

**OUTLINE OF THE  
VPM2016 PROGRAM**

**June 25<sup>th</sup> – 29<sup>th</sup>, 2016**

**Reykjavik**

**Iceland (IS)**

## **GENERAL OUTLINE**

### **DAY 1 (Basics)**

#### **Sessions:**

- Key note lectures
- Who is at risk of developing Atherosclerosis? – from Framingham to ‘Omics’
- Mechanisms of Atherogenesis
- Interventions to Prevent Coronary Disease Development
- Who will become vulnerable and when will it happen?

### **DAY 2 (Mechanisms and Imaging)**

#### **Sessions:**

- Vascular bed vulnerability
- Mechanisms of plaque instability and models of disease
- Coronary pathology
- Intracoronary imaging – novel platforms
- Biomechanical modelling
- Targets for Molecular Imaging

### **DAY 3 (Treatment)**

#### **Sessions:**

- Emerging anti-inflammatory strategies
- Treatments to reduce plaque/patient vulnerability combine with anti-inflammatory strategies?
- Thrombosis and anti-thrombotic strategies
- New approaches to the treatment of hypertension

**Sunday, June 26, 2016**  
**-Day 1-**

**08:00 Welcome remarks: Prof. Patrick W. Serruys and guest director Prof. Bernard Gersh**

**KEY NOTE LECTURES**

**Moderators: Vilmundur Gudnason and Karl Andersen**

**08:05** What have I learned from VPM 2015? A 10,000 feet view  
**Patrick W. Serruys (NL)**

**08:25** The vulnerable population. The epidemic of CVD in the developing world: Global implications.  
**Bernard Gersh (USA)**

**08:45** *Burning questions (5min)*

**Who is at risk of developing Atherosclerosis? – from Framingham to ‘Omics’**

**Chairmen: Eric Peterson and Bernard Gersh**

**08:50** Precision medicine initiative– Dream or reality?  
**Eric Peterson (USA)**

**09:00** *One burning question (3min)*

**09:03** From genome wide association to whole genome sequencing and epigenetics in CAD – What has been delivered and what can we expect?  
**Kari Stefansson (IS)**

**09:13** *One burning question (3min)*

**09:16** Cardiovascular phenotyping in population studies – reclassification of CV risk in moderate/low risk individuals.  
**Vilmundur Gudnason (IS)**

**09:31** *One burning question (3min)*

**09:34** Big data and biomarker discovery  
**Harry Hemingway (UK)**

**09:44** *One burning question (3min)*

**09:47** Genetic loci and the burden of atherosclerosis lesion – study update  
**Szilard Voros (USA)**

**09:57** *One burning question (3min)*

**10:01** Discussion (15 min.)

**10: 15 Coffee break (30 min)**

### **Mechanisms of Atherogenesis**

**Chairmen: Dorian Haskard and Kari Stefansson**

- 10:45 Ageing and the Biology of Atherosclerosis  
**Toren Finkel (USA)**
- 10:55 *One burning question (3min)*
- 10: 58 Effect of DNA damage and repair on Atherosclerosis – a clinical perspective  
**Martin Bennett (UK)**
- 11:08 *One burning question (3min)*
- 11:11 Assessing oxidative stress, its impact on atherogenesis and predicting clinical outcomes  
**Ramzi Khamis (UK)**
- 11:21 *One burning question (3min)*
- 11:34 Discussion (10 min)

### **Targets for molecular imaging**

**Chairmen: Marc Dweck and Rob Krams**

- 11:44 Macrophages  
**Farouc Jaffer (USA)**
- 11:54 *One burning question (3min)*
- 11:57 Hypoxia and haemorrhage  
**Dorian Haskard (UK)**
- 12:07 *One burning question (3min)*
- 12:10 Anti-oxidised LDL antibodies from predicting risk in blood to imaging atherosclerosis.  
**Ramzi Khamis (UK)**
- 12:20 *One burning question (3min)*
- 12:23 Discussion (10 min)

### **12:35 Lunch Break**

### **Interventions to Prevent Coronary Disease Development**

**Chairmen: Dorian Haskard and Martin Bennett**

- 14:00 Focus on families and peer pressure– it works!  
**Juan Alvira (ES)**
- 14:10 *One burning question (3min)*
- 14:13 Hypertension – Impact of Under-treatment on Global CVD burden implications of SPRINT.  
**Eric Peterson (USA)**
- 14:23 *One burning question (3min)*
- 14:26 How to protect Heart from Diabetes and hypertension?

**Roberto Ferrari (IT)**

14:36 *One burning question (3min)*

14:39 What is most important for predicting future adverse events: symptoms, anatomical disease burden or ischaemic burden?

**Jagat Narula (USA)**

14:49 *One burning question (3min)*

15:05 Discussion (10 min)

**Non-traditional risk factors: The Mayo session**

**Chairmen: Roberto Ferrari and Eric Peterson**

15:20 Endothelial dysfunction and vasomotion

**Amir Lerman (USA)**

15:30 *One burning question (3min)*

15:33 Sleep disorders and cardiovascular risk

**Bernard Gersh (USA)**

15:43 *One burning question (3min)*

15:46 Patients with chronic kidney disease

**Lilach Lerman (USA)**

15:56 *One burning question (3min)*

16:00 Discussion (10 min)

**16: 10 Coffee break (30 min)**

**Who will become vulnerable and when will it happen?**

**Chairmen: Gregg Stone and James Muller**

16:40 Circulating biomarkers for predicting future cardiovascular risk – do we need more than high sensitivity troponin and BNP?

**Stefan Blankenberg (DE)**

16:50 *One burning question (3min)*

16:53 Beyond circulating biomarkers: In situ biomarkers assessment is essential to identify the vulnerable patients.

**Nick West (UK)**

17:03 *One burning question (3min)*

17:06 MSCT vs. PET-CT for identification of vulnerable patient – what PREFFIR will tell us.

**Marc Dweck (UK)**

17:16 *One burning question (3min)*

17:19 Discussion (10 min)

**DEBATE: How do we identify vulnerable myocardium, imaging or functionality test?**

**Chairmen: Amir Lerman and James Muller**

17:29 I will use MSCT<sub>FFR</sub> for risk stratification.

**Pamella Douglas (USA)**

17:39 *One burning question (3min)*

17:42 Can we reconcile haemodynamic severity of a lesion and vulnerability?

**William Wijns (BE)**

17:52 *One burning question (3min)*

17:55 Association of coronary stenosis and plaque morphology with FFR and outcomes

**Jagat Narula (USA)**

18:05 *One burning question (3min)*

18:08 Don't forget the importance of microcirculation

**Javier Escaned (ES)**

18:18 *One burning question (3min)*

18:21 Coronary vasospasm can cause plaque thrombosis

**Takashi Akasaka (JP)**

18:31 *One burning question (3min)*

18:34 Discussion (10 min)

#### **“Grey” Cases Discussion: (with or without clinical consequence)**

18:44 Asymptomatic patient with positive PET-CT, MSCT FFR negative and invasive FFR negative with positive hs-troponin... *(Final title pending)*

**Ramzi Khamis (UK)**

18:54 How do you treat your boss, IVUS guided or FFR guided?

**Ranil de Silva (UK)**

19:04 Discussion (5 min)

**Monday, June 27, 2016**  
**-Day 2-**

### **Intracoronary Imaging**

**Chairmen: Ton van der Steen and Gregg Stone**

- 08:00 New development in intravascular ultrasound  
**Gary Mintz (USA)**
- 08:10 *One burning question (3min)*
- 08:13 New development in intravascular optical coherence tomography  
**Takashi Akasaka (JP)**
- 08:23 *One burning question (3min)*
- 08:26 Multimodality catheter development: OCT-NIRS, OCT-NIRF and IVUS-NIRF  
**Farouc Jaffer (USA)**
- 08:36 *One burning question (3 min)*
- 08:39 NIRS-IVUS for detection of vulnerable plaque.  
**David Erlinge (SE )**
- 08:49 *One burning question (3min)*
- 08:52 Serial (5yrs) analysis of fused OCT IVUS GS and IVUS VH. What does multimodality imaging add?  
**Patrick W. Serruys (NL)**
- 09:02 *One burning question (3min)*
- 09:05 Discussion (10 min)

### **09:15 TECHNICAL CORNER (5 slides: 5 min talks) 30 min**

- |   |                                |
|---|--------------------------------|
| NIRS as a possible tool to detect erosion sites | <b>James Muller (USA)</b>      |
| Combined catheter of OCT-IVUS                   | <b>Yoshi Onuma (NL)</b>        |
| Heartbeat OCT                                   | <b>Ton Van de Steen (NL)</b>   |
| Photo-acoustic imaging                          | <b>Ton Van de Steen (NL)</b>   |
| Brillouin imaging                               | <b>Rob Krams (UK)</b>          |
| Time-Resolved Spectroscopy IVUS                 | <b>Christos Bourantas (UK)</b> |
- 09:45 Innovations in software and post-processing  
**Yoshi Onuma (NL)**
- 09:55 *One burning question (3min)*
- 09:58 Discussion (10 min)

### **10:08 Coffee break (30 min)**

### **Non-invasive imaging**

**Chairmen: TBD and TBD**

- 10:38 The relationship between invasive and non-invasive imaging for vulnerable plaques.  
**James Muller (USA)**

10:48 One burning question (3min)

10:51 CT for coronary plaque evaluation and risk stratification – the bar is set high for MRI!  
**James K. Min (USA)**

11:01 One burning question (3min)

11:04 Dixon MRI  
**Jouke Smink (NL)**

11:14 One burning question (3min)

11:17 MRI for plaque vulnerability  
**Rene Botnar (UK)**

11:27 One burning question (3min)

11:30 Update of PESA: MRI  
**Juan Alvira (ES)**

11:40 One burning question (3min)

11:43 Panel discussion (10 min)

- Will we ever solve the problem of vulnerable plaque with intravascular imaging?
- We will solve the problem with non-invasive imaging.
- No imaging needed.

### **Biomechanical modelling-1**

**Chairmen: Peter Stone and Ton van der Steen**

11:53 Haemodynamic determinants of advanced coronary plaque formation  
**Ranil de Silva (UK)**

12:03 One burning question (3min)

12:06 Shear stress is the determinant of neoatherosclerosis and stent failure  
**Christos Bourantas (UK)**

12:16 One burning question (3min)

12:19 Biomarkers and IVUS for risk prediction – what did we learn from  
ATHEROREMO and BIOMArCS study?  
**Eric Boersma (NL)**

12:29 One burning question (3 min)

12:32 Discussion (5 min)

### **12:40 Lunch Break**

### **Biomechanical modelling-2**

**Chairmen: Ranil de Silva and Christos Bourantas**

14:00 What influences plaque progression and vulnerability most:  
High shear stress, low shear stress, or oscillatory shear stress?  
**Jolanda Wentzel (NL)**

14:10 One burning question (3min)



14:13 Linking haemodynamics with biology – systems biology of advanced atherosclerotic plaque formation

**Rob Krams (UK)**

14:23 *One burning question (3min)*

14:26 Applying shear stress to PROSPECT (*Title pending*)

**Peter Stone (USA)**

14:36 *One burning question (3min)*

14:39 Is shear stress ready for prime time? Feasibility of on-line analysis and what decision could be made based on shear stress.

**Academic Perspective: Frank Gijzen (NL)**

**What we need from industry: Christos Bourantas (UK)**

15:00 Discussion (10 min)

#### **Vulnerability: What to do after the event**

**Chairmen: Ramzi Khamis and Roberto Ferrari**

15:10 Cardioprotection after reperfusion – it works in animals but why not in patients?

**Bernard Gersh (USA)**

15:20 *One burning question (3min)*

15:23 Intracoronary infusion of Adenosine perfusion in preclinical model

**Dirk-Jan Duncker (NL)**

15:33 *One burning question (3min)*

15:36 Cooling for myocardial infarction: How much, how soon?

**Marko Noč (SL)**

15:46 *One burning question (3min)*

15:49 Discussion (10 min)

**Tuesday, June 28, 2016**  
**-Day 3-**

### **Mechanisms of plaque instability**

**Chairmen: Renu Virmani and TBD**

- 08:00 Observations from sudden cardiac death patients – how do they relate to our patients presenting with ACS?  
**Michael Joner (DE)**
- 08:10 *One burning question (3min)*
- 08:13 The temporal shift in plaque characteristics underlying clinically manifest of atherosclerotic disease.  
**Gerard Pasterkamp (NL)**
- 08:23 *One burning question (3min)*
- 08:26 Porcine models of vulnerable plaque  
**Jacob Fog Bentzon (ES)**
- 08:36 *One burning question (3min)*
- 08:39 Humoral immunity and plaque vulnerability  
**Dorian Haskard (UK)**
- 08:49 *One burning question (3min)*
- 08:52 MicroRNA's and non-coding RNA's in plaque vulnerability – Important Effectors and Potential Biomarkers  
**Christian Weber (DE)**
- 09:02 *One burning question (3min)*
- 09:05 Intra-plaque haemorrhage and hypoxia – potential diagnostic and therapeutic targets  
**Joe Boyle (UK)**
- 09:15 *One burning question (3min)*
- 09:18 Discussion (15 min)

### **Thrombosis and antithrombotic therapies**

**Chairmen: Patrick W. Serruys and Peter Stone**

- 09:35 Bivalirudin and Cangrelor - From one Horizon to the next.  
**Gregg Stone (USA)**
- 09:45 *One burning question (3min)*
- 09:48 Prolonged antiplatelet therapy: who really needs it, and is it treating stents or vulnerable plaque?  
**TBD**
- 09:58 *One burning question (3min)*
- 10:01 Discussion (5 min)

**10:08 Coffee break (30 min)**

**Treatment options for vulnerable plaques/patients**  
**Chairmen: Wolfgang Koenig and Lars Wallentin**

- 10:40 PCSK9 metabolism: from synthesis to expression  
**Joechen Maas (DE)**
- 10:50 *One burning question (3min)*
- 10:53 ALN-PCSSc, an RNAi Investigational Agent That Inhibits PCSK9 Synthesis  
**David Kallend (CH)**
- 11:03 *One burning question (3min)*
- 11:08 Discussion (5 min)

**11:08 TRIAL CORNER on PCSK-9 (5 slides: 5 min talks) 15 min**

- FOURIER trial (AMGEN)  
ODYSSEY outcomes trial (Sanofi/ Regeneron)  
SPIRE I/II trials (Pfizer)
- 11:23 Panel discussion of trialists  
**Gregg Stone, Bernard Gersh, Wolfgang Koenig, Amir Lerman, Patrick W. Serruys, ....**
- 11:33 Apo-AI Milano  
**Peter Wijnngaard (CH)**
- 11:43 *One burning question (3min)*
- 11:45 Lp (a) – ISIS-APO(a)Rx  
**Sam Tsimikas (USA)**
- 11:55 *One burning question (3min)*
- 11:58 Discussion (10 min)

**Anti-inflammatory drug strategies**  
**Chairmen: TBD and Wolfgang Koenig**

- 12:08 Why the drugs haven't worked – the Yin and Yang of inflammation in atherosclerosis and plaque vulnerability  
**Dorian Haskard (UK)**
- 12:18 *One burning question (3min)*
- 12:21 Targeting CD40-CD40L (Colchicine [COLCOT trial-sponsor])  
**Esther Lutgens (NL)**
- 12:31 *One burning question (3min)*
- 12:34 CIRT and CANTOS – Rationale and Progress  
**Wolfgang Koenig (DE)**
- 12:44 *One burning question (3min)*
- 12:47 Lessons learned from biomarker analysis of the SOLID and STABILITY trials: Is there any relationship with clinical outcomes?  
**Lars Wallentin (SE)**

12:57 *One burning question (3min)*

13:00 Discussion (10 min)

### **13:10 Lunch break**

### **Treatments to reduce patient vulnerability Chairmen: TBD and TBD**

14:30 Why do we need the ISCHEMIA trial?

**Gregg Stone (USA)**

14:40 *One burning question (3min)*

14:43 How vulnerable are patients with refractory angina?

**Ranil de Silva (UK)**

14:53 *One burning question (3min)*

14:56 Statins (From EASY-FIT to ESCORT)

**Takashi Akasaka (JP)**

15:06 *One burning question (3min)*

15:09 Treatment of Vulnerable Plaque

From PROSPECT: ABSORB to PREVENT (with case examples)

**Gregg Stone (USA)**

15:19 *One burning question (3min)*

15:22 Discussion (10 min)

### **FINAL DEBATE: Vulnerable Plaque- Simply a Myth or is the Requiem premature?**

15:32 Vulnerable plaque does not exist. Stop wasting your time and our money. A clinician's view.

**John Ambrose (USA)**

15:42 Thirteen years of VPM and the search for the vulnerable plaque – Now we are getting somewhere!!

**Renu Virmani (USA)**

15:52 Discussion

### **16:00 Closing remarks:**

Board of directors (Prof. Serruys, Prof. Stone, Prof. van der Steen, Prof. Koenig, Prof. Lerman, Prof. Muller and Dr. van Es)

Guest director: Prof. Bernard Gersh