# ANNUAL MEETING 2018
Queen's College • Cambridge, UK
Thursday 6 – Friday 7 September

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:

<table>
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<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
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<tbody>
<tr>
<td>08:00 - 09:00</td>
<td>Breakfast (Queens residents only)</td>
<td>Cripps Dining Hall</td>
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<tr>
<td>08:45 - 10:00</td>
<td>Registration</td>
<td>Fitzpatrick Foyer</td>
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<tr>
<td>08:45 - 10:00</td>
<td>Refreshments and Exhibition</td>
<td>Conservatory</td>
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<tr>
<td>10:00 - 10:10</td>
<td>Introduction and Welcome:</td>
<td>Fitzpatrick Hall</td>
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<td>Professor Manuel MAYR, Chairman, BAS</td>
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### Session 1: STUDYING THE MOLECULAR BASIS OF VULNERABLE PLAQUE

**Chairpersons:** Claudia MONACO, Helle JORGENSEN

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<tr>
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<tr>
<td>10:10 - 10:30</td>
<td>Macrophage transcriptomics in the study of unstable atherosclerotic plaque</td>
<td>Fitzpatrick Hall</td>
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<td>Robin CHOUDHURY (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>
<td>Conservatory</td>
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<td>Nilesh SAMANI (Leicester)</td>
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<td>11:00 - 11:10</td>
<td>Discussion</td>
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<tr>
<td>11:10 - 11:40</td>
<td>Refreshments and Exhibition</td>
<td>Conservatory</td>
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### Session 1: STUDYING THE MOLECULAR BASIS OF VULNERABLE PLAQUE

**Chairpersons:** Andrew SAGE, Robin CHOUDHURY

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<tr>
<th>Time</th>
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<tr>
<td>11:40 - 12:00</td>
<td>Global Epigenetics of Atherosclerotic Smooth Muscle cells</td>
<td>Fitzpatrick Hall</td>
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<td></td>
<td>Helle JORGENSEN (Cambridge)</td>
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<td>12:00 - 12:10</td>
<td>Discussion</td>
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<td>12:10 - 12:30</td>
<td>Matrix Metalloproteinase regulation of vulnerable plaques</td>
<td>Cripps Dining Hall</td>
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<td>Jason JOHNSON (Bristol)</td>
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<td>12:30 - 12:40</td>
<td>Discussion</td>
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<td>12:40 - 13:30</td>
<td>Lunch</td>
<td>Cripps Dining Hall</td>
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### Session 2: EARLY CAREER INVESTIGATOR AWARDS

**Chairpersons:** Tomasz Guzik, Nilesh SAMANI

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<tr>
<td>13:30 - 15:00</td>
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SINGLE CELL CHARACTERISATION OF ABDOMINAL AORTIC ANEURYSMS BY MASS CYTOMETRY (CYTOF) REVEALS A CHRONIC INFLAMMATORY CELL INFILTRATE PREDOMINATED BY T AND B CELLS

Ismail Cassimjee, Regent Lee, David Ahern, Patricia Green, Inhye Park, Ashok Handa, Claudia Monaco
- On behalf of the Oxford Abdominal Aortic Aneurysm study investigators
Nuffield Department of Surgical Sciences, University of Oxford, John Radcliffe Hospital, OX39DU

13:40 – 13:45 Discussion

13:45 – 13:55

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

14:00 – 14:10

MMP12 INHIBITION PROTECTS AGAINST ABDOMINAL AORTIC ANEURYSM PROGRESSION

K. Di Gregoli*, SJ. George, V. Dive and J. Johnson
Laboratory of Cardiovascular Pathology, School of Clinical Sciences, Faculty of Health Sciences, University of Bristol, Bristol, UK

14:10 – 14:15 Discussion

14:15 – 14:25

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

14:30 – 14:40

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

S Munshaw*, S Bruche1, AN Redpath, J Patel, KN Dubé, KM. Channon2 & N Smart1
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

14:45 – 15:00

TROPOELASTIN: A NOVEL IMAGING BIOMARKER FOR PLAQUE PROGRESSION AND INSTABILITY

A. Phinikaridou1,2*, S. Lacerda1,2,3*, B. Lavin1,2,3, M.E. Andia, MD4, A. Smith5, P. Saha,5, R.M. Botnar3,6,7
1School of Biomedical Engineering Imaging Sciences, King’s College London, London, UK.
2BHF Centre of Excellence, Cardiovascular Division, King’s College London, London, UK.
3Centre de Biophysique Moléculaire, CNRS, Orléans, France (current affiliation).
4Radiology Department, School of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile.
5Academic Department of Vascular Surgery, Cardiovascular Division, King’s College London, London, UK.
6Wellcome Trust and EPSRC Medical Engineering Center, King’s College London, UK.
7Pontificia Universidad Católica de Chile, Escuela de Ingeniería, Santiago, Chile.

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

17:00 – 17:30 Short break

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

P-1

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

Ioannis Akoumianakis, Fabio Sonna, Marios Margaritis, Laura Herdman, Alexis S Antonopoulos, Rana Sayeed, George Krasopoulou, Mario Petrou, Keith M Channon, Charalambos 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 Almutairi*, B Kanber1, J Garrard1, TC Hartshorne1, TG Robinson1, E Chung1 and KV Ramnarine1,2
1. Department of Cardiovascular Sciences, University of Leicester, Leicester, UK
2. Department of Medical Physics, University Hospitals of Leicester NHS Trust, Leicester, UK
3. Department of Vascular and Endovascular Surgery, University Hospitals of Leicester NHS Trust, Leicester, UK

P-3

PROTEIN ATLAS OF THE HUMAN VASCULAR EXTRACELLULAR MATRIX
F Boe1,2, J Barallobre-Barreiro1, M Fava1, M Jahangiri2, M Mayr*
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 Bianco*, 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 ENDOXEMIA MODEL
SA Burnap*, U Mayr*, A Joshi1; F Cuellol, MR Thomas1, J Sabroe1, RF Storey*, M Mayr1.
1. Department of Experimental Pharmacology and Toxicology, Cardiovascular Research Centre, University Medical Centre Hamburg-Eppendorf, Martinistrasse 52, 20246, Hamburg, Germany.
2. University of Birmingham, Birmingham, United Kingdom
3. 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, L1,2, Johnston, JM1, 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 Chooi, R Nikolopoulos1, MB Patel1, F Savopoulos2,3, M Barnes4, R de Silva4, R Krams4.
1. School of Engineering and Materials Science, Queen Mary University of London
2. Department of Bioengineering, Imperial College London
3. National Heart and Lung Institute, Imperial College London
4. 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., J.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 Ahern1, Lea Dib2, Christina Kassiteridi1, Dina Danso Abeam2, Michael Goddard1, Patricia Green1, Pasquale Maffia1,4, 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
M Orrego1,2, NY Yuldasheva2, A Maqbool2, H Viswambharan1, NT Watt1, V Polin1, S Galloway2, A Skromna1, N Makava1, SB Wheatcroft1, MT Kearney1, RM Cubbon1
1Leeds Institute for Cardiovascular and Metabolic Medicine, LIGHT Laboratories, University of Leeds, UK

P-13
CYCLIC-AMP DOWN REGULATES EPAC TRANSCRIPTION IN CARDIAC FIBROBLASTS VIA INHIBITION OF YAP-TEAD ACTIVITY. A NOVEL NEGATIVE FEEDBACK LOOP CONTROLLING CAMP SIGNALLING
*Reza Ebrahimighazi, Andrew Newby and Mark Bond
Department of Translational Health Sciences, University of Bristol, Bristol, BS2 8HW

P-14
CELL SURFACE INTERLEUKIN-1α, WHICH DRIVES THE SENESCENCE-ASSOCIATED SECRETORY PHENOTYPE (SASP), IS TETHERED VIA IL-1R2 OR GPI-ANCHORED
J.H. Chan1, M. Humphry, K.A. Wiggins, C.C. Burzynski, M.C. Clarke
Division of Cardiovascular Medicine, Department of Medicine, Addenbrooke’s Centre for Clinical Investigation, University of Cambridge.

P-15
CAROTID Atherosoma INFLAMMATION IS ASSOCIATED WITH DISEASE SEVERITY IN BOTH ACUTE AND CHRONIC CEREBROVASCULAR DISEASE
NR Evans1,2,*, J.M. Tarkin1, N. Walsh1, MM Chowdhury1, HS Markus2, JHF Rudd1, EA Warburton2.
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-16
DEVELOPING NEW TARGETED MOLECULAR CONTRAST AGENTS FOR IMAGING INFLAMMATION OF VULNERABLE PLAQUES
R. J. Evans1,2,*, J. Hernandez-Gil1, Z. Mohri1, K.Y. Chooi1,2, B. Lavin-Plaza1, A. Phinikaridou1, J.E. Pease1, R. Krams3, R. Botnar4, N.J. Long1
1Department of Chemistry, 2Department of Bioengineering, 3NHU, Imperial College London, Exhibition Road, London, SW7 2AZ, 4Department of Biomedical Engineering, The Rayne Institute, London, SE1 7EH, 5Department of Engineering, QMUL, Mile End Road, London, E1 4NS

P-17
EFFECTS OF GADD34, GROWTH ARREST AND DNA DAMAGE-INDUCIBLE PROTEIN 34, ON ATHEROSCLEROSIS AND POST-ISCHEMIC CARDIAC INJURY
M. Takaoka, J. Harrison, Z. Mallat, and J. Goodall
University of Cambridge, Department of Medicine, Division of Cardiovascular Medicine. Cambridge. CB2 0SZ.

P-18
INCREASED EXPRESSION AND TRANSLOCATION OF KRUPPEL-LIKE FACTOR 4 AND SMOOTH MUSCLE ALPHA ACTIN AFTER BEING SUBMITTED TO ACUTE SHEAR STRESS IN AN EX-VIVO MODEL
*Gustavo A Guida, Alex Ward, Vito D Bruno, Prof. Sarah George, Rakesh Krishnadass, Prof. Gianni D Angelini, and Mustafa Zakkar
University Hospitals Bristol NHS Foundation Trust, Bristol, UK.
Bristol Heart Institute, University of Bristol, Bristol, UK.

P-19
HISTONE H3 LYSINE 9 DIMETHYLATION REGULATES GENE EXPRESSION CHANGES ASSOCIATED WITH VASCULAR SMOOTH MUSCLE CELL PHENOTYPIC SWITCHING
Jennifer Harman1,2,*, Joel Chappell3, Amanda Dalby1, Martin R. Bennet1, Helle F. Jørgensen1,2,3
1Division of Cardiovascular Medicine, Department of Medicine, University of Cambridge, UK. 2BHF Oxbridge Centre for Cardiovascular Research Excellence.

P-20
ANTIBODIES PREDICT CARDIOVASCULAR OUTCOMES AND NECROTIC CORE IN NORDIL AND IBIS-3 SUB-STUDIES
VI van den Berg1,*, DO Haskard2, A Fedorowski3, A Hartley4,*, I Kardys3, MC Anon4, KM Akkerhuis4, RM Oemrawsingh4, RJ van Geuns5, P de Jaegere5, N van Mieghem5, E. Regar6, JMR Ligthart7, VAWM Umans5, PW Serruys8, O Melaender9, E Boersma1,*, RJ Khambadkone1
1Joint first authors  $ Joint senior authors
a) Erasmus Medical Centre (EMC), Rotterdam, the Netherlands
b) National Heart and Lung Institute, Imperial College, London, United Kingdom
c) Northwest Clinics (NW2), Alkmaar, the Netherlands
d) Netherlands Heart Institute (NHI), Utrecht, the Netherlands
P-21
MIRCO RNA-214 IS A NOVEL PLAYER IN INFLAMMATORY SMOOTH MUSCLE CELL DIFFERENTIATION AND ANGIOPLASTY RESTENOSIS
Shinya He1,2, 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-22
MYELOID TRIB1 PROMOTES EXPERIMENTAL ATHEROSCLEROSIS
Johnston, JM*; Angyal, A*; Bauer, R*; Hambry, SE*; Suvarna, SK*; Baidajievas, K*; Hegedus, Z*; Dear, NT*; Turner, M*, The Cardiogenics Consortium; Wilson, HL*; Goodall, AH*; Rader, DJ*; Shoulders, CC*; Francis, SE*; Kiss-Toth, E*.
1 Department of Infection, Immunity & Cardiovascular Disease, Medical School, Beech Hill Road, University of Sheffield, UK.
2 Division of Cardiology, Dept. of Cardiovascular Medicine, Columbia University Medical Center, USA
3 Department of Cardiovascular Sciences, University of Leicester and NIHR Cardiovascular Biomedical Research Unit, Glenfield Hospital, Leicester, UK.
4 Institute of Biophysics, Hungarian Academy of Sciences, Szeged & Departments of Biochemistry and Medicinal Chemistry, University of Pecs, Medical School, Hungary.
5 Department of Medicine, University of London, UK.
6 Laboratory of Lymphocyte Signalling and Development, The Babraham Institute, Babraham Research Campus, Cambridge, UK.
7 Perelman School of Medicine at the University of Pennsylvania and Children’s Hospital of Philadelphia, Smilow Center for Translational Research, Philadelphia, USA
8 Centre for Endocrinology, William Harvey Institute, Queen Mary University of London, UK.

P-23
TRIGLYCERIDE-CONTAINING LIPOPROTEIN SUB-FRACTIONS AND CORONARY HEART DISEASE AND STROKE RISK

P-24
KNOCKOUT OF AUTOTAXIN IN ENDOTHELIAL CELLS REDUCES ATHEROSCLEROSIS IN HYPERLIPIDEMIC MICE
Elis Karshovska*, Rokia Mohibullah, Farima Zahedi, Dominique Thomas, Nerea Ferreiros, Vassilis Aidinis, Andreas Schober EK, RM, FZ, AS - Institute for Cardiovascular Prevention, Ludwig-Maximilians-University, Munich, Germany
DT, NF - Institute of Clinical Pharmacology, Johann Wolfgang Goethe-University, Frankfurt, Germany
VA - Division of Immunology, Biomedical Science Research, Center Alexander Fleming, Athens, Greece

P-25
HUMAN MACROPHAGE SUBSETS IN THE PATHOGENESIS OF CAROTID ATHEROSCLEROSIS
K. Kocy 1, 2 *; R. Alqurashi 1*; J. M. Johnston 1; A. Majid 2; H. L. Wilson 1; E. Kiss-Toth 1; J. Redgrave 2; S. E. Francis 1
1 Department of Infection, Immunity & Cardiovascular Disease, University of Sheffield (Beech Hill Road, Sheffield, S10 2RX)
2 Department of Neuroscience (NIHR BRC Translational Neuroscience), University of Sheffield (385a Glossop Road, Sheffield, S10 2HQ)

P-26
METABOLICALLY HEALTHY OBESE INDIVIDUALS PRESENT A DISTINCT EPICARDIAL FAT PHENOTYPE AND LOW MYOCARDIAL OXIDATIVE STRESS
C. Kotanidis*, A. Antonopoulos1, L. Herdman1, S. Thomas1, I. Akoumianakis1, K. Thomas1, E. Oikonomou1, K Psarros1, R Sayeed2, C. Antoniades2
1 Division of Cardiovascular Medicine, Radcliffe Department of Medicine, University of Oxford, United Kingdom.
2 Cardiothoracic Directorate, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom.

P-27
FOCAL VASCULAR INJURY CAUSES SUSTAINED REMOTE ENDOTHELIAL DYSFUNCTION AND ATHEROSCLEROTIC PLAQUE PROGRESSION: AN IN VIVO MURINE MRI STUDY
B. Lavín*, A. Phinikaridou1, M.E. Andia2, K. Rashid2, M. Potter1, R.M. Botnar1,2
1 School of Biomedical Engineering and Imaging Sciences, King’s College London, UK.
2 Radiology Department & Biomedical Imaging Centre, Pontificia Universidad Católica de Chile

P-28
PRAVASTATIN AND MINOCYCLINE TREATMENT AFFECTS VESSEL WALL REMODELING IN A MURINE MODEL OF VASCULAR INJURY
B. Lavín*, A. Phinikaridou1, M.E. Andia2, J. Rashid2, M. Potter1, René M. Botnar1,2
1 School of Biomedical Engineering and Imaging Sciences, King’s College London, UK.
2 Radiology Department & Biomedical Imaging Centre, Pontificia Universidad Católica de Chile
P-29  
THE OMEGA 3 POLYUNSATURATED FATTY ACID, EICOSAPENTAENOIC ACID INHIBITS FOAM CELL FORMATION AND SECRETION OF PRO-INFLAMMATORY MEDIATORS  
Lezama DR*, Chimien M, Iqbal AJ and Rainger GE  
Institute of Cardiovascular Sciences, The College of Medicine and Dentistry, The University of Birmingham, Birmingham, B15 2TT.

P-30  
ERYTHROCYTE-DERIVED INTERLEUKIN-33 INSTRUCTS THE SPECIFICATION OF IRON-RECYCLING MACROPHAGES  
Department of Medicine, Division of Cardiovascular Medicine, University of Cambridge, West Forvie Building, Forvie Site, Robinson Way, Cambridge CB2 0SZ, UK.

P-31  
LOSS OF ADAMTS-5 ACCELERATES ATHEROSCLEROSIS IN APOE−/− MICE  
M. Lynch *, U Mayr, F Boig, R Lu, J Barallobre-Barreiro, P Skroblin, Manuel Mayr  
King’s College London British Heart Foundation Centre, School of Cardiovascular Medicine and Sciences, 125 Coldharbour Lane, London, SES 9NU, UK.

P-32  
ACCELERATED ATHEROSCLEROSIS AND MYOCARDIAL INJURY IN PEOPLE LIVING WITH HIV  
Dr G Manmathan, Mr A Hunter, Prof Johnson, Dr R Rakhit  
(1)The Ian Charleson Day Centre, Royal Free Hospital, Pond Street, London NW3 2QG.

P-33  
PRO-AND ANTI-INFLAMMATORY MACROPHAGES DISPLAY DIVERGENT POLARISATION TOWARDS VASCULAR SMOOTH MUSCLE-LIKE AND ENDOTHELIAL-LIKE PHENOTYPES.  
MA. Mat Noh, 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-34  
CYCLIC-AMP INDUCED NUCLEAR ACTIN DYNAMICS DIVERGENTLY REGULATES PROLIFERATION AND MIGRATION OF VSMCs AND ECs  
*M. McNeill, S White, G Sala-Newby, AC Newby, M Bond  
Department of Translational Health Sciences, University of Bristol, U.K.

P-35  
EARLY OVERNUTRITION IN RATS INDUCES ALTERATIONS IN THE CARDIOVASCULAR RESPONSE TO INSULIN IN ADULTHOOD  
Guerra-Menéndez L**, Tejera-Muñoz A*, González-Hedström D**, Amor S1, Oltra B1, Diéguez G1, Paredes JA1, Arriazu R1, García-Villalón AL2, Granado MA2  
(1) Departamento de Ciencias Médicas Básicas, Universidad San Pablo-CEU  
(2) Departamento de Fisiología, Facultad de Medicina, Universidad Autónoma de Madrid (UAM)  

P-36  
IL-1B IS PROCESSED BUT NOT SECRETED BY VASCULAR SMOOTH MUSCLE CELLS  
M A Morales-Maldonado*, M Humphry, SL Gardner, MCH Clarke  
Cardiovascular Medicine Division, Department of Medicine, University of Cambridge, Box 110 ACCI, Addenbrooke’s Hospital, Cambridge, CB2 0QQ, UK.

P-37  
MIR-103 PROMOTES ENDOTHELIAL MALADAPTATION AND ATHEROSCLEROSIS BY TARGETING LNCDWR59  
L Natorelli**, C Geißler, G Csaba1, Y Wei1, M Zhu1, A di Francesco1, P Hartmann1, R Zimmer1, A Schober1  
1 Institut für Prophylaxe und Epidemiologie der KreislaufkrankheitenExperimental Vascular Medicine (IPEK), Institute for Cardiovascular Prevention, Ludwig-Maximilians University Munich, Munich, Pettenkoferstrasse 9, 80336 Munich, Germany.  
2 Institute for Informatics, Ludwig-Maximilians University Munich, Oettingenstraße 67, 80538 Munich, Germany.  
3 Department of Cardiac, Thoracic and Vascular Sciences, University of Padova, Via Giustiniani 2, 35128 Padova, Italy.

P-38  
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-39  
MIR-101-3P CONTROLS TRIB1 EXPRESSION IN HUMAN MACROPHAGES: A POTENTIAL TARGET IN ATHEROSCLEROTIC PLAQUES  
*C. Niespola*, J.S. Viloria1,2, O.V. Perez2, H. L. Wilson1, E. Kiss-Toth1  
1 Department of Infection, Immunity and Cardiovascular Diseases, University of Sheffield, United Kingdom  
2 Mind the Byte (formerly Intelligent Pharma), Barcelona, Spain  
3 University of Barcelona, Spain.
P-40  PERIVASCULAR FAT IMAGING FOR UNSTABLE PLAQUE DETECTION AND PREDICTION OF CORONARY PLAQUE PROGRESSION
G. Chinetti, J. Raffort, TGFβ NEUTRALIZATION FINELY TUNES MACROPHAGE PHENOTYPE IN ELASTASE INDUCED ABDOMINAL AORTIC ANEURYSM
1 Division of Cardiovascular Medicine, Radcliffe Department of Medicine, University of Oxford, United Kingdom.
2 Cardiothoracic Directorate, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom.
3 Department of Radiology, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom.

P-41  OXIDATION OF LDL BY FERRITIN IN LYOSOMES INCREASES OXIDATIVE STRESS IN MACROPHAGES
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-42  INVESTIGATING THE ROLE OF DENDRITIC CELL IMMUNORECEPTOR 1 (DCIR1) IN VASCULAR MACROPHAGES USING MASS Cytometry
I. Park, J. Cole, M. Goddard, D. Ahern, P. Green, C. Monaco
*Kennedy Institute of Rheumatology, University of Oxford, Roosevelt Drive, Oxford, OX3 7FY

P-43  DOES MILD CORONARY ARTERY ATHEROSCLEROSIS PROGRESS AT SERIAL ANGIOGRAPHY?
1 Department of Infection, Immunity & Cardiovascular Disease, University of Sheffield Medical School, Sheffield, UK
2 Department of Cardiology, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, UK
3 University of Birmingham Medical School, Birmingham, UK
4 School of Health and Related Research, University of Sheffield, Sheffield, UK
5 University of Reading, Reading, Berkshire, RG6 6UB, United Kingdom

P-44  QUANTITATIVE AND NONINVASIVE MRI of the ENDOTHELIAL PERMEABILITY AND FUNCTION IN CAROTID ATHEROSCLEROSIS
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 Center, King’s College London, UK.
6 Pontificia Universidad Católica de Chile, Escuela de Ingeniería, Santiago, Chile.

P-45  ABSENCE OF INTERLEUKIN-1 RECEPTOR 2 LEADS TO STEADY-STATE IMMUNE DYSFUNCTION AND ACCELERATION OF ATHEROSCLEROSIS
K. Pyrillou, M. Humphry, L. Burzynski, A. Finigan, MR. Bennett, Z. Mallat, MCH Clarke
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, Unit 970, Paris Cardiovascular Research Center, Paris, France

P-46  TGFβ NEUTRALIZATION FINELY TUNES MACROPHAGE PHENOTYPE IN ELASTASE INDUCED ABDOMINAL AORTIC ANEURYSM
1 Division of Cardiovascular Medicine, Department of Medicine, University of Cambridge, Cambridge, UK, CB20 5Z
2 Institut National de la Santé et de la Recherche Médicale (Inserm), Unit 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, Nice, France
5 Department of Vascular Surgery, University Hospital of Nice, France

P-47  DIFFERENTIAL MICRO-RNA EXPRESSION IN DIABETIC PATIENTS WITH ABDOMINAL AORTIC ANEURYSM
1 Division of Cardiovascular Medicine, Department of Medicine, University of Cambridge, Cambridge, UK, CB20 5Z
2 Institut National de la Santé et de la Recherche Médicale (Inserm), Unit 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, Nice, France
5 Department of Vascular Surgery, University Hospital of Nice, France
P-48
TGFβ BLOCKADE INDUCES A HUMAN-LIKE DISEASE IN A NON-DISSECTING MOUSE MODEL OF ABDOMINAL AORTIC ANEURYSM
F. Larrey1,2, M. Clément1, J. Raffort1,2,3, S. Pohloď1, M. Patel1, B. Esposito1, L. Masters1, A. Finigan1, M. Vandestienne1, N. Stergiopulos1,2, S. Teletz1, B. Trachet1,2, Z. Mallat1,2
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3Institut National de la Santé et de la Recherche Médicale, Paris Cardiovascular Research Center, 75015 Paris, France
4Institute of Bioengineering, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland
5IBiTech - bioMMea, Ghent University, Ghent, Belgium

P-49
EFFECTS OF PHARMACOLOGICAL INHIBITION OF SPHINGOSINE KINASE 1 ON CARDIOVASCULAR FUNCTION IN ANGIOTENSIN II-DEPENDENT HYPERTENSION IN VIVO
Józefczuk E1, Nosalski R2,3, Szczepaniak P1, Guzik TJ1,2, Siedlinski M4,*
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-50
IDENTIFICATION OF A NOVEL YAP:TEAD INTERACTION INHIBITOR THAT DIFFERENTIALLY REGULATES PROLIFERATION AND MIGRATION IN VSMCs AND ECS
Sarah Smith1, Richard B Sessions2, Deborah Schoemark2, Christopher Williams2, Madeleine Smith2, Matthew Crump2, Andrew Newby1, Mark Bond3
1School of Translational Health Sciences, Faculty of Health, University of Bristol, Research Floor Level 7, Bristol Royal Infirmary, Bristol BS2 8HW.
2School of Chemistry, Cantock’s Close, University of Bristol, Bristol, BS8 1TD.
3School of Healthcare Sciences, Manchester Metropolitan University, Manchester M13 9PL, UK.

P-51
18Ga-DOTATATE PET IDENTIFIES MYOCARDIAL INFLAMMATION AND BONE MARROW MONOCYTE MOBILISATION AFTER MYOCARDIAL INFARCTION
JMH Tarkin1,2,3, EVP Le1, C Calcagno1, MR Dweck1, NR Evans2, MM Chowdhury3, DE Newby1, ZA Fayed2, MR Bennett1, JHF Rudd1
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, USA
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, UK

P-52
VARIATION OF VON-WILLEBRAND FACTOR EXPRESSION IN THE ENDOTHELIUM OF HUMAN CORONARY ATHEROSCLEROTIC PLAQUES: IMPLICATIONS FOR THROMBOSIS
U Tarvala1,*; RN Poston2
1Barts and The London School of Medicine, London, UK
2William Harvey Research Institute, London, UK

P-53
SINGLE CELL PROFILING REVEALS SCA1-POSITIVE VASCULAR SMOOTH MUSCLE CELLS IN HEALTHY AND DISEASED VESSELS
A.L. Taylor1,2, L. Dobnikar3,4, J. Chappell1, J. Harman2, M.R.Bennett1, M. Spivakov4, J.H. Jørgensen4
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.
4Equal contribution from both authors.

P-54
LOCALISED CORONARY ARTERY INFLAMMATORY BIOMARKER EXPRESSION DOES NOT CORRELATE WITH SYSTEMIC ELEVATION OF BIOMARKERS OR hsCRP
Nick F E West1, Joseph P. Corrigan2, Adam J. Brown2, Richard H.G. Owen2, Stephen P. Hoole2, Diane Proudfoot2, Stephen Blatcher2
Department of Interventional Cardiology, Royal Papworth Hospital, Cambridge; PlaqueTec Ltd., Cambridge; Department of Cardiovascular Medicine, University of Cambridge.

P-55
NRF2-MEDIATED UPREGULATION OF OSGIN1 AND OSGIN2 TRIGGERS CELL DETACHMENT THROUGH DYSREGULATED AUTOPHagy – A POTENTIAL MECHANISM FOR ENDOTHELIAL EROSION OVERLYING STENOTIC PLAQUES
Sandro Satta1, Michael Mcelroy2, Georgina Hazel2, Jack Teasdale3, Graciela Sala-Newby4, Jason Johnson1, Frank Gijsen5, Tom Johnson1, Yvonne Alexander1, Amir Kesmir1, Andrew Newby1 & Stephen White6
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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
P-56 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.

P-57 FLUID-STRUCTURE INTERACTION MODELLING FOR ANALYSING ADVANCED CORONARY ATHEROSCLEROTIC PLAQUE FORMATION IN TRANSGENIC HYPERLIPIDAEMIC MINIPIGS
a. National Heart & Lung Institute, Imperial College London, Guy Scadding 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

P-58 GLYCOPROTEOMIC ANALYSIS OF THE AORTIC EXTRACELLULAR MATRIX IN PATIENTS WITH MARFAN SYNDROME
X Yin*, S Wang, A Fellows, J Barallobre-Barreiro, R Lu, R Franken, M Fava, P Skroblin, Q Xing, DR Koolbergen, M Groenink, AH Zwinderman, R Balm, CLM de Vries, BIM Mulder, R Viner, M Jahangiri
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 - 08:30 Breakfast (Queens residents only) Cripps Dining Hall
07:30 – 08:00 BAS Committee meeting Angevin Room
08:00 – 09:00 Registration Fitzpatrick Foyer
08:30 – 09:00 Refreshments and Exhibition Conservatory

Session 3: IDENTIFYING AND IMAGING VULNERABLE PLAQUES
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 The immune system as a target for high definition imaging of atherosclerosis
Zahi A. FAYAD (New York)

09:50 - 10:00 Discussion

10:00 - 10:20 Detecting unstable plaques in humans
David NEWBY (Edinburgh)

10:20 - 10:30 Discussion
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<tr>
<th>Time</th>
<th>Session Details</th>
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<tr>
<td>10:30 - 11:00</td>
<td>Refreshments and Exhibition</td>
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<td><strong>Session 4: TREATING VULNERABLE PATIENTS</strong></td>
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<td><strong>Chairpersons:</strong> Jason JOHNSON, Keith CHANNON</td>
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<td>11:00 - 11:30</td>
<td><strong>Targeting PCSK-9: Implications for basic science and upcoming challenges</strong></td>
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<td><em>Kausik RAY</em> (London)</td>
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<td>11:30 - 11:40</td>
<td><strong>Discussion</strong></td>
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<td>11:40 - 12:10</td>
<td><strong>Current approaches to target cardiovascular inflammation</strong></td>
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<td><em>Ziad MALLAT</em> (Cambridge)</td>
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<td>12:10 - 12:20</td>
<td><strong>Discussion</strong></td>
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<td>12:20 - 12:50</td>
<td><strong>Futile targeting of HDL-cholesterol: More to be learnt on structure, functions, and metabolism of HDL</strong></td>
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<td><em>Arnold VON ECKARDSTEIN</em> (Zurich)</td>
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<td>12:50 - 13:00</td>
<td><strong>Discussion</strong></td>
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<td>13:10 - 13:45</td>
<td><strong>Olink sponsored lunch</strong></td>
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<td>13:45 - 15:15</td>
<td><strong>Olink Biomarker Symposium</strong></td>
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<td><strong>Introduction</strong></td>
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<td><em>Manuel MAYR</em> (London)</td>
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<td>13:45 – 14:20</td>
<td><strong>Screening for new biomarkers in patients with CAD</strong></td>
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<td><em>Lars WALLENTIN</em> (Uppsala)</td>
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<td>14:20 – 14:35</td>
<td><strong>Q&amp;A</strong></td>
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<td>14:35 – 14:50</td>
<td><strong>Olink: Protein Biomarker discovery and development</strong></td>
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<td><em>Xavier TAIT</em> (Uppsala)</td>
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<td>14:50 – 15:00</td>
<td><strong>Q&amp;A</strong></td>
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<td>15:00 – 15:15</td>
<td><strong>Discussion</strong></td>
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<td><strong>Meeting close and departure</strong></td>
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