



 Event  
Programme

Courage and  
Innovation

**50<sup>th</sup>**   
Anniversary  
of the **1<sup>st</sup> Heart  
Transplant**

2nd - 4th December 2017 | Groote Schuur Hospital, University of Cape Town

# Saturday 2<sup>nd</sup> December

## South-North Dialogue

Parallel Lecture Theatres 1 & 2, Grootte Schuur Hospital

### SOUTH-NORTH DIALOGUE

Host-Societies: STS; AATS; EACTS; ASCVTS; Brazilian Soc. CTS; PASCAR; PASCATS; ANZCTS

08:00 – 10:45

Welcome (7min)  
Procedural Introduction to the day  
The Forgotten Millions (7min)  
The Ethic Questions (20min)

#### Cardiac Surgical needs of the many

(5min Intro and 4min 'Blitzes' followed by 20min Roundtable)

Mozambique  
Brazil  
China  
India  
Equator: Contrast and Diversity  
The Magreb Countries  
Iran  
Russia  
Namibia  
South Africa

#### Humanitarian missions / NGOs: Critical Appraisal

(5min Intro and 4min 'Blitzes' followed by 20min Roundtable)

Kalangos Foundation  
Chain of Hope  
Alain Carpentier Foundation  
La Chaîne de l'Espoir  
Namibian ex-Minister of Health  
Le Petit Coeur

10:45 – 11:10

11:10 – 12:45

#### The potential role of CTS Societies

(10 min Intros plus 40min Roundtable)

Brief on "World Federation for Medical Education": An Example SAMJ)

World Heart Federation  
EACTS  
AATS  
AATS  
STS  
Asian Society  
PASCAR  
PASCATS

MC Morning Sessions: Johan Brink / Dan Corder (Cape Town)

*Max Price* (President/Rector University of Cape Town)  
*Peter Zilla* (Cape Town)  
*Liesl Zühlke* (Cape Town)  
*Solly Benatar* (Toronto / Cape Town)

Moderator: *Francis Smit* (Bloemfontein, South Africa)

*Ana Olga Mocumbi* (Maputo)  
*Juan Meija* (Fortaleza)  
*Wen Wang* (Beijing)  
*Devagourou Velayodamu* (Delhi)  
*Theodoros Kofidis* (Singapore)  
*Abdelmalek Bouzid* (Constantine Algeria)  
*Saeid Hosseini* (Tehran)  
*Gennadiy Khubulava* (St.Petersburg)  
*Richard Kamwi* (Ex-Minister Health Namibia)  
*Darshan Reddy* (Durban)

Moderator: *R. Morton Bolman, III* (Burlington/ UVMCMC)

*Afksendiyos Kalangos* (Athens)  
*Sir Magdi Yacoub* (London / Aswan)  
*Alain Carpentier* (Paris)  
*Sylvain Chauvaud* (Paris)  
*Richard Kamwi* (Windhoek/Namibia)  
*Nicole Sekarski* (Geneva-Lausanne)

#### Coffee Break

Moderator: *Joseph Bavaria* (Philadelphia) (7min Introduction)

*J.P. van Niekerk* (3min)(Ex Dean of Medicine; Prev Editor in Chief

*David Wood* (President/ London)  
*Jose Pomar* (ex-President / Barcelona)  
*R. Morton Bolman, III* (Burlington/ UVMCMC)  
*James Kirklin* (AATS Ambassador/ Birmingham Alabama)  
*Robert S.D.Higgins* (President-Elect / Baltimore)  
*Shinichi Takamoto* (President / Tokyo)  
*Bongani Mayosi* (Ex-President/ Cape Town)  
*Charles Yankah* (President / Accra – Berlin)

## The Publication Hurdle

(8min Intro plus 20min Roundtable)

*Dan Ncayiyana*  
*Friedhelm Beyersdorf*  
*JP van Niekerk*  
*Alec Patterson*  
*Sampath Kumar*  
*David F. Williams*  
*Marika Sboros*

12:45 – 13:30

13:30 – 14:40

## Overcoming the Divide through Innovation

8min Intro and 5min 'Blitzes' followed by 20min Roundtable

Health-economic frameworks for Innovation  
Affordable Heart Surgery  
Innovative health-economic models  
Affordable Medication  
Overcoming diagnostic hurdles  
Digital Health Eco-Systems for Africa  
Social Innovation

14:40 – 16:20

## MEETING CARDIOVASCULAR MEDICAL NEEDS OF DEVELOPING NATIONS

WHO Focus Rheumatic Heart Disease: The Plea of the Millions

Host Society: World Heart Federation

**Preparing the Stage** *Bernard Gersh* (Mayo Clinic) The epidemic of CVD in the Developing World: Global Implications (7min)  
*Karen Sliwa* (President-Elect World Heart Federation) New WHO focus RHD (5min)  
*Francois Bonnici* (Director: Bertha Centre for Social Innovation and Entrepreneurship) The Hurdles (7min)

## Round Table Discussion

*Mike Mussallem* (CEO Edwards)  
*Alistair Simpson* (GM Cardiac Surgery LivaNova)  
*Tim Ring* (CEO Bard via Videolink)  
*David Chung* (CEO NeoCord)  
*Jan Kimpfen* (Chief Med.Off. Royal Philips)  
*Sidhant Jena* (CEO Jana Care)

Chair: *Barry Wilson* (Former President Medtronic International)  
Co-Moderators: *Richard Kamwi* (Ex-Minister of Health Namibia)  
*Karen Sliwa* (President Elect WHF)

*Michael P. Phalen*, (Executive President MedSurg; Boston Scientific)  
*Markus Stirner-Schilling* (VP Marketing&Academy Getinge)  
*Helmut Straubinger* (CEO Tricares)  
*Lenias Hwenda* (CEO Medicines for Africa)  
*Patrice Matchaba* (Global Head Cardiac; Novartis)  
*Salah Malek* (Getinge)

16:20 16:40

16:40 18:20

## Round Table "Consensus"

### Cape Town Declaration

Moderators:

Procedural Introduction: *Robert Kleinloog* (Durban) 3min

### Proposal for Consensus Declaration:

*Joseph Bavaria* (Philadelphia)  
*Friedhelm Beyersdorf* (Freiburg)

### Moderator Panel:

*Robert S.D. Higgins* (Baltimore)  
*Joseph Bavaria* (Philadelphia)  
*Friedhelm Beyersdorf* (Freiburg)

Moderator: *Marko Turina* (8 min Introduction) (Zurich)

South African Medical Journal (Cape Town)  
Eur J Cardiothoracic Surg (Freiburg)  
South African Medical Journal (Cape Town)  
Ann Thorac Surg (St.Louis)  
Asian Cardiovasc Thorac Annals (Delhi)  
Biomaterials (Winston Salem)  
Journalist, Writer, Editor (London/Johannesburg)

## Finger fork lunch

MC Afternoon Sessions: *Peter Zilla / Dan Corder* (Cape Town)

Moderator: *Francois Bonnici* (Cape Town/South Africa)

*Javier D.Maldonado Escalante* (Bogota / Colombia)  
*Devi Prasad Shetty* (Bangalore / India)  
*Lee Chuen Neng* (Singapore)  
*Lenias Hwenda* (Zimbabwe and Switzerland)  
*Sidhant Jena* (CEO Jana Care Boston / USA)  
*Jacques Kpodonu* (Ghana and USA)  
*Solly Benatar* (Toronto, Canada and Cape Town South Africa)

Sir Magdi Yacoub (London / Aswan)  
Robert Kleinloog (Durban)

**“South Panel”: Ahmed El Sayed (Khartoum)**

Sampath Kumar (Delh/Indiai)  
Karen Sliwa (Cape Town/South Africa)  
Bongani Mayosi (Cape Town/South Africa)  
Charles Yankah (Berlin / Accra Ghana)  
Theodoros Koffidis (Singapore)  
Juan Mejia (Fortaleza/Brazil)  
Devi Prasad Shetty (Bangalore/India)  
Wen Wang (Beijing/China)  
Ana Olga Mocumbi (Maputo/Mozambique)  
Jacques Kpodonu (Ghana and USA)  
Devagourou Velayoudam (Delhi)  
Manuel Antunes (Coimbra, ex Johannesburg)  
Lenias Hwenda (Zimbabwe / Switzerland)  
Abdelmalek Bouzid (Constantine; Algeria)  
Liesl Zühlke (Cape Town/South Africa)  
Saeid Hosseini (Teheran/Iran)  
Solly Benatar (Toronto/Cape Town)  
Kumud Dhital (Sydney/Australia)

**“North Panel” Jose Pomar (Barcelona/Spain)**

Shinichi Takamoto (Tokyo/Japao)  
Lee Chuen Neng (Singapore)  
Afksendiyos Kalangos (Athens/Greece)  
Alec Patterson (St. Loui/USAs)  
Bernard Gersh (Mayo Clinic Rochester/USA)  
James Kirklin (Birmingham/USA)  
Rainald Seitelberger (Salzburg/Austria)  
Robert Frater (New York / South Africa)  
R. Morton Bolman, III (Burlington/ UVMMA USA)  
Marko Turina (Zurich/Switzerland)  
Bruno Podesser (Vienna/Austria)

18:30

Hospital)

Welcome Reception (Groote Schuur

**Sunday 3<sup>rd</sup> December**

**Courage and Innovation**

Parallel Lecture Theatres 1 & 2, Groote Schuur Hospital

08:00 – 10:10

Session MC: Peter Zilla / Dan Corder (Cape Town)

08:02 Welcome  
Peter Zilla

**History Revisited**

08:10 Tribute to a famous father  
Christiaan Barnard Jr. (Cape Town)

08:20 Christiaan Barnard – One life  
David Cooper (Pittsburgh/ ex Cape Town)

08:35 Christiaan Barnard: The Minnesota Years  
Richard Bianco (Minneapolis USA)

08:43 Cardiology and Christiaan Barnard: Partners  
and Drivers Mervyn Gotsman (Jerusalem, Israel)

08:51 The Operation - The Anaesthetic Side  
Pete Gordon (Cape Town, SA)

08:59 Upholding the Legacy  
Peter Zilla (Cape Town, SA)

09:07 Norman Shumway: a visionary and his dream  
Paul Mohacsi via Skype (Ex-Stanford / Zurich, CH)

09:19 Vladimir Demikhov: The under-appreciated forefather  
Simon Matskeplishvili (Moscow, Russia)

09:31 Reflections on making heart transplantation a reality  
Sir Magdi Yacoub (London, UK)

09:43 Heart-Lung Transplantation: Paving the Way  
Robert S.D.Higgins (Baltimore, USA)

09:55 Lung Transplantation: standing at the cradle  
Alexander Patterson (St.Louis, USA)

10:07 Heart Transplantation in Italy: The early days  
Giuseppe Faggian (Verona, Italy)

10:19 Xenotransplantation: Leonard Bailey and Baby Fae  
Beat Walpoth (Geneva, Switzerland)

10:30 – 10:45

Coffee Break

**10:45 – 12:00**

- 10:45 Willem Kolff, Robert Jarvik, Denton Cooley and beyond: The Artificial Heart of Barney Clark  
*Georg Wieselthaler* (San Francisco, USA)
- 10:57 Heart Transplantation vs. Mechanical Circulatory Support – is the Gold Standard Changing?  
*Hermann Reichenspurner* (Hamburg, GER)
- 11:09 The Return of DCD Hearts: Back to the Future  
*Kumud Dhital* (Sydney, AUS)

**12:00 – 12:45****12:45 – 15:30**

- 12:45 Robotic Heart Surgery: Has the Future begun (too early)?  
*Volkmar Falk* (Berlin, GER)
- 12:57 Does one really need a Robot for Endoscopic Mitral Valve Repair?  
*Hermann Reichenspurner* (Hamburg, GER)
- 13:09 Andreas Grüntzig: It started in Zurich...  
*Marko Turina* (Zurich, CH)
- 13:21 The Idea of Heart Valve Replacement on a Wire  
*Henning-Rud Andersson* (Aarhus, Denmark)
- 13:33 The Odyssey of Trans-catheter Aortic Valve Replacement: from Concept to Clinical Reality  
*Joseph Bavaria* (Philadelphia/USA)
- 13:45 Against the Odds  
*Mike Mussallem* (CEO Edwards, Irvine USA)
- 13:57 Breaking through Celings:  
SA)  
Challenging the gold standard  
*Hendrik Treede* (Halle, GER)

**15:30 – 16:00****16:00 – 17:25**

- 16:00 The Dawn of Mitral Repair  
*Alain Carpentier* (Paris, France)
- 16:12 Pioneering Rheumatic Mitral Repairs in Africa  
*Manuel Antunes* (Coimbra, Portugal)
- 16:24 Pushing the boundaries of mitral repair in RHD  
*Taweesak Chotivatanapong* (Nonthaburi, Thailand)
- 16:36 The vision of tackling tricuspid regurgitation  
*Norberto G. de Vega* (Malaga, Spain)

Session MC: *Alec Patterson* (St.Louis, USA) / *Dan Corder* (Cape Town)

- 11:21 The era of Transgenic Xenotransplantation  
*Bruno Reichart* (Munich, GER)
- 11:33 The bumpy road of immune-suppression  
*Howard L. Eisen* (Philadelphia, USA)
- 11:45 HIV-positive donors, multi-organ recipients and beyond  
*Elmi Muller* (Cape Town, SA)

**Finger Fork Lunch**

Session MC: *Friedhelm Beyersdorf* (Freiburg GER)/  
*Dan Corder* (Cape Town)

- 14:09 A Clip on the Mitral Valve: an unlikely beginning to the rapid rise of transcatheter mitral therapy  
*Ted Feldman* (Evanston, USA)
- 14:21 New Mitral Chordae: Padova pioneers again  
*Gino Gerosa* (Padova, Italy)
- 14:33 Trans-Catheter Mitral Valve Replacement: Pioneering a Steep Mountain  
*George Lutter* (Kiel, GER)
- 14:45 “Living” Trans-Catheter Valves  
*Simon Hoerstrup* (Zurich, CH)
- 14:57 The Developing World: The next frontline for Trans-Catheter Solutions  
*Peter Zilla* (Cape Town, SA)
- 15:09 Non-occlusive, self-homing TAVI insertion for young patients with RHD and non-calcified roots (Live in a Box Surgery)  
*Jacques Scherman* (Groote Schuur Hospital, Cape Town)

**Coffee Break**

Session MC: *Bruno Reichart* (Munich, GER) / *Dan Corder* (Cape Town)

- 16:48 The beginnings of open heart surgery in India  
*Sampath Kumar* (Delhi, India)
- 17:00 The rapid rise of Heart Surgery in China  
*Wen Wang* (NCCD and Fuwai Hospital, Beijing, PRC)
- 17:12 Capacity Building on the Ground: Chain of Hope In Africa and beyond  
*Sir Magdi Yacoub* (London, UK)

19:30

## Celebration Dinner: Jameson Hall, University of Cape Town

MC: Dr. Max Price (Vice Chancellor/Rector University of Cape Town)

Gala Speaker: Sir Magdi Yacoub (London)

## Monday 4<sup>th</sup> December

**Transplantation: 50 years on**

Lecture Theatre 1, Groote Schuur Hospital

### TRANSPLANTATION: 50 YEARS ON

Host Society: European Society for Heart Lung Transplantation (ESHLT)

08:30 – 10:40

08:30 Will there still be heart transplantation in 50 years? *Andreas Zuckermann* (Vienna, AT)

08:50 Donation after Circulatory Death pulmonologist  
*Kumud Dhital* (Sydney, AUS)  
Invited Comment: David McGiffin (Melbourne, AUS)

09:20 Recent Changes in Organ allocation in Europe  
*Günther Laufer* (Vienna, AT)

Chairs: *Hermann Reichenspurner* (Hamburg)  
*Andreas Zuckermann* (Vienna)

09:40 Lung Transplantation: view of the surgeon  
*Alec Patterson* (St.Louis, USA)

10:00 Lung Transplantation: view of the  
*Allan Glanville* (Sydney, AUS)

10:20 Experience with Ex-Vivo Lung Perfusion  
*Walter Klepetko* (Vienna/AT)

10:40 – 11:00

11:00– 12:20

11:00 Heart Transplantation in patients with Chagas Disease Transplantation  
*Juan Mejia* (Fortaleza, BR)

11:20 Immunosuppression: what have we learned?  
*Howard J Eisen* (Philadelphia, USA)

(Rochester)

12:20– 13:10

13:10– 14:55

### Coffee Break

Chairs: *Hermann Reichenspurner* (Hamburg)  
*Andreas Zuckermann* (Vienna)

11:40 How I envision the Future of heart  
*Bruno Reichart* (Munich)

12:00 Combined Heart and Liver Transplantation: Immunologic Benefits and the Challenge of the Sensitized Patient" *Richard Daly*

### Finger fork Lunch

**ASSISTED CIRCULATION: The Past, the Present and the Future**  
Host Society: International Society for Mechanical Circulatory Support, (ISMCS)

Chair: *Georg M. Wieselthaler* UCSF, USA

13:10 Cardiopulmonary Resuscitation: Light at the end of Projections the tunnel?  
*Friedhelm Beyersdorf* (Freiburg / Germany)

13:25 There is no Future without the Past – 50 years of Innovation at the THI  
*O. Howard Frazier* (Texas Heart Institute, Houston, USA)

13:40 Development of MCS Programs under the Pressure of the NHS  
*Stephan Schueler* (Newcastle upon Tyne, UK)

14:10 MCS Development in Japan the Future  
*Minoru Ono* (Tokyo Medical University, JP)

14:25 Miniaturized Pumps for Minimal Invasive Implantation  
*Simon Maltais* (Mayo Clinic Rochester, USA)

14:40 Assisted Circulation at the Tip of Africa  
*Willie Koen* (Cape Town, SA)

13:55 Mechanical Circulatory Support – Down Under  
*Kumud Dhital* (St Vincent Hosp, Darlinghurst, AUS)

14:55-15:20

15:20-16:50

15:20 Neo-Angiogenesis for LVAD patients  
*Nir Uriel* (Univ. of Chicago, USA)

15:35 Current Trends and Concepts in Haemocompatibility  
Advancements in LVADs  
*Ivan Netuka* (Prague, Czech Republic)

15:50 The Perfetc Pump: State of the Art and Future Trends in  
VAD Technologies  
*Ulrich Steinseifer* (RTWH Aachen, Germany)

USA)

16:05 Future Developments in LVAD Technology –  
The Industry Perspective  
*Jim Schurmann* (Medtronic Inc USA)

## Coffee Break

Chair: *Georg M. Wieselthaler* UCSF, USA

16:20 Boon and Bane of Extracorporeal Life Support  
(ECLS) in Cardiogenic Shock and Resuscitation  
*Christian M. Hagl* (LMU Munich, GER)

16:35 Achievements and Limits of ~Temporary MCS:  
Lessons learned from the Croatian National ECLS  
Network  
*Bojan Biocina* (University of Zagreb, Croatia)

16:50 Mechanical circulatory support: strategies and  
outcomes in pediatric congenital heart disease  
*James Kirklin* (Univ. of Alabama, Birmingham,

## “ISACB 30 YEARS OLD: The era of Repair, Replacement and Regeneration”

Lecture Theatre 2, Groote Schuur Hospital

(Host Society: International Society for Applied Cardiovascular Biology (ISACB))

07:00 – 08:00

## Introduction

7:00-7:30: Registration and Speaker Ready assistance  
7:30-7:40: Introduction and welcome address by Elena Aikawa, ISACB President  
7:40-8:00: **Welcome Lecture: Peter Zilla MD. PhD "The Surgeon Scientist"**

## Morning Session

### Pathologic Arterial Remodelling and Aneurysmal Degeneration-The interaction of Nature and Nurture

08:05 – 09:55

#### ***Pathologic Arterial Remodeling and Bioengineering Solutions***

Chairs: Beat Walpoth, Toshi Shinoka, Tim Pennel

8:05-8:25: Plenary

**Toshi Shinoka: History of Vascular Tissue Engineering Research and Long-term Clinical Results of Tissue Engineered Vascular Grafts**

8:25-9:55: Invited Speakers and Abstracts

1. Masanori Aikawa: New Mechanisms for Macrophage Activation as Therapeutic Targets for Vascular Disease
2. Luke Brewster: Translational Models of PAD—a voyage or an important destination?
3. Mike Wolf: Novel Treatments for Cerebrovascular Aneurysms
4. Claudia Goettsch: Protein Sorting in Cardiovascular Calcification
5. Beat Walpoth: Bioengineering Solutions for Vascular Tissue Engineering
6. Ulf Hedin: Molecular Remodeling Mechanisms in Carotid Atherosclerosis—lessons learned from carotid plaque biobanking

09:55– 10:15

Coffee Break

10:15 – 12:05

***Aneurysmal degeneration: The interaction of Nature and Nurture***

Chairs: David Vorp, John Curci

10:15-10:25: Plenary

**Helena Kuivaniemi: Genetics of Aortic Aneurysms**

10:35-10:50: Invited Speakers and Abstracts

1. John Curci: The Unique Challenges of Developing Novel Therapies for Abdominal Aortic Aneurysms
2. Fred DeBeer: Serum Amyloid A Exacerbates Acute Vascular Events by Activation of the NLRP3 Inflammasome
3. Giovanni Ferrari: Advanced Glycation End Products: Pathophysiologic Role and Therapeutic Target in Ascending Aortic Disease
4. Craig Goergen: Ultrasound Imaging and Hemodynamic Simulations of Murine Dissecting Aneurysms
5. David Vorp: Aortic Aneurysm Biomechanics

11:50-12:05: Round Table with Moderators and Speakers

12:05– 13:00

Lunch

**Afternoon Session**

**Cardiac and valve repair, remodeling and regeneration**

13:00 – 15:05

***Valve replacement and repair***

Chairs: Dan Simionescu, Magdi Yacoub

13:00-13:20: Plenary

**Magdi Yacoub**

13:20-15:05: Invited Speakers and Abstracts

1. Dan Simionescu: In Vitro Regeneration of Living Aortic and Pulmonary Valve Roots and Preclinical Testing
2. Elena Aikawa: Calcific Aortic Valve Disease: From calcifying Exosomes to Systems Biology
3. Teddy Fischlein: Aortic Valve Repair Using Geometric Ring Annuloplasty
4. Carlijn Bouten: Growing Heart Valves Inside the Heart: from immunomodulatory scaffolds to long-term follow-up
5. Cynthia St. Hilaire: A Role for Telomerase in Valvular Calcification
6. Max Emmert: Tissue-engineered Matrices to Regenerate the Heart
7. Joshua Hutcheson: Aortic Valve Melanocytic Cells Control Valvular Elastogenesis

15:05 – 15:20

Coffee Break

15:20 – 17:40

***Tissue engineering and regeneration***

Chairs: Simon Hoerstrup, Agneta Simionescu

15:20-15:40: Plenary

**Simon Hoerstrup: Translational Challenges in Cardiovascular Tissue Engineering**

15:40-17:00: Invited Speakers and Abstracts

1. Agneta Simionescu: Mitral Valve Tissue Engineering-a model for investigating valve degeneration



2. Jo Meinhart: 30 Years of Endothelial Cell Transplantation on Vascular Grafts
3. Nico L'Heureux: Building Completely Biological, Human Tissue Engineered Blood Vessels
4. Glenn Gaudette: Spinach Leaves for Regenerating Function in the Heart
5. Bernard Gersh: Cardiac Cell Repair Therapy: current status
6. Tim Pennel: Wrong models, wrong questions, no healing and still no change

**17:00-17:15: Round Table with Moderators and Speakers from Afternoon Session**

**17:15 – 18:30**

**“Translational challenges in endothelial cell seeding and related device concepts—lessons learned”**

**Discussion/round table - sponsored by the Industry Working Group of ISACB:**

Moderators: David Williams and Mike Wolf

17:15-17:30: Cocktails / Break

17:30-17:35: Welcome and Introduction M Wolf and DF Williams

17:35-17:50: Lessons learned from Preclinical and Clinical External Saphenous Vein Stenting - Peter Zilla

17:50-18:05: Lessons Learned from 2-Stage Human Clinical Endothelial Cell Seeding – Jo Meinhart

18:05-18:20: Lessons Learned from a Preclinical 1-Stage Cell Seeding Concept – M Wolf

18:20-18:30: Open discussion

**19:30**

**Westin**

**Faculty Dinner: ON19 Restaurant - Rooftop: The**