

**Valerian L. Fernandes, MD, MRCP, FACC**

Assistant Professor of Medicine  
Medical University of South Carolina  
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**Education & Certification**

- |            |   |
|------------|---|
| March 1988 | <b>M.B.B.S.</b><br>St. John's Medical College<br>Bangalore University<br>Bangalore, 560034, India   |
| Dec 1992   | <b>M.D. (Internal Medicine)</b><br>Post Graduate Institute of Medical<br>Education and Research (PGIMER)<br>Chandigarh, 160012, India           |
| June 1993  | <b>Diplomate of National Board (D.N.B. General Medicine)</b><br>National Board of Examinations<br>New Delhi, India                              |
| June 1994  | <b>M.R.C.P.(U.K.)</b><br>Royal College of Physicians of UK<br>11 St. Andrew's Place, Regents Park<br>London, NW1 4LE. U.K.                      |
| Aug 1997   | <b>Board Certified in Internal Medicine</b><br>American Board of Internal Medicine  |
| June 1999  | <b>Certified in Echocardiography</b><br>American Society of Echocardiography (ASE)<br>(Level 3 Echo training & Passed ASE Echo Exam)            |
| Oct 2000   | <b>Certified in Nuclear Cardiology</b><br>Certification Board of Nuclear Cardiology (CBNC)<br>(Level 2 Nuclear Card training, passed CBNC Exam) |
| Nov 2000   | <b>Board Certified in Cardiology</b><br>American Board of Internal Medicine   |
| Nov 2001   | <b>Board Certified in Interventional Cardiology</b><br>American Board of Internal Medicine  |
| Sept 2006  | <b>Fellow of American College of Cardiology (FACC)</b>  |

**Professional Experience**

Aug 1983-March 1988

**M.B.B.S.**

St. John's Medical College  
Bangalore University  
Bangalore, 560034, India

April '88 to Mar '89

**Rotating Internship**

St. John's Medical College Hospital  
Bangalore-560034 India

May '89 to Sept '89

**Senior House Officer - Gastroenterology**

St. John's Medical College Hospital  
Bangalore-560034 India

Jan '90 to Dec '92

**Resident in Internal Medicine**

Post Graduate Institute of Medical  
Education and Research,(PGIMER)  
Chandigarh -160012 India

Jan '93 to June '93

**Senior Resident in Internal Medicine**

PGIMER, Chandigarh -160012 India

Sept '93 to July '94

**Registrar in Medicine**

St. Mary's Hospital, NHS Trust  
Newport, Isle of Wight, U.K. PO30 5TG

**US Experience**

July '94 to June '95

**Internship in Internal Medicine**

St. Luke's-Roosevelt Hospital Center  
1111 Amsterdam Avenue  
New York, NY. 10025

July '95 to June '97

**Resident in Internal Medicine**

**Mayo Graduate School of Medicine**  
Rochester, MN 55902

July '97 to June 2000

Fellow in Cardiology

**Baylor College of Medicine**  
Houston, TX 77030

July 2000 to June 2001

Fellow in Interventional Cardiology

**Baylor College of Medicine**  
Houston, TX 77030

Dec 2001 onwards

Assistant Professor of Medicine

**Medical University of South Carolina**  
Director – Cardiac Catheterization Laboratory  
Ralph H Johnson VA Medical Center  
Charleston, SC 29425

## Publications

### PEER REVIEWED

1. **V L Fernandes**, S F. Nagueh, J Franklin, W Wang , R Roberts, W H. Spencer III. A prospective follow-up of Alcohol Septal Ablation for symptomatic Hypertrophic Obstructive Cardiomyopathy. The Baylor Experience (1996-2002)". Clinical Cardiology March 2005, Vol 28, No 3, 124-130
2. **Fernandes V**, Olmos L, Nagueh SF, Quiñones MA, Zoghbi WA. "Peak early diastolic velocity rather than pressure half-time is the best single index of mechanical prosthetic mitral valve function" Am J Cardiol. 2002 Mar 15; 89(6): 704-10
3. Yong Y, David Wu D, **Fernandes V**, Kopelen HA, Shimoni S, Nagueh SF, Callahan JD, Bruns DE, Shaw LJ, Quinones MA, Zoghbi WA. "Diagnostic accuracy and cost-effectiveness of contrast echocardiography on evaluation of cardiac function in technically very difficult patients in the intensive care unit". Am J Cardiol. 2002 Mar 15; 89(6): 711-8
4. **Fernandes V** , Kaluza GL, Zymek PT, Defelice CA, Hust R, Raizner AE. "Successful balloon valvuloplasty in an adult patient with severe pulmonic stenosis and aneurysmal post-stenotic dilatation". Catheter Cardiovasc Interv. 2002 Mar;55(3): 376-80.
5. **Fernandes V**, Kaluza GL, Godlewski B, Li G, Fulwebber R, Raizner AE. " Novel technique of stent delivery in tortuous coronaries. Report of 3 cases. Catheter Cardiovasc Interv. 2002 Apr;55(4): 485-90
6. **Valerian L Fernandes**, Christopher Nielsen, Sherif F Nagueh, Amy E Herrin, Christine Slifka, Jennifer Franklin, William H Spencer III. A Follow-up of Alcohol Septal Ablation for symptomatic Hypertrophic Cardiomyopathy. The Baylor and MUSC experience 1996-2007. Accepted for publication. JACC Interventions. June 2008.

### Non-PEER REVIEWED

Christopher D Nielsen, **Valerian Fernandes**, William Spencer. Alcohol Septal Ablation for Obstructive Hypertrophic Cardiomyopathy. Review article. The American Heart Hospital Journal. Winter 2003. Vol 1, Number 1.

### Abstracts

- 1 **Fernandes VL**, Gau GT, Moder K. "Rheumatoid Cardiac Tamponade with inactive arthritis" Presentation at Minnesota branch of American College of Physicians (ACP)– Nov 1996
- 2 **Fernandes VL**, McCarthy JT. "Thrombotic Microangiopathy: A treatable complication of the Antiphospholipid Syndrome" Presentation at American College of Physicians, Philadelphia PA, March 1997.

- 3 **Fernandes VL**, Nagueh SF, Aggeli CJ, Shimoni S, Mikati IA, Quinones MA, Zoghbi WA. “Doppler Peak Early Velocity, rather than Pressure Half-Time should be the initial screening parameter for mechanical Prosthetic Mitral valve Dysfunction”. Presentation at the American Heart Association, Atlanta GA Nov 1999.
- 4 Yongqui Yong, **Fernandes VL**, Wu David, Kopelen H, Shimoni S, Nagueh SF, Quinones MA, Zoghbi WA. “Impact of Optison and Harmonic Imaging on Imaging Quality and Accuracy of interpretation of Cardiac Function in the Intensive Care Unit Setting” Presentation at the American Heart Association, New Orleans LA, Nov. 2000.
- 5 **Valerian L. Fernandes**, Sherif F. Nagueh, Nasser M. Lakkis, Jennifer Franklin, Robert Roberts, William H. Spencer. “The long term follow-up results of Alcohol Septal Ablation for symptomatic Hypertrophic Obstructive Cardiomyopathy. The Baylor Experience (1996-2001)”. Oral presentation at American College of Cardiology Atlanta meeting March 2002.
- 6 Cawthon TH, Ahmed SH, Peura J, **Fernandes VL**, Nielsen CD. Predicting Renal Artery Stenosis in patients referred for coronary arteriography. Presentation at the Society for Cardiac Angiography and Intervention meeting, Boston, May 2003
- 7 Fred A. Crawford, III, Christopher Nielsen, **Valerian Fernandes**, Mary Frankis, William H. Spencer, III. Reduction in Mitral Regurgitation after Alcohol Septal Ablation in patients with Hypertrophic Obstructive Cardiomyopathy. Presentation at American College of Cardiology Annual session Chicago, March 2003
- 8 **Valerian Fernandes**, Christopher Nielsen, Sherif Nagueh, Christine Slifka, Jennifer Franklin, William Spencer. The 10-year Follow-up results of Alcohol Septal Ablation procedure in patients with hypertrophic obstructive cardiomyopathy. Presented at the Transcatheter and Cardiovascular Therapeutics Annual meeting Oct 2006.

#### **Manuscripts in review**

- 1) Alvin Timothy, **Valerian Fernandes**. Eustachian Valve Endocarditis. Circulation journal, in review.

#### **Manuscripts in progress**

- 1) Randall Goodroe, Marian Taylor, Eric Powers, **Valerian Fernandes**. Cocaine induced Tako-tsubo cardiomyopathy.
- 2) Ted Stewart, William Spencer III, **Valerian Fernandes**. Post-operative apical ballooning syndrome. Case report and review of literature
- 3) Rory Priester, George Taylor, **Valerian Fernandes**. Tako-tsubo cardiomyopathy in an elderly male with a patent LIMA bypass.

### **Book Chapters**

1. **Fernandes VL**, Kottke T “Smoking and Coronary Artery disease in South Asians” in Coronary Artery Disease in South Asians: Epidemiology, Risk Factors & Prevention. Jaypee Medical Publishers Dec 2000
2. **Fernandes VL**, Rana SV, Malik AK, Bhasin DK “Study of Enzyme Activities in the descending part of the Duodenum in patients of Duodenal Ulcer”. Thesis presented towards completion of Doctor of Medicine (MD, Internal Medicine) at Post Graduate Institute of Medical Education and Research, Chandigarh, India. June 1992.
3. Michael Craig, **Valerian Fernandes**. Endomyocardial biopsy. Cardiology Board Review, McGraw Hill 2008

### **Live Case Demonstration**

1. **Alcohol Septal Ablation** technique and procedure demonstrated live from the Methodist cardiac catheterization laboratory at New Frontiers in Cardiovascular Medicine meeting: April 2001, Houston TX.
2. **Alcohol Septal Ablation** technique and procedure demonstrated live from the Methodist cardiac catheterization laboratory at Society for Cardiac Angiography & Interventions (SCAAI) Annual Meeting: May 2001, Houston TX.

### **Editorial Board**

1. Reviewer for ‘Chest’ journal
2. Reviewer for ‘Hospital Physician Board Review’ manual
3. Reviewer for ‘Catheterization and Cardiovascular Interventions’ journal

### **Panel Discussion**

Alcohol Septal Ablation – state of the art. Panel discussant at TCT 2006.

Alcohol Septal Ablation- state of the art. Panel discussant at TCT 2007.

### **Research**

**Principal / subinvestigator for these trials at Ralph H Johnson VAMC Charleston and Medical University of South Carolina.**

1. **CHARISMA trial: ‘Clopidogrel for High Atherombotic Risk and Ischemia Stabilization, Management and Avoidance’.**

To assess whether clopidogrel 75 mg daily is superior to placebo in preventing the occurrence of major ischemic complication in high risk patients who are already on aspirin.

2. **ACUITY trial: Acute Catheterization and Urgent Intervention Thrombotic strategy.**  
Compare the use of Angiomax with unfractionated heparin in patients undergoing early invasive management of acute coronary syndromes without ST segment elevation.
3. **TENACITY trial:** Tirofiban Novel Dosing vs. Abciximab with Evaluation of Clopidogrel and Inhibition of Thrombin Study.  
TENACITY is a multi-center, double blind, randomized comparison of Aggrastat (Tirofiban) and ReoPro (abciximab) that is expected to enroll at least 8,000 patients in approximately 200 centers across the United States.
4. **REPLACE 2:** Randomized Evaluation of PCI Linking Angiomax to Reduced Clinical Events.  
The REPLACE-2 study was designed to evaluate whether patients in the trial receiving Angiomax plus provisional glycoprotein IIb/IIIa (GP IIb/IIIa) inhibitors would have outcomes that were better than, or "superior" to, a heparin historical control arm
5. **Impact of Optison and Harmonic Imaging on Imaging Quality and Accuracy of interpretation of Cardiac Function in the Intensive Care Unit Setting.**  
Industry sponsor: Mallinckrodt Inc
6. **BiPhasic Defibrillation: Dose-Response Curve for Transthoracic Cardioversion of Atrial Fibrillation with Biphasic Shocks.**  
Randomized trial comparing the efficacy of four biphasic shock energies in 200 patients undergoing elective cardioversion of persistent atrial fibrillation.
7. **SAFARI: Study for Atrial Fibrillation Reduction:**  
To demonstrate that AF pacing prevention therapies (PPTs) are effective in reducing AF burden in patients needing a pacemaker. 393 patients will be recruited in this multicenter (40 investigative centers) study over 16 months.
8. **HAT : Home AED Trial.**  
To compare all-cause mortality between the standard lay response to SCA (call EMS/CPR) to the use of a home AED response to SCA. This is a multi center (200 sites), multinational trial incorporating patients from rural and urban areas. Enrollment of 7000 patients surviving an anterior myocardial infarction (based on EKG) over the first 2.5 years of the 5-year trial. The follow-up duration is a minimum of 2 years after enrollment.
9. **ANGIOLINK – Staple closure system for femoral artery access closure.**  
Physicians use vascular closure systems to close arteries used as entry or access sites into the body for vascular procedures, such as coronary stenting and angioplasty. The EVS System provides safe and effective mechanical closure of arterial puncture sites without disturbing the lumen, or interior, of the targeted vessel. The system can be used by a single operator and is designed to apply a titanium staple that stabilizes and

closes the artery. The system is designed to quickly stop access site bleeding and contribute to reducing patient recovery time.

Angiolink's EVS™ (Expanding Vascular Stapling) Vascular Closure System, received FDA approval in Nov 2004, is engineered to close the femoral artery access site after vascular procedures, such as diagnostic angiography, balloon angioplasty and stenting.

#### 10. **CORAL Registry: COronary Graft Results following Atherectomy with Laser**

A prospective U.S. multi-center registry of outcomes after excimer laser coronary atherectomy and stenting in saphenous vein bypass grafts. The CORAL Registry was initiated in June 2003 and currently (as of August 2004) has 18 active sites.

#### 11. **ARRIVE-2 Taxus registry**

The Taxus stent is a paclitaxel eluting stent which is commonly used for the treatment of obstructive coronary lesions. Multiple TAXUS 1-6 trials have demonstrated the safety and efficacy of the Taxus stent in select subsets which has led to the FDA approval of the stent. However in the real world, the Taxus stent continues to be widely used for indications which are not approved and not well studied.

ARRIVE 2 registry program plans to enroll 5,000 patients at approximately 60 centers in the United States. The program is designed to collect and analyze "real-world" safety and clinical outcomes data from the TAXUS(TM) Express2(TM) paclitaxel-eluting coronary stent system in the treatment of patients with coronary artery disease.

#### 12. **64 slice CT vs coronary angiogram**

The SOMATOM Sensation 64 provides 64-slice sub-millimeter imaging per rotation and the world's fastest gantry rotation time at 0.37 second, for unprecedented speed and sub-millimeter volume coverage, thus allowing physicians to make more informed diagnosis and treatment decisions. The new system also routinely delivers unmatched image quality in cardiac structures. Due to its speed, the SOMATOM Sensation 64 stands alone in its ability to image the finest cardiac structures in detail without motion artifacts, even in those patients with higher heart rates. The sensitivity and specificity for detection of Coronary artery disease with this 64 slice CT scanner will be matched against coronary angiograms.

#### 13. **MOMENTUM trial: Multicenter trial of the Orqis Medical CRS for the ENhanced Treatment of CHF, Unresponsive to Medical Therapy**

The Cancion CRS therapy is a percutaneous cardiac recovery system being studied for its ability to create a "rest-to-recovery" environment for congestive heart failure (CHF) patients. The Cancion CRS increases blood flow in the descending aorta without taking over the function of the heart, without requiring synchronization of the heart, and without ever touching the heart. It is being studied for its ability to reverse the consequences of abnormal aortic flow, induce vasodilatation and improve renal blood flow.

#### 14. **MERLIN-TIMI 36. Metabolic efficiency with Ranolazine for less Ischemia in non-ST elevation acute coronary syndromes**

A randomized, double-blind, parallel group, placebo-controlled, multinational clinical trial to evaluate the efficacy and safety of ranolazine versus placebo in patients with non-ST segment elevation acute coronary syndromes.

#### 15. **COMPASS** Trial

COMPASS-HF (Chronicle(R) Offers Management to Patients with Advanced Signs and Symptoms of Heart Failure)

This is a multi-center, randomized, single-blind parallel controlled study of the Chronicle Implantable Hemodynamic Monitoring System sponsored by Medtronic to assess the safety and efficacy of the Chronicle IHM System in subjects diagnosed with moderate to severe heart failure. "The Chronicle IHM is an implantable monitor which continuously measures multiple pressure-related hemodynamic parameters through a lead implanted in the right ventricle. The ability to interpret Chronicle data and implement appropriate medical therapy based on changes in pressure serves as the foundation of Chronicle guided Therapy."

#### 16. **PERISCOPE** Trial

The PERISCOPE trial is a double-blind, randomized trial with 80 sites nationwide. The trial will evaluate the effect of treatment with ACTOS on coronary artery disease using intravascular ultrasound (IVUS). The trial has begun enrolling patients this month, with planned treatment period lasting 72 weeks (18 months). PERISCOPE should enable us to better understand the effects of a diabetes therapy such as ACTOS (**Pioglitazone HCL**) on atherosclerosis, which is the major cause of MI and stroke in patients with diabetes. ACTOS has a favorable effect on lowering triglyceride levels and increasing HDL and can be an effective part of therapeutic treatment for type 2 diabetes.

#### 17. **AutoCapture vs. Capture Management Evaluation**

To evaluate the ventricular pacing output versus the manual ventricular capture threshold between follow-up visits using two different automatic capture systems.

This will be a randomized, prospective follow-up study. At the time of implant, patients will be randomized for implantation of either a FDA approved SJM pacemaker with AutoCapture or a MDT pacemaker with Capture Management and a new ventricular lead system.

#### 18. **IMPROVE-IT** Trial

This is a randomized, active-control, double-blind study of subjects with stabilized high-risk acute coronary syndrome (ACS). The primary objective is to evaluate the clinical benefit of Ezetimibe/Simvastatin Combination 10/40 (single tablet, under the brand VYTORIN in the United States) compared with Simvastatin 40 mg. Clinical benefit will be defined as the reduction in the risk of the occurrence of the composite endpoint of CV death, major coronary events, and stroke.

### 19. **CHAMPION-PCI** trial

Phase III clinical trial evaluating ‘Cangrelor’, a fast-acting, reversible, intravenous (IV) antiplatelet agent for preventing platelet activation and aggregation during the clotting process. Cangrelor is the first IV platelet inhibitor that binds directly to the P2Y12 receptor, a clinically validated target to treat or prevent arterial thrombosis in patients undergoing percutaneous coronary intervention (PCI).

### 20. **SPIRIT III**

A Randomized, Multi-Center, Clinical Trial Evaluating the Safety and Efficacy of the XIENCE™ V Everolimus Eluting Coronary Stent System in the Treatment of Patients with de novo Native Coronary Artery Lesions

### 21. **XoMaxx** stent trial

A Randomized, Multi-Center, Clinical Trial Evaluating the Safety and Efficacy of the **XoMaxx**, Zotarilimus Drug Eluting Coronary Stent System in the Treatment of Patients with de novo Native Coronary Artery Lesions

### 22. **PLATO** trial

A study of **PLA**telet inhibition and patient **O**utcomes: A Comparison of AZD6140 and Clopidogrel in Patients With Acute Coronary Syndrome

A Randomised, Double-Blind, Parallel Group, Phase 3, Efficacy and Safety Study of AZD6140 Compared With Clopidogrel for Prevention of Vascular Events in Patients With Non-ST or ST Elevation Acute Coronary Syndromes (ACS)

### 23. **SEPIA-PCI** trial

The SEPIA-PCI Trial: Otamixaban in Comparison to Heparin in Subjects Undergoing Non-Urgent Percutaneous Coronary Intervention

A Multinational, Randomized, Double-Blind, Double-Dummy, Exploratory, Parallel Group, Dose-Ranging Phase II Study to Evaluate Pharmacodynamics, Safety and Tolerability, and Pharmacokinetics of Several Intravenous Regimens of Factor Xa Inhibitor Otamixaban (XRP0673), in Comparison to Intravenous Unfractionated Heparin, in Subjects Undergoing Non-Urgent Percutaneous Coronary Intervention

## Teaching

1- **Michael E Assey Award**- For excellence in the clinical teaching of Cardiovascular diseases. MUSC Cardiology. 2005

2-Recognition of Clinical Excellence. Baylor College of Medicine 1999. Best Cardiology Fellow- Teaching Award.

3- Yearly nomination for Best Teacher of the Year- Faculty Excellence award

4. Mentor and Selective director- 3<sup>rd</sup> yr Medical students – EKG selective

- 5) Mentor and Selective Director- 3<sup>rd</sup> yr Medical Students- Cardiology Clinic Selective
- 6) Cardiology Professor Rounds- 3<sup>rd</sup> yr Medical Students- 2006, 2007, 2008-07-10
- 7) Physical Diagnosis- 2<sup>nd</sup> year medical students- 2002-2005, 2008-07-10
- 8) Cardiology Physical Exam & EKG Interpretation Lectures- 2<sup>nd</sup> year medical students
- 9) Internal Medicine Residents Emergency Introductory Lecture Series
- 10) Cardiology Fellows Introductory Lecture Series