



Controversies in Cardiovascular Medicine

- FINAL PROGRAMME -

(the organisers reserve the right to change the programme)

ORGANISED BY: [Professor Claudia MONACO](#) & [Professor Manuel MAYR](#)

ACCREDITATION: CPD approved (10 credits)

THURSDAY 26 SEPTEMBER:

08:00 - 09:00	Breakfast (<i>College residents only</i>)
08:45 - 10:00	Registration
08:45 - 10:00	Refreshments and Exhibition
10:00 - 10:10	Introduction and Welcome: Manuel MAYR , Chairman, BAS

SESSION 1: NOVEL INSIGHTS FROM LARGE BIOBANKS

Chairpersons: [Charalambos ANTONIADES](#) (Oxford), [Sheila FRANCIS](#) (Sheffield)

10:10 - 10:30	UK Biobank: creative problems Rory COLLINS (Oxford, UK)
10:30 - 10:40	Discussion
10:40 - 11:00	Supporting cardiovascular drug development through human genomics Aroon HINGORANI (London, UK)
11:00 - 11:10	Discussion
11:10 - 11:40	Refreshments and Exhibition

SESSION 1: CULPRIT CELLS IN ATHEROSCLEROTIC PLAQUES

Chairpersons: [Andrew SAGE](#) (Cambridge), [Claudia MONACO](#) (Oxford)

11:40 - 12:00	Vascular smooth muscle cell plasticity in atherosclerosis Martin BENNETT (Cambridge, UK)
12:00 - 12:10	Discussion
12:10 - 12:30	Extravasation of immune cells: Role of neutrophils in atherosclerosis Oliver SOEHNLEIN (Munich, GERMANY)
12:30 - 12:40	Discussion
12:40 - 13:45	Lunch and Exhibition

SESSION 2: EARLY CAREER INVESTIGATOR AWARDS

Chairpersons: [Tomasz GUZIK](#) (Glasgow), [Manuel MAYR](#) (London)

13:45 - 14:00	Introduction Tomasz GUZIK (Glasgow)
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14:00 – 14:10	1 A NOVEL HUMAN EX-VIVO MODEL OF ANEURYSM FORMATION AND PROGRESSION R Bianco [*] , K Di Gregoli, M Caputo, M Zakkar, SJ George, JL Johnson <i>Laboratory of Cardiovascular Pathology, Bristol Medical School, University of Bristol, Bristol, UK</i>
14:10 – 14:15	Discussion
14:15 – 14:25	2 A MULTI-OMICS APPROACH TO UNDERSTANDING HIGH-DENSITY LIPOPROTEIN FUNCTIONALITY IN CARDIOVASCULAR DISEASE SA Burnap ^{1*} , A Joshi ¹ , K Theofilatos ¹ , F Baig ¹ , X Yin ¹ , SE Berry ² , W Hall ² , J Willeit ³ , S Kiechl ³ , B Levkau ⁴ , M Mayr ¹ . ¹ <i>King's College London British Heart Foundation Centre, School of Cardiovascular Medicine and Sciences, London, UK</i> ² <i>Diabetes and Nutritional Sciences Division, King's College London, Franklin-Wilkins Building, London, UK</i> ³ <i>Department of Neurology, Medical University of Innsbruck, AUSTRIA</i> ⁴ <i>Institute for Pathophysiology, Westdeutsches Herz- und Gefäßzentrum, Universitätsklinikum Essen, Essen, GERMANY</i>
14:25 – 14:30	Discussion
14:30 – 14:40	3 INVESTIGATING AORTIC EXTRACELLULAR MATRIX TURNOVER BY LRP1-THYMOSIN B4-MEDIATED ENDOCYTOSIS S Munshaw ^{*1} , AN Redpath ¹ , J Patel ² , KM. Channon ² & N Smart ¹ ¹ <i>Department of Physiology, Anatomy & Genetics, University of Oxford, Sherrington Building, South Parks Road, Oxford OX1 3PT UK</i> ² <i>Division of Cardiovascular Medicine, University of Oxford, John Radcliffe Hospital, Oxford OX3 9DU, UK</i>
14:40 – 14:45	Discussion
14:45 – 14:55	4 C-TYPE LECTIN RECEPTOR DCIR1 CONTROLS HOMEOSTASIS OF TISSUE RESIDENT MACROPHAGES AND PROTECTS AGAINST ATHEROSCLEROSIS Inhye Park ¹ , Jennifer Cole ¹ , Michael Goddard ¹ , Ignat Drozdov ² , Leo-Pekka Lyytikäinen ³ , Terho Lehtimäki ³ , Yoichiro Iwakura ⁴ , Claudia Monaco ¹ ¹ <i>Kennedy Institute of Rheumatology, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford, UK</i> ² <i>Bering Limited, London TW2 6EA, UK</i> ³ <i>Department of Clinical Chemistry, University of Tampere, FINLAND</i> ⁴ <i>Research Institute for Biomedical Sciences, Tokyo University of Science, JAPAN</i>
14:55 – 15:00	Discussion
15:00 – 15:10	5 ADAR1-MEDIATED RNA EDITING IS ESSENTIAL FOR THE ENDOTHELIAL CELL INTEGRITY S Tual-Chalot ^{*1} , F Bonini ² , NI Vlachogiannis ¹ , A Doddaballapur ³ , K Shook ¹ , I Spyridopoulos ¹ , A Gatsiou ¹ , K Stellos ¹ ¹ <i>Newcastle Cardiovascular Disease Prevention Hub, Faculty of Medical Sciences, Newcastle University, Newcastle upon Tyne, UK</i> ² <i>Institute of Cardiovascular Regeneration, Center of Molecular Medicine, Goethe University Frankfurt, GERMANY</i> ³ <i>Max Planck Institute for Heart and Lung Research, Bad Nauheim, GERMANY</i>
15:10 – 15:15	Discussion
15:15 – 15:25	6 INVESTIGATING THE MECHANISMS UNDERLYING THE HETEROGENEOUS VSMC INJURY RESPONSE MD Worssam [*] , JD Chappell, JL Harman, AL Taylor, HF Jørgensen <i>Cardiovascular Division, Department of Medicine, University of Cambridge, Addenbrooke's Hospital, Hills Road, Cambridge, UK</i>
15:25 – 15:30	Discussion
15:30 – 16:15	Refreshments and Exhibition <i>Chairperson: Manuel MAYR (London)</i>
16:15 – 17:00	Hugh Sinclair LECTURE: Efferocytosis and Resolution of Inflammation in Atherosclerosis Ira TABAS (Columbia, USA)
17:00 – 17:30	BAS AGM
17:30 – 17:45	Short break
17:45 – 19:15	Drinks Reception and Poster Session

19:30	Conference dinner and Young investigator prize giving
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FRIDAY 27 SEPTEMBER:

07:00 - 08:30	Breakfast (<i>College residents only</i>)
08:30 - 09:00	Registration
08:30 - 09:00	Refreshments and Exhibition

SESSION 3: INFLAMMATION versus LIPIDS: RESIDUAL INFLAMMATORY RISK

Session sponsored by: **Cardiovascular Research**

Chairperson: *Murray CLARKE* (Cambridge), *Christoph BINDER* (Vienna)

09:00 - 09:20	IL-1: a success story of an anti-inflammatory target in CVD <i>Sheila FRANCIS</i> (Sheffield, UK)
09:20 - 09:30	Discussion
09:30 - 09:50	Targeting oxidized lipids and oxidation-specific epitopes in atherosclerosis <i>Christoph BINDER</i> (Vienna, AUSTRIA)
09:50 - 10:00	Discussion
10:00 - 10:20	Challenges in translating cardiovascular strategies using advanced therapy medicinal products <i>Andrew BAKER</i> (Edinburgh, UK)
10:20 - 10:30	Discussion
10:30 - 11:00	Refreshments and Exhibition

Session 4: LIPIDS versus INFLAMMATION: RESIDUAL LIPID RISK BEYOND LDL-C

Chairperson: *Endre KISS-TOTH* (Sheffield), *Alberico CATAPANO* (Milan) TBC

11:00 - 11:30	The biology of PCSK9: beyond LDLC lowering <i>Alberico CATAPANO</i> (Milan, ITALY)
11:30 - 11:40	Discussion
11:40 - 12:10	Novel lipid targets for CVD <i>Anne TYBJAERG-HANSEN</i> (Copenhagen, DENMARK)
12:10 - 12:20	Discussion
12:20 - 12:50	Lipoprotein (a) and antisense therapy <i>Sam TSIMIKAS</i> (San Diego, USA)
12:50 - 13:00	Discussion
13:00 - 13:10	Concluding remarks
13:10	BAS Committee meeting

POSTERS:

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ADIPOSE TISSUE SECRETED CERAMIDES AND RELATED SPHINGOLIPIDS - POTENTIAL MODULATORS OF VASCULAR REDOX SIGNALLING IN CARDIOVASCULAR DISEASE

[Nadia Akawi](#)¹, Antonio Checa², Ioannis Akoumianakis¹, Marios Margaritis¹, Christos P. Kotanidis¹, Evangelia Daskalakis², Hidekazu Kondo¹, Keith Channon¹, Craig Wheelock², Charalambos Antoniades¹

¹Division of Cardiovascular Medicine, Radcliffe Department of Medicine, University of Oxford, UK

²Division of Physiological Chemistry II, Department of Medical Biochemistry and Biophysics, Karolinska Institute, Sweden

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HETERODIMERISATION OF ANGIOTENSIN AND CANNABINOID RECEPTOR AND SIGNALLING IN HUMAN VSMC

[Al Abdullah W*](#), Herbert KE, Lambert DG

Department of Cardiovascular Sciences, University of Leicester, UK

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CAROTID ARTERY STIFFNESS IN HEALTHY SUBJECTS MEASURED USING ULTRASOUND SHEAR WAVE ELASTOGRAPHY

[F Almutairi](#)^{1,2,3*}, W Chimfulunganya¹, E Chung^{1, 2} and KV Ramnarine^{1, 2,4}

¹ *Department of Cardiovascular Sciences, University of Leicester, Leicester, UK*

² *Department of Medical Physics, University Hospitals of Leicester NHS Trust, Leicester, UK*

³ *Faculty of Applied Medical Sciences, Radiology Sciences Department, King Abdulaziz University, Jeddah, Saudi Arabia*

⁴ *Medical Physics Department, Guy's and St Thomas' NHS Foundation Trust, London, UK*

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C-REL DRIVES ATHEROSCLEROSIS AT SITES OF DISTURBED BLOOD FLOW BY ACTIVATING INFLAMMATORY AND PROLIFERATIVE TRANSCRIPTIONAL PROGRAMMES IN ENDOTHELIUM

[Blanca Tardajos Ayllón](#)¹, Fiona Oakley², Paul C. Evans¹.

¹*Department of Infection, Immunity and Cardiovascular disease/ INSIGNEO Institute for In Silico Medicine/ the Bateson Centre, University of Sheffield, Sheffield, UK.* ²*Medical School, Newcastle University, Newcastle, UK.*

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WNT5A CONTRIBUTES TO ATHEROSCLEROSIS IN HUMANS VIA A NOVEL REDOX SIGNALLING PATHWAY INVOLVING USP17

[I Badi*](#), I Akoumianakis, F Sanna, N Akawi, A Chiu, L Herdman, R Sayeed, G Krasopoulos, KM Channon,

C Antoniades

Division of Cardiovascular Medicine, Radcliffe Department of Medicine, University of Oxford, Oxford OX3 9DU, UK

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CHARACTERISING THE HUMAN VASCULAR EXTRACELLULAR MATRIX: APPLICATION TO DIABETES

[F Baig*](#)¹, S Stojkovic², J Barallobre-Barreiro¹, H Hinterwirth¹, M Fava¹, K Theofilatos¹, M Lynch¹,

C Antoniades³, M Jahangiri⁴, J Wojta,² M Mayr¹

¹*King's British Heart Foundation Centre, King's College London, London, UK*

²*Department of Internal Medicine II, Medical University Vienna, Vienna, AT*

³*Division of Cardiovascular Medicine, University of Oxford, Oxford, UK*

⁴*St George's University of London, NHS Trust, United Kingdom*

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INTRANUCLEAR ACTIN MONOMER MEDIATES THE ANTI-MITOGENIC AND ANTI-MIGRATORY EFFECTS OF CYCLIC-AMP IN VASCULAR SMOOTH MUSCLE CELLS

M McNeill, J Wray, S Smith, R Ebrahimighaei, A.C. Newby, [M Bond*](#)

Translational Health Sciences, University of Bristol, BS2 8HW, UK

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PKC α : A FRIEND OR FOE IN ATHEROSCLEROSIS?

[SJ Borland](#)^{1*}, J Behnsen², L Roberts¹, MJ Sherratt³, K Brennan⁴, C Holt¹, SE Francis⁵, AE Canfield¹

¹*Division of Cardiovascular Sciences, School of Medical Sciences, Faculty of Biology, Medicine and Health, University of Manchester, UK;*

²*Henry Moseley Institute, School of Materials, Faculty of Science & Engineering, University of Manchester, UK;*

³*Division of Cell Matrix Biology & Regenerative Medicine, School of Biological Sciences, Faculty of Biology, Medicine and Health, University of Manchester, UK;*

⁴*Division of Cancer Sciences, School of Medical Sciences, Faculty of Biology, Medicine and Health, University of Manchester, UK;*

⁵*Department of Infection, Immunity and Cardiovascular Disease, University of Sheffield, UK;*

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SMARCA4 REDIRECTS BINDING OF MACROPHAGE ACTIVATING TRANSCRIPTION FACTOR 1 (ATF1) FROM GENES FOR INFLAMMATION RESOLUTION TO GENES FOR ERYTHROCYTE RESOLUTION

A Seneviratne¹, L Cave¹, A Shaikh¹, D Carling², JC Mason¹, DO Haskard¹, [JJ Boyle](#)¹.

¹ - *National Heart and Lung Institute, 2 - London Institute of Medical Sciences, Imperial College London*

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CELLULAR SIGNATURE OF HUMAN ATHEROSCLEROTIC PLAQUES USING SINGLE CELL METHODOLOGY

[L Dib](#)¹, L Koneva¹, D Ahern¹, R Lee², A Handa², S Samson¹, C Monaco¹

¹*Kennedy Institute of Rheumatology, Nuffield Department of Orthopaedics Rheumatology and Musculoskeletal Sciences, ² Nuffield Department of Surgical Sciences University of Oxford, UK*

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RISK ALLELE OF THE CORONARY ARTERY DISEASE RELATED GENE JCAD IS ASSOCIATED WITH ATTENUATED ENDOTHELIAL CELL FUNCTION

[G Douglas*](#), I Akoumianakis, E Drydale, A Antonopoulos, A Goel, H Watkins, C Antoniadis and K, M. Channon

BHF Centre of Research Excellence, Division of Cardiovascular Medicine, John Radcliffe Hospital, University of Oxford, UK

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INSULIN-LIKE GROWTH FACTOR-1 INFLUENCES VASCULAR PERMEABILITY AND ATHEROGENESIS VIA ITS KINASE DOMAIN

[M Drozd*](#), AF Bruns, N Yuldasheva, A Maqbool, H Viswambharan, P Sukumar, N Haywood, A Skromna, N Makava, K Bridge, DJ Beech, SB Wheatcroft, MT Kearney, RM Cubbon

Leeds Institute of Cardiovascular and Metabolic Medicine, University of Leeds, UK

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CAROTID ATHEROMA INFLAMMATION IS ASSOCIATED WITH INCREASED CENTRAL NERVOUS SYSTEM ACTIVATION AFTER STROKE

BJ Mahen¹, JM Tarkin², MM Chowdhury³, JHF Rudd², EA Warburton¹, [NR Evans](#)^{1,4*}

¹ *Department of Clinical Neurosciences, University of Cambridge, Cambridge, UK.*

² *Division of Cardiovascular Medicine, Department of Medicine, University of Cambridge, Cambridge, UK.*

³ *Division of Vascular and Endovascular Surgery, Department of Surgery, University of Cambridge, Cambridge, UK.*

⁴ *Department of Medicine, University of Cambridge, Cambridge, UK.*

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UNDERSTANDING THE GERMINAL CENTRE B CELL RESPONSE TO ATHEROSCLEROSIS IN MICE USING LINEAGE TRACING

[A Francis*](#), T Bray, D Tsiantoulas, M Nus, Z Mallat, A Sage

Department of Medicine, Level 5, Box 157 Addenbrookes Hospital, Hills Road, Cambridge, UK

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EPI TRANSCRIPTOMIC CONTROL OF INFLAMMATION

[A Gatsiou](#)^{1,^,*}, S Tual-Chalot¹, F Bonini², V Cesarini³, M Martini^{4,5}, A Ortega-Gomez⁶, DKA Ramadurai⁷, J Hoffmann², T Regen⁸, K Shook¹, W Chen^{9,10}, S Guenther¹¹, DA Silvestris⁴, S Kwak¹², CH Selzman^{13,14}, I Spyridopoulos^{1,15}, T Braun¹¹, A Waisman⁸, S Dimmeler¹⁶, A Gallo³, S Drakos^{7,14}, O Soehnlein^{6,17,18}, K Stellos^{1,2,15,^}.

¹*Newcastle Cardiovascular Disease Prevention Hub, Faculty of Medical Sciences, Newcastle University, Newcastle upon Tyne, UK;*

²*Department of Cardiology, Center of Internal Medicine, JW Goethe University Frankfurt, Frankfurt am Main, Germany;* ³*RNA Editing lab,*

Oncohaematology Dept., Ospedale Pediatrico Bambino Gesù IRCCS, Rome, Italy; ⁴*Fondazione Policlinico Universitario "A. Gemelli", IRCCS,*

UOC Anatomia Patologica, Rome, Italy; ⁵*Istituto di Anatomia Patologica, Università Cattolica del Sacro Cuore, Rome, Italy;* ⁶*Institute for*

Cardiovascular Prevention, LMU Munich, Germany; ⁷*Division of Cardiovascular Medicine, University of Utah School of Medicine, Salt Lake*

City, Utah, USA; ⁸*Institute for Molecular Medicine, University of Mainz, Germany;* ⁹*Department of Biology, Southern University of Science*

and Technology, Shenzhen, Guangdong, China; ¹⁰*Medi-X Institute, SUSTech Academy for Advanced Interdisciplinary Studies, Southern*

University of Science and Technology, Shenzhen, Guangdong, China; ¹¹*Max-Planck Institute for Heart and Lung Research, Bad Nauheim,*

Germany; ¹²*Department of Neurology, Graduate School of Medicine, University of Tokyo, Tokyo, Japan;* ¹³*Division of Cardiothoracic Surgery,*

University of Utah, Salt Lake City, USA.

¹⁴*Nora Eccles Harrison Cardiovascular Research and Training Institute (CVRTI), University of Utah, Salt Lake City, USA;* ¹⁵*Department of*

Cardiology, Freeman Hospital, Newcastle upon Tyne NHS Foundation Trust, Newcastle Upon Tyne, UK; ¹⁶*Institute of Cardiovascular*

Regeneration, Center of Molecular Medicine, JW Goethe University Frankfurt, Frankfurt am Main, Germany; ¹⁷*Department of Physiology*

and Pharmacology, Karolinska Institute, Stockholm, Sweden; ¹⁸*German Center of Cardiovascular Research (Deutsches Zentrum für Herz-*

Kreislauf-Forschung, DZHK), Munich Heart Alliance Partner Site, Germany

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INTEGRATING GWAS AND FUNCTIONAL DATA TO FINE-MAP CORONARY DISEASE LOCI

[A Goel*](#), C Grace, M Farrall, H Watkins

Division of Cardiovascular Medicine, Radcliffe Department of Medicine, University of Oxford, Oxford. Wellcome Centre for Human Genetics, University of Oxford, Oxford, UK

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ROLE OF SIRTUIN 6 IN VASCULAR SMOOTH MUSCLE CELLS IN ATHEROSCLEROSIS

[MOJ Grootaert*](#), AK Uryga, A Finigan, NL Figg, MR Bennett

Division of Cardiovascular Medicine, Department of Medicine, University of Cambridge, Addenbrookes Hospital, Cambridge, UK

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PROGNOSTIC EFFECT OF OLIVE OIL ON INFLAMMATORY INDEXES IN CORONARY HEART DISEASE: SYSTEMATIC REVIEW

A Bates¹, E Magriplis^{2,3}, A Zampelas², V Lambadiari⁴, A Antonopoulos⁵, NPE Kadoglou³, N Roberts⁶, [AZ Kalea](#)^{1,7}, M Trivella³

¹ *Division of Medicine, University College London, London.*

² *Laboratory of Food Chemistry and Human Nutrition, Department of Food Science and Human Nutrition, Agricultural University of Athens,*

Iera Odos 75, Athens, 11855, Greece

³ *Centre for Statistics in Medicine, NDORMS, Botnar Research Centre, University of Oxford, Windmill rd, OX3 7LD, Oxford, UK*

⁴2nd Department of Internal Medicine, Research Institute and Diabetes Center, National and Kapodistrian University of Athens, Medical School, Attikon Hospital, 1st Rimini Street, 12462, Athens, Greece.

⁵1st Cardiology Department, Hippokratia Hospital, National and Kapodistrian University of Athens, Medical School, 114 Vas. Sofias Avenue, 11528, Athens, Greece

⁶Bodleian Health Care Libraries, Knowledge Centre - ORC Research Building, Old Road Campus, University of Oxford Bodleian Libraries, Oxford, OX3 7DQ, UK

⁷Institute for Cardiovascular Science, University College London

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INFLAMMATORY MACROPHAGE SUBSETS IN THE PATHOGENESIS OF HUMAN CAROTID ATHEROSCLEROSIS

[K Kocsy](#) 1*; J Redgrave 2; A Majid 2; E Kiss-Tóth 1; SE Francis 1

1 Department of Infection, Immunity & Cardiovascular Disease, University of Sheffield

2 Department of Neuroscience (NIHR BRC Translational Neuroscience), University of Sheffield

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NOVEL DIRECT EFFECT OF CANAGLIFLOZIN ON MYOCARDIAL REDOX STATE IN HUMANS; POSSIBLE ROLE OF SGLT1 INHIBITION

[H Kondo](#)*, I Akoumianakis, N Akawi, M Carena, I Badi, C Kotanidis, L Herdman, A Antonopoulos, E Oikonomou, S Chuaiphichai, B Casadei, K Channon, C Antoniades

Division of Cardiovascular Medicine, University of Oxford, Oxford, UK

Division of Cardiovascular Medicine, L6 West Wing, John Radcliffe Hospital, Headley Way, Oxford OX3 9DU, UK

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THE OX-HVF COHORT: PREDICTIVE VALUE OF MYOCARDIAL REDOX STATE

[CP Kotanidis](#)^{1*}, AS Antonopoulos¹, EK Oikonomou¹, I Akoumianakis¹, G Krasopoulos², R Sayeed², KM Channon¹, C Antoniades¹

1: Division of Cardiovascular Medicine, Radcliffe Department of Medicine, University of Oxford, Oxford, UK; 2: Department of Cardiothoracic Surgery, Oxford University Hospitals NHS Foundation Trust, Oxford, UK.

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GALECTIN-9 CAUSES INCREASED ADHESION OF LEUKOCYTES FROM PERIPHERAL ARTERIAL DISEASE PATIENTS COMPARED TO HEALTHY INDIVIDUALS

[F Krautter](#) *¹, MT Hussain¹, DR Lezama¹, M Chimen¹, D Cooper², AJ Iqbal¹

¹Institute of Cardiovascular Sciences, University of Birmingham, UK

² Centre for Biochemical Pharmacology, William Harvey Research Institute, Queen Mary University of London, UK

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INVESTIGATING THE INFLAMMATORY POTENTIAL OF GALECTIN 9, A β -GALACTOSIDE PROTEIN, IN FOAM CELL FORMATION AND LEUKOCYTE CROSSTALK WITH ENDOTHELIAL CELLS

[Lezama DR](#)*, Krautter F, Hussain M, Chimen M and Iqbal AJ.

Institute of Cardiovascular Sciences, University of Birmingham, B15 2TT, United Kingdom

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MICRO-RNA 27a* REGULATES VE-CADHERIN EXPRESSION IN *IN VITRO* MACROPHAGES

[MA Mat Noh](#)*^{1,2}, K Di Gregoli¹, SJ George¹, JL Johnson¹

¹Laboratory of Cardiovascular Pathology, School of Clinical Sciences, Faculty of Health Sciences, University of Bristol, Bristol, UK.

²Department of Anatomy, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia.

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THE ANTI-INFLAMMATORY EFFECTS OF THE NOVEL OESTROGEN RECEPTOR GPR30 ON HUMAN ENDOTHELIAL CELLS

IRA Gaskell, [SA Millar](#)*, SE O'Sullivan

Division of Graduate Entry Medicine and Medical Sciences, School of Medicine, University of Nottingham, Royal Derby Hospital, UK.

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A LACK OF ROLE FOR OSTEOCALCIN IN HUMAN VASCULAR CELL CALCIFICATION

[SA Millar](#)*, SI Anderson, SE O'Sullivan

Division of Graduate Entry Medicine and Medical Sciences, School of Medicine, University of Nottingham, Royal Derby Hospital, UK.

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ROLE OF GLUTAMINE SYNTHETASE IN ARTERIAL TONE AND ATHEROGENESIS

[KE Musialowski](#)^{1*}, CH Ozber¹, NY Yuldasheva¹, T Slater¹, A Skromna¹, N Makava¹, A Visnagri¹, WH Lamers², G Eelen³, P Carmeliet³, SB Wheatcroft¹, MT Kearney¹, RM Cubbon¹.

¹ Leeds Institute of Cardiovascular and Metabolic Medicine, University of Leeds, Leeds, LS2 9JT, UK

² Department of Anatomy and Embryology, Maastricht University, P.O. Box 616, 6200MD Maastricht, THE NETHERLANDS

³ Laboratory of Angiogenesis and Vascular Metabolism, Center for Cancer Biology, VIB, 3000 Leuven, BELGIUM

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GUT MICROBIOTA REGULATES THE T CELL ADAPTIVE IMMUNE RESPONSE IN EARLY ATHEROSCLEROSIS

S Newland¹, A Grill², H Formes², C Reinhardt², Z Mallat¹, *[M Nus](#)¹

¹ Cardiovascular Division, Department of Medicine, University of Cambridge, UK; ² Centre for Thrombosis and Haemostasis, University of Mainz, Germany

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THE ROLE OF THE HYPOXIA INDUCIBLE FACTOR 2-ALPHA (HIF2- α) IN MECHANOBIOLOGY AND ATHEROSCLEROSIS

[D Pirri](#)^{*1,2}, M Fragiadaki¹, W Han², PC Evans¹

¹ Department of Infection, Immunity and Cardiovascular disease, The University of Sheffield, Beach Hill Road, Sheffield (UK); ² Singapore Bioimaging Consortium, Agency for Science, Technology and Research (A*STAR), Biopolis Way, Singapore

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CAPTURING MONOCYTE/MACROPHAGE DIFFERENTIATION AT SITES OF INFLAMMATION USING SINGLE CELL TRANSCRIPTOMICS

[GSD Purvis](#)^{*1,3}, E McNeill^{2,3}, B Wright³, H Lockstone³, K Channon^{2,3} DR Greaves¹

¹Sir William Dunn School of Pathology, University of Oxford, Oxford, OX3 1RE, UK.

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

³Wellcome Trust Centre for Human Genetics, University of Oxford, Oxford OX3 7BN, UK.

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ABSENCE OF INTERLEUKIN-1 RECEPTOR 2 LEADS TO STEADY-STATE IMMUNE DYSFUNCTION AND ACCELERATION OF ATHEROSCLEROSIS

[K Pырillou](#)^{*1}, M Humphry¹, L Burzynski¹, AP Sage¹, L Kitt¹, A Finigan¹, MR Bennett¹, MA Linterman³, Z Mallat^{1,2}, MCH Clarke¹

¹Division of Cardiovascular Medicine, University of Cambridge, Addenbrooke's Centre of Clinical Investigation, Hills Road, CB2 0QQ

²Institut National de la Santé et de la Recherche Médicale, Unit 970, Paris Cardiovascular Research Center, Paris, France

³Laboratory of Lymphocyte Signalling and Development, Babraham Institute, Cambridge

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CORRELATION BETWEEN GLYCEMIC PARAMETERS AND THE ABDOMINAL AORTIC ANEURYSM MORPHOLOGY IN HUMAN USING A FULLY AUTOMATIC SOFTWARE ON CT-SCAN IMAGES

[J Raffort](#)^{1*}, M Carrier², C Adam², A Ballaith³, K Rajhi³, E Jean-Baptiste³, R Hassen-Khodja³, F Lareyre³

⁽¹⁾ Clinical Chemistry Laboratory, University Hospital of Nice, France

⁽²⁾ Laboratory of Applied Mathematics and Computer Science (MICS), CentraleSupélec, Université Paris-Saclay, France

⁽³⁾ Department of Vascular Surgery, University Hospital of Nice, France

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A NEW FULLY AUTOMATED IMAGING SOFTWARE TO CHARACTERIZE ABDOMINAL AORTIC ANEURYSM PROPERTIES USING IMAGE SEGMENTATION

[J Raffort](#)^{*1}, C Adam², M Carrier², F Lareyre³

⁽¹⁾ Clinical Chemistry Laboratory, University Hospital of Nice, France

⁽²⁾ Laboratory of Applied Mathematics and Computer Science (MICS), CentraleSupélec, Université Paris-Saclay, France

⁽³⁾ Department of Vascular Surgery, University Hospital of Nice, France

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CORRELATION BETWEEN GLYCEMIC PARAMETERS AND THE ABDOMINAL AORTIC ANEURYSM MORPHOLOGY IN HUMANS USING A FULLY AUTOMATIC SOFTWARE ON CT-SCAN IMAGES

[J Raffort](#)^{1*}, M Carrier², C Adam², A Ballaith³, K Rajhi³, E Jean-Baptiste³, R Hassen-Khodja³, F Lareyre³

⁽¹⁾ Clinical Chemistry Laboratory, University Hospital of Nice, France

⁽²⁾ Laboratory of Applied Mathematics and Computer Science (MICS), CentraleSupélec, Université Paris-Saclay, France

⁽³⁾ Department of Vascular Surgery, University Hospital of Nice, France

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AUTOMATIC MEASUREMENT OF VASCULAR CALCIFICATIONS AS A PREDICTIVE FACTOR OF 30-DAY MORTALITY IN PATIENTS WITH ACUTE MESENTERIC ISCHEMIA

[J Raffort](#)^{1*}, E Augène³, C Adam², M Carrier², A Ballaith³, E Jean-Baptiste³, R Hassen-Khodja³, F Lareyre³

⁽¹⁾ Clinical Chemistry Laboratory, University Hospital of Nice, France

⁽²⁾ Laboratory of Applied Mathematics and Computer Science (MICS), CentraleSupélec, Université Paris-Saclay, France

⁽³⁾ Department of Vascular Surgery, University Hospital of Nice, France

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EXPLOITING THE INHIBITION OF VASCULAR SMOOTH MUSCLE CELL PROLIFERATION AND INTIMAL THICKENING BY PRH/HHEX

*[LM Reolizo](#)¹, K Wadey¹, A Frankow¹, K Gaston², P-S Jayaraman³, J Johnson¹, SJ George¹.

¹Bristol Heart Institute, University of Bristol, Research Floor Level 7, Bristol Royal Infirmary, Bristol BS2 8HW.

²Faculty of Medicine & Health Sciences, University of Nottingham, Nottingham, NG7 2UH.

³Division of Immunity and Infection, College of Medicine, University Birmingham, Edgbaston, Birmingham, B15 2TT.

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EXTRACELLULAR MATRIX REMODELLING DURING VASCULAR AGEING

[M Rienks](#)*¹, M Lynch¹, E Reed¹, F Baig¹, L Schmidt¹, K Theofilatos¹, X Yin¹, R Lu¹, L Allison², R Fleck², C Faulkes³, U Mayr¹, M Mayr¹

¹King's British Heart Foundation Centre, King's College London, London, United Kingdom

²Centre for Ultrastructural Imaging, Kings College London, London, United Kingdom

³School of Biological & Chemical Sciences, Queen Mary University of London, London, United Kingdom

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FREESTYLE FLUIDICS – A NOVEL PLATFORM TO STUDY MACROPHAGE CHEMOTAXIS

[AN Rumianek](#)*¹, C Deroy², J Wheeler³, PR Cook¹, E Walsh², DR Greaves¹

Sir William Dunn School of Pathology, University of Oxford, South Parks Road, Oxford, OX1 3RE, UK

Department of Engineering Science, University of Oxford, Parks Road, Oxford, OX1 3PJ, UK

Department of Zoology, University of Oxford, Zoology Research and Administration Building, 11a Mansfield Road, Oxford, OX1 3SZ, UK

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CIRCULATING SERUM EXTRACELLULAR MATRIX DEGRADATION ENZYME CATHEPSIN S PREDICTS MORTALITY AND IMPROVES RISK STRATIFICATION OVER THE GRACE SCORE IN PATIENTS WITH NON-ST ELEVATION ACUTE CORONARY SYNDROMES

K Sopova¹, G Georgiopoulos², M Mueller-Hennesen³, M Sachse⁴, *[NI Vlachogiannis](#)¹, C Bakogiannis¹, M Biener³, M Vafaie³, A Gatsiou⁴, A Zaman⁵, H Katus³, I Spyridopoulos^{1,5}, E Giannitsis³, K Stamatelopoulos², K Stellos^{1,5}

¹Newcastle Cardiovascular Disease Prevention Hub, Faculty of Medical Sciences, Newcastle University, Newcastle Upon Tyne, UK

²Department of Clinical Therapeutics, Alexandra Hospital, University of Athens, Athens, Greece

³Department of Internal Medicine III, Cardiology, University Hospital Heidelberg, Heidelberg, Germany

⁴Institute of Cardiovascular Regeneration, Centre of Molecular Medicine, J.W. Goethe University Frankfurt, Frankfurt am Main, Germany

⁵Department of Cardiology, Freeman and RVI Hospitals, Newcastle Upon Tyne Hospitals NHS Foundation Trust, Newcastle Upon Tyne, UK

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EXPRESSION OF THE RNA-BINDING PROTEIN HUR IN PERIPHERAL BLOOD MONONUCLEAR CELLS IS ASSOCIATED WITH EXTENT OF ATHEROSCLEROSIS

M Sachse¹, A Mareti², G Georgiopoulos², *[NI Vlachogiannis](#)³, K Sopova³, S Tual-Chalot³, C Kritsioti², A Laina², C Kontogiannis², A Zaman^{3,4}, I Spyridopoulos^{3,4}, A Gatsiou³, K Stamatelopoulos², K Stellos^{3,4}

¹Faculty of Medicine, Goethe University Frankfurt, Frankfurt am Main, Germany;

²Department of Clinical Therapeutics, Alexandra Hospital, University of Athens, Athens, Greece;

³Newcastle Cardiovascular Disease Prevention Hub, Faculty of Medical Sciences, Newcastle University, Newcastle Upon Tyne, UK;

⁴Department of Cardiology, Freeman and RVI Hospitals, Newcastle Upon Tyne Hospitals NHS Foundation Trust, Newcastle Upon Tyne, UK

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IDENTIFYING THERAPEUTIC HYPOTHESES FOR ADVANCED ATHEROSCLEROSIS FROM AN OPEN, REUSABLE MATHEMATICAL MODEL

A Parton¹, V McGilligan², M Chemaly², M O'Kane³, [S Watterson](#)^{2*}

¹The European Bioinformatics Institute (EMBL-EBI), Wellcome Genome Campus, CB10 1SD, United Kingdom

²Northern Ireland Centre for Stratified Medicine, Ulster University, C-TRIC building, Altnagelvin Hospital Campus, Derry, Co Londonderry, Northern Ireland, UK, BT47 6SB

³Western Health and Social Care Trust, Altnagelvin Hospital, Co Londonderry, Northern Ireland, UK, BT47 6SB

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ENDOTHELIUM EXPOSED TO ATHEROPROTECTIVE FLOW RELEASES A PROTEIN THAT SUPPRESSES TRANSCYTOSIS

M Ghim¹, KT Pang¹, S Burnap², F Baig², X Yin², M Mayr², [PD Weinberg](#)^{1*}

¹Department of Bioengineering, Imperial College London, UK

²King's BHF Centre, King's College London, UK

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A PIVOTAL ROLE FOR NRF2 IN ENDOTHELIAL DETACHMENT– IMPLICATIONS FOR ENDOTHELIAL EROSION OF STENOTIC PLAQUES

S Satta¹, M McElroy², A Langford Smith¹, GR Ferris¹, J Teasdale³, Y Kim⁴, G Niccoli⁵, T Tanjeko Ajime⁶, J Serré⁶, G Hazell³, G Sala Newby³, P Wang⁷, JL Johnson³, MJ Humphries⁸, G Gayan-Ramirez⁶, P Libby⁹, F Crea⁵, H Degens¹, F Gijzen¹⁰, T Johnson¹¹, A Keshmiri², Y Alexander¹, AC Newby³, [SJ White](#)^{1*}

¹Department of Life Sciences, Manchester Metropolitan University, Manchester M1 5GD UK

²School of Mechanical, Aerospace and Civil Engineering (MACE), The University of Manchester, Manchester, M13 9PL, UK

³Bristol Medical School, University of Bristol, Bristol BS2 8HW, UK

⁴Department of Cardiovascular Medicine, Chonnam National University Hospital, 42 Jebongro, Dong-gu, Gwangju, 61469 Republic of Korea

⁵Fondazione Policlinico Universitario A. Gemelli IRCCS, Roma, Italia; Università Cattolica del Sacro Cuore, Roma, Italia

⁶Laboratory of Pneumology, Department of Chronic Diseases, Metabolism and Ageing, KULeuven, Leuven, Belgium

⁷Bioinformatics Core Facility, Faculty of Biology, Medical and Health, University of Manchester

⁸Wellcome Centre for Cell-Matrix Research, Faculty of Biology, Medicine & Health, University of Manchester, Manchester, M13 9PT, UK

⁹Brigham and Women's Hospital, Harvard Medical School, Boston, MA 02115 USA

¹⁰ Department of Cardiology, Biomedical Engineering, Erasmus MC, Rotterdam, The Netherlands

¹¹ Department of Cardiology, Bristol Heart Institute Upper Maudlin St. Bristol BS2 8HW

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THE ENDOSOMAL DUET HRS/STAM FINELY TUNES TOLL-LIKE RECEPTOR SIGNALLING

[N Zanin](#)^{*}, A JB Robinson, I Park, L Dib, M Goddard, C Monaco.

NDORMS, Kennedy Institute of Rheumatology.

Kennedy Institute of Rheumatology, University of Oxford, Oxford, OX3 7FY, UK.

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DEFICIENCY OF FRMD8, A MEMBER OF 4.1/EZRIN/RADIXIN/MOESIN SUPERFAMILY, PROTECTS AGAINST HIGH FAT DIET-INDUCED OBESITY AND INSULIN RESISTANCE

[L Zeboudj](#)^{*}, G Purvis, M Freeman, DR Greaves

Sir William Dunn School of Pathology, University of Oxford, Oxford OX1 3RE

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INTRONIC ADENOSINE-TO-INOSINE RNA EDITING CONTROLS PRE-MRNA PROCESSING IN ATHEROSCLEROTIC HEART DISEASE

[E Zormpas](#)^{1^*}, M Sachse^{2^}, JC Lima Jr¹, F Bonini^{1,2}, G Georgiopoulos³, S Tual-Chalot¹, N Vlachogiannis¹, K Shook¹, I Spyridopoulos^{1,4}, K Stamatelopoulos³, K Stellos^{1,2,4^}, A Gatsiou^{1,2^}

¹Newcastle Cardiovascular Disease Prevention Hub, Faculty of Medical Sciences, Newcastle University, Newcastle Upon Tyne, UK;

²Department of Cardiology, Center of Internal Medicine, Goethe University Frankfurt;

³Department of Clinical Therapeutics, Alexandra Hospital, University of Athens, Athens, Greece;

⁴Department of Cardiology, Freeman Hospital, Newcastle upon Tyne NHS Foundation Trust, Newcastle Upon Tyne, UK.