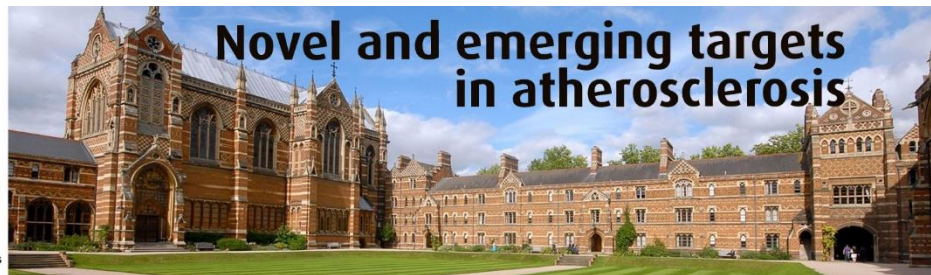




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# Novel and emerging targets in atherosclerosis

**REGISTRATION OPEN Thursday 8 - Friday 9 September 2022, Keble College, Oxford, UK**

**P1**

**A developmental bias towards aortic calcification: use of iPSCs to study vascular calcification**

**Akbulut A C**<sup>\*,1</sup>, Rapp N<sup>1</sup>, Davaapil H<sup>2</sup>, Sinha S<sup>2</sup>, Schurgers L<sup>1</sup>

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**P2**

**Remote acute assessment of patients with high cardiovascular risk post-acute coronary syndrome (TELE-ACS)**

**Nasser S Alshahrani**<sup>\*</sup>, Adam Hartley, Amit Kaura, Mihir Kelshiker, Reza Hajhosseiny, Saud Khawaja, Henry Seligman, Nicholas Peters, Ramzi Khamis

National Heart and Lung Institute, Imperial College London, UK

**P3**

**Effect of Inflammatory Cytokines and T cell proliferation in Hypertension**

**Al-Sheikh EO**<sup>1,2\*</sup>, Nosalski, R<sup>1</sup>, Maffia, P<sup>1</sup>, Guzik TJ<sup>1</sup>

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**P4**

**Dimethylarginine dimethylaminohydrolase 2 (DDAH2) as a possible therapeutic target for inflammation in atherosclerosis**

**N. Alshuwayer**<sup>1,2\*</sup>, L. Dowsett<sup>1</sup>, B. Ahmetaj<sup>3</sup>, F. Leiper<sup>1</sup>, J. Leiper<sup>1</sup>

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<sup>3</sup>Imperial College London, London, United Kingdom

**P5**

**Synthetic proteins called Affimers as tools for evaluating LOX-1 status in patients with arterial disease**

**Ahmed Al Afi**<sup>1,2\*</sup>, Barney W. R. Roper<sup>2</sup>, Darren C. Tomlinson<sup>2</sup>, Sreenivasan Ponnambalam<sup>2</sup>, Shervanthi Homer-Vanniasinkam<sup>1</sup>

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**P6**

**Characterising the role of monocyte subsets in driving foam cell formation in cardiovascular disease**

**J. Begum**<sup>\*1</sup>, M. Chimen<sup>1</sup>, D. Lezama<sup>1</sup>, A.J. Iqbal<sup>1</sup>, G. Ed Rainger<sup>1</sup>

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P7

**Replication of newly discovered SNPs for coronary artery disease in Europeans in a Chinese adults.**

**Derrick Bennett**, Ahmed Edris Mohamed, Kuang Lin, Sofia Massa, Iona Millwood, Robin Walters, Zhengming Chen, Robert Clarke, on behalf of the China Kadoorie Biobank  
*Clinical Trial Service Unit and Epidemiological Studies Unit, Nuffield Department of Population Health, Big Data Institute Building, Old Road Campus, Roosevelt Drive, Headington*

P8

**Human primary plaque cells cultures to study molecular mechanisms of sex-differences in atherosclerosis**

**Michele F. Buono**<sup>a</sup>, MSc; Ernest Diez Benavente<sup>a</sup>, PhD; Mark Daniels<sup>a</sup>, MSc; Daniek Kapteijn<sup>a</sup>, BSc; Gerard Pasterkamp<sup>b</sup>, MD PhD, Hester M. den Ruijter<sup>a</sup>, PhD; Michal Mokry<sup>a,b</sup>, MD PhD\*

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P9

**The multi-tyrosine kinase inhibitor Sunitinib has anti-inflammatory activity in a mouse model of hypercholesterolemia**

**Laura Chaffey**<sup>\*</sup>, Amelia Bowman, Annabell Roberti, Gareth S D Purvis, Conan O'Brien, David R Greaves  
*Sir William Dunn School of Pathology, University of Oxford, South Parks Road, Oxford, OX1 3RE*

P10

**T2 values should be used with caution to distinguish between acute and chronic myocardial infarction**

**Chin XW**<sup>\*</sup>, Barton AK<sup>1</sup>, Dweck MR<sup>1</sup>

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P11

**Reversing Atherosclerosis by the Specific Removal of Oxidized Cholesterol with Cyclodextrin Dimers**

**DM Clemens**<sup>1\*</sup>, AM Anderson<sup>1</sup>, D Dinh<sup>1</sup>, P Bhargava<sup>1</sup>, K Sadrerafi<sup>1</sup>, M Malanga<sup>2</sup>, R Garcia-Fandiño<sup>3,4</sup>, Á Piñeiro<sup>1,3,5</sup>, MS O'Connor<sup>1</sup>

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P12

**Key role of endothelial cell Jcad in voluntary exercise capacity**

**\*SAV Draycott**<sup>1,2</sup>, KE Shimell<sup>1,2</sup>, E Drydale<sup>2</sup>, J Mayer-Cowland<sup>1,2</sup>, KM Channon<sup>1,2</sup> and G Douglas<sup>1,2</sup>.

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P13

**The Circular RNA circANRIL16-5 regulates Atherosclerosis through binding to Cell Cycle regulator TRA2B**

**A Elwazir**<sup>\*1,2</sup>, L Castell<sup>3</sup>, P Patel<sup>1</sup>, G Hautbergue<sup>3</sup>, A Cox<sup>4</sup>, S Francis<sup>1</sup>

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**P14**

**Lipoproteins act as vehicles for lipid antigen delivery and iNKT cell activation**

**S.E. Engelen\***, H.S. Schipper, C. Monaco.

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**P15**

**Allergic inflammation induces endothelial dysfunction and oxidative stress through IL-4 dependent mechanisms**

\***Gurgone D.**<sup>1,2,3,4</sup>, Jasiewicz-Honkisz B.<sup>2</sup>, Caiazza E.<sup>3,4</sup>, Konior-Rozlachowska A.<sup>2</sup>, Szczepaniak P.<sup>2</sup>, Nosalski R.<sup>1,2</sup>, McShane L.<sup>3</sup>, Osmenda G.<sup>2</sup>, Wilk G.<sup>2</sup>, Sliwa T.<sup>2</sup>, McSharry C.<sup>3</sup>, Kurowska-Stolarska M.<sup>3</sup>, Mikolajczyk T.P.<sup>2</sup>, Niccoli G.<sup>5</sup>, D'Emmanuele di Villa Bianca R.<sup>4</sup>, Sorrentino R.<sup>4</sup>, Siedlinski M.<sup>2</sup>, Crea F.<sup>6</sup>, Grodzicki T.<sup>7</sup>, Maffia P.<sup>3,4</sup>, Guzik T.J.<sup>1,2</sup>

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**P16**

**In vivo targeting of oxidised-LDL with novel humanised Fab-nanoparticles**

**Adam Hartley**<sup>1\*</sup>, Michelle Greene<sup>2</sup>, Mikhail Caga-Anan<sup>1</sup>, Samuel Owen<sup>1</sup>, Michael Mullin<sup>3</sup>, Charis Pericleous<sup>1</sup>, Chris Scott<sup>2</sup>, Dorian Haskard<sup>1</sup>, Ramzi Khamis<sup>1</sup>

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<sup>3</sup> – *Protein & Cell Sciences, GlaxoSmithKline, Stevenage, United Kingdom*

**P17**

**A novel experimental model of atherosclerosis – the ex vivo pump-perfused amputated limb model**

**Adam Hartley**<sup>1\*</sup>, Samuel Owen<sup>1</sup>, Mikhail Caga-Anan<sup>1</sup>, Jonathan Afoke<sup>1</sup>, Joseph Shalhoub<sup>2</sup>, Kimberly Hassen<sup>3</sup>, Dorian Haskard<sup>1</sup>, Ramzi Khamis<sup>1</sup>

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<sup>3</sup> – *Hammersmith Hospital, Imperial College Healthcare NHS Trust, London, UK*

**P18**

**Investigating the shear-dependent modulation of EC-VSMC communication in in coronary artery bypass vein graft failure**

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**P19**

**Independent associations of lipoprotein characteristics on risk of coronary heart disease: a study of 90,000 individuals**

**D Jin\***, E Trichia, N Islam, J Besevic, S Lewington, B Lacey

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Big Data Institute, Old Road Campus, Oxford OX3 7LF, United Kingdom*

P20

**Cellular senescence promotes accumulation of vascular smooth muscle cells in de-differentiated / fibromyocytic phenotype**

**Anuradha Kaistha** PhD\*, Abel-Martin Garrido PhD, Sebnem Oc PhD, Kirsty Foote PhD, Helle Jorgensen PhD, Martin Bennett MD, PhD.

*Section of Cardiorespiratory Medicine, University of Cambridge*

P21

**Macrophage subsets differentially regulate cardiac fibroblast activation – involvement of CXCL10**

**G. Kremastiotis**\*<sup>1</sup>, Y. Li<sup>2</sup>, A. W. Poole<sup>2</sup>, R. Ascione<sup>1</sup>, J. L. Johnson<sup>1</sup>, S. J. George<sup>1</sup>

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P22

**Role of Acute Arterial Haemodynamics on Endothelial-to-Mesenchymal Transition Activation in Long Saphenous Veins**

**Ladak S**<sup>1</sup>, McQueen L<sup>1</sup>, JoelDavid L<sup>2</sup>, Murphy G<sup>1</sup>, Zakkar M<sup>1</sup>

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P23

**Targeting the migration of CD4<sup>+</sup>CD28<sup>null</sup> T lymphocytes in acute coronary syndrome**

**D.R. Lezama**<sup>1</sup>, J. Bullenkamp<sup>2</sup>, A.A. Mansour<sup>1</sup>, A.J. Iqbal<sup>1</sup>, I.E. Dumitriu<sup>1,2</sup>.

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<sup>2</sup> *Molecular and Clinical Sciences Research Institute, St. George's, University of London*

P24

**BCL-6b is a novel regulator of HiPSC-based vascular cell lineage specification**

**C Liu**\* - *Centre for Clinical Pharmacology, William Harvey Research Institute, Queen Mary University of London, London*

W Wang - *School of Engineering and Material Science, Queen Mary University of London, London*

Q Xiao - *Centre for Clinical Pharmacology, William Harvey Research Institute, Queen Mary University of London, London*

*Centre for Clinical Pharmacology, William Harvey Research Institute, Queen Mary University of London, Charterhouse Square, London, EC1M 6BQ*

P25

**Role of TCF7L2 in human adipose progenitor biology and genetic susceptibility to type 2 diabetes**

**Nellie Y Loh**\*<sup>1</sup>, Manu Verma<sup>1</sup>, Rugivan Sabaratnam<sup>1</sup>, Senthil K Vasan<sup>1</sup>, Andrea D van Dam<sup>1</sup>, Marijana Todorčević<sup>1</sup>,

Matthew J Neville<sup>1</sup>, Enrique Toledo<sup>2</sup>, Fredrik Karpe<sup>2</sup>, Constantinos Christodoulides<sup>1</sup>

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P26

**Deficiency in Inflammatory Chemokine Receptors Reduces Atherosclerosis and Promotes Plaque Stability**

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### Invasive assessment of microcirculation in Acute Myocardial Infarction: a comparison of the prognostic value of Coronary Flow Reserve, Index of Microcirculatory Resistance and Microvascular Resistance Reserve from the Oxford Acute Myocardial Infarction (OXAMI) Study

**Federico Marin**, Jeremy Langrish, Andrew Lucking, Rajesh Kharbanda, Keith Channon, Adrian Banning, Giovanni Luigi De Maria, OxAMI Investigators  
Oxford Heart Centre, Oxford, UK.

P28

### SVEP1 is a promising biomarker within a Coronary Artery Disease Cohort

**Maxwell C**<sup>1,2</sup>, Webb TR<sup>1</sup>, Jones DJL<sup>2,3</sup>, Ng LL<sup>1,2</sup>, Morris GE<sup>1</sup>

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### Mechanical Forces pull the strings on EndMT and Atherosclerosis via an Alk5-Shc Pathway

**V Mehta**<sup>\*</sup>, KL Pang, CS Givens, Z Chen, J Huang, DT Sweet, H Jo, JS Reader, E Tzima

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CSG, ZC, JH, DTS - McAllister Heart Institute, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA.

HJ - Coulter Department of Biomedical Engineering, Emory University and Georgia Institute of Technology, Atlanta, GA, USA.

P30

### SVEP1, a novel regulator of blood pressure

**Morris GE**<sup>\*1</sup>, Denniff MJ<sup>1</sup>, Douglas G<sup>2</sup>, Kostogrys RB<sup>3</sup>, Rainbow RD<sup>4</sup>, Samani NJ<sup>1</sup>, Webb TR<sup>1</sup>

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### IL10 signalling in human vascular development: human vascular cell differentiation from induced-pluripotent stem cells

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### Immune system dysregulation and its impact on the cardiovascular system in post-COVID19 infection

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**Marginal Zone B cells produce 'natural' atheroprotective IgM antibodies in a T cell dependent manner**

James Harrison<sup>1</sup>, Steve Newland<sup>1</sup>, Wei Jiang<sup>1</sup>, Xiaohui Zhao<sup>1</sup>, Marc Clement<sup>1,2</sup>, Leanne Masters<sup>1</sup>, Andrej Corovic<sup>1</sup>, Xian Zhang<sup>3</sup>, Fabrizio Drago<sup>4</sup>, Marcella Ma<sup>5</sup>, Maria Ozsva Kozma<sup>6</sup>, Froher Yasin<sup>1</sup>, Yuta Saady<sup>1</sup>, Hema Kothari<sup>4</sup>, Tian X Zhao<sup>1</sup>, Guo-Ping Shi<sup>3</sup>, Coleen A McNamara<sup>4</sup>, Christoph Binder<sup>6</sup>, Andrew P Sage<sup>1</sup>, Jason M Tarkin<sup>1</sup>, Ziad Mallat<sup>1,7</sup>, **Meritxell Nus<sup>1\*</sup>**

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**Glutamine synthetase – A novel modulator of atherosclerosis?**

**CH Ozber<sup>1\*</sup>**, KE Musialowski<sup>1</sup>, NY Yuldasheva<sup>1</sup>, T Slater<sup>1</sup>, A Skromna<sup>1</sup>, N Makava<sup>1</sup>, A Visnagri<sup>1</sup>, WH Lamers<sup>2</sup>, G Eelen<sup>3</sup>, P Carmeliet<sup>3</sup>, SB Wheatcroft<sup>1</sup>, MT Kearney<sup>1</sup>, and RM Cubbon<sup>1</sup>.

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P35

**Adipose Tissue Derived Ceramides Regulate Myocardial Redox State and Predict Cardiovascular Outcomes**

**M. Polkinghorne<sup>\*1</sup>**, N. Akawi<sup>1,2</sup>, I. Badi<sup>1</sup>, A. Checa<sup>3</sup>, C. Kotanidis<sup>1</sup>, I. Akoumianakis<sup>1</sup>, A. Antonopoulos<sup>1</sup>, G. Krasopoulos<sup>4</sup>, R. Sayeed<sup>4</sup>, N. Walcot<sup>4</sup>, K. Channon<sup>1</sup>, C. Wheelock<sup>3</sup>, C. Antoniades<sup>1</sup>

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**Bruton's tyrosine kinase (BTK) regulates macrophage polarisation within the atherosclerotic lesion**

**GSD Purvis<sup>1,2,3,\*</sup>**, S Hui<sup>1</sup>, AJ Iqbal<sup>4</sup>, G Douglas<sup>2,3</sup>, L Zeboudj<sup>1</sup>, D Ahern<sup>5</sup>, C Monaco<sup>5</sup>, KM Channon<sup>2,3</sup> and DR Greaves<sup>1</sup>

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P37

**IL-33 is an emerging target in hypertension and vascular dysfunction and remodelling.**

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**Establishing gel based 3d microenvironment to investigate macrophage migratory behaviour**

**Mustafa Sevim**<sup>\*1,2</sup>, Jenefa Begum<sup>1</sup>, Asif Jilani Iqbal<sup>1</sup>, Ed Rainger<sup>1</sup>

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P39

**Indian Consensus for the Utilisation of Combination of Dual Antiplatelet and Statin therapy for the Stratified Treatment of Acute Coronary Syndrome**

**Jay Shah**<sup>1</sup>, Prashant Kharche<sup>2</sup>, Ajeya Mundhekar<sup>3</sup>, Pradeep R Kumar<sup>4</sup>, Soumik Chaudhuri<sup>5</sup>, Joy Sanyal<sup>6</sup>, Sukriti Bhalla Singh<sup>7</sup>, Omer Mustafa Hasan<sup>8</sup>, Saikat Kanjilal<sup>9</sup>, Ameya MT<sup>10</sup> (**STRATIFY study group**)

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4. *Jp Hospital, Rourkela, India*
5. *Peerless Hospital, Kolkata, India*
6. *Nivedita Health Care Center, Siliguri, India*
7. *Aakash Hospital, Delhi, India*
8. *Allahabad Heart Center, Prayagraj, India*
9. *Manipal Hospital, Kolkata, India*
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**The downregulation of IGFBP-6 in people with periodontitis may exacerbate the risk of atherosclerosis**

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P41

**Generation of a conditional JCAD overexpressing mouse to investigate the association with coronary artery disease risk**

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**Diagnosis and prognosis of ischaemic heart disease types in the China Kadoorie Biobank (CKB) study**

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**Novel independent relationship between inflammatory proteins and myocardial infarction**

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**Auto Epicardial Adiposity Assessment For Atrial Fibrillation Risk In Severe Coronary Atherosclerosis**

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P45

**A Nrf2-OSGIN1&2-HSP70 axis mediates cigarette smoke-induced endothelial detachment - implications for plaque erosion**

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**Systolic blood pressure and risk of cardiovascular diseases: a Mendelian randomization study**

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**Technical advances in imaging guided minimally invasive post-mortem CT angiography**

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**Variability in vascular inflammation in response to different COVID-19 variants**

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**Defective vascular smooth muscle cell tafazzin impairs mitochondrial function and promotes atherosclerosis**

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