMORHEOLOGY IN CLINICAL PRACTICE I

Room 3

Chairpersons: O.I. Ajayi / O. Yalcin

F2-1 Differential rheology of ABO blood group system

O.I. Ajayi, W.O. Usunobun and E. Ofovwe

F2-2 Alterations in hemocoagulation status in patients with deep vein thrombosis

A. Vardanyan, R. Mumladze, A. Badanyan, E. Roitman, D. Dolidze and M. Shieh

F2-3 The effects of blood storage on microhemodynamics

O. Yalcin, P.C. Johnson and P. Cabrales

F2-4 Hemorheological disturbances in patients with chronic myeloid neoplasms

P. Kenyeres, A. Miko, A. Toth, B. Sandor, R. Csalodi, O. Toth, Sz. Kosztolanyi, A. Szomor and A. Nagy

F2-5 Evidence of thrombotic tendencies in Nigerians on injectable contraceptives

W.O. Usunobun, J.E. Obarhua, B.C. Okereke and O.I. Ajayi

F2-6 Highly efficient localization of pathological gland(s) in primary hyperparathyroidism using contrast-enhanced ultrasonography (CEUS)

A. Agha, M. Hornung, C. Stroszczyński, H.J. Schlitt and E.M. Jung

15:30–15:45

Coffee Break

15:45–16:30

Plenary Lecture L3

Room 1

O.K. Baskurt: Contribution of erythrocytes to the regulation of tissue perfusion

Chairperson/laudation: L. Bogar

16:30–18:00

Poster Session

Chairpersons: B. Cooke / N. Nemeth

- P-1 Anti-irritant and anti-inflammatory effects of polyols in irritant contact dermatitis
E. Szel, G. Eros, P. Hartmann, I. Nemeth, D. Degovics, Cs. Korponyai, S. Dikstein, M. Boros, K. Nagy and L. Kemeny
- P-2 Investigation of erythrocyte aggregation properties of laboratory animal species by different methods: The importance of comparability and sensitivity
F. Kiss, Z. Klarik, E. Toth, K. Peto, I. Miko and N. Nemeth
- P-3 The effect of centrifugation at various forces on red blood cell micro-rheological properties of blood samples taken from laboratory animals
F. Kiss, Z. Klarik, E. Toth, E. Vanyolos and N. Nemeth
- P-4 Postocclusive reactive hyperaemia of skin microcirculation is altered in hyperthyroid patients
N. Bedernjak, K. Zaletel, S. Gaberscek and H. Lenasi
- P-5 Investigation of human red blood cell deformability and stability in males and females during a five-month research period
M. Grau, M. Kunkel, J. Wolf, N. Blameuser and W. Bloch
- P-6 Intraday blood rheological changes induced by Ramadan fasting in sickle cell trait carriers
M. Diaw, P. Connes, A. Samb, A.K. Sow, F.B. Sar, A. Ba, S. Diop, N.D. Sall, M.N. Niang and J. Tripette
- P-7 The effect of N',N-substituted piperazines on the adrenoactivity of the microcirculatory vessels
N. Petrishchev, I.A. Mikhailova and O.S. Veselkina
- P-8 Blood donation as a therapeutic exercise for lowering plasma lipids and improving hemorheology in Nigerians
B.C. Okereke, W.O. Usunobun and O.I. Ajayi
- P-9 Study of platelet hemostasis and inflammation markers in chronic diseases in children
O. Gordeeva, V. Botvinyeva, O. Simonova, M. Soloshenko and O. Petrova
- P-10 Intravital observation of capillary angiogenesis during wound healing under different ambient oxygen conditions
S. Kawamura and M. Shibata
- P-11 Endothelial dysfunction representing by elevated asymmetric and symmetric dimethylarginine in acute ischemic cerebrovascular events
T. Molnar, G. Pusch, B. Biri, L. Nagy, S. Keki and Z. Illes
- P-12 Type 2 diabetes: Acute effect of whole body vibration exercise on glycaemic control and hemorheology
T. Whitehouse, M. Climstein and M. Simmonds
- P-13 Influence of parenteral nutrition on blood rheology and platelet aggregation *in vitro*
W.H. Reinhart and S. Compagnoni
- P-14 Acetylsalicylic acid, but not metamizol elicits dose-dependent contraction of isolated rat carotid arteries
Z. Vamos, P. Cseplo, J. Papp, K. Toth and A. Koller

P-15 Ca²⁺-binding protein-S100B elicits concentration-dependent relaxation of rat cerebral arteries

Z. Vamos, P. Cseplo, J. Hamar, T. Molnar and A. Koller

P-16 Comparative evaluation of the effects of COX inhibitor drugs: Aspirin, Naproxen and Diclofenac on platelet aggregation induced by different inductors; an *in vitro* study

M. Kurthy, E. Ranczinger, E. Virag, Zs. Miklos, V. Kovacs, T. Nagy, P. Hardy, T. Veress, E. Roth and G. Jancso

17:00–18:00 **Clinical Hemorheology and Microcirculation Editorial Board meeting** Room 3

19:00 **Concert and Gala Dinner in Zsolnay Cultural Quarter**

Monday, 8 July 2013

08:30–09:30 **Fåhraeus Award Ceremony L4** Room 1

G.B. Nash: Cellular hemorheology: The importance of getting small cells through small gaps

Chairperson/laudation: W.H. Reinhart

09:30–09:45 **Coffee Break**

09:45–11:30 **Symposium S5: THE MECHANISMS OF CHANGES IN BLOOD CELL MICRORHEOLOGY AND MICROCIRCULATION: EXPERIMENTS AND CLINICS** Room 1

(Portuguese Society for Hemorheology and Microcirculation, Russian Society for Microcirculation and Hemorheology)

Chairpersons: C. Saldanha / I. Tikhomirova

S5-1 Signal transduction pathways in erythrocyte nitric oxide metabolism under high fibrinogen levels

C. Saldanha, J.P. Almeida and T. Freitas

S5-2 Hemorheological parameters profile in children with sickle cell disease
P. Napoleao, A. Calado, A. Morais, P. Faustino, A. Coelho, J. Lavinha and C. Saldanha

S5-3 Erythrocyte nitric oxide association with low grade inflammation

C. Saldanha, M.J. Santos, H. Canhao, L.M. Pedro, J.F. Fernandes, J.C. Silva and J.E. Fonseca

S5-4 The study of elements of red blood cell signaling cascades as molecular targets for control of cell microrheology

S. Bulaeva, A.V. Muravyov, M.J. Miloradov and E.V. Uzikova

S5-5 The role of microcirculation and red blood cell microrheology in tissue perfusion: The study on the muscular exercise model

A. Akhapkina, P.V. Mikhailov, A.A. Muravyov, A.V. Stankevich and A.V. Muravyov

S5-6 Regulation of peripheral blood flow in normals and in cardiac failure

A. Oslyakova and I. Tikhomirova

- 09:45–11:30 **Symposium S6: NOVEL VASCULAR MECHANISMS** Room 2
(European Society of Cardiology Working Group on Coronary Pathophysiology and Microcirculation)
 Chairpersons: A. Koller / L. Badimon
- S6-1 The role of ultra-large von Willebrand factor multimers in endothelial cell-platelet-leukocyte interaction
M. Hecker
- S6-2 Regulation of vascular tone and platelet aggregation through the NO/sGC pathway: Alterations enhance the risk of myocardial infarction
C. Wit, F. Kaiser, Z. Aherrahrou, D. Koesling, H. Schunkert and J. Erdmann
- S6-3 Coronary microvascular dysfunction in porcine models of coronary artery disease
D. Duncker, D. Merkus and O. Sorop
- S6-4 Thrombus formation and hemorheology: Computational fluid dynamics for modelling thrombus formation
L. Badimon, G. Mendieta, S. Cito and G. Vilahur
- S6-5 Regulation of wall shear stress in arterioles and venules: Rules and exceptions
A. Koller
- 09:45–11:30 **Free Communications F3: METHODOLOGY AND BASIC RESEARCH IN HEMORHEOLOGY** Room 3
 Chairpersons: M.R. Hardeman / B. Grzegorzewski
- F3-1 Red blood cell aggregate size determination by measurements of the intensity of the coherent component of the scattered light
B. Grzegorzewski, A. Szolna-Chodor, M. Bosek and A. Kempczynski
- F3-2 Aggregation of red blood cells – from rouleau to clot formation
C. Wagner, P. Steffen, M. Brust, O. Aouane, T. Podgorski, G. Coupier, C. Misbah, L. Kaestner and I. Bernhard
- F3-3 Factors influencing the determination of whole blood viscosity with the new LS 300 low shear rheometer
L. Gehm, P. Ruef, N. Kuss and J. Pöschl
- F3-4 The dependence of velocity on the size of RBC aggregate
M. Bosek, A. Kempczynski and B. Grzegorzewski
- F3-5 RBC-NOS dependent S-Nitrosylation of cytoskeletal proteins improves RBC deformability
M. Grau, S. Pauly, J. Ali, K. Walpurgis, M. Thevis, W. Bloch and F. Suhr
- F3-6 Experiences on teaching basics of hemorheology between 2003–2013 at the Department of Operative Techniques and Surgical Research in Debrecen, Hungary
N. Nemeth, I. Furka and I. Miko

- F3-7 Prototyping the experimental setup for the deformability evaluation of a single red cell and its preliminary study
T. Tsuzuki and N. Watanabe
- 11:45–12:30 **Plenary Lecture L5:** Room 1
H.H. Lipowsky: The role of cell deformability in entrapment and flow retardation in the microvasculature
Chairperson/laudation: Gerard B. Nash
- 12:30–14:00 **Lunch**
- 12:30–14:00 **ESCHM Advisory Board meeting** Room 2
- 14:00–15:30 **Symposium S7: CLINICAL MICROCIRCULATION** Room 1
(German Society for Clinical Microcirculation and Hemorheology)
Chairpersons: E.M. Jung / D. Clevert
- S7-1 Intraoperative contrast enhanced ultrasound (IO-CEUS) and color coded elastography (CCE) for characterization of liver lesion before surgical resection
E.M. Jung, J. Rennert, M. Loss, S. Farkas, C. Stroszczynski and A. Agha
- S7-2 Effects of CB2 receptor inhibition on LPS-induced changes within the intestinal microcirculation in CNS injury-induced immune deficiency syndrome
D. Austen, C. Lehmann, M. Kelly, J. Zhou, K. Wafa and G.S. Robertson
- S7-3 Detection of microvascularization of thyroid carcinomas using linear high resolution contrast-enhanced ultrasonography (CEUS)
M. Hornung, E.M. Jung, M. Georgieva, H.J. Schlitt, C. Stroszczynski and A. Agha
- S7-4 Evaluation of multimodality imaging using image fusion with ultrasound tissue elasticity imaging in an experimental animal model
P.M. Paprottka, P. Zengel, C.C. Cyran, M. Ingrisch, K. Nikolaou, M.F. Reiser and D. Clevert
- S7-5 Acute effects of hemodialysis on central venous pressure, augmentation index and subendocardial viability index
C. Thalhammer, M. Augustoni, M. Husmann, V. Jacomella, R. Clemens, B. Amann-Vesti and S. Seegerer
- S7-6 Value of compression elastography in characterisation of breast fibroadenoma
D. Rjosk-Dendorfer, M. Reiser and D. Clevert
- 14:00–15:30 **Symposium S8: BLOOD RHEOLOGY, FROM BENCH TO BEDSIDE. PART II: BLOOD RHEOLOGY CLOSER TO THE BEDSIDE** Room 2
(International Society for Clinical Haemorheology)
Chairpersons: B. Cooke / T. Alexy

- S8-1 Hemorheology in the pre-diabetic and diabetic states
M. Simmonds and N. Milne
- S8-2 Erythrocyte alterations during blood storage
W.H. Reinhart, S.A. Reinhart and T. Schulzki
- S8-3 Sickle cell disease and blood rheology
P. Connes, M.D. Hardy-Dessources, N. Lemonne, Y. Lamarre, X. Waltz, M. Etienne-Julan and M. Romana
- S8-4 Application of osmotic gradient ektacytometry in surgical research models
N. Nemeth, I. Furka, F. Kiss and I. Miko

15:30–15:45 **Coffee Break**

15:45–17:15 **Symposium S9 HEMORHEOLOGY AND MICROCIRCULATION IN ARTERIAL HYPERTENSION (Italian Society for Clinical Hemorheology and Microcirculation)** Room 1
Chairpersons: G. Caimi / S. Forconi

- S9-1 Changes in low frequency components in arteriolar oscillations in experimental hypertension
A. Colantuoni, D. Lapi, N. Starita, S. D'Avanzo and M.P. Fantozzi
- S9-2 Hemorheological abnormalities in human arterial hypertension
R. Lo Presti, E. Hopps and G. Caimi
- S9-3 Endothelial function in human arterial hypertension
T. Gori and S. Forconi
- S9-4 Microvascular dysfunction in hypertensive patients: Effects of antihypertensive treatment
M. Rossi

15:45–17:15 **Symposium S10: HEMORHEOLOGICAL CONSEQUENCES OF THERAPEUTICAL APPLICATIONS (Turkish Society for Hemorheology)** Room 2
Chairpersons: O.K. Baskurt / L. Bogar

- S10-1 Iatrogenic hyperviscosity and consequences
O.K. Baskurt and H.J. Meiselman
- S10-2 Anesthetics and red blood cell rheology
S. Aydogan
- S10-3 Serotonin, selective serotonin reuptake inhibitors and hemorheology
N.D. Falkmarken, O. Arihan, G. Ucar and S.Y. Ciftci
- S10-4 Artificial circulatory environment and blood mechanical trauma
O. Yalcin, H.J. Meiselman and O.K. Baskurt

18:30 **Departure for the social program in Villány Winery Region**

Tuesday, 9 July 2013

- 09:00–09:45 **Plenary lecture L6** Room 1
A.V. Muravyov: Hemorheology and microcirculation: The mechanisms of interaction and co-ordination
 Chairperson/laudation: N. Antonova
- 09:45–10:00 **Coffee Break**
- 10:00–12:00 **Symposium S11: MICRORHEOLOGY AND MICROCIRCULATION. FROM EXPERIMENTS TO CLINICS** Room 1
(Bulgarian Society of Biorheology, Scientific Society of Clinical Hemostasiology)
 Chairpersons: N. Antonova / I. Velcheva
- S11-1 Influence of polymeric nanoparticles on rheological and electrical properties of RBC suspensions
N. Antonova, N. Koseva, A. Kowalczyk, P. Riha and I. Ivanov
- S11-2 Skin hemodynamics and temperature oscillations in diabetic patients. Relation to blood rheology
I. Velcheva, Z. Stoyneva, N. Antonova, P. Damianov, V. Kostova and V. Dimitrova
- S11-3 Blood rheology in children with acute lymphoblastic leukemia in first remission after initial chemotherapy (pilot results)
E. Roitman, I. Kolesnikova, Y. Roumyantseva, L. Zharikova, M. Nureev, S. Roumyantsev, M. Andrianova and L. Ershova
- S11-4 Role of the hemorheological investigations in diagnostic and methodology. Electrorheological method
N. Antonova
- S11-5 Study of 3D blood flow and common carotid artery hemodynamics in the carotid artery bifurcation with stenosis
N. Antonova, P. Tosheva and I. Velcheva
- S11-6 Hemorheological changes in rats after sodium nitrite intoxication
I. Ivanov, Y. Gluhcheva, E. Petrova and N. Antonova
- S11-7 Influence of salinomycin and lead on some hematological parameters in female mice, subjected to subacute lead intoxication
Y. Gluhcheva, J. Ivanova, D. Dimova, I. Ivanov and E. Pavlova
- S11-8 Effect of sodium nitrite on some hematological and hemorheological parameters in mice
Y. Gluhcheva, I. Ivanov, E. Petrova, E. Pavlova and I. Vladov
- S11-9 Cobalt(II) compounds and mouse hematology – an in vivo study
Y. Gluhcheva, E. Pavlova, I. Vladov, V. Atanasov, I. Ivanov, J. Ivanova and M. Mitewa
- 10:00–12:00 **Panel Discussion S12: EPO or placEPO? Science versus practical experience?** Room 2
 Chairpersons: M.R. Hardeman / O.K. Baskurt

Introduction: *M.R. Hardeman*

- S12-1 Limits to human performance: Is there still room for improvement?
H. Kuipers
Presented by *M.R. Hardeman*
- S12-2 How recombinant human erythropoietin (rHuEPO) administration increases exercise performance?
P. Connes
- S12-3 Erythropoietin, optimal hematocrit, and microcirculation
F. Jung
- S12-4 The pros and cons of erythropoietin use in the clinical practice
T. Alexy

Conclusive remarks: *O.K. Baskurt*

10:00–12:00 **Free Communications F4: HEMORHEOLOGY IN CLINICAL PRACTICE II**
Chairpersons: *R. Adams / A.V. Muravyov*

Room 3

- F4-1 The effects of oxygen- and hydroxyproline-containing solutions on the healing of acute wounds
D. Degovics, G. Eros, P. Hartmann, K. Gati, I.B. Nemeth, M. Czobel, Cs. Korponyai, K. Nagy and L. Kemeny
- F4-2 Is metabolically healthy obesity also hemorheologically healthy?
J.F. Brun, E. Varlet-Marie, C. Fedou and E.R. Mauverger
- F4-3 Are overall adiposity and abdominal adiposity separate or redundant determinants of blood viscosity?
J.F. Brun, E. Varlet-Marie, E.R. Mauverger and C. Fedou
- F4-4 Assessment of blood perfusion as possible tool in differentiating between benign skin naevi and malignant melanomas
M. Rossi, A. Stefanovska, G.M. Vezzoni, M. Pesce, B. Loggini, F. Ghiara, G. Rossi, F. Pingitore and P. Barachini
- F4-5 Red blood cell distribution width (RDW) and MCHC as probes of target organ damage and inflammation component in newly diagnosed hypertension
M. Fornal, B. Wizner, M. Cwynar, J. Krolczyk, A. Kwater, R.A. Korbut and T. Grodzicki
- F4-6 Effect of glycated proteins on actin polymerisation in phagocytic leukocytes in type 2 diabetes
R. Adams, M. Melhuish, K. Morris, G. Sanki, J. Geen and O. Okosieme
- F4-7 Microrheological mechanisms of blood fluidity alterations under type II diabetes
S. Bulaeva, A.V. Muravyov and A.V. Zamishlayev

- F4-8 Peripheral endothelial function predicts the presence of coronary atherosclerosis but not that of inducible ischemia
S. Schafer, S. Muxel, A. Beutel, L. Himmrich, S.R. Bardeleben, J. Parker, S. Forconi, T. Munzel and T. Gori

12:00–13:00 **Lunch**

13:00–14:30 **Symposium S13: LEUKOCYTE INTERACTIONS AND THROMBOTIC PROCESSES ON THE ENDOTHELIAL SURFACE (International Society of Biorheology)** Room 1
 Chairpersons: M.B. Lawrence / H.H. Lipowsky

- S13-1 Inhibition of P-selectin and P2Y₁₂ receptors suppresses capture of flowing platelets by adherent monocytes
M.B. Lawrence, E.Y.H. Park, N. Brackett and A.R. Gear
- S13-2 Simulation of platelet, thrombus and erythrocyte hydrodynamic interactions in a 3D arteriole with in vivo comparison
M. King, W. Wang, T.G. Diacovo, J. Chen and J.B. Freund
- S13-3 Glycosyltransferases regulating human leukocyte adhesion to selectins
S. Neelamegham, N. Mondal and A. Buffone
- S13-4 Temporal and spatial cues that guide leukocyte emigration
S.I. Simon, N. Dixit and U. Schaff
- S13-5 Protease mediation of leukocyte-endothelium adhesion, alterations in glycocalyx structure, and thrombus formation in post-capillary venules
H.H. Lipowsky and A. Lescanic

13:00–14:30 **Symposium S14: HEMORHEOLOGICAL ALTERATIONS IN VARIOUS CARDIOVASCULAR DISEASES (Hungarian Society of Haemorheology)** Room 2
 Chairpersons: K. Toth / G. Kesmarky

- S14-1 Hemorheological parameters in ischemic heart disease
A. Toth, K. Totsimon, S. Szukits, E. Varady, B. Sandor, D. Botor, N. Vryzas, J. Papp, M. Rabai, P. Kenyeres, I. Juricskay, G. Kesmarky, I. Battyani, B. Sumegi and K. Toth
- S14-2 S14-2 Effect of physical activity in ischemic heart disease patients participating in a cardiological ambulatory rehabilitation program
B. Sandor, A. Toth, B. Mezey, M. Rabai, J. Papp, I. Juricskay, K. Toth and E. Szabados
- S14-3 Hemorheological characteristics of metabolic syndromes
L. Bajnok

S14-4 Peripheral vascular diseases: Role of hemorheological factors
*G. Kesmarky, B. Sandor, A. Toth, K. Biro, K. Koltai, J. Papp,
 M. Rabai and K. Toth*

13:00–14:30 **Free Communications F5: HEMORHEOLOGY AND VASCULAR
 FUNCTION** Room 3

Chairpersons: T. Gori / D. Kim

F5-1 Influence of non-Newtonian viscosity of blood on microvascular
 impairment

D. Kim, J.H. Moh, Y.I. Cho, D.J. Cho and R.K. Banerjee

F5-2 A three-dimensional stem cell culture system by polyurethane scaffold
 material

*N. Ma, K. Lutzow, K. Kratz, D. Furlani, W. Li, W. Wang, E. Pittermann,
 A. Neffe, T. Sauter, F. Jung and A. Lendlein*

F5-3 Following-up changes in red blood cell deformability and membrane
 stability in presence of PTFE graft implanted into the femoral artery
 in the canis

*N. Nemeth, Cs. Toth, F. Kiss, Z. Klarik, E. Gergely, E. Toth, K. Peto,
 E. Vanyolos and I. Miko*

F5-4 Circadian rhythms of macro and microvascular endothelial function

T. Gori, A.A. Shazly, M. Vosseler, S. Forconi and T. Munzel

F5-5 Elevated oxidative stress parameters are associated with impaired flow-
 mediated dilation

T. Gori, A. Beutel, S. Schafer, S. Muxel, B. Schnorbus and T. Munzel

F5-6 Correlation between changes in blood flow and endothelial vasomotor
 responses measured by flow-mediated constriction and dilation

*T. Gori, S. Muxel, S. Schafer, F. Fasola, A. Beutel, J.D. Parker and T.
 Munzel*

14:30–14:45 **Closing Remarks** Room 1