



BRITISH ATHEROSCLEROSIS SOCIETY

Medical Sciences Teaching Centre / Magdalen College • Oxford, UK

Organised by: BAS Committee

CPD approved – 8 credits

SPRING MEETING : 3 - 4 APRIL 2008 FINAL PROGRAMME

- ANGIOGENESIS AND ATHEROSCLEROSIS -

THURSDAY 3 APRIL:

09:30 Registration and Refreshments

10:00 Introduction and Welcome: *Professor Keith Channon*

Chairperson: Anna Randi

10:05-10:15 **ANGIOGENESIS IN ATHEROSCLEROSIS: THE BIG PICTURE**

Dr Anna M Randi

Clinical Senior Lecturer, BHF Cardiovascular Medicine Unit, Imperial College London, UK

Basic concepts of angiogenesis

10:15-10:40 **VEGF BIOLOGY IN HEALTH AND DISEASE**

Professor Lena Claesson-Welsh

Department of Genetics and Pathology, Uppsala University, SWEDEN

10:40-10:55 Discussion

10:55-11:20 **ANGIOGENESIS, A REGULATORY PARAMETER OF INFLAMMATION**

Professor Arjan Griffioen

Professor of Experimental Oncology & Angiogenesis, Angiogenesis Laboratory, University Hospital Maastricht, THE NETHERLANDS

11:20-11:35 Discussion

11:35-12:00 **ARTERIOGENESIS AND ANGIOGENESIS: DIFFERENCES AND SIMILARITIES**

Professor Wolfgang Schaper

Arteriogenesis Research Group, Max-Planck Institute for Heart & Lung Research, Bad Nauheim, GERMANY

12:00-12:15 Discussion

12:15-13:30 Lunch and Poster session

(offering an opportunity to discuss work with the authors. Please see the listing given on the back page)

Angiogenesis and atherosclerosis

Chairperson: Dorian Haskard

13:30-13:55 **THERAPEUTIC ANGIOGENESIS FOR ISCHAEMIC HEART DISEASE**

Professor Seppo Yla-Herttuala

Professor of Molecular Medicine, Department of Biotechnology and Molecular Medicine, A. I. Virtanen Institute, University of Kuopio, FINLAND

13:55-14:10 Discussion

14:10-14:35 **ANGIOGENESIS AS A SOURCE OF INTRAPLAQUE HAEMORRHAGE**

Dr Renu Virmani

President and Medical Director, CVPPath Institute Inc, Gaithersburg, USA

14:35-14:50 Discussion

14:50-15:00 Comfort break

Chairperson: *Chris Newman*

15:15-16:15 **Michael Davies Young Investigator Award Finalist presentations**

(The BAS gratefully acknowledges that this Award is made possible by a grant from the British Heart Foundation)

Judging Panel: Keith Channon; Jonathan Gibbins; Renu Virmani; Peter Weinberg; Seppo Yla-Herttuala

15:15-15:25 (1)
REDUCTION OF PLAQUE INSTABILITY BY SUPPRESSION OF VSMC APOPTOSIS WITH SOLUBLE N-CADHERIN

CA Beeching, JL Johnson, GB Sala-Newby, SJ George

Bristol Heart Institute, Level 7, Bristol Royal Infirmary, Bristol, UK

15:25-15:30 Discussion

15:30-15:40 (2)
THE ROLE OF ANGIOGENESIS IN ABDOMINAL AORTIC ANEURYSM RUPTURE

E Choke, GW Cockerill, J Dawson, F Howe, K Laing, IM Loftus, M Thompson

St George's, University of London, UK

15:40-15:45 Discussion

15:45-15:55 (3)
NEUROTROPHIN-3 (NT-3) PROMOTES REPARATIVE NEOVASCULARIZATION AND BLOOD FLOW RECOVERY IN A MOUSE MODEL OF LIMB ISCHAEMIA

B Cristofaro, A Caporali, M Meloni, GB Sala-Newby, LS Barcelos, P Madeddu, C Emanuelli

Bristol Heart Institute, University of Bristol, Bristol, UK

15:55-16:00 Discussion

16:00-16:10 (4)
HISTONE DEACETYLASE 7 IS ESSENTIAL FOR STEM CELL DIFFERENTIATION INTO SMOOTH MUSCLE CELLS

A Margariti, Q Xiao, A Zampetaki, Z Zhang, H Li, Y Hu, L Zeng, Q Xu

Cardiovascular Division, King's College London, London, UK

16:10-16:15 Discussion

16:15-16:25 (5)
MAP KINASE PHOSPHATASE-1 SUPPRESSES ENDOTHELIAL ACTIVATION IN REGIONS OF THE ARTERIAL TREE THAT ARE RESISTANT TO ATHEROSCLEROSIS

¹M Zakkar, ¹H Chaudhury, ²R Krams, ¹JC Mason, ³AR Clark, ¹DO Haskard, ¹PC Evans

¹BHF Cardiovascular Sciences Unit, ²Department of Bioengineering, ³The Kennedy Institute of Rheumatology, Imperial College London, UK

16:25-16:30 Discussion

16:30-16:45 Refreshment Break

Chairperson: *Keith Channon*

16:45-17:45 **ASTRAZENECA SPONSORED SYMPOSIUM**

Chairperson: *Keith Channon*

17:45-18:30 **JOHN FRENCH LECTURE:
NEW MECHANISMS FOR THE REGULATION OF PLATELET FUNCTION IN HAEMOSTASIS AND THROMBOSIS**

Professor Jonathan Gibbins

Professor of Cell Biology, Head of Biomolecular Sciences, School of Biological Sciences, University of Reading, UK

- 18:30 Meeting concludes – Day One
- 19:15 Drinks Reception – *Magdalen College*
- 19:45 Conference Dinner and announcement of the winner of the Michael Davies Young Investigator Award

FRIDAY 4 APRIL:

08:45 – 09:30 BAS Annual General Meeting

Chairperson: Sarah Jane George

09:30 – 10:45 **Free Communications**

09:30-09:40

(6)

THE TRANSCRIPTION FACTOR ERG REGULATES ANGIOGENESIS AND ENDOTHELIAL APOPTOSIS THROUGH VE-CADHERIN

*GM Birdsey¹, NH Dryden¹, V Amsellem¹, F Gebhardt², DO Haskard¹, E Dejana³, JC Mason¹, AM Randi¹
¹NHLI Cardiovascular Sciences, Imperial College London, Hammersmith Hospital, London, UK; ²Silence Therapeutics, Berlin, Germany; ³IFOM, Milan, Italy*

09:40-09:45

Discussion

09:45-09:55

(7)

XBP1 IS A KEY PROTEIN INDUCING ENDOTHELIAL CELL DEATH IN VIVO AND IN VITRO

*L Zeng, A Zampetaki, A Margariti, H Li, Z Zhang, Q Xiao, Y Hu, Q Xu
 Cardiovascular Division, King's College London, London, UK*

09:55-10:00

Discussion

10:00-10:10

(8)

ATM PROTECTS AGAINST ATHEROSCLEROSIS AND THE METABOLIC SYNDROME IN APOE MICE

*J Mercer, N Figg, A Vidal-Puig¹, J Griffin², M Bennett
 Division of Cardiovascular Medicine, Department of Medicine, ¹Department of Clinical Biochemistry, ²Department of Biochemistry, University of Cambridge, UK.*

10:10-10:15

Discussion

10:15-10:25

(9)

EFFECTS OF TISSUE INHIBITOR OF METALLOPROTEINASE (TIMP) DEFICIENCY ON MACROPHAGE INFILTRATION, PLAQUE STABILITY AND PSEUDO-ANEURYSMS

*JL Johnson, CL Jackson, AC Newby
 Bristol Heart Institute, University of Bristol, Bristol, UK*

10:25-10:30

Discussion

10:30-10:40

(10)

RAPID ENDOTHELIAL TURNOVER IN ATHEROSCLEROSIS-PRONE AREAS COINCIDES WITH STEM CELL REPAIR IN APOE-DEFICIENT MICE

*Y Hu, G Foteinos, Q Xiao, Q Xu
 Cardiovascular Division, King's College London, UK*

10:40-10:45

Discussion

10:45-11:15 Refreshment break

Translational aspects of angiogenesis in atherosclerosis

Chairperson: Qingbo Xu

11:15-11:35

CLINICAL IMPLICATIONS OF RE-DEFINING ENDOTHELIAL PROGENITOR CELLS BY STEM AND PROGENITOR CELL ANALYSIS

*Dr David Ingram
 Associate Professor Pediatrics and Biochemistry and Molecular Biology, Department of Paediatrics, Indiana University School of Medicine, Indianapolis, USA*

11:35-11:50

Discussion

- 11:50-12:10 **IMAGING ANGIOGENESIS IN PLAQUES**
Professor Gregory Lanza
Associate Professor of Medicine and Bioengineering, Department of Medicine, Division of Cardiology,
Washington University Medical School, St. Louis, MO, USA
- 12:10-12:25 Discussion
- 12:25-12:45 **SELECTIVE INHIBITION OF PATHOLOGIC ANGIOGENESIS IN ATHEROSCLEROSIS**
Dr Karen Moulton
Cardiology Division, University of Colorado Denver, USA
- 12:45-13:00 Discussion
- 13:00 Concluding Remarks: *Professor Keith Channon*
- 13:15 Close of Meeting and Lunch

Meeting Secretariat:

Wheldon Events & Conferences

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POSTERS

An opportunity exists during lunch on Thursday 3 April to discuss the posters with the abstract authors.

- 1 **SOUTH ASIAN ETHNICITY IS ASSOCIATED WITH MULTIPLE DEFECTS IN ENDOTHELIAL PROGENITOR CELL FUNCTION**
RM Cubbon (1), SB Wheatcroft (1), C Ferguson (2), S Murgatroyd (2), H Imrie (1), A Rajwani (1), A Abbas (1), M Kahn (1), KE Porter (1), MT Kearney (1).
(1) Leeds Institute of Genetics Health and Therapeutics, The University of Leeds, UK
(2) Institute of Membrane and Systems Biology, The University of Leeds, UK
- 2 **GENETIC VARIANTS LINKED TO CORONARY ARTERY DISEASE ARE NOT ASSOCIATED WITH CAROTID INTIMA-MEDIA THICKNESS OR INTERMEDIATE RISK MARKERS**
MS Cunnington¹, BM Mayos², DH Hall¹, PJ Avery¹, H Watkins³, B Keavney¹
¹University of Newcastle upon Tyne, UK; ²University of Cape Town, South Africa; ³University of Oxford, UK
- 3 **THE ROLE OF CXCR4A AND WASP IN ZEBRAFISH ARTERIOGENESIS**
C Gray, IM Packham, PW Ingham, DC Crossman, M Milo, TJA Chico
MRC Centre for Developmental and Biomedical Genetics, University of Sheffield, UK
- 4 **DISTURBANCE OF THE INSULIN-LIKE GROWTH FACTOR (IGF-1)/INSULIN SIGNALLING PATHWAY AS A RESULT OF DIETARY-INDUCED OBESITY LEADS TO METABOLIC AND VASCULAR IGF-1 RESISTANCE**
H Imrie, H Viswambharan, A Rajwani, A Abbas, RM Cubbon, C Gayle, SB Wheatcroft, MT Kearney
Division of Cardiovascular and Diabetes Research, LIGHT Laboratories, University of Leeds, UK
- 5 **DECAY-ACCELERATING FACTOR PLAYS A CRITICAL ATHEROPROTECTIVE ROLE IN LOW DENSITY LIPOPROTEIN DEFICIENT (LDLR-/-) MICE**
VWY Leung (1), S Yun (1), J Mason (1), W Song (3), M Botto (2), J Boyle (1), D Haskard(1)
(1) NHLI Cardiovascular Sciences, (2) Molecular Genetics & Rheumatology, Faculty of Medicine, Imperial College London, London, United Kingdom, (3) Institute for translational Medicine and Therapeutics, University of Pennsylvania School of Medicine, Philadelphia, USA
- 6 **LUPUS PHENOTYPE ACCELERATES ATHEROSCLEROSIS IN A NOVEL MOUSE MODEL OF SLE**
MJ Lewis¹, TH Malik¹, LM Fossati-Jimack¹, D Carassiti¹, TH Cook², DO Haskard³, M Botto¹
¹Rheumatology Section, ²Dept of Histopathology & ³BHF Cardiovascular Medicine Unit, Imperial College, Hammersmith Campus, London, UK
- 7 **CHEMOKINE RECEPTOR EXPRESSION IN ATHEROSCLEROSIS: A PUTATIVE ROLE FOR CCR2 IN ADVENTITIAL INFLAMMATION**
¹JE Lucas, ¹GM Turner, ²PJ Gough, ¹RM Rao, ¹DO Haskard
¹NHLI Cardiovascular Sciences, Imperial College, London, UK; ²GSK PLC, King of Prussia, USA
- 8 **PROTEOMIC CHARACTERIZATION OF CIRCULATING HUMAN VASCULAR PROGENITORS**
D Simper (1); U Mayr (2); C Urbich (3); A Zampetaki (2); M Prokopi (2); U Benbow (4); A Newby (4); S Rahman (2); S Dimmeler (3); Q Xu(2); M Mayr (2)
(1) Harrington Department of Bioengineering, Arizona State University, Tempe, USA; (2) Cardiovascular Division, King's College, London, UK; (3) Molecular Cardiology, Dept. of Internal Medicine, Frankfurt, D; (4) Bristol Heart Institute, University of Bristol, UK
- 9 **INVESTIGATION OF RELATIONSHIPS BETWEEN CIRCULATING ENDOTHELIAL PROGENITOR CELL NUMBERS, CARDIAC ALLOGRAFT VASCULOPATHY AND DONOR HEART AGE IN CARDIAC TRANSPLANT RECIPIENTS**
HE Thomas¹, G Parry², JD Dark¹, H M Arthur¹, BD Keavney¹
(1) University of Newcastle, Newcastle Upon Tyne, United Kingdom (2) Freeman Hospital, Newcastle Upon Tyne, UK
- 10 **COMMON TGFB3 AND LTBP4 HAPLOTYPES ARE ASSOCIATED WITH SLOWER AAA GROWTH**
AR Thompson 1,2, JA Cooper 1, S Druce 2, H Ashton 2, H Hafez 2, SE Humphries 1
1) Cardiovascular Genetics Department, UCL, UK
2) Vascular Surgery Department, Chichester, UK
- 11 **OVEREXPRESSION OF MOUSE INTERLEUKIN 4 OR 13 IN APOE-/- MICE REDUCES ATHEROSCLEROSIS**
S White, A Newby
Bristol Heart Institute, University of Bristol, Level 7 Bristol Royal Infirmary, Bristol, UK
- 12 **MMP-7 MEDIATES CLEAVAGE OF N-CADHERIN DURING SMOOTH MUSCLE CELL APOPTOSIS**
H Williams, SJ George
Bristol Heart Institute, University of Bristol, Bristol Royal Infirmary, Bristol, UK