THE GENOMIC MEDICINE FOUNDATION (UK)
FELLOWSHIP, SCHOLARSHIP, EDUCATION AND PROMOTION OF GENOMIC APPLICATIONS IN MEDICINE, HEALTHCARE AND SOCIO-ECONOMIC PROGRESS

The IX International Conference of Cardiovascular Genomic Medicine
Royal College of Surgeons, Edinburgh, Scotland
23-24 October 2023

The next (9th) **Biennial International Cardiovascular genomics conference** is held on 23-24 October 2023. The main theme of this conference is '***Precision Cardiovascular Medicine'***. The scientific programme, delivered by leading global experts, includes the ***Third William Harvey Oration***, plenary/ key-note lectures, and scientific oral & poster sessions.

Organising Committee

Prof. Dhavendra Kumar (Chair)
Dr. Wayne Lam
Ms. Sam Moss
Mr. Nick Miles

Scientific Committee

Prof. Sir Munir Pirmohamed (Univ. Liverpool, UK/ GMF-UK, Chair)
Prof. Dhavendra Kumar (Genomic Medicine Foundation UK/ CEO)
Prof. Arthur Wilde (Univ. Amsterdam, NL)
Prof. Perry Elliott (Univ. College Hospital & Bart's Hospital, London, UK)
Prof. Mary Porteous (Univ. of Edinburgh, Scotland, UK)
Prof. Martin Denvir (Univ. of Edinburgh, Scotland, UK)
Prof. Zaheer Yousef (Cardiff University, Wales, UK)
Prof. Ajay Bahl (PGIMER, Chandigarh, India)
Dr. Wayne Lam (Western General Hospital, Edinburgh, Scotland, UK)
Dr. Catherine Mercer (Southampton Univ. Hospitals, Southampton, UK)
Prof. Bart Loeys (Univ. Antwerp, Belgium)
Dr. John Dean (Royal Infirmary, Aberdeen, Scotland, UK)
Prof. Robert Hamilton (Sick Kids, Toronto, Canada)
Prof. Dan Arking (Johns Hopkins, Baltimore, MD, USA)
Prof. Patricia Munroe (William Harvey Institute, QMUL, London, UK)
Dr. Yasmine Aquib (Sir Magdi Yaquib Heart Hospital, Aswan, Egypt)
Prof. Bill Newman (Centre for Genomic Medicine, Univ. Manchester, UK)
Prof. Christopher Semsarian (University of Sydney, Australia)

Programme

Theme: "PRECISION CARDIOVASCULAR MEDICINE"

Day 1 Monday 23rd October 2023

0800 **Reception/ Registration**

0900 **Welcome/ Introduction**
Professor Dhavendra Kumar, William Harvey Research Centre, Bart's Medical School, QMUL, UK

0915- 1115 **Session I: Diagnostic cardiovascular genomics**
Chair- Professor Mary Porteous, Clinical Geneticist, Edinburgh, Scotland

1. Dr. Lorenza Monserrat, La Coruna, Spain
'*Genomic evolution of diagnostic cardiology*'
2. Prof. Sandi Deans, Edinburgh, Scotland
'*Challenges of genome diagnosis in clinical cardiology*'

1115 ***Coffee break***

1130-1330 **Session II: Phenotype ontology in cardiovascular genomics**
Chair: Dr. John Dean, Clinical Geneticist, Aberdeen, Scotland

3. Dr. Catherine Mercer, Cardiovascular Genetics, Southampton
'*Cardiovascular phenotypes in developmental disorders*'
4. Prof. James Ware, Imperial, London
'*Phenotype-genotype' correlation in Inherited cardiovascular conditions*'

1330- 1430 ***LUNCH***

1430- 1500 **Session III: Posters viewing**

1500-1600 **Session IV: 'Multi-OMICS Cardiovascular Medicine'**
Chair- Prof. Martin Denvir, Cardiologist, Edinburgh, Scotland

4. Prof. Seema Mittal, Hospital for Sick Children, Toronto, Canada
'*Digital approaches to multi-OMICS clinical cardiology*'
5. Dr. Anna Maria Choy, Cardiologist, Univ. Dundee, Scotland
' Multi-disciplinary management of arrhythmia syndromes'

1600-1630 ***TEA***

1630-1730 **Session V: Cardiovascular genomic precision medicine- back to the future'**
Key Note Lecture: Chair- Prof. James Ware, Imperial College, London.
6. Prof. Perry Elliott, UCL, London, UK

'*Emerging novel treatment prospects for cardiomyopathies'*

1730 **Panel discussion- Reflections of the Day**

CLOSE

1930 ***Scottish Reception/ Welcome***

2000 ***Conference Dinner (Dress- Black tie/ Traditional/ National)***

Day 2 Tuesday 24th October 2023

0830-0930 **Reception/ Registration**

0930-1015 **Key note lecture, Chair:**
7. Prof. Sir Munir Pirmohamed, Universtity of Liverpool, UK
'Pharmacotherapy cardiovascular genomic medicine'

1015-1115 **Session VI: 'Oral Award presentations (10 minutes each)**
Chairs: Dr. Caroline Coats, Cardiologist, Glasgow & Dr. Ruth McGowan, Clinical Geneticist, Glasgow, Scotland.

8. *Open papers selected from submitted abstracts for Award Maximum 5*

1115 ***COFFEE***

1145-1330 **Session VII 'Genomic precision cardiovascular medicine**
Chair: Prof. Sandi Deans, University of Edinburgh, Scotland
9. Prof. Nimesh Desai, Philadelphia, USA
'Genotype driven surgical management of aortopathies'
10. Prof. Sandosh Padmanabhan, Glasgow, Scotland, UK
'Genomics and the cardiovascular continuum'
11. Dr. Rob Ainsworth, Pathologist, University of Edinburgh, Scotland
'Sudden cardiac death- the Scottish perspectives'

1330-1430 ***LUNCH***

1430-1600 **Session VIII: Personal genomics in preventive cardiology**
Chair: Prof. Sandosh Padmanabhan, University of Glasgow
12. Prof. Manuel Mayr, King's College London.
' Cardiovascular proteomics of coronary artery disease'
13. Prof. Panagiotis Deloukas, Queen Mary University, London.
'Polygenic scoring systems in preventive cardiology'

1600-1630 ***TEA***

1630-1730 **'The Third William Harvey Oration'**
Facilitator- Professor Sir Munir Pirmohamed
14. Invited speaker- Prof. Arthur A.M. Wilde, University Amsterdam,
'Evolution of channelopathies in clinical cardiology'

1730 **Reflections of the Day ; Best Oral and Poster presentations awards**
Vote of Thanks- *Close and Bon Voyage*

All enquiries to-
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Mr. Nicholas Miles- Events Manager, Neon Events, Cardiff, UK- nick@neon-events.co.uk

Faculty

Professor Dhavendra Kumar

MBBS, MD, DCH(Ire), MMedSci, FRCPI, FRCP, FRCPCH, FACMG, DSc (Hon)
* The William Harvey Research Institute, Queen Mary University of London (d.kumar@qmul.ac.uk)
*Institute of Medical Genetics, University Hospital of Wales, Division of Cardiff University School of Medicine, UK. (kumard1@cf.ac.uk)
*The Genomic Policy Unit, the University of South Wales, Pontypridd, South Wales, UK.(Dhavendra.kumar@southwales.ac.uk)
*Inherited Cardiac Diseases Unit, St. Bart's Hospital, Bart's NHS Foundation Trust, London, UK
*Department of Medicine, The Medical School, Swansea University, UK
* The Genomic Medicine Foundation UK
(www.genomicmedicine.org; md@genomicmedicine.org)

Professor Dhavendra Kumar, Chair Organising/ Scientific Committees

An alumnus (Graduate,MBBS); Postgraduate, MD and Honorary Doctorate in Science, DSc) of the King George's Medical University, Lucknow, UP, India. He holds Fellowship of the Royal Colleges of Physicians (FRCPI & FRCP London) and Paediatric-Child Health (FRCPCH). In addition, he is a Fellow of the American College of Genetics and Genomics (FACMG). He is one of the globally acknowledged genetic and genomic clinician. His special interests in clinical genetics include genetic diseases of children, inherited conditions of heart and blood vessels, genomic medicine and genomic applications in global healthcare.

He has authored/edited many textbooks and monographs in the field of clinical genetics, cardiovascular genetics and genomic medicine & healthcare. Main titles include ***'Genetic Disorders of the Indian Subcontinent'***, '***Principles and Practice of Genomic Medicine'***, '***', 'Genomics and Health in Developing World' and 'Clinical Molecular Medicine-Principles & Practice'***. His books '***Oxford Specialist Handbook Inherited Cardiac Disease'*** and '***Medical & Health Genomics'*** received ***Highly Commended*** award at the British Medical Association Annual Medical Book Awards. Since 2016, he has served is the Serial Editor for '***Advances in Genetics***' and serves on the editorial board of many biomedical journals.

He is passionate for raising awareness and promoting importance of the inherited cardiovascular conditions (ICC) in clinical cardiology and genetic/genomic in modern medicine. He is acknowledged with the benchmark practice of 'multi-disciplinary care for inherited/familial heart disease'. He founded and leads the '***Global Familial Heart Challenge***'

project for promotion; early detection, management and prevention of familial/ inherited heart diseases globally. He is an international authority in cardiovascular genomic medicine (CVGM) and leads the Global Network comprising of leading CVGM Centres. Since 2007, he has organized and led the Biennial International Cardiovascular Genetics and Genomics Conferences. He is the Founding Editor in Chief of the new biomedical journal '***Genomic and Molecular Cardiology***' and co-author/co-editor of '***Cardiovascular Genetics & Genomics-Principles and Clinical Practice' and the 'Oxford Specialist Handbook Inherited Cardiac Disease'.***

Professor Kumar is passionate for high quality healthcare in developing nations. His new project, the **Global Consortium for Genomic Education (GC4GE)** aims to enhance and empower healthcare providers in the developing world through genetic/genomic education and training. Pursuant to this initiative he is actively engaged with a number of global genomic medicine initiatives of the Human Genome Organization International (***HUGO***), Human Variome Project (***Global Variome***), Global Genomic Medicine Collaborative (***G2MC***) and Genomic Alliance for Global Health (***GA4GH***). He is the first Chair of the **HUGO Genomic Education Committee**. He founded and leads the **Genomic Medicine Foundation (UK**), a 'not-for-profit' organization that aims to support genomic and OMIC applications in medicine, healthcare and socio-economic welfare through scholarship, fellowship and mutually beneficial collaboration.

Dr. Lorenzo Monserrat, MD, PhD, Cardiologist, La Coruna, Spain

Lorenzo Monserrat, MD, PhD Founder and Medical Director , Dilemma Solutions Researcher in University of A Coruña Founder of Health in Code Medical degree in Santiago de Compostela, Research Fellowship in Cardiomyopathies at St George´s University Hospital in London. Specialist in Cardiology and PhD in A Coruña University. Diplomature in Design and Statistics in Health Sciences (Autonoma University, Barcelona). Former researcher of the Galician Health Service and Chief of the Inherited Cardiovascular Diseases Reference Unit in A Coruña University Hospital. Author of >150 papers focused on inherited cardiovascular diseases and cardiovascular genetics. Participation and leadership in multiple research projects on the field of cardiovascular genetics.

Prof. Sandi Deans, Molecular Geneticist, University of Edinburgh, Scotland

Dr Sandi Deans, National Laboratory & Scientific Lead (Genomics) NHS England

Sandi Deans is the National Laboratory and Scientific Lead within the NHS England Genomics Team providing scientific oversight and leadership for the delivery of the NHS National Genomic Medicine Service and the NHS contribution to the 100,000 Genomes Project.

Dr Deans is a Consultant Clinical Scientist with an international reputation in the delivery and assessment of a wide range of molecular and genomic technologies in modern healthcare. She is also the Director of Genomics Quality Assessment (GenQA) part of the UK National External Quality Assessment Service (UK NEQAS) based in the Department of Laboratory Medicine, Royal Infirmary of Edinburgh.

Dr Deans is an Honorary Reader in Genomic Medicine at Edinburgh University and a Senior Honorary Lecturer in the Medical School, University of St. Andrews.

Dr. Catherine Mercer, MD FRCP, Clinical Geneticist, Southampton, England, UK

Dr Catherine Mercer is a Consultant Clinical Geneticist at University Hospital Southampton NHS Foundation Trust and an Honorary Senior Lecturer at the University of Southampton. She works as the Wessex Cardiac Genetics Lead, and along with the team, covers a population of 3.5 million. Dr Mercer has expertise in caring for families with isolated familial cardiac disease as well as those with syndromic diagnoses that include a cardiovascular component. Dr Mercer is active in research regarding gene identification, including the discovery of both *NR2F2* in patients with left ventricular outflow tract obstruction and more recently a novel monogenic cause of familial Ebstein's anomaly.

Prof. James Ware, Cardiovascular Genomic Medicine, Imperial/ Brompton, London, UK

Dr. James Ware is a Reader in Genomic Medicine at Imperial College London and the MRC London Institute of Medical Sciences, and Consultant Cardiologist at Royal Brompton and Harefield Hospitals. He graduated from the University of Cambridge, trained clinically in London & Geneva, and pursued research training at Imperial College London, Harvard Medical School, and the Broad Institute of MIT & Harvard.

James' research aims to understand the impact of genetic variation on the heart and circulation, and to use genomic information for precision medicine. Clinical interests include the management of Inherited Cardiac Conditions, and the broader application of genetics and genomics to healthcare.

Professor Seema Mital, Sick Kids, Univ. Toronto, Canada

Dr. Seema Mital is a Heart Failure and Transplant Cardiologist and Head of Cardiovascular Research at the Hospital for Sick Children, Toronto. She is Professor of Paediatrics at the University of Toronto and a Senior Scientist at the SickKids Research Institute. She is also the Heart and Stroke Foundation of Ontario Chair of Cardiovascular Science, and the Scientific Co- Lead of the Ted Rogers Centre for Heart Research.
Seema Mital has a strong translational research program focused on genomics, pharmacogenomics and stem cell applications to model childhood heart disease and discover new therapies. She has extensive experience in the genetics/genomics of congenital heart disease and heart failure, personalized medicine and clinical trials.
She established the SickKids Heart Centre Biobank, a multi-centre biorepository of children and adults with childhood onset heart disease for genomics research, one of the largest international repositories of its kind.

She is the Scientific Co-lead of the Ted Rogers Centre for Heart Research Cardiac

Precision Medicine Program established in November 2014. Mital is a Principal Investigator of the CIHR-funded Canadian National Transplant Research Program, the NIH-funded Pediatric Heart Network, and leads the ERAPerMed funded PROCEED network for Personalized Genomics in congenital heart disease. She serves on the Leadership Committee of the Functional Genomics and Translational Biology Council of the American Heart Association, and the Heart and Stroke Foundation
Structural Heart Disease Council.

Dr. Anna Mario Choy, MD FRCP, Honorary Reader Cardiology, University of Dundee, Scotland.

Dr Anna Maria Choy is a Honorary Reader and a consultant cardiologist with interests in inherited and acquired arrhythmias. She is also the lead for international medical students at the medical school.

Prior to her appointment in 2004 to University of Dundee, she was an associate professor in Cardiology, and head of the Arrhythmia Service at the University of Malaya, an American Heart Association Fellow at Vanderbilt University, USA. Her research interests are arrhythmia related; focusing on implantable cardiac electronic devices for arrhythmia management, the familial arrhythmias, anti-arrhythmic drugs and atrial fibrillation. Dr Choy is also the national lead clinician for FANS (the Familial Arrhythmia Network for Scotland), a national specialist network for patients with malignant arrhythmias due to genetic disease. She was awarded the National Award for Outstanding Contribution to the Management of Inherited Cardiac Conditions from the Arrhythmia Alliance in 2009.

Impact of Research

Maintaining serum potassium in drug induced long QT syndrome. Her research on the importance of potassium in drug induced arrhythmias is cited as the supporting evidence in the recommendation of current American Heart Association and the American College of Cardiology on the Prevention of torsade de pointes in hospital settings. Dr Choy's work with FANS was recognized by the National Award for Outstanding Contribution to the Management of Inherited Cardiac Conditions from the Arrhythmia Alliance in 2009.

Prof. Perry Elliott, MD FRCP, Cardiovascular Medicine, University College of London, UK

Prof. Perry M. Elliott (H-index 83, 37,824 citations) is Professor of Cardiovascular Medicine at University College London (UCL). He is director of the UCL Centre for Heart Muscle Disease, Head of Clinical Research at the Institute of Cardiovascular Science UCL and a consultant cardiologist in the Centre for Inherited Cardiovascular Disease at the Bart's Heart Centre, St. Bartholomew's Hospital London, UK. He studied medicine at St. Thomas's Hospital Medical School, London. After qualifying in 1987 he trained in general medicine, gaining membership of the Royal College of Physicians in 1991, and completed his general cardiology training at St. George's Hospital Medical School, London. He was appointed as Senior Lecturer first at St. George's Hospital in 1999 and then at UCL in 2003. He was promoted to Reader in Inherited Cardiac Disease in 2005 and became a full Professor at UCL in 2012. He was elected as a Fellow of the European Society of Cardiology (ESC) in 2005, is past Chairman of the ESC Working Group on Myocardial and Pericardial Diseases (2010–2012), and chairs the ESC Guideline Task Force on Hypertrophic Cardiomyopathy and the Executive Committee for the European Outcomes Research Programme registry on cardiomyopathies. He is cardiovascular lead for the North Thames NHS Genomic Medicine Centre and is President of Cardiomyopathy UK, Europe's foremost charity for patients with heart muscle disease. From 2009 to 2013, he was Deputy Editor of The Heart Journal and is currently Deputy Editor for the International Journal of Cardiology. Over the past 25 years, Prof. Elliott has established an international reputation in the field of heart muscle disease, authoring more than 300 peer-reviewed papers on the subject. He develops diagnostic standards, risk stratification tools and clinical service models based on some of Europe's largest inherited heart disease cohorts, fostering industry collaborations in sequence interpretation, therapeutic trials and multicentre research partnerships.

In the NIHR-BRC funded programme Prof. Elliott has used hypertrophic cardiomyopathy (HCM) as a model for translation. HCM is a genetic disorder (1:500 adults) that causes sudden cardiac death , stroke and heart failure. It is characterised by marked variability in disease expression and despite 20 years of research, an understanding of genotype-phenotype relations in HCM had remained elusive. Professor Elliott's work shows that genetic heterogeneity causes different but predictable effects on cardiac phenotype and that creation of an integrated genetic testing pipeline can be used to guide therapy and counselling strategies in patients with this and other inherited cardiac diseases. These results

are used in national and international guidance on genetic testing in families affected by inherited heart muscle disease:

Professor Sir Munir Pirmohamed, MB ChB (Hons), MRCP, PhD, FRCP, FRCP(E), FBPharmacolS

Professor Sir Munir Pirmohamed is a British clinical pharmacologist and geneticist. Since 2007 he has been the NHS Chair of Pharmacogenetics at the University of Liverpool. He studied medicine at the University of Liverpool from 1980 to 1985. He was awarded a PhD in pharmacology in 1993, and began working as a consultant physician at the Royal Liverpool University Hospital in 1996. Pirmohamed gained the position of Personal Chair in Clinical Pharmacology at The University of Liverpool in 2001. He went on to become the NHS Chair of Pharmacogenetics in 2007 and the David Weatherall Chair of Medicine at the University of Liverpool in 2013. He was a member of the Commission on Human Medicines and Chair of its Pharmacovigilance Expert Advisory Group from 2005 to 2020 and was appointed Chair of the Commission in 2021.

He is Director of the Centre for Drug Safety Science, Director of the Wolfson Centre of Personalised Medicine, [6] and Director of the MRC Clinical Pharmacology Training Scheme, all at the University of Liverpool. In addition, he is Director of HDR North, part of HDR UK. Alongside these responsibilities, Pirmohamed is a Non-Executive Director for NHS England/Improvement, a member of the governing council of the Medical Research Council, a medical trustee for the British Heart Foundation, and was President of the British Pharmacological Society from January 2020 to December 2021. He is President-Elect of the Association of Physicians for 2022, and will become President in 2023. In 2022, he chaired a committee that produced a report, Personalised prescribing, on behalf of the Royal College of Physicians of London and the British Pharmacological Society, which advocates the implementation of pharmacogenomics into the UK NHS.

Dr. Nimesh Desai, MD, PhD, Cardiovascular Surgeon, University of Pennsylvania, Philadelphia, USA

Nimesh Desai, MD, PhD is a cardiovascular surgeon who serves as Co-Director of the Penn Aorta Center. He is an Associate Professor of Surgery at the Hospital of the University of Pennsylvania. He also serves as Associate Director of the Cardiovascular Outcomes, Quality, and Evaluative Research (CAVOQER) Center at Penn.

Dr. Desai's research interests include organizing large multi-center clinical trials to assess new cardiovascular technologies and health process evaluations using big-data and novel statistical approaches to improve quality of care for cardiac patients. Dr. Desai is the primary investigator of over 10 clinical trials currently ongoing at Penn, holds grants for database and registry development, and was recently awarded funding from the NHLBI to develop and direct a Clinical and Implementation Research Skills Program (CIRSP) for surgical trainees as part of a successful Penn U01 submission. Dr. Desai's clinical focus is on advanced aortic surgery, both endovascular and open, percutaneous valve replacement, complex valve surgery, multiple arterial grafting, and arrhythmia surgery.

Dr. Desai holds several national leadership positions in cardiovascular surgery including Co-Chair of the Society of Thoracic Surgeons Aortic Surgery Task Force and Co-Chair of the Society of Thoracic Surgeons/American College of Cardiology Transcatheter Valve Therapies Registry Risk Modelling Sub-Committee. He received his medical degree from the Schulich School of Medicine at Western University in Ontario and his PhD in Clinical Epidemiology from the University of Toronto. He completed an integrated Cardiac Surgery Residency at the University of Toronto and is a Fellow of the Royal College of Surgeons of Canada.

Prof. Sanosh Padmanabhan, Academic Cardiologist, University of Glasgow, Scotland

Prof Sandosh Padmanabhan completed his MBBS and MD at JIPMER, Pondicherry, India and was awarded the Gold Medal for MD General Medicine in 1995. His PhD (1999-2003) on G-protein signalling in hypertension was awarded the Bellahouston Medal by the University of Glasgow in 2004. He received the Austin Doyle Award from the International Society of Hypertension in 2004. His pharmacogenetic genomewide linkage study led to a BHF Intermediate Fellowship (2006-2009). He was the lead on a genome wide association analysis of Hypertension between 2008 and 2010 resulting in the discovery of a new gene and pathway for hypertension. He was a visiting fellow to the Broad Institute of Harvard and MIT (2010-2012). He is a Fellow of the Royal College of Physicians, the British Hypertension Society and the American Heart Association.

DR ROBERT JOHN AINSWORTH, FORENSIC PATHOLOGIST, EDINBURGH, SCOTLAND

Dr Ainsworth has been a consultant forensic pathologist for 12 years in Scotland, undertaking FRCPath Histopathology/Forensic Pathology training at the University of Glasgow before then commencing his consultant forensic pathology career there in 2007. In 2011, he transferred to NHS Lothian (Edinburgh), where he is currently the Head of Specialty for Forensic Pathology.

Dr Ainsworth's professional interests include the investigation of sudden cardiac deaths in the young, and in this regard, he is a member of the steering group for the Familial Arrhythmia Network for Scotland, is the forensic pathology representative for the UK Cardiac Pathology Network, and undertakes the UK CPN annual EQA. He is also an RCPath examiner for the Certificate of Higher Autopsy Training (CHAT) and for the Forensic Pathology Part 2 examination, as well as an examiner for the Worshipful Society of the Apothecaries of London for the DMJ Forensic Pathology examination.

Professor Manuel Mayr, MD, PhD, BHF Professor of Cardiovascular Medicine, King's College, London, UK

Manuel Mayr qualified in Medicine from the University of Innsbruck (Austria) in 1999. He then moved to London to undertake a PhD. Upon completion of his PhD, he achieved promotion to Professor in 2011. He has been awarded a prestigious British Heart Foundation Personal Chair in 2017. His academic achievements have been recognised by the inaugural Michael Davies Early Career Award of the British Cardiovascular Society (2007), the inaugural Bernard and Joan Marshall Research Excellence Prize of the British Society for Cardiovascular Research (2010), and the Outstanding Achievement Award by the European Society of Cardiology Council for Basic Cardiovascular Science (2013).

Prof. Panagiotis Deloukas, PhD, FMedSci, Queen Mary University, London, UK

Panos Deloukas obtained his BSc in Chemistry from the Aristotelian University of Thessaloniki, Greece and MSc in Microbiology from University Paris 7, France. He received his PhD from the Biozentrum University of Basel, Switzerland in 1991. He joined the Sanger Centre in 1994 where he set up a high-throughput pipeline for radiation hybrid mapping, leading an effort to map 30,000 gene markers, GeneMap98. Panos was an active member of the Human Genome

Project coordinating the sequencing and analysis of chromosomes 10 and 20. After the completion of the HGP he joined the International HapMap project constructing SNP maps of the human genome. Since 2005 he is studying the molecular basis of common disease and variable response to drugs in humans through large-scale genetic studies. He joined the William Harvey Research Institute at Queen Mary University London in September 2013 working on the genomics of coronary artery disease and lipid levels. Panos is a member of many consortia including CARDIoGRAMplusC4D, Global Lipids Genetics Consortium, GIANT, the UK Biobank Cardiometabolic Consortium, and the Cardiovascular Genomics England Clinical Interpretation Partnership. He has authored over 400 publications (H-index 121) and is listed by Thomson Reuters among the 1% highly cited researchers in Molecular Biology & Genetics since 2012**.**

Prof. Arthur A.M. Wilde, Cardiologist, Academic Medical Centre, University of Amsterdam, Netherlands

Arthur A.M. Wilde got his M.D. at the University of Amsterdam in 1983. After his Ph.D. in 1988, he started his Fellowship training in Cardiology at the Academic Medical Centre, and was registered as such in 1994. Afterwards he specialized in clinical electrophysiology at the Academic Hospital Utrecht.

From the Netherlands Heart Association he was awarded a grant as Clinical Established Investigator for five years. In 1999, he became head of the Laboratory of Experimental Cardiology, and in 2003 head of the Department of Clinical and Experimental Cardiology (Academic Medical Centre). His major focus is on different aspects of inherited arrhythmia syndromes. In more recent years also genetic factors contributing to sudden cardiac death in the general population became a focus.

In 2011 he was appointed as member of the Dutch Academy of Science and in 2012 he received the Distinguished Investigator award of the Heart Rhythm Society.