# From the Vulnerable Plaque to the Vulnerable Patient

## Final Programme

(The organisers reserve the right to change the programme)

Organised by: **Professor Charalambos ANTONIADES** and **Dr Andrew SAGE**

Accreditation: **CPD to apply for**

### Thursday 6 September:

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<td>08:45 - 10:00</td>
<td>Registration, Refreshments and Exhibition</td>
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<td>10:00 - 10:10</td>
<td>Introduction and Welcome:</td>
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<td><strong>Professor Manuel MAYR</strong>, Chairman, BAS</td>
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<td>10:10 - 10:30</td>
<td><strong>Session 1: STUDYING THE MOLECULAR BASIS OF VULNERABLE PLAQUE</strong></td>
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<td>Chairpersons: <strong>Claudia MONACO, Helle JORGENSEN</strong></td>
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<td>10:10 - 10:30</td>
<td>Using transcriptomics to understand macrophage function in human atherosclerotic plaque</td>
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<td><strong>Robin CHOUDHURY</strong> (Oxford)</td>
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<td>10:30 - 10:40</td>
<td>Discussion</td>
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<td>10:40 - 11:00</td>
<td>Genome wide association studies: new lessons and new targets</td>
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<td><strong>Nilesh SAMANI</strong> (Leicester)</td>
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<td>11:00 - 11:10</td>
<td>Discussion</td>
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<td>11:40 - 12:00</td>
<td><strong>Session 1: STUDYING THE MOLECULAR BASIS OF VULNERABLE PLAQUE</strong></td>
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<td>Chairpersons: <strong>Andrew SAGE, Robin CHOUDHURY</strong></td>
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<td>11:40 - 12:00</td>
<td>Global Epigenetics of Atherosclerotic Smooth Muscle cells</td>
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<td><strong>Helle JORGENSEN</strong> (Cambridge)</td>
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<td>12:00 - 12:10</td>
<td>Discussion</td>
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<td>Macrophage transcriptomics in the study of unstable atherosclerotic plaque</td>
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<td><strong>Jason JOHNSON</strong> (Bristol)</td>
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<td>12:30 - 12:40</td>
<td>Discussion</td>
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<td>Lunch</td>
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<td>13:30 - 14:30</td>
<td><strong>Session 2: EARLY CAREER INVESTIGATOR AWARDS</strong></td>
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<td>Chairpersons: <strong>Tomasz Guzik, Nilesh SAMANI</strong></td>
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<td>13:30 - 14:00</td>
<td><strong>SINGLE CELL CHARACTERISATION OF ABDOMINAL AORTIC ANEURYSMS BY MASS CYTOMETRY (CYTOF) REVEALS A CHRONIC INFLAMMATORY CELL INFILTRATE PREDOMINATED BY T AND B CELLS</strong></td>
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LOSS OF AUTOPHAGY IN DENDRITIC CELLS PROMOTES CD4+ TREG EXPANSION AND LIMITS THE DEVELOPMENT OF ATHEROSCLEROSIS IN MICE.


From the Division of Cardiovascular Medicine (M.C., J.R., F.L., L.M., S.N., A.F., J.H., Z.M.) and Division of Gastroenterology and Hepatology (S.S., A.K.), University of Cambridge, Cambridge, UK, and Institut National de la Santé et de la Recherche Médicale, Universite Paris-Descartes, Paris Cardiovascular Research Center, and Université Paris-Descartes, Paris, France (Z.M.); Department of Vascular Surgery (F.L.) and Clinical Chemistry Laboratory (J.R.), University Hospital of Nice, and Université Côte d’Azur, Nice, France.

**13:55 – 14:00** Discussion

MMP12 INHIBITION PROTECTS AGAINST ABDOMINAL AORTIC ANEURYSM PROGRESSION


Laboratory of Cardiovascular Pathology, School of Clinical Sciences, Faculty of Health Sciences, University of Bristol, Bristol, UK

**14:10 – 14:15** Discussion

UNDERSTANDING THE ROLE OF INTERFERON REGULATORY FACTOR 8 ON ATHEROSCLEROSIS PROGRESSION

**Louie R.,** Gage M.C, Pineda-Torra I

Centre of Clinical Pharmacology and Therapeutics, Division of Medicine, Rayne Institute, University College London, 5 University Street, London, WC1E 6JF

**14:25 – 14:30** Discussion

THYMOSIN β4 MEDIATES VASCULAR PROTECTION VIA INTERACTION WITH LOW DENSITY LIPOPROTEIN RECEPTOR RELATED PROTEIN 1 (LRP1)

**S Munshaw**, S. Bruche, AN Redpath, J Patel, KN Dubel, KM. Channon & N Smart

1Department of Physiology, Anatomy & Genetics, University of Oxford, Sherrington Building, South Parks Road, Oxford OX1 3PT UK

2Division of Cardiovascular Medicine, University of Oxford, John Radcliffe Hospital, Oxford OX3 9DU, UK

**14:40 – 14:45** Discussion

TROPOELASTIN: A NOVEL IMAGING BIOMARKER FOR PLAQUE PROGRESSION AND INSTABILITY

**A. Phinikaridou**, S. Lacerda, B. Lavin, M.E. Andia, A. Smith, P. Saha, R.M. Botnar

1 School of Biomedical Engineering Imaging Sciences, King’s College London, London, UK.

2 BHF Centre of Excellence, Cardiovascular Division, King’s College London, London, UK.

3 Centre de Biophysique Moléculaire, CNRS, Orléans, France (current affiliation).

4 Radiology Department, School of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile.

5 Academic Department of Vascular Surgery, Cardiovascular Division, King’s College London, London, UK.

6 Wellcome Trust and EPSRC Medical Engineering Center, King’s College London, UK.

7 Pontificia Universidad Católica de Chile, Escuela de Ingeniería, Santiago, Chile.

**14:55 – 15:00** Discussion

**15:00 – 15:30** Refreshments and Exhibition

*Chairperson: Manuel MAYR*

**15:30 - 16:15** Hugh Sinclair LECTURE:

Scientific Bases of Health: Imaging, Omics and Behavior

**VALENTIN FUSTER** (Mount Sinai, New York)

**16:15 - 17.00** BAS AGM

**16:45 – 17:30** Short break

**17:30 - 20:00** Drinks Reception and Poster Session

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**P-1**

PERIVASCULAR ADIPOSE TISSUE-DERIVED WNT5A AS A REGULATOR OF HUMAN VASCULAR DISEASE PATHOGENESIS

Ioannis Akmounioulos, Fabio Sanna, Marios Margaritis, Laura Herdman, Alexis S Antonopoulos, Rana Sayeed, George Krasopoulos, Mario Petrou, Keith M Channon, Charalampos Antoniades

Cardiovascular Medicine Division, Level 6 West Wing, John Radcliffe Hospital, Headley Way, Headington, Oxford OX3 9DU

**P-2**

NOVEL ULTRASOUND IMAGING TECHNIQUES HELP CHARACTERIZE AND IDENTIFY THE VULNERABLE PLAQUE

F Al-mutairi, B Kanber, J Garrard, TC Hartshorne, TG Robinson, E Chung and KV Rammarine

1. Department of Cardiovascular Sciences, University of Leicester, Leicester, UK
P-3
PROTEIN ATLAS OF THE HUMAN VASCULAR EXTRACELLULAR MATRIX
F Boig1*, J Barallobre-Barreiro1, M Fava3, M Jahangiri2, M Mayr1
1 King’s British Heart Foundation Centre, King’s College London, London, UK
2 St George’s University of London, NHS Trust, United Kingdom

P-4
VALIDATION OF A NOVEL HUMAN EX-VIVO MODEL OF ANEURYSM TO SUPPLANT MOUSE MODELS
R Bianco9*, K Di Gregori, M Caputo, M Zakkar, SJ George, JL Johnson
Laboratory of Cardiovascular Pathology, Bristol Medical School, University of Bristol, Bristol, England

P-5
MODULATION OF THE ACTIN CYTOSKELETON IN MACROPHAGE PHENOTYPES DIFFERENTIALLY AFFECTS THEIR BEHAVIOUR
S. Boyajian, SJ. George, and JL. Johnson
Laboratory of Cardiovascular Pathology, School of Clinical Sciences, Faculty of Health Sciences, University of Bristol, Bristol, UK.

P-6
VASCULAR INFLAMMATION AS REVEALED BY MULTIPLEXED-PROTEOMICS IN AN LPS-DRIVEN ENDOOXEMIA MODEL
SA Burnage*, U Mayr3, A Joshi1; F Cuello9, MR Thomas1, I Sabroe1, RF Storey1, M Mayr1
1 King’s College London British Heart Foundation Centre, School of Cardiovascular Medicine and Sciences, London, United Kingdom.
2 Department of Experimental Pharmacology and Toxicology, Cardiovascular Research Centre, University Medical Centre Hamburg-Eppendorf, Martinistrasse 52, 20246, Hamburg, Germany.
3 University of Birmingham, Birmingham, United Kingdom
4 Department of Infection, Immunity and Cardiovascular Disease, University of Sheffield, United Kingdom

P-7
CONSEQUENCES OF TRIB3 DEFICIENCY ON EXPERIMENTAL ATHEROSCLEROSIS AND MACROPHAGE PHENOTYPE
Martinez Campesino, L1*; Johnston, JM; Francis, SE; Kiss-Toth E; Wilson, HL.
Department of Infection, Immunity & Cardiovascular Disease, Medical School, Beech Hill Road, University of Sheffield, UK.

P-8
ELUCIDATING THE MECHANOSENSITIVE RNA INTERACTOME IN ENDOTHELIAL CELLS IN VIVO
*KY Chooi9, R Nikolopoulou9, MB Patel9, F Savopoulos12,3, M Barnes9, R de Silva9, R Krauns2
School of Engineering and Materials Science, Queen Mary University of London
Department of Bioengineering, Imperial College London
National Heart and Lung Institute, Imperial College London
William Harvey Research Institute, Queen Mary University of London

P-9
VASCULAR SMOOTH MUSCLE CELL PLASTICITY IN DISSECTING AORTIC ANEURYSMS
From the Division of Cardiovascular Medicine, University of Cambridge, Cambridge, UK (M.C., J.C., I.R., F.L., A.L.T., A.F., J.H., M.R.B., H.F.J., Z.M.), and Institut National de la Santé et de la Recherche Médicale, Universite Paris-Descartes, Paris Cardiovascular Research Center, and Université Paris-Descartes, Paris, France (M.V., P.B., S.T., Z.M.); Department of Vascular Surgery (F.L.) and Clinical Chemistry Laboratory (J.R.), University Hospital of Nice, and Université Côte d’Azur, Nice, France.

P-10
UNCOVERING MYELOID CELL DIVERSITY IN ATHEROSCLEROSIS USING MASS CYTOMETRY
Jennifer E Cole*, Inhye Park1, David Ahern2, Lea Diib1, Christina Kassiteridi1, Dina Danso Abeam1, Michael Goddard1, Patricia Green1, Pasquale Moffa2,3, Claudia Monaco1
1 Kennedy Institute of Rheumatology, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford, Oxford, United Kingdom;
2 Centre for Immunobiology, Institute of Infection, Immunity and Inflammation, College of Medical, Veterinary and Life Sciences, University of Glasgow, Glasgow, United Kingdom;
3 Institute of Cardiovascular and Medical Sciences, College of Medical, Veterinary and Life Sciences, University of Glasgow, Glasgow, United Kingdom;
4 Department of Pharmacy, University of Naples Federico II, Naples, Italy.

P-11
LOSS OF KIAA1462, A CORONARY ARTERY DISEASE ASSOCIATED GENE, DECREASES ATHEROSCLEROSIS.
BHF Centre of Research Excellence, Division of Cardiovascular Medicine, John Radcliffe Hospital, University of Oxford, UK

P-12
INCREASING ENDOTHELIAL INSULIN-LIKE GROWTH FACTOR-1 RECEPTOR EXPRESSION REDUCES CIRCULATING LEUKOCYTES AND PROTECTS AGAINST ATHEROSCLEROSIS.
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CYCLIC-AMP DOWN REGULATES EPAC TRANSCRIPTION IN CARDIAC FIBROBLASTS VIA INHIBITION OF YAP-TEAD ACTIVITY. A NOVEL NEGATIVE FEEDBACK LOOP CONTROLLING CAMP SIGNALLING
*Reza Ebrahimian*, Andrew Newby and Mark Bond
Department of Translational Health Sciences, University of Bristol, Bristol, BS2 8HW

P-14
CAROTID Atherosoma inflammation is associated with disease severity in both Acute and chronic Cerebrovascular Disease
1. Department of Medicine, University of Cambridge, Cambridge, UK.
2. Department of Clinical Neurosciences, University of Cambridge, Cambridge, UK.
3. Department of Surgery, University of Cambridge, Cambridge, UK.

P-15
DEVELOPING NEW TARGETED MOLECULAR CONTRAST AGENTS FOR IMAGING INFLAMMATION OF VULNERABLE PLAQUES
1. Department of Chemistry, 2. Department of Bioengineering, 3. NHLU, Imperial College London, Exhibition Road, London, SW7 2AZ.
4. Department of Biomedical Engineering, The Rayne Institute, London, SE1 7EH.
5. Department of Engineering, QMUL, Mile End Road, London, E1 4NS

P-16
EFFECTS OF GADD34, GROWTH ARREST AND DNA DAMAGE-INDUCIBLE PROTEIN 34, ON Atherosclerosis and Post-Ishemic Cardiac Injury
*M. Takaoaka*, J. Harrison, Z. Mallat, and J. Goodall
University of Cambridge, Department of Medicine, Division of Cardiovascular Medicine. Cambridge, CB2 0SZ.

P-17
INCREASED EXPRESSION AND TRANSLLOCATION OF KRUPPEL-LIKE FACTOR 4 AND SMOOTH MUSCLE ALPHA ACTIN AFTER BEING SUBMITTED TO ACUTE SHEAR STRESS IN AN EX-VIVO MODEL
*Gustavo A. Guido*, Alex Ward, Vito D. Bruno, Prof. Sarah George, Rakesh Krishnadas, Prof. Gianni D. Angelini, and Mustafa Zakkar
University Hospitals Bristol NHS Foundation Trust, Bristol, UK.

P-18
HISTONE H3 LYSINE 9 DIMETHYLATION REGULATES GENE EXPRESSION CHANGES ASSOCIATED WITH VASCULAR SMOOTH MUSCLE CELL PHENOTYPIC SWITCHING
*Jennifer Harman*, Joel Chappell, Amanda Dalby, Martin R. Bennett, Helle F. Jørgensen.
1. Division of Cardiovascular Medicine, Department of Medicine, University of Cambridge, UK.
2. BHF Oxbridge Centre for Cardiovascular Research Excellence.

P-19
ANTIBODIES PREDICT CARDIOVASCULAR OUTCOMES AND NECROTIC CORE IN NORDIL AND IBIS-3 SUB-STUDIES
1. Erasmus Medical Centre (EMC), Rotterdam, the Netherlands
2. National Heart and Lung Institute, Imperial College, London, United Kingdom
3. Northwest clinics (NW2), Alkmaar, the Netherlands
4. Netherlands Heart Institute (NHI), Utrecht, the Netherlands
5. Department of Clinical Sciences, Malmö, Faculty of Medicine, Lund University, Clinical Research Center, Malmö, Sweden
6. Department of Cardiology, Skåne University Hospital, Malmö, Sweden

P-20
MICORRNA-214 IS A NOVEL PLAYER IN INFLAMMATORY SMOOTH MUSCLE CELL DIFFERENTIATION AND ANGIOPLASTY RESTENOSIS
*Shiping He*, 1,2, Qishan Chen1,3, Feng Yang1,3, Jiayong Chen1, Eithne Margaret Maguire1, Mei Yang1,3, Weiwei An1, Li Zhang3, Wen Wang2 and Qingzhong Xiao1
Clinical Pharmacology, William Harvey Research Institute, Barts and the London School of Medicine and Dentistry Queen Mary, University of London * William Harvey Heart Centre, Room: G23*
Charterhouse square, London, E1CM 6BQ

P-21
MYELOID TRIB1 PROMOTES EXPERIMENTAL Atherosclerosis
*Johnson, JH* a, Angyal, A* b, Bauer, R* c, Hamby, SE* d, Suvarna, SK* e, Baidalojevas, K* f, Hgedus, Z* f, Dear, NT* f, Turner, M* f, The Cardiogenics Consortium; Wilson, JL* g, Goodall, AH* g, Roder, DJ* g, Shoulders, CC* g, Francis, SE* g, Kiss-Toth, E*. b
1. Department of Infection, Immunity & Cardiovascular Disease, Medical School, Beech Hill Road, University of Sheffield, UK.
P-32
PRO- AND ANTI-INFLAMMATORY MACROPHAGES DISPLAY DIVERGENT POLARISATION TOWARDS VASCULAR SMOOTH MUSCLE-LIKE AND ENDOTHELIAL-LIKE PHENOTYPES.

MA. Mat Noh1, K. Di Gregoli, SJ. George, JL. Johnson
Laboratory of Cardiovascular Pathology, School of Clinical Sciences, Faculty of Health Sciences, University of Bristol, Bristol, UK.

P-33
CYCLIC-AMP INDUCED NUCLEAR ACTIN DYNAMICS DIVERGENTLY REGULATES PROLIFERATION AND MIGRATION OF VSMCs AND ECs

*Matthew S, White, G Sala-Newby, AC Newby, M Bond
Department of Translational Health Sciences, University of Bristol, U.K.

P-34
EARLY OVERNUTRITION IN RATS INDUCES ALTERATIONS IN THE CARDIOVASCULAR RESPONSE TO INSULIN IN ADULTHOOD

Guerrero-Menéndez L1*, Tejera-Muñoz A2, González-Hedström D2,3, Amor S2, Oltra B1, Diéguez G1, Paredes JA1, Arriazu R1, García-Villalón AL2, Granado M2
(1) Departamento de Ciencias Médicas Básicas, Universidad San Pablo-CEU
(2) Departamento de Fisiología, Facultad de Medicina, Universidad Autónoma de Madrid (UAM)
(3) Pharmactive Biotech Products SL, Parque Científico de Madrid

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MIR-103 PROMOTES ENDOTHELIAL MALADAPTATION AND Atherosclerosis BY TARGETING LNCWDR59

L Natorelli1*, C Geißler2, G Cao3, Y Wei4, M Zhu5, A di Francesco3, P Hartmann2, R Zimmer5, A Schöber1
1Institut für Prophylaxe und Epidemiologie der KreislaufkrankheitenExperimental Vascular Medicine (IPEK), Institute for Cardiovascular Prevention, Ludwig-Maximilians University Munich, Munich, Pettenkoferstrasse 9, 80336 Munich, Germany.
2Institute for Informatics, Ludwig-Maximilians University Munich, Oettingenstraße 67, 80538 Munich, Germany.
3Department of Cardiac, Thoracic and Vascular Sciences, University of Padova, Via Giustini, 2, 35128 Padova, Italy.

P-36
NON CYTOKINE MEDIATED ACTIVATION OF ILC2 IMPACTS Atherosclerosis PROGRESSION

Newland SA, Hufnagel A, Lam BYH, Ma M, Yeo GSH, Ugolini S and Mallat Z
University of Cambridge, Department of Cardiovascular Medicine, West Forvie Building, Forvie Site Robinson Way, Cambridge, CB2 0SZ

P-37
MIR-101-3P CONTROLS TRIB1 EXPRESSION IN HUMAN MACROPHAGES: A POTENTIAL TARGET IN Atherosclerotic PLAQUES

*C. Niespola1, J.S. Viloria2,3, O.V. Perez4, H. L. Wilson5, E. Kiss-Toth6
1Department of Infection, Immunity and Cardiovascular Diseases, University of Sheffield, United Kingdom
2Mind the Byte (formerly Intelligent Pharma), Barcelona, Spain
3University of Cambridge, Department of Infection, Immunity and Cardiovascular Diseases, University of Sheffield, United Kingdom
4Experimental Medicine and Immunotherapeutics, University of Cambridge, Cambridge, UK.
5MedImmune Ltd, Cambridge, UK.
6Maximilians University Munich, Munich, Pettenkoferstrasse 9, 80336 Munich, Germany.

P-38
THE APELIN-36 ANALOGUES N-58 AND N-140 ARE LIGANDS AT THE APELIN RECEPTOR

O Nizami1*, C Read2, P Yang3, RE Kuc1, MA Bednarek2, P Ambery2, L Jermutus2, JJ Maguire4, AP Davenport5
1Experimental Medicine and Immunotherapeutics, University of Cambridge, Cambridge, UK.
2MedImmune Ltd, Cambridge, UK.

P-39
PERIVASCULAR FAT IMAGING FOR UNSTABLE PLAQUE DETECTION AND PREDICTION OF CORONARY PLAQUE PROGRESSION

1Division of Cardiovascular Medicine, Radcliffe Department of Medicine, University of Oxford, United Kingdom.
2Cardiothoracic Directorate, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom.
3Department of Radiology, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom.

P-40
OXIDATION OF LDL BY FERRITIN IN LYSOSOMES INCREASES OXIDATIVE STRESS IN MACROPHAGES

O. O. Ojo* & D.S. Leake
School of Biological Sciences and Institute for Cardiovascular and Metabolic Research, University of Reading, Reading, Berkshire, RG6 6UB, United Kingdom

P-41
SAFETY OF MEN WITH SMALL AND MEDIUM ABDOMINAL AORTIC ANEURYSMS UNDER SURVEILLANCE IN THE NATIONAL HEALTH SERVICE SCREENING PROGRAMME

C. Oliver-Williams1,2*, M. Sweeting1,2, J. Jacomelli5, L. Summers5, A. Stevenson5, T. Lees5, J.J. Earnshaw4
1Cardiovascular Epidemiology Unit, Department of Public Health & Primary Care, University of Cambridge, Cambridge, CB1 8RN, UK
2Homerton College, University of Cambridge, Cambridge, CB2 8PH, UK
4Department of Health Sciences, University of Leicester, Leicester, LE1 7RH, UK
P-42
MATERNAL RISK OF FIFTEEN CARDIOVASCULAR OUTCOMES AFTER HYPERTENSIVE DISORDERS OF PREGNANCY
C Oliver-Williams1,2, D Stevens1, AM Wood2
1 Department of Public Health and Primary Care, University of Cambridge
2 Homerton College, University of Cambridge

P-43
INVESTIGATING THE ROLE OF DENDRITIC CELL IMMUNORECEPTOR 1 (DCIR1) IN VASCULAR MACROPHAGES USING MASS CYTOMETRY
I Park1, J Cole1, M Goddard1, D Ahern1, P Green1, C Monaco1
1 Kennedy Institute of Rheumatology, University of Oxford, Roosevelt Drive, Oxford, OX3 7FY

P-44
DOES MILD CORONARY ARTERY ATHEROSCLEROSIS PROGRESS AT SERIAL ANGIOGRAPHY?
Parker W1,2, Gosling R1,2, Churton A,3 Parviz Y,4 Iqbal J,4 Heppenstall J,4 Teare D,4 Gunn J1,2
Department of Infection, Immunity & Cardiovascular Disease, University of Sheffield Medical School, Sheffield, UK
Department of Cardiology, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, UK
University of Birmingham Medical School, Birmingham, UK
School of Health and Related Research, University of Sheffield, Sheffield, UK

P-45
QUANTITATIVE AND NONINVASIVE MRI of the ENDOTHELIAL PERMEABILITY AND FUNCTION IN CAROTID ATHEROSCLEROSIS
A Phnikaridou1,2,3, J Silikas1, B Lavin1,2, A Smith3, P Saha3, RM Botnar1,2,4,5
1 School of Biomedical Engineering Imaging Sciences, King’s College London, London, UK.
2 BHF Centre of Excellence, Cardiovascular Division, King’s College London, London, UK.
3 London, UK.
4 Academic Department of Vascular Surgery, Cardiovascular Division, King’s College London, London, UK.
5 Wellcome Trust and EPSRC Medical Engineering Centre, King’s College London, UK.
6 Pontificia Universidad Católica de Chile, Escuela de Ingeniería, Santiago, Chile.

P-46
ABSENCE OF INTERLEUKIN-1 RECEPTOR 2 LEADS TO STEADY-STATE IMMUNE DYSFUNCTION AND ACCELERATION OF ATHEROSCLEROSIS
K Pyrillou1,*, M Humphry1, L Burzynski1, AP Sage1, A Finigan1, MR Bennett1, Z Mallat1,2, MCH Clarke1
1 Division of Cardiovascular Medicine, University of Cambridge, Addenbrooke’s Centre of Clinical Investigation, Hills Road, CB2 0QQ
2 Institut National de la Santé et de la Recherche Médicale, Unité 970, Paris Cardiovascular Research Center, Paris, France

P-47
TGFß NEUTRALIZATION FINELY TUNES MACROPHAGE PHENOTYPE IN ELASTASE INDUCED ABDOMINAL AORTIC ANEURYSM
J Raffort1,2,3,4, F. Lareyre1,2,5, M. Clément2, C. Moratal2, E. Jean-Baptiste2,4, H. Hassane-Khodja4, F. Burel-Vandenbos6, P. Bruneval7, G. Chinetti3, Z. Mallat1,2
1 Division of Cardiovascular Medicine, Department of Medicine, University of Cambridge, Cambridge, UK, CB20 0SZ
2 Institut National de la Santé et de la Recherche Médicale (Inserm), Unité 970, Paris Cardiovascular Research Center, 75015 Paris, France
3 Department of Clinical Biochemistry, University Hospital of Nice, France
4 Université Côte d’Azur, CHU, Inserm U1065, C3M, CNRS, Nice, France
5 Department of Vascular Surgery, University Hospital of Nice, France
6 Department of Pathology, University Hospital of Nice, France.
7 Department of Pathology, Hôpital Européen Georges Pompidou, Assistance Publique-Hôpitaux de Paris, France.

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DIFFERENTIAL MICRO-RNA EXPRESSION IN DIABETIC PATIENTS WITH ABDOMINAL AORTIC ANEURYSM
J Raffort1,2,3,4, F. Lareyre1,2,5, M. Clément2, C. Moratal2, X. Loyer3, E. Jean-Baptiste4,5, R. Hassane-Khodja4, G. Chinetti3, Z. Mallat1,2
1 Division of Cardiovascular Medicine, Department of Medicine, University of Cambridge, Cambridge, UK, CB20 0SZ
2 Institut National de la Santé et de la Recherche Médicale (Inserm), Unité 970, Paris Cardiovascular Research Center, 75015 Paris, France
3 Department of Clinical Biochemistry, University Hospital of Nice, France
4 Université Côte d’Azur, CHU, Inserm U1065, C3M, CNRS, Nice, France
5 Department of Vascular Surgery, University Hospital of Nice, France

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TGFß BLOCKADE INDUCES A HUMAN-LIKE DISEASE IN A NON-DISSECTING MOUSE MODEL OF ABDOMINAL AORTIC ANEURYSM
F. Lareyre1,2, M. Clément1, J. Raffort1,2,3, S. Pohlad7, M. Putel7, B. Esposito1, L. Masters1, A. Finigan1, M. Vandestienne1, N. Stergioupolos3, S. Talebian7, B. Trachet7, Z. Mallat1,2
1 Division of Cardiovascular Medicine, University of Cambridge, Cambridge, UK, CB20 0SZ
2 Université Côte d’Azur, CHU, Inserm U1065, C3M, CNRS, Nice, France
3 Institut National de la Santé et de la Recherche Médicale, Paris Cardiovascular Research Center, 75015 Paris, France
P-50
EFFECTS OF PHARMACOLOGICAL INHIBITION OF SPHINGOSINE KINASE 1 ON CARDIOVASCULAR FUNCTION IN ANGIOTENSIN II-DEPENDENT HYPERTENSION IN VIVO
Józefczuk E, Nosalski R, Szczepaniak P, Guzik TJ, Siedlinski M.
1Department of Internal and Agricultural Medicine, Faculty of Medicine, Jagiellonian University Medical College, Kraków, Poland
2BHF Centre for Research Excellence, Institute of Cardiovascular and Medical Research (ICAMS), University of Glasgow, Glasgow, United Kingdom

P-51
IDENTIFICATION OF A NOVEL YAP:TEAD INTERACTION INHIBITOR THAT DIFFERENTIALLY REGULATES PROLIFERATION AND MIGRATION IN VSMCs AND ECS
Sarah Smith, Richard B Sessions, Deborah Schoemark, Christopher Williams, Madeleine Smith, Matthew Crump, Andrew Newby, Mark Bond
(1) School of Translational Health Sciences, Faculty of Health, University of Bristol, Research Floor Level 7, Bristol Royal Infirmary, Bristol BS2 8HW.
(2) School of Biochemistry, Faculty of Biomedical Sciences, Biomedical Sciences Building, University of Bristol, Bristol, BS8 1TD.
(3) School of Chemistry, Cantock’s Close, University of Bristol, Bristol, BS8 1TS.

P-52
68Ga-DOTATATE PET IDENTIFIES MYOCARDIAL INFLAMMATION AND BONE MARROW MONOCYTE MOBILISATION AFTER MYOCARDIAL INFARCTION
JM Tarkin*, EPV Le, C Calcagno, MR Dweck, NR Evans, MM Chowdhury, DE Newby, ZA Fayad, MR Bennett, JHF Rudd
1Division of Cardiovascular Medicine, University of Cambridge
2National Heart & Lung Institute, Imperial College London
3Translational & Molecular Imaging Institute and Department of Radiology, Icahn School of Medicine at Mount Sinai, New York
4British Heart Foundation Centre for Cardiovascular Science, University of Edinburgh
5Department of Clinical Neurosciences, University of Cambridge
6Department of Vascular and Endovascular Surgery, Addenbrooke’s Hospital, Cambridge

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VARIATION OF VON-WILLEBRAND FACTOR EXPRESSION IN THE ENDOTHELIUM OF HUMAN CORONARY ATHEROSCLEROTIC PLAQUES: IMPLICATIONS FOR THROMBOSIS
U Tarvala*, RN Poston
1Barts and The London School of Medicine, London, UK
2William Harvey Research Institute, London, UK

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SINGLE CELL PROFILING REVEALS SCA1-POSITIVE VASCULAR SMOOTH MUSCLE CELLS IN HEALTHY AND DISEASED VESSELS
A.L. Taylor*, L. Dobnikar*, J. Chappell†, J. Harman†, M.R. Bennett†, M. Spivakov†, H.F. Jørgensen
1Cardiovascular Medicine Division, Department of Medicine, University of Cambridge, UK.
2Nuclear Dynamics ISP, Babraham Institute, Cambridge, UK.
3Gene Control Group, Epigenetics Section, MRC London Institute of Medical Sciences, UK.
*Equal contribution from both authors.

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LOCALISED CORONARY ARTERY INFLAMMATORY BIOMARKER EXPRESSION DOES NOT CORRELATE WITH SYSTEMIC ELEVATION OF BIOMARKERS OR hsCRP
Department of Interventional Cardiology, Royal Papworth Hospital, Cambridge; PlaqueTec Ltd., Cambridge; Department of Cardiovascular Medicine, University of Cambridge.

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NRF2-MEDITATED UPREGULATION OF OSGIN1 AND OSGIN2 TRIGGERS CELL DETACHMENT THROUGH DYSREGULATED AUTOPHAGY – A POTENTIAL MECHANISM FOR ENDOTHELIAL EROSION OVERLYING STENOTIC PLAQUES
Sandra Satta*, Michael Mcelroy†, Georgina Hazell†, Jack Teasdale, Graciela Solo-Newby†, Jason Johnson†, Frank Gijsen†, Tom Johnson†, Yvonne Alexander†, Amir Kesmiri†, Andrew Newby‡ & Stephen White†
1School of Healthcare Sciences, Manchester Metropolitan University, Manchester M1 5GD, UK.
2School of Mechanical, Aerospace and Civil Engineering, University of Manchester, Manchester M13 9PL, UK.
3School of Clinical Sciences, University of Bristol, Bristol Royal Infirmary, Bristol, BS2 8HW, UK.
4Department of Biomedical Engineering, Erasmus Medical Center, Rotterdam, The Netherlands

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MINING 13,000 GENOMES TO CHARACTERISE RARE APELIN RECEPTOR MUTATIONS IN DISEASE
TL Williams*, RE Kuc*, D Nyiman*, E Read†, RGC Macrae†, P Yang†, R Glen†, S Graf†, NW Morrell†, H Currinn†, J Brown†, A Brown†, JJ Maguire†, AP Davenport†.
1EMIT, University of Cambridge, Cambridge, UK, CB2 0QQ
2Department of Medicine, University of Cambridge, Cambridge, UK, CB2 0QQ
3NIHR BioResource, Cambridge Biomedical Campus, Cambridge, UK, CB2 0QQ
4Heptares Therapeutics, Broadwater Road, Welwyn Garden City, UK, AL7 3AX
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TISSUE RESIDENT ILC2 ARE ACTIVATED FOLLOWING ISCHEMIA AND REGULATE HEART FUNCTION AFTER ACUTE MYOCARDIAL INFARCTION
Yu X*, Newland S, Lu YN, Harrison J, Mallat Z
Department of Medicine, University of Cambridge, The West Forvie Building, Robinson Way, Cambridge, CB2 0SZ, UK.

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FLUID-STRUCTURE INTERACTION MODELLING FOR ANALYSING ADVANCED CORONARY ATHEROSCLEROTIC PLAQUE FORMATION IN TRANSGENIC HYPERLIPIDAEMIC MINIPIGS
a. National Heart & Lung Institute, Imperial College London, Guy Scaddung Building, Cale Street, London, SW3 6LY, United Kingdom
b. Harefield NHS Foundation Trust, Level 2 Chelsea Wing, Sydney Street, London, SW3 6NP, United Kingdom
c. Mechanical and Materials Engineering, University of Nebraska-Lincoln, Lincoln, NE 68588-0526, United States
d. School of Engineering and Materials Science, Queen Mary University of London, Mile End Road, London, E1 4NS, United Kingdom

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GLYCOPROTEOMIC ANALYSIS OF THE AORTIC EXTRACELLULAR MATRIX IN PATIENTS WITH MARFAN SYNDROME
X Yin*, S Wangoa, A Fellows1, J Barallobre-Barreiro1, R Lu1, R Frankena, P Skroblina, Q Xing1, DR Koolbergenb, M Groeninkc, AH Zwinderma, R Balm1, CJM de Vries1, BIM Muldera, R Viner1, M Jahangiria, V de Waard2, M Mayria
1 King’s British Heart Foundation Centre, King’s College London, London, UK
2 Department of Medical Biochemistry, Amsterdam UMC, location Academic Medical Center, Amsterdam, The Netherlands
3 Department of Cardiology, Amsterdam UMC, location Academic Medical Center, Amsterdam, The Netherlands
4 Department of Cardiothoracic Surgery, Amsterdam UMC, location Academic Medical Center, Amsterdam, The Netherlands
5 Department of Radiology, Amsterdam UMC, location Academic Medical Center, Amsterdam, The Netherlands
6 Department of Clinical Epidemiology, Biostatistics & Bioinformatics, Amsterdam UMC, location Academic Medical Center, Amsterdam, The Netherlands
7 Department of Surgery, Amsterdam UMC, location Academic Medical Center, Amsterdam, The Netherlands
8 Netherlands Heart Institute, Utrecht, The Netherlands
9 Thermo Fisher Scientific, San Jose, USA
10 St George’s, University of London, London, UK

FRIDAY 7 SEPTEMBER:

07:00 - 08:00  Breakfast  Cripps Dining Hall
07:30 – 08:30  BAS Committee meeting  Angevin Room
08:45 – 10:00  Registration, Refreshments and Exhibition  Fitzpatrick Foyer

Session 3: IDENTIFYING AND IMAGING VULNERABLE PLAQUES  Fitzpatrick Hall

Session sponsored by: Cardiovascular Research

Chairpersons: Charalambos ANTONIADES, Ziad MALLAT

09:00 - 09:20  Discovering new biomarkers to detect the vulnerable plaque
Keith CHANNON (Oxford)

09:20 - 09:30  Discussion

09:30 - 09:50  Molecular imaging of atherosclerotic plaques: Detecting unstable lesions
Zahi A. FAYAD (New York)

09:50 - 10:00  Discussion

10:00 - 10:20  Detecting unstable plaques in humans
P. Yang* (Oxford)

10:20 - 10:30  Discussion

10:30 - 11:00  Refreshments and Exhibition  Conservatory
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<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker</th>
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<tr>
<td>11:00 - 11:30</td>
<td>Targeting PCSK-9: Implications for basic science and upcoming challenges</td>
<td>Kausik RAY (London)</td>
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<td>11:30 - 11:40</td>
<td>Discussion</td>
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<td>11:40 - 12:10</td>
<td>Current Approaches to Target Cardiovascular Inflammation</td>
<td>Ziad MALLAT (Cambridge)</td>
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<td>12:10 - 12:20</td>
<td>Discussion</td>
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<tr>
<td>12:20 - 12:50</td>
<td>Futile targeting of HDL-cholesterol: More to be learnt on structure, functions, and metabolism of HDL</td>
<td>Arnold VON ECKARDSTEIN (Zurich)</td>
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<td>12:50 - 13:00</td>
<td>Discussion</td>
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<td>13:00 - 13:10</td>
<td>Concluding remarks</td>
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<td>13:10 - 13:45</td>
<td>Olink Biomarker Symposium</td>
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<td>13:45 - 15:15</td>
<td>Olink sponsored lunch</td>
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<td>13:45</td>
<td>Introduction</td>
<td>Manuel MAYR (London)</td>
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<td>13:45 – 14:20</td>
<td>Screening for new biomarkers in patients with CAD</td>
<td>Lars Wallentin (Uppsala)</td>
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<td>14:20 – 14:35</td>
<td>Q&amp;A</td>
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<td>14:35 – 14:50</td>
<td>Olink: Protein Biomarker discovery and development</td>
<td>Xavier Tait (Uppsala)</td>
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<td>14:50 – 15:00</td>
<td>Q&amp;A</td>
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<td>15:00 – 15:15</td>
<td>Discussion</td>
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<td>15:15</td>
<td>Meeting close and departure</td>
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