Updated April 10, 2022

JAGAT NARULA MBBS MD DM PhD FRCP MACC MASNC MSCCT

Philip J. and Harriet L. Goodhart Chair of Cardiovascular Medicine

Chief, Division of Cardiology, Mount Sinai Hospital Morningside

Professor of *Medicine & Cardiology,* Diagnostic, Molecular and Interventional Radiology,

Artificial Intelligence & Human Health, Population Health Science and Policy,

and Health System Design & Global Health

Icahn School of Medicine at Mount Sinai

Associate Dean for Global Health

Director, Cardiovascular Imaging Program, Mount Sinai Health System

Executive Editor, Journal of the American College of Cardiology

Editor-in-Chief Emeritus, Journal of the American College of Cardiology- Imaging

Editor-in-Chief Emeritus, Global Heart [World Heart Federation]

Editor-in-Chief Emeritus, Heart Failure Clinics of North America

Executive Editor, Annals of Global Health [Consortium of Universities for Global Health]

Vice President [World Heart Federation]

**INDEX:**

A. Synopsis, ***2-3***

B. Education, ***4-6***

### Clinical and Research Fellowships: 4

### Internships and Residency: 4

### Medical School: 5

*Board Certifications: 5*

*Medical Licensure: 5-6*

C. Appointments, ***6-8***

### Academic Appointments: 6-7

### Hospital Appointments: 7

### Administrative Appointments: 7-8

D. Professional Activity, ***9-26***

### Awards and Honors: 9-14

### Awards to Fellows/Mentees in Training: 14-18

### Visiting Professorships, Orations: 18-21

### Offices Held in Professional Societies: 21-24

### Editorial Responsibilities: 24-25

### Editorial Boards: 25

### Journal Reviews: 25-26

E. Grant and Research Awards, ***27-35***

### Active: 27-28

### Pending: 28-29

### Completed (Selected): 29-35

F. National & International Presentations, ***36-68***

### National Presentations: 36-46

### International Presentations: 46-56

### Medicine/Cardiology Grand Rounds: 57-66

### Community Presentations: 66-68

G. Service to Professional Organizations, ***69-80***

### Organization of Conferences or Symposia: 69-73

### Leadership and Contributions to National/ International Organizations: 73-79

### Membership in Professional Organizations: 79

### University Service and Hospital Committees: 80

H. Bibliography, ***81-225***

### Books and Monographs: 80-82

### Special Issues of Journals: 82-83

### Original Manuscripts: 84-183

### Doctoral/Post-Doctoral Dissertations: 183

### Chapters Contributed to Books: 184-190

### Abstracts and Conference Proceedings: 183-225

I. U.S. Patent Awards/Applications, ***225***

J. Training Graduate/Doctoral Students, ***225-229***

*Undergraduate and Doctoral Students*, *225-228*

### Examiner, Doctoral Thesis Title Defense: 228

### Post-Doctoral Students in Training: 228-229

**Synopsis:**

1. EDUCATION:

* Medical School, SMS Medical College, Jaipur, India, 1978
* Residency, Internal Medicine, SMS Medical College, Jaipur, India, 1983
* Fellowship, Cardiology, All India Institute of Medical Sciences, Delhi, India, 1986
* PhD, CV Immunology, All India Institute of Medical Sciences, Delhi, India; Completed 1989, defended 1994
* Fellowship, Cardiology, Massachusetts General Hospital, Harvard Medical School, Boston, 1991
* Fellowship, Radiology, Massachusetts General Hospital, Boston, 1994
* Fellowship, Heart Failure & Transplantation, Massachusetts General, Harvard Medical School, Boston, 1996

2. APPOINTMENTS:

* Assistant Professor of Cardiology, and Director, Center for Advanced Research in Rheumatic Fever & Rheumatic Heart Disease, All India Institute of Medical Sciences, Delhi, until 1991
* Clinical Assistant in Medicine (Cardiology), Massachusetts General Hospital; Instructor in Medicne, Harvard Medical School, Boston, until 1997
* Thomas J. Vischer Professor of Medicine; Chief, Division of Cardiology; Vice-Chairman, Department of Internal Medicine for Resaerch; Director, Heart Failure & Transplantation Center, Hahnemann University Hospital, Drexel University College of Medicine, Philadelphia, until 2003.
* Professor of Medicine; Chief, Division of Cardiology; Associate Dean for Research, Director, Cardiovascular Center- UCI Douglas Hospital; Director, Memorial Heart & Vascular Institute-Long Beach Memorial Hospital; Medical Director, Edwards Lifesciences Center for Advanced CV Technology, University of California- Irvine, until 2011.
* CURRENT APPOINTMENT: Philip J. and Harriet L. Goodhart Chair of Cardiology, Chief, Division of Cardiology- Mount Sinai Morningside; Professor of Medicine & Cardiology, Diagnostic, Molecular and Interventional Radiology, Artificial Intelligence & Human Health, Population Health Science and Policy, and Health System Design & Global Health, Icahn School of Medicine at Mount Sinai; Associate Dean for Global Health; Director, Cardiovascular Imaging Program, Mount Sinai Health System

3. RESEARCH CONTRIBUTIONS:

* Prevention of acute coronary events: From bench to bedside to population. Pathology, pathogenesis and molecular mechanisms of the plaque rupture and plaque erosion underlying acute coronary events, developing novel imaging techniques for identification of high-risk plaques by CT angiographic investigation, intracoronary imaging and molecular imaging, developing algorithms for risk stratification of asymptomatic subjects susceptible to coronary events, initiation of numerous population-based prevention programs for acute coronary events including HAPPY [Heart Attack Prevention Program for You], and unique global collaborative projects addressing the risk factors and pathogenesis of atherosclerosis icluding HORUS initiative [imaging mummies and ancient humans].
* Description of the phenomenon of heart muscle cell suicide (or apoptosis) in progression of heart failure, development of imaging techniques targeting myocardial apoptosis, autoschizis, necrosis and interstitial fibrosis during evolution of adverse cardiac remodeling.
* Funded, in part, by the grants from National Institutes of Health
* Considered to be a true translationist with a distinction of publishing in the best basic science and the best clinical journals including Science, Nature (Medicine), PNAS, New England Journal of Medicine and Lancet.
* Contributed >875 original research publications and 500 presentations, with editor of 55 books or journal supplements.

4. EDITORIAL RESPONSIBILITIES:

* Executive Editor of the Journal of American College of Cardiology 2014-2019.
* Editor-in-chief of the Journal of American College of Cardiology- Cardiovascular Imaging 2007-2017.
* Editor-in-Chief of ‘Global Heart’ (official publication of World Heart Federation), 2011-2018.
* Founder editor of the Heart Failure Clinics of North America, 2005-2007.
* Co-editor-in-chief of the Hurst’s The Heart, 14th edition, 2017; 15th Edition, 2022.

5. LEADERSHIP ROLES:

* Vice President, World Heart Federation 2021-2022
* Board of Trustees, American College of Cardiology, 2015-2020
* Chairman, Science, Policy and Advocacy Committee, World Heart Federation, 2015-2020
* Advisory Board; National Academy of Medical Sciences, USA, Global Prevention of Cardiovascular Diseases, 2009-2011
* President, Orange County Chapter, American Heart Association, 2008-2010; Chaired numerous committees of the American College of Cardiology, since 2008.

6. RECENT AWARDS:

* Master of the Society of Cardiovascular Computed Tomography, 2021
* Henry Wagner Oration, Society of Nuclear Medicine & Molecular Imaging, 2020
* International Service Award, American College of Cardiology 2020
* Distinguished Fellow Award, American College of Cardiology 2018
* Maseri-Florio International Lecture, American College of Cardiology 2016
* Agatston Award of the Society of Cardiovascular Computed Tomography, 2016
* Distinguished Scientist Award (Translational Domain), American College of Cardiology 2015
* Master of the American Society of Nuclear Cardiology 2014
* Paul Wood Award, National Heart, Lung Institute, UK 2014, Imperial College, London
* Mario Verani Oration of the American Society of Nuclear Cardiology, 2014, Boston
* Howard Morgan Award for Distinguished Achievements in Cardiovascular Research, International Academy of
* Cardiovascular Sciences, 2014, Winnipeg, Canada
* Harold Buchwald Distinguished Oration, Cardiovascular Forum for Promoting Centres of Excellence and
* Young Investigators, 2014, Winnipeg, Canada
* Anand & Saroj Aggarwal Endowed Lectureship for South Asian Heart Health, Ottawa Heart Institute 2014
* Featured: Roberts WC. A conversation with the editor. *Am J Cardiol.* 2014;113(12):2070-85. PMID: 24878131
* Master of the American College of Cardiology 2013
* Innovators of the Cardiovascular Medicine (American College of Cardiology) 2012
* Gifted Educator Award (American College of Cardiology) 2012
* American Heart Association, Orange County Distinguished Scientist Award, 2011
* James Seward & Jamil Tajik Award for Excellence in Cardiovascular Imaging, Mayo Clinic, Rochester, 2010
* Einthoven Medal for contribution to Cardiovascular Imaging Leiden, the Netherlands, 2009
* Honor of the City of Maastricht, the Netherlands by the Mayor of the City, for contributions to
* Heart Health of the City, 2008
* Awarded as the best young investigator on several occasions for research contributions in the field of cardiovascular imaging.
* More than 35 young investigator awards have been won by my mentees

**Education**

1994 Ph D Doctor of Philosophy *(CV Immunology)*

1985 D M Sub-Specialty Board *(Cardiology)*

1983 M D Primary Specialty Board *(Internal Medicine)*

1978 MB BS Medical School

### Clinical and Research Fellowships:

Jul 1995-Dec 1996 Fellow in Heart Failure/Transplantation

Massachusetts General Hospital

and Harvard Medical School, Boston

Jan 1995-Jun 1995 Fellow in Nuclear Cardiology

Massachusetts General Hospital, Boston

Harvard Medical School, Boston

Jan 1992-Dec 1994 Research Fellow in Radiology

Massachusetts General Hospital and

Harvard Medical School, Boston, MA

Jul 1989-Dec 1991 Fellow in Cardiology

Massachusetts General Hospital and

Harvard Medical School, Boston, MA

Jul 1983-Jun 1986 Fellow in Cardiology

All India Institute of Medical Sciences, Delhi, India

### Internships and Residency:

Jan 1982-Mar 1983 Senior Resident in Internal Medicine

SMS Medical College, Jaipur, India

Oct 1979-Dec 1981 Resident in Internal Medicine

SMS Medical College, Jaipur, India

Oct 1978-Sep 1979 Internship in Medicine

SMS Medical College, Jaipur, India

### Medical School:

Oct 1973-Sep 1978 SMS Medical College, Jaipur, India

***Board Certifications:***

1999 American Board of Nuclear Medicine (Eligible)

1994 *Ph D: Doctor of Philosophy*

*(Cardiovascular Immunology)*

All India Institute of Medical Sciences, Delhi

1993 *FLEX* *Components I & II*

Federal Licensing Examination

1993 *USMLE Steps 1 & 2*

United States Medical Licensure Examination

1985 Subspecialty Board Certification

*DM:* *Doctor of Medicine* *(Cardiology)*

All India Institute of Medical Sciences, India

1983 Primary Board Certification

*MD: Doctor of (Internal) Medicine*

University of Rajasthan, India

1978 *MB BS: Bachelor of Medicine & Surgery*

Medical School, University of Rajasthan, India

***Medical Licensure:***

Jul 2011 The State of New York Education Dept

Registration Certificate License #262639-1

Certificate #7558405

Jan 2004 Medical Board of California

Jan 2004-May 2006: 2113 Cert #F5139

May 2006: License #C 52343

Dec 1997 Commonwealth of Pennsylvania

Board of Registration in Medicine;

MD-063673-L (Active)

Oct 1996 Commonwealth of Massachusetts

Board of Registration in Medicine; 151563

Inactive since 7/16/1999)

Aug 1996 DEA BN5366275

Jun 1980 India, Rajasthan Medical Council

Certificate of Registration; 7958

**Academic Appointments**

Apr 2011 - Philip J. & Harriet L. Goodhart Chair of Cardiology

Professor of Medicine & Cardiology,

Diagnostic, Molecular and Interventional Radiology,

Artificial Intelligence & Human Health,

Population Health Science and Policy, and

Health System Design & Global Health,

Icahn School of Medicine at Mount Sinai, New York

Jul 2009 - Professor of Medicine, Step VI

University of California School of Medicine, Irvine

Jul 2006 - Professor of Medicine, Step V

University of California School of Medicine, Irvine

Nov 2003 - Professor of Medicine, Step III

University of California School of Medicine, Irvine

Jul 2001–Oct 2003 Thomas J. Vischer Professor of Medicine

Drexel University College of Medicine, Philadelphia

Apr 2000–Jun 2001 Professor of Medicine

Drexel University College of Medicine, Philadelphia

Jul 1997–Mar 2000 Associate Professor of Medicine

Drexel University College of Medicine, Philadelphia

Jan 1997–Jun 1998 Instructor in Medicine, Cardiac Unit

Massachusetts General Hospital and

Harvard Medical School, Boston

Jul 1995-Jun 1997 Clinical Professor of Cardiovascular Sciences

Northeastern University, Boston

Aug 1992-Jun 1995 Clinical Assistant Professor of Cardiovascular Sciences

Northeastern University, Boston

May 1988-Jun 1991 Assistant Professor, Dept of Cardiology

All India Institute of Medical Sciences, Delhi, India

**Hospital Appointments**

May 2015- Staff Physician, Cardiovascular Institute

St. Luke’s & Roosevelt Hospitals, New York, NY

May 2011- Staff Physician, Cardiovascular Institute

Mount Sinai Medical Center, New York, NY

Jan 2004-Mar 2011 Staff Physician, Department of Medicine (Cardiology)

UCI Medical Center, Orange, CA

Jul 1997–Oct 2003 Staff Physician, Department of Medicine (Cardiology)

Hahnemann University Hospital, Philadelphia, PA

Jan 1997–Jun 1998 Clinical Assistant in Medicine, Cardiac Unit, Massachusetts

General Hospital and Harvard Medical School, Boston, MA

May 1988-Jun 1991 Staff Physician, Dept of Cardiology

All India Institute of Medical Sciences, Delhi, India

**Administrative Appointments**

Mar 2015- Chief, Division of Cardiology

Mount Sinai Morningside Hospital, New York

Jul 2013-Feb 2015 Director of Operations, Mount Sinai Heart Network

Apr 2011- Associate Dean

Arnhold Institute for Global Health at Mount Sinai, New York

Apr 2011- Director, Cardiovascular Imaging Program

Zena and Michael A. Wiener Cardiovascular Institute &

Mount Sinai Hospital, New York

Jul 2009-Mar 2011 Director, Memorial Heart & Vascular Institute

Long Beach Memorial Hospital, Long Beach, CA

Jul 2009-Mar 2011 Medical Director, Edwards Lifesciences Center for Advaced CV

Technology, University of California, Irvine, CA

Jan 2008-Mar 2011 Director, Cardiovascular Center

UC Irvine’s Douglas Hospital, Orange, CA

Nov 2003-Mar 2011 Chief, Division of Cardiology

University of California Irvine Medical Center, Orange, CA

Nov 2003–Mar 2007 Associate Dean for Research

University of California School of Medicine, Irvine, CA

Mar 2002–Oct 2003 Chief, Division of Cardiology

Hahnemann University Hospital, Philadelphia, PA

Jan 2001–Mar 2002 Vice-Chairman for Research, Department of

Medicine, Hahnemann University Hospital, Philadelphia, PA

May 2000–Jul 2001 Associate Chief, Division of Cardiology

Hahnemann University Hospital, Philadelphia, PA

Feb 2000–Jun 2001 Co-Director, Cardiology Fellowship Program

Drexel University College of Medicine, Philadelphia, PA

Feb 2000–Jun 2003 Director, Heart Failure/Transplant Center

Center, Hahnemann University Hospital, Philadelphia, PA

Jan 1999–Jun 2003 Director, Heart Failure/Transplant Research

Hahnemann University Hospital, Philadelphia

Jul 1997–Oct 2003 Director, Center for Molecular Cardiology

Drexel University College of Medicine, Philadelphia, PA

Aug 1992-Jun 1997 Associate Director, Center of CV Targeting

Northeastern University, Boston, MA

Jul 1986-Jun 1988 Research Director, Center for Advanced Research on

Rheumatic Fever & Heart Disease, Department of Cardiology

All India Institute of Medical Sciences, Delhi, India

Jul 1987-Aug 1988 (Hon.) Program Officer, Non-Communicable Diseases (CVD)

Indian Council of Medical Research, Delhi, India

**Professional Activity**

***Awards and Honors:***

2022 First Barry L. Zaret Honorary Lectureship and Visiting

Professorship, Yale University School of Medicine, New Haven

2021 AIIMS Alum of the Year Award, AOA 38th Annual Convention

AIIMSonians of America, New York

2021 Master, Society of Cardiovascular Computed Tomography

2020 International Service Award, American College of Cardiology

2020 Henry Wagner Oration, Society of Nuclear Medicine &

Molecular Imaging

2018 Distinguished Fellow, American College of Cardiology

2018 William Little Oration, University of Mississippi, Jackson, MS

2017 DSc [Doctor of Sciences] (Honoris Causa), Autonomous

University of Barcelona, Spain

2017 DeMots Lecturer, Cardiology Fellows Graduation

Oregon University Health Sciences Center, Portland

2017 Chhangani Memorial Oration, Lecture Series for Illustrious

Alumni of SMS Medical College, Jaipur

2017 President Kalam Oration, Nuclear Cardiology Society of

India, Mumbai

2016 15th Annual Maseri-Florio International Lecture

American College of Cardiology

2016 Agatsoton Award of the Society of Cardiovascular

Computed Tomography

2016 Arnsdorf Lecturer, Cardiology Fellows Graduation &

Departmental Research Symposium, University of Chicago

Chicago

2016 7-Decade Celebrations of SMS Medical College (my *alma*

*mater*), Distinguished Alumnus Award, and 7-Decade Oration

2016 President Kalam Lecture, Preventive Cardiology Society of

India, Mt. Abu, India

2015 Distinguished Scientist Award *(Translational Domain)*

American College of Cardiology, San Diego

2014 Master of the American Society of Nuclear Cardiology

2014 Paul Wood Award, National Heart, Lung Institute, London

2014 Mario Verani Oration, American Society of Nuclear

Cardiology, Boston

2014 Harold Buchwald Distinguished Oration, Cardiovascular Forum

for Promoting Centres of Excellence and Young Investigators,

Winnipeg, Canada

2014 Howard Morgan Award for Distinguished Achievements in

Cardiovascular Research, International Academy of

Cardiovascular Sciences, Winnipeg, Canada

2014 Anand & Saroj Aggarwal Endowed Lectureship for South Asian

Heart Health, Ottawa Heart Institute, Ottawa, Canada

2014 Featured: Roberts WC. A Conversation With the Editor

*Am J Cardiol.* 2014;113:2070-85. PMID: 24878131

2013 Master of the American College of Cardiology

2012 American College of Cardiology The Gifted Educator Award

2012 Innovators of Cardiovascular Medicine *(Imaging)*

American College of Cardiology

2012 PK Dandiya Oration, SMS Medical College, Jaipur

2012 PK Sengupta Memorial Oration

Indian Medical Association, Nagpur

2011 American Heart Association, Orange County

Distinguished Scientist Award: Heart Hero

2010 James Seward & Jamil Tajik Award for Excellence in

Cardiovascular Imaging, Mayo Clinic, Rochester

2010 Sujoy Roy Oration Award and Distinguished Visiting Professor

All India Institute of Medical Sciences, Delhi, India

2010 Most Distinguished Physician Award

American Association of Physicians of India

Annual National Convention, Washington, DC

2009 Advisory Board; Institute of Medicine

(National Academies of Sciences, USA)

Global Prevention of Cardiovascular Diseases

2009 Rameshwar Sharma Gold Medal of National

Academies of Medical Sciences, Medical

University of Rajasthan, Jaipur

2009 R.D. Lele Distinguished Physician Award, Association of

Nuclear Medicine Physicians of India, Bangalore

2009 Vikram Sarabhai Oration Award, Society of Nuclear Medicine

Jaipur

2009 Einthoven Medal for contribution to Cardiovascular Imaging

Leiden, the Netherlands

2008 Honor of the City of Maastricht, the Netherlands by the

Mayor of the City, for contributions to Heart Health of the City

2008 Shekh Abdullah Memorial Oration

SMS Medical College, Jaipur, India

2008 JN Berry Memorial Oration, Post-Graduate Institute

of Medical Education and Research, Chandigarh, India

2008 Distinguished Physician Award, Rajasthan

Medical Alumni Association, Pittsburgh

2007 Physician of the Year Award, Indian Medical Association of

California, Anaheim

2007 Premlata Seth Memorial Oration Award

Cardiological Society of India, New Delhi

2007-2009 President, American Heart Association

Orange County, California

2007 Faculty of the Year Award, Division of

Cardiology University of California, Irvine

2007 ARISE Award for Academic Excellence

University of California, Irvine

2007 UC Irvine *Living Our Values* Honor Roll

2006 Fellow of the Royal College of Physicians Edinburgh [hc]

2005-2008 American Heart Association

National Leadership Council

Jun 2004–Sep 2005 *Hein JJ Wellens Distinguished Visiting Professo*r

The University of Maastricht Maastricht, Netherlands

2004 Mentorship Award, Division of Cardiology

University of California, Irvine

2003 American Heart Association Recognition Award

2003 Strathmore Who’s Who in America

2002 *Million Dollar Club* of High research dollars grantees

of the Drexel University

2002 *Mentorship Award*, Drexel University College

of Medicine from Fellows of Cardiology and

Residents of Internal Medicine

2001 *Distinguished Physician Award*

American Association of Cardiologists of Indian Origin

2001 *Best Teacher Award,* Drexel University

College of Medicine; Division of Cardiology

2000 *Best of Scientific Sessions 2000* American Heart Association

2000 *Merck Young Investigator Award*

1997 *Academic Achievement Award* from the

Indo-American Society of Nuclear Medicine

1997 *Best Young Investigator Award,*

CV Council, Society of Nuclear Medicine

1997 *Best Young Investigator Award,* ICNC-II

American Society of Nuclear Cardiology

1996 *Best Basic Science Paper Award*, JNC

American Society of Nuclear Cardiology

1996 *Nuclear Cardiology 1996*

*Best Young Investigator Award*

1996 *Young Investigator Award,* Runners-up

CV Council, Society of Nuclear Medicine

1995 *Best Clinical Paper Award*, JNC

American Society of Nuclear Cardiology

1995 Phi-Beta-Delta *Outstanding International Scholar* *Award*

1995 *Best Abstract Award,* ICNC-I

American Society of Nuclear Cardiology

1994 *Young Investigator Award,* from CV Council

of the Society of Nuclear Medicine

1993 *Outstanding Abstract Award*

from the Controlled Release Society

1993 *Outstanding Manuscript of the Year*

Controlled Release Society

1993 *Young Investigator Award* from the CV

Council of the Society of Nuclear Medicine

1986 *Best Young Investigator Award* of the

Cardiological Society of India

1986 Gold Medal for the *Best Fellow* in Cardiology

1983 Gold Medal for the *Best Resident* in Internal Medicine

1978 Gold Medal for the *Best Medical Student*

1976 Gold Medal for the *highest scores,* Step Two

(Professional) Medical Board Examination

1975 Gold Medal for the *highest score,* Step One

(Professional) Medical Board Examination

1973 Gold Medal for the *Best Premedical Student*

Excellence in all pre-med disciplines

including Physics, Chemistry and Biology

***Awards to Fellows/Mentees in Training:***

2022 *Glorney Raisback Fellowship Research Grant Award*

(Waqas Mallick, Cardiology Fellow)

Co-mentored with Robert Rosenson, MD

2018 Young Investigator Award, Genomic Medicine

(Kipp Johnson, Research Fellow)

American Heart Association, Chicago, IL

2018 Melvin Marcus- Judkins Young Investigator Award

(Farhan Chaudhry, Research Fellow)

American Heart Association, Chicago, IL

2018 Young Investigator Award Runners up

(Aditya Shekhar, Research Affiliate)

American Association of Physicians of India, New York, NY

2017 Young Investigator Award Runners up

(Aditya Shekhar, Research Affiliate)

American Society of Nuclear Cardiology, Orlando, FL

2016 Young Investigator Award

(Amir Ahmadi, Clinical Imaging Fellow)

Canadian Society of Cardiology, Ottawa, Canada

2016 Best Abstract Award

(Amir Ahmadi, Clinical Imaging Fellow)

European Society of Cardiology, Rome, Italy

2016 Best Abstract Award

(Amir Ahmadi, Clinical Imaging Fellow)

Society of Cardiovascular Computed Tomography, Orlando, FL

2016 Young Investigator Award Winner

(Aditya Shekhar, Research Affiliate)

American Association of Cardiologists of Indian Origin,

Washington, DC

2016 Young Investigator Award Winner

(Farhan Chaudhry, MS Student)

American College of Nuclear Medicine, Orlando, FL

2016 Young Investigator Award Finalist

(Farhan Chaudhry, MS Student)

World Molecular Imaging Congress, New York, NY

2014 Young Investigator Award Finalist

(Tiziano Scarabelli, Clinical Cardiology Fellow)

2nd Cardiovascular Forum for Promoting Centres of Excellence

and Young Investigators, Winnipeg, Canada

2014 Young Investigator Award Finalist

(Tiziano Scarabelli, Clinical Cardiology Fellow)

3rd International Conference on Cancer and the Heart,

Houston, TX

2008 Young Investigator Award Finalist

(Partho Sengupta, Clinical Cardiology Fellow)

Association of the American Cardiologists of Indian Origin

2008 Judkin’s *Young Investigator Award* *Finalist*

(Satoru Ohshima, Research Fellow)

Committee on Radiology, American Heart Association

Orlando, FL

2007 *Young Investigator Award Finalist*

(Shinichiro Fujimoto, Research Fellow)

Committee on Radiology, American Heart Association

Orlando, FL

2007 *Young Investigator Award Finalist*

(Shoturo Oshima, Research Fellow)

Committee on Atherosclerosis, Thrombosis, and Vascular

Biology, American Heart Association, Orlando

2006 *Young Investigator Award Finalist*

(Satoshi Isobe, Research Fellow)

CV Council Society of Nuclear Medicine, San Diego

2006 *Young Investigator Travel Grant Award*

(Johan Verjans, Research Fellow)

Society of Molecular Imaging, Hawaii

2005 *Young Investigator Award* Finalist

(Johan Verjans, Research Fellow)

American Heart Association WSA, Irvine

2004 *Young Investigator Award*, First Runner-up

(Johan Verjans, Research Fellow)

American Society of Echocardiography, San Diego

2004 *Young Investigator Award*, Second Runner-up

(Mashayoshi Sarai, Research Fellow)

CV Council, Society of Nuclear Medicine, Philadelphia

2003 *Fujisawa* *Young Investigator Award*

(Dagmar Hartung, Research Fellow)

American Society of Nuclear Cardiology, Indianapolis

2003 *Young Investigator Award*, Runner-Up

(Dagmar Hartung, Research Fellow)

CV Council, Society of Nuclear Medicine, New Orleans

2003 *Best of the Best Abstracts Award*

(Dagmar Hartung, Research Fellow)

International Congress of Nuclear Cardiology, Florence, Italy

2003 *Best Abstract Award: North America*n Region

(Dagmar Hartung, Research Fellow)

International Congress of Nuclear Cardiology, Florence, Italy

2003 *Amersham Young Investigator Research Award*

(Gurusher Panjarath, Research Fellow)

American Society of Nuclear Cardiology ’03-04

Co-mentored with Diwaker Jain, MD

2002 *Amersham Young Investigator Clinical Research*

*Award* (Sabu George, Cardiology Fellow)

American Society of Nuclear Cardiology

2002 *Young Investigator Award Finalist*

(Paulina Gorodin, Internal Medicine Resident)

Society of Nuclear Medicine, Los Angeles

2002 *Young Investigator Award Finalist*

(Carina Mari, Research Fellow, Stanford)

Society of Nuclear Medicine, Los Angeles

Co-mentored with H. William Strauss, MD

2001 *Best* *Young Investigator Award* *Winner*

(Ahsan Chowdhury, Cardiology Fellow)

American Society of Nuclear Cardiology, Boston

2001 *Best Young Investigator Award,* *Winner*

(Kimberly Urban, Cardiology Fellow)

International Congress of Nuclear Cardiology, Vienna, Austria

2001 *Young Investigator Award Finalist*

(José DaSilva, Research Fellow)

International Congress of Nuclear Cardiology Vienna, Austria

Co-mentored with Ban-An Khaw, PhD

1999 *Young Investigator Award,* *Winner*

(Nezam Haider, Research Fellow)

PA Chapter American College of Cardiology, Philadelphia, PA

1999 *Young Investigator Award, Winner*

(Farid Al-Khouri, Cardiology Fellow)

PA Chapter American College of Cardiology, Philadelphia

Co-mentored with Ami E. Iskandrian, MD

1999 *Young Investigator Award*

(Carina Mari, Nuclear Medicine Fellow)

CV Council, Society of Nuclear Medicine, Los Angeles

Co-mentored with Ignasi Carrio, MD, Barcelona

1999 *Young Investigator Award, Second Runner-Up*

(Albert Flotats, Nuclear Medicine Fellow)

CV Council, Society of Nuclear Medicine, Los Angeles

Co-mentored with Ignasi Carrio, MD, Barcelona

1999 *Best Young Investigator Award, Winner*

(Ali Zarrinkhameh, Cardiology Fellow)

Nuclear Cardiology Today, Cesena, Italy

1999 *Young Investigator Award Finalist*

(Neil Kabous, Cardiology Fellow)

Nuclear Cardiology Today, Cesena, Italy

1997 *Best Young Investigator Award, Winner*

(Mireia Puig, Cardiology Fellow)

Cardiovascular Targeting Symposium, Boston

Co-mentored with Manel Ballester, MD, Barcelona

***Visiting Professorships:***

Jun 2019 University of Arizona, Banner Health, Phoenix, AZ

May 2019 University of Alabama, Birmingham, AL

Sep 2018 University of Mississippi, Jackson, MS

May 2018 University of Kansas, KS

Jan 2018 Methodist St. Luke’s Hospital, Houston, TX

Dec 2017 Rhode Island Hospital, Brown University, Providence, RI

Nov 2017 Columbia University, New York, NY

May 2017 Christiana Healthcare, Delaware University, Wilmington, DE

Apr 2017 Orgeon Health Sciences University, Portland, OR

Apr 2016 University of Chicago School of Medicine, Chicago, IL

Mar 2016 Weill Cornell Medicine, Internal Medicine, New York, NY

May 2016 Weill Cornell Medicine, Cardiology, New York, NY

Nov 2015-Oct 2017 Hon. Professor, Public Health Foundation of India

May 2015 MD Anderson Cancer Center, Houston, TX

May 2015 Henry Ford Medical Center, Detroit

May 2015 Stony Brook Medicine, Heart Institute, Hauppauge, NY

Apr 2015 Duke University School of Medicine, Durham, NC

Feb 2015 George Washington University Heart & Vascular Institute

Washington DC

May 2014 University of Virginia, Charlottesville, VA

May 2014 University of Maryland School of Medicine, Baltimore, MD

April 2014 Christ Medical Center, Chicago

Jan 2014 New York University School of Medicine, New York, NY

Oct 2013 Brigham & Women’s Hospital & Harvard Medical School

Boston, MA

June 2013 Mayo Clinic Rochester, MN

Oct 2011 University of Texas, Houston, TX

James T. Willerson Distinguished Professor

Jun 2011 University of California, Irvine, CA, Graduation Speaker

Ralph J. Cicerone Distinguished Professor

May 2011 Columbia University, College of Physicians and Surgeons

New York, NY

Feb 2011 Cleveland Clinic Foundation, Cleveland

Sep 2010 Mayo Clinic, Rochester, MN

Sep 2010 All India Institute of Medical Sciences, Delhi, India

May 2010 Massachusetts General Hospital, Boston, MA

Jun 2009 University of California, Davis, CA

Jun 2009 University of British Columbia, Vancuver, BC

Mar 2009 Northwestern University, Chicago, IL

Jan 2009 Leiden University Medical Center, Leiden, The Netherlands

Dec 2008 SMS Medical College, Jaipur, India

Nov 2008 Post-Graduate Institute of Education & Research

Chandigarh, India

Feb 2007 Yale University School of Medicine, New Haven, CT

Jan 2007 Columbia University College of Physicians and Surgeons

New York, NY

Dec 2006 *Molecular Imaging Program at Stanford (MIPS)*

Stanford University School of Medicine, Stanford

Apr 2006 Massachusetts General Hospital, Boston

Apr 2006 University of Maryland, Baltimore

Jun 2004–Sep 2005 University of Maastricht, the Netherlands

*Hein JJ Wellens Distinguished Professo*r

Nov 2005 Fujita University of Health Sciences Toyoaki, Japan

Apr 2004 The University of Toronto, Toronto, Canada

Heart & Stroke Foundation Professor

Apr 2004 University of Toronto, Toronto, Canada

*Merck-Frost Distinguished Visiting Professo*r

Jul 2004 *Distinguished Braun Professor*

University of California, Los Angeles

Oct 2004 University of California, San Diego

Oct 2004 Mayo Clinic Foundation, Rochester

Sep 2003 University of Arkansas Medical Centre, Little Rock, AR

Sep 2003 University of Alabama Medical Centre, Birmingham, AL

Jan 2003 *Joint Program in Nuclear Medicine*

Harvard Medical School, Boston

Jan 2003 Rush-Presbyterian-St. Luke's Medical Centre, Chicago, IL

Dec 2002 Academic University of Maastricht, The Netherlands

Oct 2002 University of Minnesota School of Medicine

Minneapolis VA Hospital, Minneapolis

Dec 2001 Triviglio Hospital, University of Bergamo, Treviglio, Italy

Dec 2001 Ospedale M. Bufalini, Cesena, Italy

*Bufalini Distinguished Visiting Professor*

Nov 2001 University of Michigan, Ann Arbor, MI

Jul 2001 University of Texas Medical Branch, Galvastone, TX

Sep 2000 University of Arkansas Medical Centre, Little Rock, AR

Oct 1999 Weill Medical College, Cornell University, New York

*Howard Gilman Foundation Distinguished Visiting Professor*

Apr 1999 University of Virginia School of Medicine, Charlottesville, VA

Feb 1997–Apr 1997 Autonomous University of Barcelona and Sant Pau Hospital

Barcelona, Spain

**Offices Held in Professional Societies and Scholarly Organizations:**

2019-20 Vice President Elect, World Heart Federation

2015-18 Board of Trustees, American College of Cardiology

2015-18 Chair, Scientific Policy and Advocacy Committee

World Heart Federation

2018 Chair, Scientific Program Committee

World Heart Federation

2016 Co-Chair, Scientific Program Committee

World Heart Federation

2014 Member, Scientific Program Committee

World Heart Federation

2013- Member-at-Large, Scientific Program Committee

American College of Cardiology

2013- Chair, Scientific Programs, International Chapters

American College of Cardiology

2012-3 Co-Chair, Scientific Programs, International Chapters

American College of Cardiology

2009- Imaging Council, *Ex-Officio*

American College of Cardiology

2007- Publications Committee, *Ex-Officio*

American College of Cardiology

2007 - 2009 President, American Heart Association Orange County

2007 - 2009 Research Committee

American Heart Association Western States Affiliate

2005-2008 National Leadership Council, Clinical

Cardiology, American Heart Association

2006 Coordinator, International Mentoring Program in Clinical

Cardiology, American Heart Association

2006-2007 President-Elect, American Heart Association Orange County

2006-2009 Clinical Cardiology Council, Scientific Program Committee

National Center American Heart Association

2005- Vice-President (Research) Heart Valve Society of America

2005-2006 Vice-President, American Heart Association Orange County

2005 AHA/ACC/ESC Joint Scientific Statement Writing Group:

Role of Endomyocardial Biopsy in the Management of CVD

2005 Judges Panel, Jermaih Stamler Young Investigator Awards

Northwestern University, Chicago

2005 American Heart Association, Western States

Chairman, Young Investigator Awards

University of California, Irvine

2004 American Heart Association, Writing Group

Guidelines for Primary Prevention of Heart Failure

2004 American Heart Association

Reviewer Guidelines for Management of Heart Failure

2004 Executive Board of Directors

American Heart Association, Orange County

2003-2004 Chairman, Global Epidemiology of Valve Disease

International Society of Heart Valve Disease

2003-2006 Clinical Cardiology Council

Scientific Sessions Program Committee

National Center American Heart Association

2003-2005 Council on Nutrition and Metabolism

American Heart Association Obesity Committee

2001-2003 Council for Clinical Cardiology American Heart Association

AHA-ACC Committee for Heart Failure and Transplantation

2002 *Co-Chair, Nuclear Cardiology Molecular*

*Imaging Recommendation Panel* 5th American Society of

Nuclear Cardiology Working Group, Wintergreen, VA

2001-2003 *Chairman, National Awards & Grants Committee*

American Society of Nuclear Cardiology

2001 *Member,* *Publications Committee*

American Society of Nuclear Cardiology

2001 Molecular Nuclear Cardiology Task Force

American Society of Nuclear Cardiology

2001 Heart Failure Council

International Society of Heart and Lung Transplantation

2000 *Rapparteur,* World Health Organization

*Guidelines Development Group: Diagnosis of Rheumatic Fever*

2000 *Special Writing Group Committee of Rheumatic Fever*

*Council of CVD in Young,* American Heart Association

*Proceedings of the Jones Criteria Workshop*

2000 *Co-Chair, Nuclear Cardiology Recommendation Panel*

Molecular Probes in Future of Nuclear Imaging, 4th American

Society of Nuclear Cardiology Working Group, Bar Harbor, ME

1998-2000 President, Indo-US Society of Nuclear Medicine

1997-1998 President-Elect, Indo-US Society of Nuclear Medicine

1994-1997 Board of Trustees, Indo-US Society of Nuclear Medicine

**Editorial Responsibilities:**

Jul 2014-Jun 2019 Executive Editor

Journal of the American College of Cardiology*-*

Publisher: Elsevier

Editorial Office: Washington, DC and New York, NY

Jul 2007-Jun 2017 Editor-in-Chief

[2 X 5-year terms] Journal of the American College of Cardiology*- CV Imaging*

Publisher: Elsevier

Editorial Office: Washington, DC and New York, NY

Apr 2011-Dec 2018 Editor-in-Chief

[2 X 4-year terms]  *Global Heart* [Official Journal of World Heart Federation]

Publisher: Elsevier

Editorial Office: Amsterdam, The Netherlands

Apr 2013- Executive Editor

*Annals of Global Health* [Official Journal of Consortium of

Universities for Global Health & MSSM]

Publisher: Ubiquity

Editorial Office: Boston, MA

Nov 2003 – Jun 2014 Associate Editor

*Journal of American College of Cardiology*

Publisher: Elsevier

Editorial Office: San Diego, CA

Jan 2004–Sep 2007 Founding Editor

*Heart Failure Clinics of North America*

Publisher: Elsevier

Editorial Office: Philadelphia, PA

1998–2003Section Editor:Molecular Biology& Imaging

*Journal of Nuclear Cardiology:*

Publisher: Mosby

Editorial Office: New Haven, CT

2006 Guest Associate Editor: Cardiology

Jul 2003–Oct 2003 Guest Associate Editor

*Journal of American College of Cardiology*

***Editorial Boards of Journals***

2011 European Journal of Cardiovascular Imaging

2006 Cardiology

2003 - 2012 Journal of Nuclear Medicine

2003 - 2018 European Journal of Nuclear Medicine

2002 - American Journal of Cardiology

2002 - Journal of Cardiovascular Pharmacology

2001 - Indian Heart Journal

1998 - Journal of Nuclear Cardiology

1998 - 2004 Apoptosis

***Reviewer for Journals***

Nature Medicine

Nature Scientific Reports

Nature Research

Nature Reviews Cardiology

New England Journal of Medicine

The Lancet

Lancet- Global Health

Lancet Digital Medicine

Proceedings of National Academy of Sciences

Annals of Internal Medicine

Circulation

Circulation Research

Circulation- Cardiovascular Imaging

Circulation- Cardiovascular Interventions

Journal of American College of Cardiology

Journal of American College of Cardiology- Imaging

Journal of American College of Cardiology- Interventions

Journal of American College of Cardiology- Heart Failure

Journal of American College of Cardiology- Electrophysiology

Journal of American College of Cardiology- Basic &

Translational Science

Journal of American College of Cardiology- Case Reports

Journal of American College of Cardiology- Cardio-Oncology

American Journal of Cardiology

American Heart Journal

American Journal of Physiology

American Journal of Pathology

Journal of Molecular & Cellular Cardiology

Journal of Nuclear Medicine

Journal of Nuclear Cardiology

Journal of Cardiovascular Pharmacology

Journal of Biomedical Optics

Laboratory Investigation

Apoptosis

European Heart Journal

European Journal of Nuclear Medicine

FASEB (Federation of American Society of

Experimental Biology)

International Journal of Cardiology

**Grant Support, Contracts and Research Awards**

ACTIVE

07/01/2021 – 06/30/2025 NHLBI, 1 R01 HL159433-01

Mechanistic registry to study whether infection with

Corona Virus Disease 2019 (COVID-19) alters

atherosclerotic plaque progression

$4,650,000

Role: mPI- Shaw, Narula, Blankstein; 1.2 CM

04/01/2021 - 03/31/2026 19-2184-00001-01; CA251754 NIH/National Cancer Institute/

National Cancer Institute/DHHS Population Health Science Policy

Enhancing the public health benefits of mammography

screening by informing women of both breast cancer and

breast arterial calcification results: A randomized trial to

promote cardiovascular health

$499,805

Role: Co-I; 0.96 CM (PI: Montogomery, G)

7/01/2020 – 4/30/2025 NHGRI; U01HG011176

Electronic Medical Records & Genomics (eMERGE).

Genomic Risk Assessment, Management Network

$830,398

Role: Co-I; 0.6 CM (PI: E. Kenny)

03/08/2019-2/25/2021 Vascular Graft Solutions CD0131

NCE A Multi-centered, Randomized, within Subject Controlled,

Open Label Study of the effectiveness of VEST, Venous

External Support

$290,250

Role: PI; 0.6 CM

4/28/2021-08/31/2022 Illumina Radiopharmaceuticals LLC

An Open-Label, Phase 2 Scintigraphy Study Evaluating

18F-mFBG for Imaging Myocardial Sympathetic Innervation

in Subjects Without and With Heart Disease.

$ 175,000

Role: PI; 0.12 CM

02/15/2021-01/31/2025 NIH; R01 HL155915

Elucidating hereditary transthyretin-mediated heart failure

risk using machine learning, polygenic risk and recall by

genotype approaches in African ancestry individuals

$561,632

Role: Co-I; 0.6 CM (Co-PIs: Do, Nadkarni)

12/15/2020-12/14/2021 Amgen, 20-2935

YELLOW III: Effect of Evolocumab on Coronary Plaque

Characteristics: a Multimodality Imaging Study

$per patient

Role: Co-I; 0.12 CM (PI: Kini, A)

07/01/2021-06/20/2023 NIOSH; OH012244

Long-term effects of WTC exposure on respiratory and CVD

using automated CT image analysis

$147,489

Role: Co-I; 0.6 CM (PI: Jirapatnakul)

07/01/2021-6/30/2022 Seoul National University Hospital

Exploring the Mechanism of Plaque Rupture in Acute

Coronary Syndrome using Coronary CT Angiography and

Computational Fluid Dynamics II (EMERALD II) study

Per Patient Care cost

Role: Co-I; 0.12CM (Site PI: Sanz, J)

PENDING

09/01/2021-08/31/2023 NIH; 1 R21 AI166694-01

Residual Myocardial Neuronal Dysregulation after

Resolution of COVID-19

$280,000

Role: PI; 0.12CM

12/01/2021 – 11/30/2025 NIH; 1 R01 HL150574 1 A1

Relationship of Atherosclerotic Plaque to Ischemia,

Outcomes, and Randomized Treatment in ISCHEMIA Trial

$173,810 (Subaward cost; Weill Cornell Medicine)

Role: Co-PIs, Shaw; Narula)1.20 CM

07/01/2021 – 03/31/2025 NIH; R01

INTensive EvaluatioN and Treatment of Patients with

Nonobstructive Atherosclerosis (INTENT) Trial

$25,254 (Subaward cost; Weill Cornell Medicine

Role: Co-PIs, Shaw, Narula; 1.2 CM

04/01/2021-03/31/2026 NIH; HL157536

Polygenic and clinical risk scores for improved diagnosis &

prediction of coronary disease in a multi-ethnic biobank

$ 492,293

Role: Co-I; 0.6 CM (PI: Do, R)

09/01/2021-08/31/2026 NIH, R01

COVID-19 dependent cardiac disease

$513,904

Role: Co-I; 1.2 CM (PI: Iyenger, R)

04/01/2021-03/31/2024 SBIR 19-0185-00001-01, with Rubicon

Rapid Intracellular Delivery of Exogenous HSP72 for

Myocardial Cytoprotection

$260,502

Role: Site PI; 1.2 CM

07/01/2026-06/30/2026 NHLBI, R01

Resistin Accelerates Age-Associated Diastolic Decline

$250,000

Role: Co-I, 1.2 CM (PI: Lebeche)

COMPLETED

07/20/12–04/30/17 NIH/NHLBI R01 HL 115150

##### Gender-Specific Plaque Characteristics and

##### Risk of Myocardial Infarction

Role: Co-I (PI: Min, James; Weill Cornell Medicine)

12/1/19 – 1/6/23 19-2450-00001-01 Rubicon

Molecular imaging of necrotic tissue using a

novel histone targeting antibody

Role: Scietific PI

09/08/14–08/31/15 NIH R43 HL122012-01A1, with Rubicon Biotechnology,

Los Angeles

Intracellular Targeting Hsp70 for myocardial cytoprotection

after infarction

Total Cost $74,000

Role: Scientific PI; sub-awardee

09/08/14–08/31/15 NHLBI SBIR Topic 85 Phase I HHS-N268201400043C;

With Molecular Targeting Technology, Menlo Park, PA

PE-Specific Molecular Imaging to Detect High Risk

Atherosclerotic Plaque

$73,421

Role: Scientific PI; sub-awardee

01/01/10–12/31/14 NIH RO1 EB010090-01

Integrated multi-modality IVUS imaging system

$2,176,372

Role: Co-I; (PI: Chen, ZP; University of California, Irvine)

12/01/14-11/30/17 AstraZeneca, 0249- 2258GCO/ 14-0701

TAN-SNIP [TransAtlantic Network to Study stepwise Noninvasive

Imaging as a tool for cardiovascular prognosis and Prevention]

Total cost $5,400,000

Role: Site PI Project 3 (PI: Valentin Fuster)

07/01/14-06/30/17 AHA 14-FRN20490315/0266-2723GCO

HARLEM Project: Center for Strategically Focused Prevention

Research Network

Total cost $3,700,000

Role: Co-I, Mentorship (PI: Valentin Fuster)

05/01/2011-04/30/2012 Philips Healthcare Grants,

Role: PI

SEEING IS BELIEVING

Medical Education 40 Hahnd-Held Units loaned to Sinai

Exhibit B-19:

PETMR added value in carotid high-risk plaque patients,$28,000

Exhibit B-23:

Assessment of LVF in Non-ischemic mitral regurgitation using

Speckle Tracking, $120,000 & iE33

Exhibit B-29

Investigate Relationship between the extent of CV disease and

the onset of Alzheimer Disease using PET-MR, $100,000

Exhibit B-30:

CV disease and the onset of Alzheimer Disease using

PET-MR-Plaqueview Tool, $25,000

Exhibit B-32:

Bioimage Two ultrasound & $90,000 for Coordinator (Pending)

Exhibit B-33:

Heart to Head $130,000 & One Epiq ultrasound (pending)

09/01/12-06/30/2014 GE Healthcare Grants

SEEING IS BELIEVING

Medical Education and Residency Training

80 Hahnd-Held Units loaned to Sinai

Role: PI

01/25/2012- Panasonic Healthcare Grants

Rapid Screening for Subclinical Atherosclerosis by Carotid

Ultrasound Examination: The HAPPY Substudy

Role: PI

Risk Factor Assessment in Tsimane Bolivian population

10/01/04–09/30/09 NIH/NHLBI R01 HL 078681

##### Targeting MMPs to image atherosclerosis

$1000,000

Role: PI

12/01/01–11/30/07 NIH/NHLBI RO1 HL 68657 (Jagat Narula)

##### Imaging Apoptosis to Detect Unstable

##### Atherosclerotic Plaque

$750,000

Role: PI

12/01/04–11/30/07 NIH 5 R01 HL075038

Genetic Modulation of LV Recovery in

##### Recent Onset Cardiomyopathy

$15,500 ($887.5/patient×10)

Role: Co-I (PI: Dennis McNamara; University of Pittsburgh)

11/01/05–10/31/08 TOSHIBA Unrestricted educational Grant

University of California Irvine

(e-APP) # 879 Detection of Vulnerable Plaques

# 259 *Heart Attack Prevention Program for You*

*(HAPPY): Cohort Study for Possible Prevention of*

*Acute Coronary Events* (e-APP)

Direct Cost $1,500,000 (For 3 Years)

Role: PI

3/1/09–2/28/10 Investigator-Initiated Grant, Clear Vascular, Inc.

Molecular Imaging of Atherosclerosis

$80,000

Role: PI

1/23/09–7/31/09 Investigator-Initiated Grant, Malinckrodt, Inc.

Imaging Apoptosis with Intracellular Molecular Probes

$44,500

Role: PI

9/1/07–8/31/08 Investigator Initiated Award No. CVI-42867, Clear Vascular,

Sn-117-Labeled-Annexin A5 Apoptosis Imaging

$334,500

Role: PI

9/1/07–8/31/09 Award 42865 HS#2007-5763

SPARC Multicenter Study: A study of Myocardial Perfusion and

Coronary Anatomy: Imaging Roles in CAD

$34,500

Role: Site PI

10/1/05–8/31/08 General Electric Healthcare GEHC 156-00-222

Direct Cost $ 168,631 ($7,900/patient)

Role: PI; Chair Scientific Writing Group

MBG 312 An Open-label, multicentre, Phase 3 study

evaluating the prognostic usefulness of I-123 mIBG

scintigraphy for identifying subjects with heart failure who will

experience an adverse cardiac event

MBG 311 A Pilot phase 3, International,

Multicenter, Open-label, Dual-Injection, Myocardial Imaging

and Safety of MIBG in suspected Ischemic Disease

9/1/05-8/31/08 SCIOS-37663

Scios Nova Inc *ADHERE* Registry

Role: Site PI

08/17/04–10/31/05 Fujisawa HealthCare RSA-030162,

A Phase 2, Dose Escalation Evaluation of Pharmacokinetic and

Hemodynamic Effects of Carperitide in Heart Failure Subjects

227,042 ($19,010/patient)

Role: Site PI

9/1/05–12/31/05 Titan Healthcare TP-37257,

Multi-Center, Randomized, Double Blind, Placebo-Controlled

Study of DITPA in patients with NYHA Class III and IV

Congestive Heart Failure who have low Serum T3 Levels

$44,829.00 ($8,336/patient)

Role: Site PI

12/1/00–12/21/01 Theseus Biotechnology

Direct Cost $5,450/patient×15 patients

Phase II Noninvasive Detection of Myocardial Apoptosis in

Cardiac Allograft Rejection with Tc-99m-Labeled Annexin-V

Role: Site PI, Chairman writing group

3/1/01–12/31/02 Theseus Biotechnology

Noninvasive Detection of Myocardial Apoptosis in Acute

Myocardial Infarction with Tc-99m-Labeled Annexin-V

$5,400/patient

Role: Site PI

3/1/00–2/28/03 DuPont Pharmaceuticals

Development of Targeting Strategies for the

Detection of Unstable Atherosclerotic Plaques

$2,44,000

Role: PI

2/1/02–6/30/03 Sanofi-Synthelabo DFI4510

A Randomized, Double Blind, Multicenter, Placebo Controlled

Study of the SR121463B as Aquauretic Vasopressin V2

Receptor Inhibitor Trial in Congestive Heart Failure

$7,132 per patient×20 Patien*ts*

Role: Site PI

10/1/02– Novartis Pharmaceuticals

Comparison of C0 and C2 Cyclosporin Levels for Prediction Of

Calcneurin Inhibitor-Induced Renal Toxicity and Cardiac

Allograft Rejection

Direct Cost $83,000

Role: Site PI

7/1/02–6/30/03 Drexel University, Synergy Grant Award

Exploiting palpography for the detection of atherosclerotic

plaques vulnerable to rupture

Role: Co-PI from Medicine, Ryszard M. Lec From Bioengineering

$20,000

7/1/03–6/30/04 Drexel University, Synergy Grant Award

Nanoimaging for noninvasive detection of vulnerable plaques

Role: Co-PI from Medicine, Som Tyagi From Bioengineering

$20,000

7/1/01–6/30/03 Drexel University, State Tobacco Funds

Ultrasound-based targeting of unstable plaques

$47,000

Co-PIs: Vannan, Narula)

7/1/97–6/30/00 Allegheny Health, Education and Research Foundation

*Center for Molecular Cardiology*

$162,500, Unrestricted

9/1/98–6/30/99 Commonwealth of Pennsylvania State Grant

*Stress Signaling and Apoptosis Interruptus in Heart Failure*

$125,000

Role: Co-PI: Brozena, Narula

5/1/98–4/30/99 Novartis Industrial Grant

Potential Reversal of Apoptosis after LVAD Placement

$10,000

Role: PI

11/1/99–4/30/00 Parke-Davis 1025-012

A Randomized, Double Blind, Multicenter, Placebo Controlled

Study of the IV YM087 (CI1025) on Cardiopulmonary

Hemodynamics in Patients with Class III-IV Heart Failure

$11,750 per patient

Role: PI

12/1/99–11/30/01 Theseus Biotechnology

Phase I Noninvasive Detection of Myocardial Apoptosis in

Cardiac Allograft Rejection with Tc-99m-Labeled Annexin-V

$5,450/patient×31 patients

Role: PI

12/1/00–6/30/01 Otsuka America Pharmaceutical, Award #156-00-222

VICTOR: Multicenter Randomized, Double Blind, Placebo

Controlled Parallel Group, Efficacy and Safety Study to

Evaluate Effects of Tolvapton (OPC-41061) when Compared to

Frusemide in Patients with Heart Failure

$13,000 per patient

Role: Site PI

12/1/00–6/30/01 Otsuka America Pharmaceutical Award #156-00-222

*VITAL: Multicenter Randomized, Double Blind, Placebo*

*Controlled Parallel Group, Efficacy and Safety Study to*

*Evaluate Effects of Tolvapton (OPC-41061) on the Chronic*

*Outcomes in Patients with Congestive Heart Failure*

$3,500 per patient

Role: PI

12/1/00–12/30/01 Searle Pharmaceutical Award #IE3-99-02-035

*EPHESUS: Multicenter Randomized, Double Blind, Placebo-*

*Controlled Parallel Group, Efficacy and Safety Study to*

*Evaluate Effects of Eplerenone in Patients with Heart Failure*

*After Acute Myocardial Infarction*

$4,100 per patient

Role: Site PI

7/1/00–6/30/02 Drexel University, Synergy Grant Award

Fluorescence Imaging of Unstable Atherosclerotic Plaques

$20,000

Role: Co-PI from Medicine, Steven Wrenn From Bioengineering

**Invited National and International Presentations**

***National Presentations:***

1. Apoptosis in atherosclerosis. Lofland Conference of Atherosclerosis. Washington DC; June 1998; *[Conference Faculty].*
2. Society of Thoracic Surgeons. *[Plenary Session]* New Treatment Modalities in Heart Failure: Recent insights in the pathogenesis of heart failure indicate the superiority of surgical management. Fort Lauderdale; January 2000.
3. Spring Meeting of American Heart Association: Council on Cardiovascular Disease in Young. Improving the diagnostic accuracy of Jones criteria in rheumatic fever. April 2000; *[Special Writing Group of the Committee on RF, Endocarditis and Kawasaki Disease].*
4. 4th Scientific Meeting of the Heart Failure Society of America. *[Debate- For the Motion]* Does apoptosis contributes to heart failure? Boca Raton, FL, October 2000.
5. 4th Scientific Meeting of the Heart Failure Society of America. Targeting molecular alterations for noninvasive detection of apoptosis. Boca Raton, FL, September 2000 *[Conference Faculty].*
6. 50th Scientific Sessions of the American College of Cardiology. *[Mini-Course]* Advances in nuclear cardiology: Noninvasive diagnosis of atherosclerotic lesions. American College of Cardiology, Orlando, FL, March 2001.
7. 50th Scientific Sessions of the American College of Cardiology. *[Plenary Session]* Why does the heart fail? Role of Apoptosis. Orlando, FL, March 2001*.*
8. 5th Scientific Meeting of the Heart Failure Society of America. *[Debate]* Apoptosis contributes to heart failure [for], (against, Jutta Schaper, MD), Washington, DC, October 2001.
9. 2001 Scientific Sessions of the American Heart Association. *[Mini-Course]* Novel Molecular Tracers in Nuclear Cardiology: Apoptosis and Necrosis, Anaheim, CA, November 2001.
10. 6th Scientific Sessions of the American Society of Nuclear Cardiology, *[Plenary Session]* Advances in radiopharmaceuticals: Imaging cell death. Boston, MA, September 2001.
11. 51st Scientific Sessions of the American College of Cardiology. *[Session 0079]* Emerging Imaging Modalities:Imaging Apoptosis.Atlanta, GA, March 2002.
12. 51st Scientific Sessions of the American College of Cardiology. *[Chairman, Brown Bag Lunch Panel Session 322]* Rheumatic Fever Forgotten but Not Gone… Atlanta, GA, March 2002.
13. 49th Annual Meeting of Society of Nuclear Medicine. *[Plenary Session]* Molecular Imaging in Cardiovascular Diseases, Los Angeles, CA, June 2002.
14. 7th Scientific Sessions of the American Society of Nuclear Cardiology, *[Plenary Session]* Advances in radiotracers: Imaging apoptosis and necrosis. Baltimore, MD, September 2002.
15. 2002 Scientific Sessions of the American Heart Association *[Session 1061-CVS.51; What constitutes optimum nuclear imaging in 2002?]*. Imaging Apoptosis and Necrosis, Chicago, IL, November 2002.
16. 52nd Scientific Sessions of the American College of Cardiology. *[Session 77; Special considerations in heart failure]* Imaging transplant rejection.Chicago, IL, March 2003.
17. 52nd Scientific Sessions of the American College of Cardiology. *[Session 651; Nuclear Cardiology: Beyond perfusion and function]* Imaging Atherosclerosis.Chicago, IL, March 2003.
18. 52nd Scientific Sessions of the American College of Cardiology. *[Brown Bag Lunch Panel Session 309]* How to Set Up and Manage a Heart Failure Program, March 2003.
19. 50th Annual Meeting of Society of Nuclear Medicine. *[Plenary Session]* Imaging Atherosclerotic Lesions, New Orleans, LA, June 2003.
20. American Society of Nuclear Cardiology, *[Workshop]* Molecular radiotracers. Baltimore, MD, July 2003.
21. 8th Scientific Sessions of the American Society of Nuclear Cardiology, *[Plenary Session]* Novel Targeted Imaging of Apoptosis Process. Indianapolis, IN, September 2003.
22. 7th Scientific Meeting of the Heart Failure Society of America. Molecular imaging of cardiac remodeling. Las Vegas, NV, October 2003 *[Conference Faculty].*
23. 53rd Scientific Sessions of the American College of Cardiology. *[CV Seminar]* Imaging of heart failure, New Orleans, LA; March 2004.
24. 15th Scientific Sessions of the American Society of Echocardiolgraphy, *[Plenary Session]* Molecular basis of imaging heart failure. San Diego, CA, Jun 2004.
25. 15th Scientific Sessions of the American Society of Echocardiolgraphy, *[Plenary Session]* Imaging coronary arteries. San Diego, CA, Jun 2004.
26. 51st Annual Meeting of Society of Nuclear Medicine. *[Plenary Session]* Imaging of vulnerable plaques (Japanese Chapter), Philadelphia, PA, June 2004.
27. 8th Scientific Meeting of the Heart Failure Society of America. Molecular imaging in heart failure. Toronto, September 2004 *[Conference Faculty].*
28. 2004 Scientific Sessions of the American Heart Association. *[Geriatrics Society Symposium]* Imaging heart failure in elderly, Orlando, FL, November 2004.
29. 2004 Scientific Sessions of the American Heart Association. *[Geriatrics Society Symposium]* Imaging pathophysiology of LV dysfunction, Orlando, FL, November 2004.
30. 52nd Annual Meeting of Society of Nuclear Medicine. *[Plenary Session]* Imaging vascular biology, Toronto, Canada, June 2005.
31. 54th Scientific Sessions of the American College of Cardiology. Essentials of plaque biology for clinicians. Orlando, FL; March 2005.
32. 54th Scientific Sessions of the American College of Cardiology. Myocardial structural remodeling. Orlando, FL; March 2005.
33. 4th Annual Meeting of the Heart Valve Society of America. Imaging myocardial biology: the future of evaluation of valvular disease, New York, NY; Apr 2005.
34. 16th Scientific Sessions of the American Society of Echocardiolgraphy, *[Plenary Session]* Unwrapping the heart: the single muscle band concept. Boston, MA, Jun 2005.
35. 25th Scientific Sessions of Bangladesh Medical Association of North America [BMANA], *[Inaugural Speaker]* Predicting and preventing heart attacks. Washington, DC, Jul 2005.
36. State of Cardiac Imaging in 2005. Current Practice in CV Imaging, Las Vegas CME Course. Sep 2005.
37. Predicting Coronary Risk in the Asymptomatic Patient: Why do we need it and how do we do it? Current Practice in CV Imaging, Las Vegas CME Course. Sep 2005.
38. Targeted Molecular Imaging in our advances in technology. *Current Practice in CV Imaging,* Las Vegas CME Course. Sep 2005.
39. Present Status of Heart Failure Treatment. *Cutting Edge Cardiology for the Future,* Long Beach Memorial Hospital, Long Beach, CA, Oct. 2005.
40. Vulnerable Plaque: Molecular Imaging. Transcatheter Cardiovascular Therapeutics 2005, Washington, DC; Oct. 2005.
41. Imaging Low Abundance Targets. What are the Expectations of a clinician from an Imager? Frontiers in Imaging Science, Department of Energy. Cambridge, MA; Nov. 2005.
42. Nuclear Imaging of Heart Failure. American Heart Association Scientific Sessions, Dallas, TX, Nov. 2005.
43. Echocardiography Evaluation of Diastolic Function. American Heart Association Scientific Sessions, Dallas, TX, Nov. 2005.
44. Nuclear Cardiology Isotope Imaging and PET: Advances in Tracking Therapy and Assessing Pathophysiology. American Heart Association Scientific Sessions, Dallas, TX; Nov. 2005.
45. Obesity and Heart Failure. American Heart Association, Obesity, Lifestyle, & Cardiovascular Disease Symposium, Washington, DC; Jan. 2006.
46. Predicting Heart Failure. GE Cardiovascular Innovation Symposium, Crotonville, CT; Feb. 2006.
47. MIBG Imaging in Heart Failure. High Country Nuclear Medicine Vail, CO; Feb. 2006.
48. Can We Predict Heart Attacks 18th Annual Cardiology Symposium, Loma Linda, CA; Mar. 2006.
49. Prevention of heart attacks. Diagnostic & Therapeutic Skills in Internal Medicine, USC-UCI 50th Annual CME Symposium; Hawaii, Hi; Mar. 2006.
50. Understanding atherosclerosis for better management of coronary artery disease. Diagnostic & Therapeutic Skills in Internal Medicine, USC-UCI 50th Annual CME Symposium; Hawaii, Hi; Mar. 2006.
51. Advance in pathogenesis of heart failure. Diagnostic & Therapeutic Skills in Internal Medicine, USC-UCI 50th Annual CME Symposium; Hawaii, Hi; Mar. 2006.
52. Management of heart failure. Diagnostic & Therapeutic Skills in Internal Medicine, USC-UCI 50th Annual CME Symposium; Hawaii, Hi; Mar. 2006.
53. Primary prevention of heart failure. Diagnostic & Therapeutic Skills in Internal Medicine, USC-UCI 50th Annual CME Symposium; Hawaii, Hi; Mar. 2006.
54. Targets for Cardiovascular Imaging in Heart Failure. BMS Cardiovascular Imaging Advisory, Boston, MA; May 2006.
55. 55th Scientific Sessions of the American College of Cardiology. Using nuclear isotopes. Atlanta, GA; March 2006 [Session 54; Detection of myocardial pathology].
56. 55th Scientific Sessions of the American College of Cardiology. Apoptosis imaging. Atlanta, GA; March 2006 [Session 618; State of the art: Nuclear tracers and imaging agents].
57. 55th Scientific Sessions of the American College of Cardiology. Predicting LV remodeling. Atlanta, GA; March 2006 [Session 54; Detection of myocardial pathology].
58. 55th Scientific Sessions of the American College of Cardiology. Mechanical Activation of the Heart: Essentials for the Imager. Atlanta, GA; March 2006 [Session 67; Integrated Imaging of Left Ventricular Mechanics in Heart Failure].
59. Optical medical therapy of heart failure in 2006. Cardiac Iamging for Practioner, University of California, Irvine, Apr 2006 *[Conference Faculty].*
60. 17th Scientific Sessions of the American Society of Echocardiolgraphy, Basis of contraction and relaxation. Baltimore, MD, Jun 2006 *[Plenary Session]*.
61. 17th Scientific Sessions of the American Society of Echocardiolgraphy, Imaging diastolic dysfunction. Baltimore, MD, Jun 2006 *[Plenary Session]*.
62. 17th Scientific Sessions of the American Society of Echocardiolgraphy, Molecular imaging of heart failure. Baltimore, MD, Jun 2006.
63. 1st Society of Cardiovascular CT Conference, Washington, DC, July 2006 *[Conference Faculty]*.
64. Vulnerable Plaque: focus on 64-slice CT. GE Symposium; Transcatheter Cardiovascular Therapeutics 2006, Washington, DC; Oct. 2006.
65. Imaging atherosclerosis. Transcatheter Cardiovascular Therapeutics 2006, Washington, DC; Oct. 2006.
66. The burden of heart failure and 2005 Guidelines. Echo Phoenix, Mayo Clinic Foundation, Scottsdale, AZ; Oct. 2006.
67. Apoptosis in Acute ischemic syndromes. Annual American Heart Association Scientific Sessions, Chicago, IL, Nov. 2006 *[Conference Faculty; Joint Symposium of American Heart Association & Japanese Circulation Society]*.
68. Plaque characteristics for imagers. *iMAX2006: Maximizing imaging strategies for superior management of cardiovascular disease.* Annual American Heart Association Scientific Sessions, Chicago, IL, Saturday, November 11, 2006.
69. Vulnerable plaque. *Cardiovascular Seminar CVS 74: Advances in Nuclear Imaging*; Annual American Heart Association Scientific Sessions, Chicago, IL, Sunday, November 12, 2006, 5:15 pm-6:45 pm S504.
70. Prevention of Heart Failure. *Special Session SS 02. Clinical Practice 2006: Practical Management of Heart Failure*. Annual American Heart Association Scientific Sessions, Chicago, IL, Monday, November 13, 2006, 9:00 am-10:15 am S100a.
71. Molecular Imaging. *Cardiovascular Seminar CVS 88b. Translational Science 2006: Imaging the Vulnerable Plaque.* Annual American Heart Association Scientific Sessions, Chicago, IL, Tuesday, November 14, 2006, 5:15 pm-6:45 pm S406b.
72. Future of cardiovascular imaging. Annual ACC Nuclear Cardiology and CT Course at Cedars Sinai. Los Angeles, January 2007.
73. Atherosclerotic plauqe instability. 1st Edition of Cautionary Tales in Cardiology in Orange County. January 2007.
74. CRT: Is Imaging of Vulnerable Plaque Clinically Feasible? Washington; DC, March 2007
75. 4th GE Cardiovascular Innovation Symposium: Imaging of Atherosclerotic Plaque New York, NY, March 2007
76. 56th Scientific Sessions of the American College of Cardiology. Advances in Imaging of Heart Failure. New Orleans, LA; March 2007 [Session 54; Advances in Nuclear Imaging].
77. Lessons from epidemiology of heart failure. Mayo Clinic Update in Cardiovascular Diseases. Sedona, AZ; August 2007.
78. Vulnerable patients: who, why, when? Mayo Clinic Update in Cardiovascular Diseases. Sedona, AZ; August 2007.
79. Classification of Heart Failure. ASE 5th Annual CV Ultrasound: From Pictures to Information, Phoenix, AZ; Sep 2007.
80. Tracking contrast in LV cavity. ASE 5th Annual CV Ultrasound: From Pictures to Information, Phoenix, AZ; Sep 2007.
81. Function follows form. Mayo Clinic Integrated Imaging Course. Rancho Mirage. Oct 2007.
82. Pathogenesis of heart failure. Mayo Clinic Integrated Imaging Course. Rancho Mirage. Oct 2007.
83. Imaging fibrosis in cardiac remodeling. ASE sponsored iMAX program. Annual American Heart Association Scientific Sessions, Orlando, FL Nov 2007.
84. Plaque Characterization. Annual American Heart Association Scientific Sessions, Orlando, FL Nov 2007.
85. CT Coronary Plaque Imaging. Clinical Practice 2007: Clinical Implementation of CT Coronary Angiography, Annual American Heart Association Scientific Sessions, Orlando, FL Nov 2007.
86. Statins and plaque stabilization. Sponsored by Tanabe Pharamaceuticals, Japan for Japanese Delegates at the Annual American Heart Association Scientific Sessions, Orlando, FL 2007.
87. Cardiovascular Molecular Imaging (M143): Myocardial infarction. Radiological Society of North America: 93rd Scientific Assembly and Annual Meeting, Chicago, IL Nov 2007.
88. Cardiovascular Imaging in the Era of Molecular Medicine (RC217): Myocardium. Radiological Society of North America: 93rd Scientific Assembly and Annual Meeting, Chicago, IL Nov 2007.
89. Future of CT and Nuclear Imaging. ACC Course in CT and Nuclear Imaging, Cedars-Sinai Medical Center, Los Angeles, CA Jan 2008.
90. Multislice CT Imaging: Where are we and where do we go from here? 18th Mayo Clinic Echo Hawaii Course. Kona, HI Jan 2008.
91. Myocardial Mechanics: Vortex, the New Frontier! 18th Mayo Clinic Echo Hawaii Course. Kona, HI Jan 2008.
92. How likely am I to get a heart attack: an approach to a worried well. Cogent Lessons in Cardiology, UC Irvine Medical Center. Feb 2008.
93. Molecular imaging of apoptotic cell death in vulnerable plaques. 14th Vascular Biology Working Group with Annual Meeting of the American College of Cardiology. Chicago, April 2008.
94. What in new in imaging? [Keynote and Inaugural Address]. Annual Scientific Sessions of the Heart Valve Society of America, Las Vegas, May 2008.
95. Detection of high-risk plaques. ASNC Plenary Lecture. American Society of Nuclear Cardiology, Boston, Sep 2008.
96. Molecular imaging for plaque detection. CV Seminar; Annual American Heart Association Scientific Sessions, New Orleans, LA Nov 2008.
97. Reversal of atherosclerosis: role of CT imaging. Plenary Session; Annual American Heart Association Scientific Sessions, New Orleans, LA Nov 2008.
98. Reversibility of heart failure and novel molecular mechanisms: apoptosis. Plenary Session; Annual American Heart Association Scientific Sessions, New Orleans, LA Nov 2008.
99. Using Cardiac Computed Tomography Angiography to Detect Coronary Artery Disease; Imaging Atherosclerosis: What Insight Does SPECT Have to Offer; How the Clinical Practice of MultiModality Imaging 2020 Will Look Based on Today’s Research. New Orleans [ACC 60th Annual Scientific Session] April 2011.
100. Clinical Importance of Knowing Plaque Morphology. Mexico [ACC-Cardiologia Mexicana] May 2011.
101. Non-Invasive Imgaging To Improve PCI Outcomes. NY NY, [14th Annual Live Symposium of Complex Coronry and Vascular Cases] June 2011.
102. Who Gets the Heart Attack? Atkins SAB Conference, Lambert NJ, Aug. 2011.
103. Novel Methods for Imaging of Vulnerable Plaque; Congestive Heart Failure. Orlando, FL [AHA Scientific Session] Nov. 2011.
104. Current diagnostic workup for CAD, roles for assessing Coronary Artery calcification and stenosis relative to plaque vulnerability; Potential clinical rolefor VP imaging (screening or diagnostic) in a revised diagnostic workup; Identification of patients for VP imaging (known CAD patient, undetected CAD patients, etc.); Estimated incidence of VP. Number/percentage of total CAD or other patient population who are cadidates for VP imaging. [Siemens Advisory Board Meeting] May 2012.
105. How to Revise Your Manuscript. Chicago [ACC Scientic Session] March 2012.
106. Advanced Imaging for Vulnerable Plaque Detection: The Future is (Almost) Now!; OCT of Plaque Erosion and Use to Guide Treatment Strategy in the AMI Patient; How to Revise a Manuscript, Miami FL [TCT 2012] Oct. 2012.
107. Multimodal Detection of the Vulnerable Patient. Los Angeles [AHA Scientific Session] Nov. 2012.
108. High-Risk, Non-Obstructive Plaque: Whati is it and What Do I Do?; Nuclear Cardiology; Doing Away with Stents. San Francisco [ACC Scientific Session] March 2013.
109. Evolution of Humanity and Heart Disease: What do The Mummies Tell You? Complex Coronary & Vascular Cases 2013, New York, June 2013
110. Imaging Atherosclerosis. Echo New York [ENY-MINY], New York, October 2013.
111. Investigating Atherosclerosis Using Cardiac Imaging [Cardiovascular Pathysiology] New York, October 2013.
112. Vulnerable Plaue Imaging: Is There a Path from Research to Outcomes? Dallas TX [AHA Scientific Session] Nov. 2013.
113. Advances and Future Directions of Imaging in Myocardial Disease Identification and Management. [46th Annual NY Cardiovascular Symposium] Dec. 2013.
114. On the Prospect of Reconciling COURAGE and FAME; Plaque Composition and Intervention. TCT-25, San Franciso California, 2013.
115. Can Imaging Prevent a Heart Attack? Radiological Society of North America [RSNA], Chicago Dec. 2013.
116. Plaque Characterization Is Superior to Coronary Calcium Scoring for Prediction of Future ACS. American College of Cardiology Annual Meeting, San Diego, March 2014
117. Coronary Disease: Imaging from Bench to Bedside and from Mummies to Population. Exploiting the Imaging Technology: Learning from Other Disciplines. American Urology Association [AUA] Annual Meeting, Orlando Florida May 2014.
118. Classification of Cardiomyopathy: 2014. Sight and Sound of Echocardiography, New York May 2014.
119. Evolution of Adrenegic Imaging with MIBG: what was the best Imaging Protocol in 2013? CDMI Heart Failure Symposium, New York, July 2014.
120. Who Gets the Heart Attack? 32nd Annual Convention, AIIMSonians of Americas [AOA]. Buffalo, NY. Aug. 2014.
121. I had a Normal Stress Test- Why Did I Suffer a Heart Attack? Annual Convention, Rajasthan Medical Alumni Associations [RAJMAAI]. Niagra Falls, Canada. Aug. 2014.
122. Vulnerable Plaque Detection and Treatment, Noninvasive Imaging Modalities for Coronary VP Detection: CT, MR and CIMT. 26th Annual Scientific Symposium of Transcatheter Cardiovascular Therapeutics, Washinton DC. September 2014.
123. **Mario Verani Lecture**: Just Because I Can, Should I? A Case Study of the Detection of a High-Risk Plaque. American Society of Nuclear Cardiology, Boston MA, September 2014.
124. What's Important: Inside the Mind of an Editor? American Society of Nuclear Cardiology, Boston MA, September 2014.
125. Recent Advancement in Imaging Atherosclerotic Disease. American Society of Nuclear Cardiology, Boston MA, September 2014.
126. Vulnerable Plaque Detection and Treatment. Transcatheter Therapeutics [TCT] San Francisco. Sept. 2014.
127. From Vulnerable Plaque to Vulnerable patient. Cadiac Imaging in risk assessment 2014. Echo New York, Mount Sinai CME Symposium, New York, October 2014.
128. Is Fibrosis the Be-All and End-All? Annual Scientific Sessions of the American Heart Association [AHA]. Chicago, IL. November 2014.
129. Non Invasive Plaque Imaging: How When and Why. Controversies in Cardiology. Cedars Sinai Medical Center, Los Angeles, CA. November 2014.
130. The 2013 Clinical-Genetic Classification of Myocardial Disease A New Approach for Identification and Management. 47th Annual New York Cardiovascular Symposium. New York. December 2014.
131. Practice Changing Research Published in the JACC Journals Highlights from JACC: Cardiovascular Imaging. American College of Cardiology 2015 Scientific Sessions, San Diego, CA. March 2015.
132. The Clinical-Genetic MOGES Classification of Myocardial Diseases. A New Approach for Definition of the Various Entities. American College of Cardiology 2015 Scientific Sessions, San Diego, CA. March 2015.
133. Breakthrough and Controversies in Imaging: Non-Invasive Imaging. American College of Cardiology 2015 Scientific Sessions, San Diego, CA. March 2015.
134. Vulnerable Plaque OR Vulnerable Patient. 7th Annual Cardiovascular Symposium Nevada Heart and Vascular Center, & American Heart Association. March 2015
135. State of the Art Lecture: Vulnerable Plaque or Vulnerable Patient? Case Studies from the Heart of Manhattan: Mayo Clinic Cardiovascular Update. New York, April 2015.
136. Do Plaques Rapidly Progress Prior to Rupture? 5th Annual Napa Valley Cardiology Conference of Piedmont Heart Institute & Mount Sinai Heart. Napa Valley, CA, June 2015.
137. Interactive Case-Based Illustration of What I Do: IVUS/ or OCT for PCI Planning. 5th Annual Napa Valley Cardiology Conference of Piedmont Heart Institute & Mount Sinai Heart. Napa Valley, CA, June 2015.
138. How Does the New Technology Impact Economics in Cardiac Ultrasound. American Society of Echocardiography-2015. Boston, MA, June 2015
139. Measuring Myocardial Ischemia Outside the Cath Lab. American Association of Thoracic Surgeons - International Coronary Congress- New York, NY, August 2015
140. Presentations to the Editors of Event: the Journal of the American College of Cardiology. TCT, Washington DC, October 2015.
141. Should We Continue to Chase Vulnerable Plaque? Georgia Chapter of the American College of Cardiology, Lake Oconee, GA, November 2015.
142. New Classification of Cardiomyopathy. Georgia Chapter of the American College of Cardiology, Lake Oconee, GA, November 2015.
143. Invasive Evaluation of High Risk of Vulnerable Plaque A Powerful Therapeutic Tool to Address Potential Pharmacological Agents. 48th New York Cardiovascular Symposium of the American College of Cardiology. New York, December 2015.
144. MOGES or Clinical Genetic Classification of Cardiomyopathy, the Term Idiopathic In the Process of Eradication. 48th New York Cardiovascular Symposium of the American College of Cardiology. New York, December 2015.
145. Best of Imaging: JACC: Cardiovascular Imaging. American College of Cardiology 2016 Scientific Sessions, Chicago, IL. March 2016.
146. **The Best Research in Imaging Speaker**: The Year In Imaging. American College of Cardiology 2016 Scientific Sessions, Chicago, IL. March 2016.
147. **Maseri-Florio International Lecture**: Atherosclerosis in 4-D and Promotion of Cardiovascular Health Globally. American College of Cardiology 2016 Scientific Sessions, Chicago, IL. March 2016.
148. **Agatston Award Lecture**: Plaque Morphology: And Nothing Else Matters. Society of Cardiovascular Computed Tomography, Orlando, FL, June 2016.

***International Presentations:***

1. Pathogenesis of rheumatic fever. All India Institute of Medical Sciences, New Delhi, India; January 1991; *[Symposium Faculty].*
2. Reversing cardiomyocyte death. All India Institute of Medical Sciences, New Delhi, India, December 1995; *[Symposium Faculty].*
3. Newer insights in the pathogenesis of Dilated Cardiomyopathy. All India Institute of Medical Sciences, New Delhi, India, December 1995; *[Symposium Faculty].*
4. Recent advances in diagnosis and salvage of acute cardiomyocyte necrosis. Sri Satya Sai Institute of Higher Medical Sciences, Bangalore, India, December 1995; *[Symposium Faculty].*
5. Imaging myocardial necrosis outside the ischemic heart disease. Nuclear Cardiology Today, Cesena, Italy, May 1996; *[Symposium Faculty].*
6. Linking molecular biology and pathophysiology of heart failure. Nuclear Cardiology Today, Cesena, Italy, May 1996; *[Symposium Faculty].*
7. Imaging myocarditis with antimyosin antibodies. European Society of Nuclear Medicine and European College of Cardiology, Nuclear Cardiology Reunion, Madrid, Spain, February 1997; *[Symposium Faculty].*
8. Apoptosis and the heart. Sant Pau Hospital and Autonomous University of Barcelona, Barcelona, Spain, February 1997, *[Cardiology Grand Rounds].*
9. Antimyosin liposome for salvage of dying heart muscle cells. Hospital Vall d’Hebron and Autonomous University of Barcelona, Barcelona, Spain, March 1997; *[Cardiology Grand Rounds].*
10. Unique components of atherosclerotic plaque for noninvasive diagnostic targeting. Facultat de Medicina, Universitat Rovira i Virgili, Reus, Spain, March 1997; *[Cardiology Grand Rounds].*
11. Recent developments in antibody imaging. Facultat de Medicina, Hospital Santa Creu i Sant Pau, Barcelona, Spain, April 1997 *[Visiting Professorship].*
12. Can we reverse the death of heart muscle cells? University of Manitoba, Manitoba Institute of Cell Biology. Winnipeg, Canada, December 1997 *[Cell Biology Lecture Series]*.
13. After all, why does the heart fail? Recent Advances in Cardiomyopathy and Heart Transplantation. Barcelona; September 1998 *[Inaugural Address].*
14. Definition of atherosclerotic plaque morphology by radionuclide imaging. Amrita Institute of Medical Sciences, Cochin, India, December 1998; *[Symposium Faculty].*
15. Newer imaging agents for atheroma imaging. 4th International Congress of Nuclear Cardiology, Athens, Greece. April 1999; *[Congress Faculty].*
16. Strategic targeting of atherosclerotic lesions. European Association of Nuclear Medicine, Barcelona, Spain. October 1999; *[Plenary Session].*
17. Prevention of rheumatic heart disease: are we making progress. International Conference on Heart Health in Developing Countries: World Health Organization, New Delhi, India. October 1999; *[Conference Faculty].*
18. Future directions in cardiovascular research. Lleida University Hospital, Lleida, Spain. April 2000; *[Invited Lecture].*
19. Exploiting molecular biology for the radionuclide assessment of clinical diseases. Nuclear Cardiology Today, May 2000; *[Congress Faculty].*
20. Nuclear cardiology approaches to vascular imaging. Nuclear Cardiology Today, May 2000; *[Congress Faculty].*
21. Clinical applications of nuclear cardiology: an overview. Thematic Program in Health Care: International Atomic Energy Commission, Delhi, India. December 2000 *[Regional Training Course].*
22. Myocardial viability assessment - radionuclide methods. Thematic Program in Health Care: International Atomic Energy Commission, Delhi, India. December 2000 *[Regional Training Course].*
23. Nuclear Cardiology: future perspectives. Thematic Program in Health Care: International Atomic Energy Commission, Delhi, India. December 2000 *[Regional Training Course].*
24. Pathogenesis of rheumatic carditis. South Pacific Congress of Cardiology, Papetee, Tahiti, May 2001 *[Conference Faculty].*
25. Jones Criteria. South Pacific Congress of Cardiology, Papetee, Tahiti, May 2001 *[Conference Faculty].*
26. Feasibility of Nuclear Imaging of Vascular Pathology. International Congress of Nuclear Cardiology, Vienna, Austria, May 2001 *[Conference Faculty].*
27. The apoptotic cascade. University of Lleida, Lleida, Spain, Aug 2001 *[Neurobiology Grand Rounds].*
28. Strategies for noninvasive diagnosis of cardiovascular pathology. University of Lleida, Lleida, Spain, Aug 2001 *[Cardiology Grand Rounds].*
29. Noninvasive detection of apoptosis. International Society of Heart Research, Winnipeg, Manitoba, Canada, July 2001 *[Conference Faculty].*
30. Nuclear Cardiology in 21st Century. Japanese Society of Nuclear Medicine, Kanazawa, Japan, October 2001 *[Conference Faculty].*
31. Apoptosis in cardiovascular disease: its amenability to noninvasive imaging. Japanese Society of Nuclear Cardiology, Kanazawa, Japan, October 2001 *[Conference Faculty].*
32. Nuclear Cardiology in 21st Century. Japanese Society of Nuclear Medicine, Kanazawa, Japan, October 2001 *[Conference Faculty].*
33. Future of nuclear cardiology. Italian Society of Nuclear Cardiology, Rome, Italy, November 2001 *[Special Lecture].*
34. Advances in pathogenesis and management of heart failure. M. Bufalini Hospital, Cesena, Italy, December 2001 *[Bufalini Distinguished Professorship Award].*
35. Apoptosis in cardiovascular diseases. Bergamo University Hospital, Treviglio, Italy, December 2001 *[Cardiology Grand Rounds].*
36. Noninvasive strategies for the diagnosis of atherosclerosis. Royal College of Physicians, Bangkok, Thailand, April 2002 *[Symposium Faculty].*
37. Nuclear imaging of atherosclerosis: facts and fantasies. International Symposium on Cardiovascular Nuclear Medicine, International Atomic Energy Commission, Beijing, China, May 2002 *[Symposium Faculty].*
38. Worthy imaging targets in cardiovascular diseases. Amersham Health, London, UK, July 2002 *[Invited Address].*
39. Assessment of myocardial viability. National Heart Hospital, Cairo, Egypt, August 2002 *[Cardiology Grand Rounds].*
40. Future of atheroma imaging. National Heart Hospital, Cairo, Egypt, August 2002 *[Nuclear Cardiology Grand Rounds].*
41. Assessment of a dying myocyte. National Heart Hospital, Cairo, Egypt, August 2002 *[Medicine Grand Rounds].*
42. Image vascular wall, not the lumen! University of Maastricht Hospital, Maastricht, Netherlands, Dec 2002 *[Cardiology Visiting Professor Grand Rounds].*
43. Will atheroma imaging become clinically feasible? 6th International Congress of Nuclear Cardiology, Florence, Italy. April 2003; *[Congress Faculty].*
44. Imaging neurohumoral receptors in myocardium. Amersham Health, Oslo, Norway, February 2003 *[Invited Address].*
45. Developing imaging strategies for novel interventions aimed at myocardial salvage. Amersham Health, Oslo, Norway, February 2003.*.*
46. Targeted imaging of angiotensin receptor type-I. Amersham Health, London, UK, July 2003 *[Invited Lecture].*
47. Angiotensin receptor imaging and rate of remodeling. Amersham Health, London, UK, Nov 2003*.*
48. Apoptosis in heart failure: process and proposal. British Heart Failure Society, Oxford, UK, Nov 2003 *[Speaking Faculty]*
49. Future of nuclear cardiology: molecular imaging. European Association of Nuclear Medicine, Helsinki, Finland. September 2004 *[Opening Lecture].*
50. Targeting atherosclerosis: apoptosis imaging. European Association of Nuclear Medicine, Helsinki, Finland. September 2004 *[CV Seminar].*
51. Algorithms for detection of atherosclerosis in asymptomatic. Shandong Society of Cardiology (Shandong Medical Association) and First Qilu International Conference on Cardiovascular Diseases, Jinan, China. September 2004 *[Inaugural Address].*
52. Management of heart failure. Shandong Society of Cardiology (Shandong Medical Association) and First Qilu International Conference on Cardiovascular Diseases, Jinan, China. September 2004 *[Symposium Faculty].*
53. In vivo detection of vulnerable plaque: noninvasive imaging. Association of European Cardiovascular Pathology, Padua, Italy. Oct 2004 *[Plenary Session].*
54. Pathogenesis and detection of atherosclerotic plaques. Joint Program of the American College of Cardiology and Portuguese Society of Cardiology, Sintra, Lisbon, Portugal. Feb 2005 *[Symposium Faculty].*
55. Pharmacogenomics and heart failure. Joint Program of the American College of Cardiology and Portuguese Society of Cardiology, Sintra, Lisbon, Portugal. Feb 2005 *[Symposium Faculty].*
56. New clinical trials for treatment of heart failure. Joint Program of the American College of Cardiology and Portuguese Society of Cardiology, Sintra, Lisbon, Portugal. Feb 2005 *[Symposium Faculty].*
57. Heart failure: Prevention is the key to success. Joint Program of the American College of Cardiology and Portuguese Society of Cardiology, Sintra, Lisbon, Portugal. Feb 2005 *[Symposium Faculty].*
58. Targeted nuclear imaging of atherosclerotic plaques. 3rd Vulnerable Plaque Meeting, Capri, Italy. Jun 2005 *[Symposium Faculty].*
59. Molecular concepts in modern cardiology: Who Gets Heart Attacks?. 8th Hungarian Academy of Sciences, Budapest, Hungary. Aug 2005 *[Symposium Faculty].*
60. Unstable Atherosclerotic Plaque: From Images to Info and Impact: Will it become clinically feasible to detect vulnerable plaques? European Society of Cardiology, Stockholm, Sweden. Sep 2005 *[Conference Faculty].*
61. Unstable plaques: Converting imaging to information. European Society of Cardiology, Stockholm, Sweden. Sep 2005 *[Seimens Symposium Faculty].*
62. Single myocardial band, myocardial mechanics and clinical implications. University of Masstricht Academic Medical Center, Maastricht, Netherlands. Sep 2005 *[Hein J.J. Wellens Clinical Lecture].*
63. Moleculare basis of detecting CV disease. University of Masstricht Academic Medical Center, Maastricht, Netherlands. Sep 2005 *[Hein J.J. Wellens Oration].*
64. Imaging apoptosis for imaging atherosclerosis. Society of Molecular Imaging, Cologne, Germany. Sep 2005 *[Symposium Faculty].*
65. Can we clinically image death in vascular tree? Life And Death of the Vascular Tree, ISPEN Foundation Symposium, College de France, Paris Sep 2005 *[Symposium Faculty].*
66. Entity called - Vulnerable Plaque. Japanese Circulation Society, Yokohama, Japan, Mar 2005 *[Conference Faculty].*
67. Histopathology of Atherosclerosis for Clinicans. Japanese Circulation Society, Yokohama, Japan, Mar 2005 *[Conference Faculty].*
68. Post-myocardial infarction heart failure: espleronone or ARB? lll Joint Meeting, American College of Cardiology and Spanish Cardiology Society, Madrid, Spain, May 2006 *[Conference Faculty].*
69. Imaging of Atherosclerosis: From Macro to Molecular Level. lll Joint Meeting, American College of Cardiology and Spanish Cardiology Society, Madrid, Spain, May 2006 *[Conference Faculty].*
70. 64-Slice MSCT: The Future? 4th International Vulnerable Plaque Meeting, Capri, Italy, June 2006 *[Conference Faculty]*.
71. What are Vulnerable Plaques? 70th Japanese Circulation Society, Nagoya, Japan, Mar 2006 *[Fireside Session].*
72. Vulnerable Plaques. 70th Japanese Circulation Society, Nagoya, Japan, Mar 2006 *[Keynote Speaker].*
73. Histopathologic characteristics of Vulnerable Plaques. 70th Japanese Circulation Society, Nagoya, Japan, Mar 2006 *[Meet the Experts Session].*
74. It's time that we start looking at contraction and relaxation differently? 25th Echo Kobe, Japanese Society of Echocardiography, Kobe Japan, Jul 2006. *[Conference Faculty].*
75. What do we look for in vulnerable plaques: challenges to echocardiographer? 25th Echo Kobe, Japanese Society of Echocardiography, Kobe Japan, Jul 2006. *[Conference Faculty].*
76. PET-based imaging of plaque vulnerability. European Society of Cardiology Annual Meeting, Barcelona, Spain Sep 2006 *[Conference Faculty].*
77. Vulnerable plaque or vulnerable patient? Contemporary Cardiology 2006: Mayo Clinic Foundation and Vienna Medical University, Vienna, Austria. Sep 2006 *[Conference Faculty].*
78. Molecular imaging: the future is here. Contemporary Cardiology 2006: Mayo Clinic Foundation and Vienna Medical University, Vienna, Austria. Sep 2006 *[Featured Lecture]*
79. Molecular imaging of heart failure. Severance Cardiovascular Imaging Symposium 2006, Seoul, Korea, Sep 2006 *[Featured Lecture]*
80. Imaging vulnerable plaque. Severance Cardiovascular Imaging Symposium 2006, Seoul, Korea, Sep 2006 *[Featured Lecture]*
81. Going beyond luminal stenosis… 2nd Asian Interventional Cardiovascular Therapeutics, New Delhi, India, Oct. 2006 *[Conference Faculty].*
82. Imaging genetic and molecular markers in cardiomyopathy. Revolution in CV Imaging: Structure, Function and Biology, Joint symposium of University Vita-Salute San Raffaele, Milan and American College of Cardiology, Milan, Italy, Oct 2006 *[Conference Faculty].*
83. Detection of vulnerable plaque. Revolution in CV Imaging: Structure, Function and Biology, Joint symposium of University Vita-Salute San Raffaele, Milan and American College of Cardiology, Milan, Italy, Oct 2006 *[Conference Faculty].*
84. Molecular imaging: state of the art. Sights and Sounds of Cardiology; Mayo Clinic Cardiology CME, Aboard Diamond Princess Cruise, Nov. 2006 *[Conference Faculty].*
85. Nuclear imaging: not only diagnostic but prognostic as well. Sights and Sounds of Cardiology; Mayo Clinic Cardiology CME, Aboard Diamond Princess Cruise, Nov. 2006 *[Debate].*
86. ABC of treating heart failure. Sights and Sounds of Cardiology; Mayo Clinic Cardiology CME, Aboard Diamond Princess Cruise, Nov. 2006 *[Conference Faculty].*
87. The *“popcorn”* plaques. University of Maastricht AZM, Netherlands. December 2006 *[Cardiology Grand Rounds].*
88. Imparting brighter façade to death: nuclear of imaging cell death. Euregion Pact Meeting, Cardiovascular Research Institute of Maastricht, University of Maastricht AZM, Netherlands. December 2006 *[Symposium Faculty].*
89. Imaging of cardiovascular diseases: integrating various imaging modalities. University of Maastricht AZM, Netherlands; December 2006 *[Concluding lecture for the Hein J.J. Wellens Distinguished Visiting Professorship].*
90. Imaging Collagen Deposition in Myocardium; April 2007; 2nd Meeting of Biomarkers in Heart Failure, Cannes, France *[Conference Faculty].*
91. Imaging Apoptosis in Heart; 8th International Congress of Nuclear Cardiology, Prague, Czech Republic; May 2007 *[Conference Faculty].*
92. Rendering brighter face to death: imaging apoptosis in cardiovascular disease. 16th Japanese society of Interventional Cardiology, Fukushima, Japan; June 2007 *[Hiroyuki Yaoita Memorial Lecture].*
93. Statins and regression of atherosclerosis. Novartis Symposium at the 16th Japanese society of Interventional Cardiology, Koriyama, Japan; June 2007 *[Symposium Faculty]*.
94. If I could, what would I look for in an unstable plaque? 55th Annual Scientific Sessions of the Japanese College of Cardiology, Chiba, Japan, Sep 2007 *[Keynote Speaker]*.
95. Is plaque regression a reality: lessons from CT angiography. Novartis-Tanabe symposium at the Japanese College of Cardiology, Chiba, Japan, Sep 2007 *[Symposium Speaker]*.
96. Molecular imaging of heart and vessels. Canadian Cardiology Society, Qubec City, Oct 2007 *[Keynote Speaker].*
97. Imaging vulnerable plaques. Robert J. Burns Memorial Lecture, Canadian Nuclear Cardiology Society, Qubec City, Oct 2007*.*
98. CT Angiography: looking beyong coronary stenosis. Cardiology Society of India: Delhi Chapter, October 2007 *[Seth Memorial Oration].*
99. Debate: Will CT Angiography replace invasive coronary angiography [protagonist]: Cardiology Society of India. Dec 2007.
100. Molecular and cellular basis of atherosclerosis. Mexican Cardiology Society, Mexico City. Mar 2008.
101. Noninvasive imaging of unstable plaque. Mexican Cardiology Society, Mexico City. Mar 2008.
102. CT imaging of unstable plaque. 5th Vulnerable Plaque Meeting, Athens, Greece. May 2008.
103. Clinical detection of plaque instability. European Society of Cardiology, Munich, Germany. Sep 2008.
104. How likely are you to get a heart attack? Berry Memorial Oration, Post-Graduate Institute of Medical Education and Research, Chandigarh, India. Nov 2008.
105. Who is likely to get a heart attack? Cardiological Society of India, Chennai, India. Dec 2008.
106. Predicting a heart attack? Abdullah Memorial Lecture, SMS Medical College, Jaipur, India. Dec 2008.
107. Noninvasive imaging of unstable plaque. Einthoven Lecture 2009, Leiden, the Netherlands. Jan 2009.
108. Molecular imaging: a new tool for the assessment of cardiovascular system. Vascular Disease: A multidisciplinary approach, Barcelona, Spain. Feb 2009.
109. Breakthroughs in Plaques Assesment; Prevention. The Lancet/Jacc 1st Pacific Cardiovascular Summit: Breakthroughs and Controversies, Hong Kong, July 2011.
110. What is a high risk Plaque. International Innovations in Imaging and Intervention & Cardiology, Katowice, Poland, Sept. 2011.
111. Evolving Role of Imaging for New Understanding. The New York Academy of Sciences Session, Barcelona, Spain, Nov. 2011.
112. Careers in Imaging Research. ACC Heart House, Washington, DC. Dec. 2011.
113. Identification of Vulnerable Plaque to Improve Outcomes… Where have we reached? 63rd Annual Conference of Cardiological Society of India, New Delhi, Dec. 2011.
114. Vulnerable Plaque: from prospect to Prospects; Are Culprit lesions really non-obstructive? [CADECI] Guadalajara, Feb. 2012.
115. CT for Plaque Characteristics. World Congress of Cardiology, Dubai, UAE, April 2012.
116. Careers in Translational Research: Imaging as a tool. Mardrid, Sept. 2012.
117. The Critical Role of Risk Factors in Cardiovascular Disease. Journalist Summit- Rio de Janeiro, Brazil. April 2013.
118. Plaque Morphology: Is it time to Change the Management Paradigm. Quebec City, June 2013.
119. Are imaging endpoints appropriate replacement of hard endpoints in clinical trials? Paris [VPM] June 2013.
120. Why Must a Clinician Know The Plaque Morpohology? Now That OCT is Universally Used, What Should Be My Clinical Research Priorities? CVIT, Osaka, Japan. July 2013.
121. The Vulnerable Plaque. Odense University Hospital, Amsterdam, Aug. 2013.
122. Carotid Artery Disease: Is it different Than the Coronary Artery Disease? 2nd World Summit of Echocardiography. Leela Kempinski. Oct. 2013.
123. Echocardiograpy in Medical School: Catch’em Young? 2nd World Summit 2nd World Summit of Echocardiography. Leela Kempinski. Oct. 2013.
124. The mathematics of the altered myocardium: stunned, hibernating or scarred muscle. [65th Annual Conference of Cardiological Society of India], Bangalore. Dec. 2013.
125. Should STEMI related to plaque erosion be managed differently? [65th Annual Conference of Cardiological Society of India], Bangalore. Dec. 2013.
126. Reconciling COURAGE and FAME for the Management of Non Acute Coronary Syndromes. 65th Annual Conference of Cardiological Society of India, Bangalore. Dec. 2013.
127. New Classification of Cardiomyopathies: Clinical Relevance for diagnosis, management and prognostication Discussion. 65th Annual Conference of Cardiological Society of India], Bangalore. Dec. 2013.
128. MOGES classification for cardiomyopathies. 4th Fuster-India Cardiovascular Symposium, New Delhi, January 2014.
129. **Anand & Saroj Aggarwal Endowed Lectureship for South Asian Heart Health**: Who Will Have the Heart Attack? University of Ottawa Heart Institute, Ottawa, ON. February 2014.
130. Present Status of Cardiovascular Imagings in the Detection of Vulnerable Plaque. Tokyo [78th Annual Scientific Meeting of Japanese Circulation Society]. March 2014.
131. Non-High Risk Plaques: how much is the warranty? Melbourne, Australia, World Heart Federation Scientific Session. May 2014.
132. Imaging of Coronary Arteries. Melbourne, Australia, World Heart Federation Scientific Session. May 2014.
133. Who gets a heart attack? STEMI India 2014. Mumbai, India. May 2014.
134. Restricting Muscle Damage Before Reperfusion: Relevance for Low and Mid Income Countries. STEMI India 2014. Mumbai, India. May 2014.
135. STEMI with plaque erosion- Do we need management strategy? STEMI India 2014. Mumbai, India. May 2014.
136. Why must a Clinician know Plaque Morphology? Mexican Cardiology Society- Global Congress of Echo & Cardiovascular Imaging. Cancun, Mexico, July 2014.
137. Cardiomyopathies: New Classification Spanning from Phenotype to Genotype. Mexican Cardiology Society- Global Congress of Echo & Cardiovascular Imaging. Cancun, Mexico, July 2014.
138. **Harold Buchwald Distinguished Oration**: Who gets the attack? From bench to bedside, and from mummies to population. Winnipeg, Canada. [2nd Cardiovascular Forum for Promoting Centers of Excellence and Young Investigators]. September 2014.
139. Should we Keep Chasing High-Risk Palques of Focus on Vulnerable Patients? Paraguay Cardiology Society. Asuncion, Paraguay. October 2014.
140. Approach to subclinical atherosclerosis. Paraguay Cardiology Society. Asuncion, Paraguay. October 2014.
141. **Paul Wood Oration**: ‘Atherosclerosis from Mummies to the Modern Man: Why Clinicians mus know Plaque Morphology’. Annual NHLI/RBHT Paul Wood Cardiovascular Lecture. London. October 2014.
142. Careers in Imaging [Jornada Cicerone] Madrid, Spain. October 2014.
143. From Vulnerable Plaque to Vulnerable Patient. Update Symposium on Acute Coronary Syndrome and Anti-Thrombotic Treatment, Fundacion CardioInfantil Instituto de Cardiologia, Bogota, Colombia, November 2014
144. **Reinaldo Cabrera Oration**: Reclasifiying Cardiomyopathies. Cardiovascular Update, Fundacion CardioInfantil Instituto de Cardiologia, Bogota, Colombia, November 2014
145. Atherosclerosis & Coronary Plaque. The 18th International Toronto-Ottawa Heart Summit. Toronto, Canada, June 2015
146. Discordance Between stenosis and ischemia: Are we ready for new vocabulary? Annual Vulnerable Plaque Meeting, Madrid, Spain. June 2015.
147. Should we continue to chase vulnerable plaque? Annual Vulnerable Plaque Meeting, Madrid, Spain.
148. **Conferencia Magistral:** Keep the focus on the patient, more so than disease, and definitely more than the plaque! Mexican Cardiology Society ACC Chapter-Latin America, Mexico City, October 2015.
149. Anatomical or Functional Assessment of Coronary Stenosis: Emerging Trends. Delboni Cardiovascular Imaging Symposium. Sao Paolo, Brazil, October 2015.
150. Vulnerable Plaques or Vulnerable Patients. Delboni Cardiovascular Imaging Symposium. Sao Paolo, Brazil, October 2015.
151. New Classification of Cardiomyopathies. Delboni Cardiovascular Imaging Symposium. Sao Paolo, Brazil, October 2015.
152. Chest Pain Evaluation, No Test, Stress Test of CT Angio? 6th Annual Cardiovascular Symposium of the American College of Cardiology. Mumbai, India, January 2016
153. Promoting Cardiovascular Health Trends and Challenges. 6th Annual Cardiovascular Symposium of the American College of Cardiology. Mumbai, India, January 2016
154. Clinical-Genetic Classification of Cardiomyopathy, the Term Idiopathic In the Process of Elimination.6th Annual Cardiovascular Symposium of the American College of Cardiology. Mumbai, India, January 2016
155. Inhibición PCSK9: Amanecer de una nueva era? PCSK9 Inhibition: Dawn of new era? Cardiology Society of the Dominican Republic and the American College of Cardiology Chapter, Santo Domingo, DR, February 2016
156. **Conferencia Magistral**: Mantener el enfoque en el paciente más que la enfermedad y, definitivamente, más que en la placa. Keep the focus on the patient more so than disease and definitely more than the plaque. Cardiology Society of the Dominican Republic and the American College of Cardiology Chapter, Santo Domingo, DR, February 2016.

***Medicine/Cardiology Grand Rounds:***

1. Endomyocardial biopsies in rheumatic fever. Michael Reese Hospital, Chicago, IL; October 1991; *[Cardiology Grand Rounds].*
2. Evolution of Jones' criteria and the diagnosis of rheumatic carditis. Cabrini Medical Center, New York, NY; March 1993; *[Medicine Grand Rounds].*
3. Antimyosin imaging for noninvasive detection of myocarditis. Ospedale M. Bufalini, University of Bologna, Cesena, Italy; April 1993; *[Cardiology Grand Rounds].*
4. Scintigraphic recognition of myocarditis masquerading as myocardial infarction. New England Deaconess Hospital, Boston, MA; April 1993; *[Cardiology Grand Rounds].*
5. Diagnosis of rheumatic fever. Beth Israel Hospital, Harvard Medical School, Boston, MA; September 1993; *[Cardiovascular Grand Rounds].*
6. Rheumatic carditis and Jones’ criteria. Postgraduate Institute of Medical Education and Research, Chandigarh, India; February 1994; *[Medical Grand Rounds].*
7. Rheumatic fever. Henry Ford Hospital, Detroit, MI; January 1995; *[Cardiology Grand Rounds].*
8. Immunoimaging of atherosclerotic lesions. Brown University Rhode Island Hospital, Providence, RI; March 1995; *[Cardiology Grand Rounds].*
9. Antimyosin imaging: from bench to bedside. Armed Forces Institute of Pathology, Washington, DC; June 1995; *[Guest Speaker].*
10. Antimyosin imaging for cardiovascular disorders. Children Hospital, Harvard Medical School, Boston, MA; September 1995; *[Cardiology Grand Rounds].*
11. Use of an antibody targeted against cardiac myosin for diagnosis and salvage of myocardial damage. George Washington University Hospital Center, October 1996. *[Cardiology Grand Rounds].*
12. Contemporary techniques for the diagnosis of an old disease that licked the joints but stung the heart. George Washington University Hospital Center, October 1996. *[Medicine Grand Rounds].*
13. Imaging synthetic smooth muscle cell phenotype for the noninvasive localization of atherosclerotic lesions. Yale University School of Medicine, November 1996. *[Cardiology Grand Rounds].*
14. Antimyosin antibodies for the diagnosis and salvage of dying myocytes. Boston University Medical Center, Boston, April 1997 *[Cardiology Grand Rounds].*
15. Myocyte death, myocyte sealing and atherosclerotic imaging with monoclonal antibodies. Allegheny University of Health Sciences, Philadelphia, April 1997. *[Cardiology Grand Rounds].*
16. Using antibodies for specific *in vivo* targeting. Allegheny University Hospital, Philadelphia, July 1997 *[Pulmonary Medicine Grand Rounds].*
17. Relevance of radionuclide assessment of diffuse myocardial necrosis in various cardiovascular disorders. Medical College of Pennsylvania, Philadelphia, September 1997 *[Nuclear Cardiology Seminar Series].*
18. Imaging atherosclerotic lesions. Hahnemann Hospital, Philadelphia, September 1997 *[Nuclear Cardiology Seminar Series].*
19. Reversal of myocyte death by selective sarcolemmal repair. Northeastern University, Boston, September 1997; *[Symposium Faculty].*
20. Noninvasive detection of heart muscle cell death. South-East Chapter of Society of Nuclear Medicine, Tampa; September 1997; *[Symposium Faculty].*
21. Role of antimyosin imaging in management of cardiac allograft recipients. University of Miami School of Medicine, Miami, September 1997 *[Radiology Grand Rounds].*
22. Clinical utility of scintigraphic testing with antimyosin imaging in various cardiovascular diseases. Eleventh North-East Regional Meeting of Society of Nuclear Medicine, Ryebrook, New York, October 1997; *[Symposium Faculty].*
23. Mechanisms of myocyte death and strategies for cardiocyte salvage. Medical College of Pennsylvania, Philadelphia, October 1997 *[Physiology Seminar].*
24. Apoptosis for beginners. Medical College of Pennsylvania, Philadelphia, March 1998 *[Physiology Seminar].*
25. Novel strategies for radionuclide imaging of atherosclerosis. Allegheny University of the Health Sciences, Philadelphia, April 1998 *[Medicine Grand Rounds].*
26. Identification of novel antigens on rejecting allografts for noninvasive imaging. Allegheny University of the Health Sciences, Philadelphia, April 1998 *[Nephrology Grand Rounds].*
27. Apoptosis in heart failure. University of Minnesota Medical Center, Minneapolis, January 1999; *[Medicine Grand Rounds].*
28. Apoptosis in cardiovascular diseases. National Institutes of Health, February 1999; *[Cardiology Grand Rounds].*
29. Apoptosis in heart failure: Is it an aborted phenomenon? University of Virginia, Charlottesville, April 1999; *[Cardiology Grand Rounds].*
30. Is apoptosis relevant in heart failure? University of Alabama at Birmingham, Birmingham, AL. May 1999; *[Cardiology Grand Rounds].*
31. Imaging unstable plaque. Research and Development, DuPont Pharmaceuticals, North Billerica, MA. September 1999; *[Research Seminar].*
32. Imaging apoptosis in cardiovascular diseases. Cornell University, New York Presbyterian Hospital, New York, NY, October 1999; *[Cardiology Grand Round].*
33. Apoptosis: is this the missing link in progression of heart failure. In “Blocking the Angiotensin Link.” Clinical Advances Conference, Hahnemann University Hospital, Philadelphia. December 1999; *[Conference Faculty].*
34. Apoptosis in heart failure. University of California San Francisco. January 2000; *[Cardiology Grand Rounds].*
35. Recent advances in pathogenesis of atherosclerosis. Hahnemann University Hospital. January 2000; *[Cardiology Grand Rounds].*
36. Newly recognized mechanisms of plaque rupture. In “Unstable Angina and Coronary Artery Syndromes.” Clinical Advances Conference, Hahnemann University Hospital, Philadelphia. February 2000; *[Conference Faculty].*
37. Apoptosis interruptus in heart failure. Massachusetts General Hospital, Boston. March 2000; *[CVRC Research Seminar].*
38. Is apoptosis in heart failure reversible? Massachusetts General Hospital, Boston. March 2000; *[Heart Failure Research Seminar].*
39. Recent advances in treatment of heart failure. Central Pennsylvania Physicians from India, June 2000; *[Colloquium Speaker].*
40. Is apoptosis important in heart failure? University of Arkansas Medical Center, September 2000 *[Medicine Grand Rounds].*
41. Apoptosis in cardiovascular diseases and its noninvasive diagnosis. University of Michigan Health Center, Ann Arbor, November 2000 *[Cardiology Grand Rounds].*
42. Advances in management of Heart Failure. Association of Asian Professionals, Philadelphia, PA, May 2001 *[Conference Faculty].*
43. Diagnosis of rheumatic fever. Valves in the Heart of the Big Apple, New York, NY, May 2001 *[Symposium Faculty].*
44. Role of apoptosis in ventricular remodeling. Remodeling and Progression of Heart Failure, Minneapolis, MN, July 2001 *[Conference Faculty].*
45. Apoptosis in heart failure. University of Texas Medical Branch, Galvastone, TX, July 2001 *[Cardiology Grand Rounds and Visiting Professorship].*
46. Advances in management of heart failure. Graduate Hospital, Philadelphia, December 2001 *[Cardiology Grand Rounds].*
47. Apoptosis interruptus. Hahnemann University, Philadelphia, December 2001 *[Physiology-Pharmacology Combined Grand Rounds].*
48. Novel treatment options in heart failure. St. Joseph’s Hospital, Philadelphia, December 2001 *[Cardiology Grand Rounds].*
49. Apoptosis in cardiovascular rhythm disorders. Hahnemann University Hospital, December 2001 *[Symposium Faculty].*
50. Management of CHF: Drugs, devices and genes…. New Frontiers in Cardiology 2002; Pennsylvania Hospital, Philadelphia April 2002 *[Symposium Faculty].*
51. Survival instinct of myocytes in heart failure. Albert Einstein Medical College, April 2002 *[Cardiology Grand Rounds].*
52. Novel tracers for the diagnosis of valvular disease. 2nd Valves in the Heart of the Big Apple, New York, NY, May 2002 *[Symposium Faculty].*
53. Advances in the management of heart failure. Independence Hospital, Independence, KS Sept 2002 *[Cardiology Grand Round].*
54. Management of heart failure. Innovis Hospital, Fargo, ND Oct 2002 *[Cardiology Grand Round].*
55. Seeing death in the living. University of Minnesota Medical Center, Minneapolis, MN, October 2002 *[Cardiology Grand Rounds].*
56. Optimum management of heart failure. Wrightsville VA Hospital *[Cardiology Grand Rounds]* November 2002.
57. Beta-blockers in heart failure. Ball State Medical Center, Muncie, IN, November 2002.
58. Medical management and reverse remodeling in heart failure. Notre Dame Medical Center, South Bend, IN, November 2002.
59. Imaging myocardial damage. Harvard Medical School, Boston, MA, Jan 2003 *[Nuclear Medicine Grand Rounds].*
60. Advances in medical management of heart failure. ISJ Mayo Clinic, Mankato, MN, Jan 2003 *[Medicine Grand Rounds].*
61. Exploiting Molecular Biology for Non-Invasive Detection of Atherosclerosis. Rush, Chicago, Jan 2003 *[Nuclear Medicine Grand Rounds].*
62. Apoptosis in Heart Failure: Mechanistic, Diagnostic and Therapeutic Considerations. Rush, Chicago, Jan 2003 *[Cardiology Grand Rounds].*
63. Advances in Medical Management of Heart Failure. Green Bay, WI, Mar 2003 *[Cardiology Grand Rounds].*
64. Is Apoptosis Reversible in Myocardium? University of Maryland, Baltimore, May 2003 *[Cardiology Grand Rounds].*
65. How to Noninvasively Target Myocardial Disorders. University of California, Los Angeles, CA, Jun 2003 *[Cardiology Grand Rounds].*
66. Apoptosis in Atherosclerosis: Vicious or Virtuous? University of Arkansas Medical center, Little Rock, AR, Sep 2003 *[Cardiology Grand Rounds].*
67. Rescuing the failing hearts: can heart muscle cell death be manipulated? University of Arkansas Medical Center, Birmingham, AL, September 2003 *[Cardiology Grand Rounds].*
68. Salvaging the failing myocardium… Colorado Chapter of the American College Cardiology, Denver, CO, Nov 2003 *[Special Lecture].*
69. Beta-blockers and reverse remodeling in heart failure. Lutheran Hospital, Denver, CO Nov 2003 *[Medicine Grand Rounds].*
70. Advances in the management of heart failure. Bellin Hospital, Green Bay, WI, Nov 2003 *[Medicine Grand Rounds].*
71. Polypharmacy of heart failure. Hoag Memorial Hospital, Newport Beach, CA, May 2004 *[Cardiology Grand Rounds].*
72. Interrogation of neuronal dysfunction in heart failure: clinical relevance and prognostication. FDA Advisory Board, Washington, DC, Aug 2004 *[presented on behalf of GE Healthcare for MIBG petition].*
73. Can imaging help prevent cardiac remodeling and evolution of heart failure? GE Healthcare Innovation Center, Niskayuna, NY, Feb 2005*.* *[Expert Panel on Future of CV Imaging]*
74. Pathogenesis of heart failure. Mayo Clinic La Crosse Medical Center, La Crosse, WI, Apr 2005 *[Cardiology Grand Rounds].*
75. Premonition: occurrence of acute coronary syndrome…. Emanuel St. Joseph’s Hospital, Mankato, MN, Apr 2005 *[Cardiology Grand Rounds].*
76. Management of acutely decompensated heart failure. Hannepin County Medical Center, Apr 2005 *[Cardiology Grand Rounds].*
77. Picking plaques that pop…. University of Minnesota (Fairview) Medical Center, Minneapolis, MN, Apr 2005 *[Cardiology Grand Rounds].*
78. Who gets the heart attack? Long Beach VA Hospital, Long Beach, CA, May 2005 *[Veterans Day Celebration, Keynote Speaker].*
79. Perfecting techniques for imaging plaque vulnerability. ERASMUS University. Rotterdam, Jun 2005 *[Cardiology Grand Rounds].*
80. Pathology of vulnerable plaque. Fujita University of Health Sciences, Japan, Nov 2005 *[Cardiology Grand Round].*
81. Plaque morphology and plaque vulnerability. Massachusetts General Hospital, Boston, MA; Apr 2006 *[Cardiology Grand Rounds].*
82. Should we change the way we look at the coronary lesions? University of Maryland Medical Center, Baltimore, MD; Apr 2006 *[Cardiology Grand Rounds].*
83. Prevention of acute coronary syndromes… Mayo Clinic, La Crosse, WI, Apr 2006 *[Cardiology Ground Rounds]*.
84. Atherosclerotic plaque disruption. St. Joseph’s Regional Medical Center, Milwaukee, WI, Apr 2006 *[Cardiology Ground Rounds]*.
85. Pathogenesis of acute coronary syndromes. Medical College of Wisconsin, Aurora Medical Center, Milwaukee, WI, Apr 2006 *[Cardiology Ground Rounds]*.
86. Molecular Imaging of the Heart. Cedars-Sinai Medical Center *[Cardiology Ground Rounds] May 2006*
87. Atherosclerosis for clinicians. University of California, Irvine. *[Cardiology Ground Rounds]* Jul 2006.
88. Heart failure: management guidelines. University of California, Irvine. *[Cardiology Ground Rounds]* Aug 2006.
89. Molecular Imaging of heart and vessels. Stanford University Medical Center *[MIPS Rounds]* Dec 2006.
90. Molecular imaging cardiac remodeling and heart failure. Ottawa University, Ottowa, Canada, Dec. 2006 *[Cardiology Ground Rounds]*
91. Can we image vulnerable plaques? Ottawa University, Ottowa, Canada, Dec. 2006 *[Noon Rounds]*
92. Plaque morphology and prognostication. Columbia University College of Physicians and Surgeons, New York *[Cardiology Ground Rounds]* Jan 2007.
93. Integrated imaging for noninvasive detection of unstable atherosclerotic plaques. Yale University School of Medicine, New Haven *[Cardiology Ground Rounds]* Feb 2007.
94. CT Angiography for atherosclerotic disease. Wisconsin Heart Hospital *[Cardiology Ground Rounds]* Jul 2007.
95. Twist and untwist function of heart: principles and clinical applications. University of California, Irvine *[Cardiology Ground Rounds] Dec 2007.*
96. HAPPY: Heart Attack Prevention Program for You. University of California, Irvine *[Medicine Ground Rounds] Dec 2007.*
97. Predicting the likelihood of a heart attack…Long Beach Memorial Hospital *[Medicine Grand Rounds]* April 2008.
98. Predicting a heart attack…Albert Einstein Medical Center, Philadelphia *[Medicine Grand Rounds]* Mar 2009.
99. Imaging for prevention of heart failure. Albert Einstein Medical Center, Philadelphia, PA *[Cardiology Grand Rounds]* March 2009.
100. Molecular imaging of atherosclerosis. Mount Sinai School of Medicine, New York, NY *[Research Seminar]* March 2009.
101. An approach to an asymptomatic high-risk subject. Feinberg Cardiovascular Institute of the Northwestern University, Chicago, IL *[Cardiology Grand Rounds]* March 2009.
102. Why must a Clinician know Plaque Morphology? North Shore Long Island Jewish Medical Center, Long Island, NY *[Cardiology Grand Rounds]* Oct. 2013.
103. Contemporary Use of Beta Blockers in Heart Failure. Mount Sinai Queens Medical Center, New York *[Cardiovascular Grand Rounds]* Nov. 2011.
104. Why must a Clinician know Plaque Morphology? Mayo Clinic, Rochester, MN *[Cardiac Imaging Grand Rounds]* June 2013.
105. Why must a Clinician know Plaque Morphology? Brigham & Womens Hospital *[Cardiology Grand Rounds]* Oct. 10, 2013.
106. Why Must Clinicians Know Plaque Morphology? NYU School of Medicine, New York, *[Cardiology Grand Rounds]* Jan. 2014
107. Who Gets the Heart Attack? Making Atherosclerosis Imaging Sweeter. Rutgers Medical School *[Radiology Grand Rounds]* April. 2014
108. Why must a clinician know plaque Morphology? University of Washington, Seattle. *[Imaging Grand Rounds]* April 2014.
109. Reclassifying Cardiomyopathies. Advocate Christ Medical Center Department of Medicine, Oaklawn IL. *[Medicine Grand Rounds]* April 2014.
110. Classifying Cardiomyopathies: from Phenotype to Genotype. University of Virginia, Charlottesville. *[Cardiology Grand Rounds]* May 2014.
111. Why must a Clinician know Plaque Morphology? University of Virginia, Charlottesville. *[Medicine Grand Rounds]* May 2014.
112. Why must Clinicians Understand Plaque Morphology? Univesity of Maryland, Baltimore Maryland *[Medicine Grand Rounds]* May 22, 2014.
113. Why must a clinician know Plaque Morphology? Hackensack Medical Center *[Medical Grand Rounds]* December 2014.
114. MOGES Classification of Cardiomyopathies. Mount Sinai School of Medicine. *[Internal Medicine Grand Rounds]* February 2015.
115. Reclassifying Cardiomyopathies. George Washington Heart & Vascular Institute, George Washington University. *[Cardiology Grand Rounds]* February 2015.
116. Who Gets The Heart Attack? George Washington University. *[Medicine Grand Rounds]* February 2015.
117. Vulnerable Patient or Vulnerable Plaque? Winthrop University Hospital, Mineola, NY. *[Cardiology Grand Rounds]* March 2015.
118. Vulnerable plaque and Vulnerable patient. Mount Sinai Queens Hospital. New York. *[Cardiology Grand Rounds]* March 2015.
119. Vulnerable Plaque or Vulnerable Patient. Duke University School of Medicine, Durham, NC. *[Imaging Grand Rounds]* April 2015.
120. MOGES Classification for Cardiomyopathies. Duke University School of Medicine, Durham, NC. *[Heart Failure Grand Rounds]* April 2015.
121. Vulnerable Plaque or Vulnerable Patient? Stony Brook Medicine, Heart Institute, Hauppauge, NY. *[Cardiology Grand Rounds]* April 2015.
122. MOGES Classification for Cardiomyopathies. Henry Ford Medical Center, Detroit. *[Cardiology Grand Rounds]* May 2015.
123. The WHF Classification of Cardiomyopathies. MD Anderson Cancer Center, Houston, TX. *[Cardiology Grand Rounds]* May 2015.
124. Focus on Vulnerable Plaque. Mount Sinai St. Luke’s Hospital, New York [Cardiology Grand Rounds] October 2015.
125. Who Gets the Heart Attack? An Approach to the Worried Well. Weill Cornell Medicine, New York, NY. *[Internal Medicine Grand Rounds]* February 2016.
126. Classification of Cardiomyopathies. Weill Cornell Medicine, New York, NY. *[Cardiology* *Grand Rounds]* March 2016

***Educational Training of Community Physicians or Industry-Sponsored Programs:***

1. Primary prevention of heart failure: role of primary physician. Philadelphia, PA, September 2001.
2. Can we prevent evolution of heart failure in hypertensives and diabetics? Philadelphia, PA, October 2001.
3. Why should we be afraid of using -blockers in CHF? Mountain Top, PA, October 2001.
4. ACE-inhibitors in heart failure. College Park, PA, November 2001.
5. Medical management of heart failure. Philadelphia, PA, December 2001.
6. Role of beta adrenoceptor blockers in heart failure. Williamsport, PA, January 2002.
7. Role of angiotensin receptor blockers in management of heart failure. Philadelphia, PA, February 2002.
8. Management strategies in Heart Failure. Atlanta, GA, March 2002.
9. Which beta-blocker should be used in Heart Failure? Atlanta, GA, March 2002.
10. Which ACE-inhibitor, which ARB? Philadelphia, PA, June 2002.
11. Role of primary care physicians in the impending epidemic of heart failure. Philadelphia, PA, September 2002.
12. Hypertension, diabetes, and heart failure. Philadelphia, PA, October 2002.
13. Can we prevent heart failure? Analogy from primary prevention of CAD prevention. Wrightsville, PA, November 2002.
14. Advances in diagnosis and management of heart failure. Fargo, ND, November 2002.
15. ACE-inhibitor versus ARB? Philadelphia, PA, November 2002.
16. Neutralizing angiotensin axis in heart failure. Philadelphia, PA, December, 2002.
17. Medical management options in heart failure. Minneapolis, MN, January 2003.
18. Heart failure: What is the role of family physicians? Green Bay, WI, May 2003.
19. Why and which neurohumoral agent in heart failure? College Park, PA, May 2003.
20. Neurohumoral antagonists in heart failure. Lancaster, PA, May 2003.
21. What do new beta-blockers trials tell us? Philadelphia, PA, Aug 2003.
22. Why are beta-blockers under-utilized in heart failure? Birmingham, AL, Sep 2003.
23. Advances in the management of heart failure. Annual Scientific Meeting of the Indian Medical Association of California, Irvine, CA, Nov 2003.
24. How to manage heart failure optimally? Wausau, WI, Nov 2003.
25. Heart failure: day-to-day management. El Paso, TX, Jul 2004.
26. Management of post-MI LV dysfunction. Albuquerque, NM, Jul 2004.
27. Differences among beta-blockers, Solana Beach, CA Sep 2004.
28. Advances in management of heart failure, Rochester, MN, Oct 2004.
29. Diabetic-hypertensive, type A, pre-heart failure patient, Minneapolis, MN Oct 2004.
30. Beta-blockers for pharmacists, Eau Claire, WI Apr 2005.
31. Beta-blockade in heart failure: from contraindication to optimism. Park Nicollette Medical Center, Minneapolis, MN, Apr 2005*.*
32. Neurohumoral upregulation in heart failure, CV Associates, Mesa, AZ, May 2005.
33. Management of heart failure: a primer for family physicians and nurse practitioners, Pima Heart Institute, Tucson, AZ, Aug 2005.
34. Current Insights in the Treatment of Post-MI LVD and HF, St. Paul, MN, Apr 2006.
35. Optimum management after acute myocardial infarction… Phoenix, AZ, Jul 2006.
36. Stains beyond LDL? Tustin, CA, Aug 2006.
37. Guidelines for the management of heart failure: what is missing? Irvine, CA, November 2006.
38. Selection of beta-blockers in heart failure. Wisconsin, CA, Jul 2007.
39. Coronary disease: are women different than men? State of the Heart Lecture Series, University of California, Irvine, Mar 2008.
40. Who gets the heart attack? State of the Heart Lecture Series, University of California, Irvine, April 2008.
41. Heart disease in women. State of the Heart Lecture Series, University of California, Irvine, April 2008.
42. Your Heart in Your Hands. Mount Sinai Charity Event, Hotel Carlyle. October 2011.
43. Atherosclerosis: From Mummies to Modern Man. Queens Cardiology Community. October 2014.
44. The Vulnerable Patient and Cardiac Imaging in Risk Assessment. Forest Hills, NY. October 2014.

**Service to Professional Organizations**

**Organization of Conferences or Symposia:**

1991 Scientific Committee

Symposium on Cardiovascular Epidemiology and Prevention

New Delhi, January 14-18

1993 Scientific Committee

II International Symposium: Nuclear Cardiology Today…

Role in Clinical Decision Making, Cesena, Italy, May 21-23

1995 Scientific Committee

International Symposium on Current Concepts in CVD

New Delhi, India, December 3-7

1996 Scientific Committee

III International Symposium: Nuclear Cardiology Today…

Role in Clinical Decision Making Cesena, Italy, May 23-25

1997 Scientific Committee

Symposium on Cardiovascular Targeting

Northeastern University, Boston, September 19-21

1998 Co-Chairman, Scientific Committee,

Advances in Cardiomyopathy and Cardiac Transplantation

Autonomous University of Barcelona, Spain, October 26-28

1998 Chairman, Scientific Committee

Indo-American Society of Nuclear Medicine

Pune, India, December 3-5

1999 Course Co-Director

Nuclear Cardiology, 12th Asian-Pacific Congress of Cardiology

Lahore, Pakistan, October 17-21

1999 Scientific Committee

Renaissance Nuclear Cardiology, Sienna, Italy, July 15-19

1999 Course Director Clinical Symposium

Heart Failure, Hypertension and Renal Failure:

The Angiotensin Link

Hahnemann University Hospital, Philadelphia, December 7

1999 Co-Chair, ICBM: International Consortium for the Study

of the Band of Myocardium: Clinical Relevance of the

Helical Anatomy of the Heart Denia, Spain, March 2004

2000 Scientific Committee

IV International Symposium Nuclear Cardiology Today: 2000

and Beyond… Cesena, Italy, May 2000

2001 Co-Chair, Inflammation in Cardiovascular Disease

Hahnemann University Hospital, Philadelphia, April 2001

2001 Course Director, Clinical Symposium

Renin-Angiotensin and Sympathetic Adrenergic System in

Heart Failure, Philadelphia, December 2000

2002 Co-Chair, Expert Panel

Future of Imaging of Heart Failure, London, November 2001

2002 Scientific Committee, Nuclear Cardiology Retreat

American Society of Nuclear Cardiology, Lake Tahoe, July 2002

2003 Co-Chair, Imaging Vulnerable Plaque, Boston, October 2003

2004 Scientific Committee, Molecular Imaging Symposium

National Institutes of Health & American Society of Nuclear

Cardiology Initiative, Bethesda, May 2004

2004 Scientific Committee

V International Symposium, Nuclear Cardiology Today…

State-of-Art Clinical Practice and Future Molecular Directions

Cesena, Italy, May 2004

2004 ClinCard Scientific Program Committee (Heart Failure)

American Heart Association Scientific Sessions, New Orleans

2005 Scientific Program Committee

International Congress of Nuclear Cardiology,

Lisbon, Portugal, May 2005

2005 Co-Chair, Echo Orange County

Irvine, Mar 31-Apr 2

2005 Co-Chair, Cardiovascular CT/MR Today

Irvine, Sep 30-Oct 2

2005 Chair, Young Investigators Award

American Heart Association WSA, UC Irvine, Sep 2005

2005 ClinCard Scientific Program Committee (Heart Failure)

American Heart Association Scientific Sessions, Dallas, TX

2006 Scientific Program Committee, Diet, Obesity, Heart Disease

American Heart Association, Washington, January 2006

2006 Co-Chair, Echo Orange County

Irvine, Mar 31-Apr 2

2006 Co-Chair, iMax 2006, Pre-AHA Scientific Symposium

Chicago, Nov 11

2006 ClinCard Scientific Program Committee (Heart Failure)

American Heart Association Scientific Sessions, Chicago, IL

2007 Co-Chair, GE CV Innovations Symposium

New York, Mar 7-9

2007 Program Committee, Heart failure Society of America

11th Scientific Sessions, Washington, DC

2007 Co-Director, From Pictures to Practice

American Society of Echocardiography,

Rancho Mirage, Sep 2007

2007 Co-Chair, iMax 2007, Pre-AHA Scientific Symposium

Orlando, Nov 3

2007 ClinCard Scientific Program Committee (Imaging)

American Heart Association Scientific Sessions, Orlando, FL

2008 Co-Chair, Nuclear Cardiology Today to

Integrated Imaging Tomorrow… Cesena, Sep 2008.

2009 Advisor, Scientific Program Committee

Cardiology Society of India, Chenai, Dec 2009.

2010 Advisor, Scientific Program Committee

Cardiology Society of India, Cochin, Dec 2010

2011 Advisor, Scientific Program Committee

Cardiology Society of India, Mumbai, Dec 2011

2012 Advisor, Scientific Program Committee

Cardiology Society of India, New Delhi, Dec 2012

2013 Advisor, Scientific Program Committee

Cardiology Society of India, Bangalore, Dec 2013

2014 Advisor, Scientific Program Committee

Cardiology Society of India, Hyderbad, Dec 2014

2013 Co-Chair, Scientific Program Committee, Luncheon Seminars

International ACC Chapters, San Francisco, Mar 2013

2013 Course Director, 13th Annual Echo New York

Mount Sinai School of Medicine, Oct 2013

2014 Chair, Scientific Program Committee, Luncheon Seminars

International ACC Chapters, Washington DC, Mar 2014

2014 Course Director, 14th Annual Echo New York

Mount Sinai School of Medicine, Oct 2014

2014 Co-Director, Top Ten Advances in Clinical Cardiology

Patient Focused Evidence Based Approach

Mount Sinai School of Medicine, June 2014

2015 Scientific Program Committee, ACC

San Diego CA, Mar 2015

2015 Course Director, 15th Annual Echo New York

Mount Sinai School of Medicine, Oct 2015

2015 Co-Director, Top Ten Advances in Clinical Cardiology

Patient Focused Evidence Based Approach

Mount Sinai School of Medicine, Jun 2015

2016 Scientific Program Committee, ACC

Chicago IL, Mar 2016

2016 Course Director, 16th Annual Echo New York

Mount Sinai School of Medicine, Oct 2016

2016 Co-Director, Top Ten Advances in Clinical Cardiology

Patient Focused Evidence Based Approach

Mount Sinai School of Medicine, June 2016

2016 Co-Director, Top Ten Advances in Clinical Cardiology

Patient Focused Evidence Based Approach

Mount Sinai School of Medicine, Oct 2016

2017 Course Director, 17th Annual Echo New York

Mount Sinai School of Medicine, Oct 2017

2017 Vice Chair, Scientific Program Committee

International ACC Chapters, Washington DC, Mar 2017

2017 Co-Director, Top Ten Advances in Clinical Cardiology

Patient Focused Evidence Based Approach

Mount Sinai School of Medicine, Jun 2017

2018 Course Director, 18th Annual Echo New York

Mount Sinai School of Medicine, Nov 2018

2018 & 2019 Chair, Scientific Program Committee

International ACC Chapters, Orlando, Mar 2018

2015 Co-Director, Top Ten Advances in Clinical Cardiology

Patient Focused Evidence Based Approach

Mount Sinai School of Medicine, June 2018

2018 Chair, Scientific Program Committee

World Heart Federation- World Congress of Cardiology

Dubai, UAE Dec. 2018

**Leadership and Contributions to National/International Professional Organizations:**

### American Heart Association

*Leadership Position(s)*

2005-2008 Appointed to American Heart Association,

Council of Clinical Cardiology, National Leadership Committee

2007-2009 President; American Heart Association, Orange County

2006 President-Elect; American Heart Association, Orange County

2005 Vice-President; American Heart Association, Orange County

2004-2005 Executive Board of Directors

American Heart Association, Orange County

*Writing Groups and Assignments*

2000Special Writing Group of the Committee of

Rheumatic Fever, Endocarditis, Kawasaki Disease

*Council of Cardiovascular Diseases in Young:*

Jones Criteria Workshop

2004 Designated Reviewer

Guidelines for Management of Heart Failure

2005 Special Writing Group Guidelines for Primary Prevention of

Heart Failure

2006 Special Writing Group Guidelines on the role of myocardial

biopsy in heart failure

*AHA Committees*

2001-2003 Council of Clinical Cardiology

*AHA-ACC Committee for Heart Failure and Transplantation*

2003-2005 Council on Nutrition and Metabolism *Obesity Committee*

2003-2006 Clinical Cardiology Council

Scientific Program Committee

National Center, American Heart Association

2006-2009 Renominated to Clinical Cardiology Council

Scientific Program Committee

National Center, American Heart Association

2006 Scientific Program Committee Diet, Obesity and Heart Disease

American Heart Association Program, Washington, Jan. 2006

2006 Clinical Cardiology Council

International Student Mentoring Program

*AHA Annual Scientific Sessions*

2001-2017 *Conference Faculty*

2003-2008 *Abstract Grader*

2002-2017 *Session* *Chairman and/or Poster Moderator*

*Research, Grants and Awards*

1999 Grants Review Committee, Mid-Atlantic AHA

2005 Chair, Young Investigators Award, American Heart Association

UC Irvine, Sep 2005

### American College of Cardiology

*Editorship*

2003- Guest Editor, JACC

2004-2007 Associate Editor, JACC

Jul 2007-Jun 2017 Editor-in-Chief, JACC-CV Imaging

Jul 2014-Jun 2019 Executive Editor, JACC

Jul 2007 ImagingTask Force, Cardiosource

Jul 2007 ACC Interventional Forum

*Leadership Responsibilities*

Apr 2015-Mar 2018 Board of Trustees

Jul 2016-Jun 2018 Academic Council

Apr 2011-Jun 2017 Imaging Council, *Ex-Officio* Member

Jul 2007-Jun 2015 Publications Committee, *Ex-Officio* Member

Apr 2016-Mar 2018 Chair, Education Committee [Academic Council]

Apr 2016-Mar 2017 Vice-Chair, ACC International Program Committee

Apr 2017-Mar 2019 Chair, ACC International Program Committee

Apr 2017-Mar 2019 Nominations Committee

Apr 2017-Mar 2019 Chair, ACC International Chapters Oversight Committee

*Writing Groups, Conference Assignments*

1998 Contributor to Self-Assessment Program

(PACCSAP)

Feb 2005 Portuguese Cardiology Society

May 2006 Spanish Cardiology Society

Oct 2006 Italian Cardiology Society

Dec 2009 Cardiological Society of India, Chenai

Apr 2010 United Arab Emirates Cardiology Society

Dec 2010 Cardiological Society of India, Cochin

May 2011 Mexican Cardiology Society

Dec 2011 Cardiological Society of India, Mumbai

Dec 2012 Cardiological Society of India, Delhi

Sep 2013 Japanese College of Cardiology Annual Meeting, Yokohama

Dec 2013 Cardiological Society of India, Bangalore

Mar 2014 Japanese Circulation Society Annual Meeting, Tokyo

Jul 2015 Paraguay Cardiology Society Annual Meeting, Asuncion

Dec 2015 European CV Imaging, Seville, Spain

Nov 2015 Mexican Cardiology Society Annual Meeting, Mexico City

Mar 2016 Dominican Republic Cardiology Society Annual Meeting

Santa Domingo

Dec 2016 European CV Imaging, Leipzig, Germany

Jun 2017 Northeast Cardiology Forum, Shenyang, China

Nov 2017 ACC Chapter Mexico, Mexico City

Aug 2008-Aug 2016 European Society of Cardiology

Nov 2008-Nov 2016 American Heart Association

*Scientific Sessions of the ACC*

2001-2017 *Session Chairman and/or Poster Moderator*

2002-2017 *Conference Faculty*

2003-2017 *Abstract Grader*

### World Heart Federation

2019-2020 Vice President Elect

2011-2018 Editor-in-Chief, Global Heart

2015-2019 Chairman, SPAC [Science, Policy & Advocacy Committee]

2015-2019 Board of Directors

2015-2016 Chairman, Guidelines Writing Committee

### American Society of Nuclear Cardiology

*Writing and Working Groups, and Editorships*

1994 *Nuclear Cardiology Recommendation Panel*

2nd American Society of Nuclear Cardiology

Working Group, Wintergreen, VA

1998 Question Writing Assignment for Certification

Council of Nuclear Cardiology, American

Society of Nuclear Cardiology

1998 *Nuclear Cardiology Recommendation Panel*

*Molecular Imaging Panel*

3rd American Society of Nuclear Cardiology

Working Group, Wintergreen, VA

1999 Scientific Committee: Nuclear Cardiology

Task Force Renaissance Nuclear Cardiology

San Luigi, Italy

2000 *Nuclear Cardiology Recommendation Panel*

Co-Chair, Molecular Probes in Future

of Nuclear Imaging

4th American Society of Nuclear Cardiology

Bar Harbor, ME

2002 Scientific Committee

5th American Society of Nuclear Cardiology

Working Group, Lake Tahoe, CA

*Research and Other Leadership Roles*

1998-2002 Section Editor

Journal of Nuclear Cardiology

1998-2003 Abstract Grader, American Society of

Nuclear Cardiology and International

Congress of Nuclear Cardiology

1998 Selection Committee, Best Manuscript Awards

Journal of Nuclear Cardiology

2001 *Member, Publications Committee*

American Society of Nuclear Cardiology

2001 Member, Molecular Imaging Task Force

2001-2003 *Chairman, National Awards & Grants Committee*

*ASNC Annual Scientific Sessions*

2001-2008 *Conference Faculty*

*International Congress of Nuclear Cardiology Scientific Sessions*

2001-2007 *Abstract Grader*

1999-2008 *Conference Faculty*

### European Society of Cardiology

*ESC Annual Scientific Sessions*

2007-2017 *Conference Faculty*

*Research and Awards*

2008 (2008) Judges Panel, Young Investigator Award

Munich, Germany

2008 (2009) Judges Panel, Young Investigator Award

Barcelona, Spain

### Heart Failure Society of America

*Committees and Working Groups*

2006- Scientific Program Committee

2006- Academics and Research Committee

*Annual Scientific Sessions*

2000-2007 *Conference Faculty*

### Society of Nuclear Medicine

*Scientific Sessions*

2002-2006 *Conference Faculty*

1996- *Session* *Chairman and/or Poster Moderator*

### World Health Organization

2000Experts Panel

*International Atomic Energy Commission*,

Thematic Program on Health Care

Asia & Pacific Region

2000 *Rapparteur*

*Guidelines Development Group, Diagnosis of*

*Rheumatic Fever,* World Health Organization

### National Institutes of Health

2000 *Special Conference*

Post-Transplant Disease Recurrence

2000 *Grantees’ Meeting*

Molecular and Physical Characterization of

Vulnerable Plaque

2003 *Special Conference*

Molecular Imaging Symposium

**Membership in Professional Organizations**

1986 Cardiological Society of India

1986- Council on CV Epidemiology and Prevention

International Society & Federation of Cardiology

1989- Council for CV Diseases in Young

1992Fellow, American College of Cardiology

1994 Indo-US Society of Nuclear Medicine

1996- Society of Nuclear Medicine

1997 International Society of Heart and Lung

Transplantation

1998 American Society of Nuclear Cardiology

2001 Fellow, American Heart Association

Clinical Council

2003 Fellow, American Heart Association,

Metabolic Council

2005 Founder Member, Cardiac CT Society

2006 Fellow, Royal College of Physicians

[Edinburgh] (Hon)

2009 Advisory Board, Institute of Medicine, USA

**University Service and Hospital Committees**

1999 Mentoring Program for Junior Faculty

National Center of Leadership

in Academic Medicine

Drexel University College of Medicine

2000 Quality Control and Improvement Committee

Hahnemann University Hospital

2000-2002 Fellowship Program Co-Director

Division of Cardiology

Drexel University College of Medicine

2000 Radiation Safety Committee

Hahnemann University Hospital

2001 Director, Fellowship Education Committee

Division of Cardiology

Drexel University College of Medicine

2001-2002 Administrative Council

Vice-Chairman (Research), Dept of Medicine

Drexel University College of Medicine

2001- Academic Promotions Committee

Department of Medicine

Drexel University College of Medicine

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***Books and Monographs:***

1. *Monoclonal Antibodies in Cardiovascular Diseases.* *Eds.* Ban-An Khaw, **Jagat Narula,** H. William Strauss. Lea & Febiger, Philadelphia, 1994.
2. *Rheumatic Fever.* *Eds*. **Jagat Narula,** R. Virmani, KS Reddy, R Tandon. American Registry of Pathology Publications, Washington, DC, 1999.
3. *Heart Failure: Pathogenesis and Management.* *Eds.* **Jagat Narula,** Renu Virmani, Stephen Westaby, O. Howard Frazier, James T. Willerson. Martin Dunitz, Oxford, UK, 2001.
4. *Cardiac Allograft Rejection.* *Eds.* William Dec, **Jagat Narula,** Manel Ballester, Ignasi Carrió. Kluwer Academic Publishers, Boston 2001.
5. *Atlas of Nuclear Cardiology.* *Volume Eds.* Vasken Dilsizian, **Jagat Narula.** *Series Ed.*Eugene Braunwald, Current Medicine, 2003.
6. *Atlas of Electrophysiology in Heart Failure.* *Volume Eds.* K Shivkumar, James Weiss, Gregg Fonarow, **Jagat Narula.** *Series Ed.*Eugene Braunwald, Current Medicine, 2005.
7. *Essentials of Heart Disease.* *Consulting Eds.* Baughman, Beller, Califf, Colucci, Dilsizian, Freedom, Goldhaber, Hollenberg, Holmes, Lee, Mathew, **Narula,** Rahimtoola, Scheinman, Wilson.*Ed.*Eugene Braunwald, Current Medicine, 2005.
8. *Atlas of Nuclear Cardiology.* Second Edition. *Volume Eds.* Vasken Dilsizian, **Jagat Narula.** *Series Ed.*Eugene Braunwald, Current Medicine, 2005.
9. *Excerpts from the* Braunwald’s *Atlas of Nuclear Cardiology: Myocardial Function Assessment by Nuclear techniques. Volume 1 of 4.* *Eds.* Vasken Dilsizian, **Jagat Narula.** Current Medicine, 2007.
10. *Excerpts from the* Braunwald’s *Atlas of Nuclear Cardiology: The Role of Myocardial Perfusion Imaging in Special Populations.* *Volume 2 of 4.* *Eds.* Vasken Dilsizian, **Jagat Narula.** Current Medicine, 2007.
11. *Excerpts from the* Braunwald’s *Atlas of Nuclear Cardiology: Nuclear Investigation in Heart Failure and Myocardial Viability.* *Volume 3 of 4.* *Eds.* Vasken Dilsizian, **Jagat Narula.** Current Medicine, 2007.
12. *Excerpts from the* Braunwald’s *Atlas of Nuclear Cardiology: Neuronal Dysfunction.* *Volume 4 of 4.* *Eds.* Vasken Dilsizian, **Jagat Narula.** Current Medicine, 2007.
13. *The Vulnerable Atherosclerotic Plaque.* *Eds.* Renu Virmani, **Jagat Narula,** Martin B. Leon, James T. Willerson.Blackwell-Futura, Boston,2006.
14. *Atlas of Cardiovascular CT.* *Volume Eds.* Matthew Budoff, Stephan Achenbach, **Jagat Narula.** *Series Ed.*Eugene Braunwald, Current Medicine, 2007.
15. *Atlas of Nuclear Cardiology.* Third Edition. *Volume Eds.* Vasken Dilsizian, **Jagat Narula.** *Series Ed.*Eugene Braunwald, Current Medicine, 2009.
16. *Atlas of Nuclear Cardiology.* Fourth Edition. *Eds.* Vasken Dilsizian, **Jagat Narula.** Springer, 2013.
17. *Atlas of Cardiac Innervation.* *Eds*. Vasken Dilsizian & **Jagat Narula.** Springer, 2017.
18. *Handbook og Cardiovascular Catheterization and Interventions*. Annapoorna Kini, **Jagat** **Narula**, Samin Sharma. Springer 2017.
19. *Atlas of Cardiovascular CT.* Second Edition. *Eds.* Matthew Budoff, Stephan Achenbach, Harvey Hecht & **Jagat Narula.** Springer 2018.
20. *Atlas of Hand-Held Ultrasound. Eds.* Bret Nelson, Anjali Bhagra, Sharon Mulvag, Eric Topol & **Jagat Narula.** Springer, 2019.
21. *Atlas of Clinical Optical Coherence Tomography. Eds.* Annapoorna Kini, **Jagat Narula,** Samin Sharma, Springer, 2018.
22. ***Hurst’s the Heart.* Fourteenth Edition. *Eds.* Valentin Fuster, Robert Harrington,Jagat Narula, Zubin Eappen. McGraw-Hill, Philadelphia, 2017**.
23. *Advances in Echocardiography.* *Eds.* HK Chopra, Navin C. Nanda, **Jagat Narula.** Jaypee Bros., New Delhi 2018.
24. *Advances in Heart Failure.* *Eds.* HK Chopra, Navin C. Nanda, **Jagat Narula.** Jaypee Bros., New Delhi 2019.
25. *Atlas of Noninvasive Imaging of Cardiac Anatomy.* *Eds.* Francesco Faletra, **Jagat Narula.** Springer, 2020.
26. *Atlas of Nuclear Cardiology.* Fifth Edition. *Eds.* Vasken Dilsizian, **Jagat Narula.** Springer, 2021 (in press).
27. *Before and After Heart Transplant.* *Eds.* Radha Gopalan, Penny Parker, Jeffrey Hosenpud**,** Mandeep Mehra, G. William Dec and **Jagat Narula**. 2023 Jaypee Brothers (in preparation).
28. *Rheumatic Fever.* Second Edition. *Eds.* Magdi Yacoub, Salim Yusuf, Leisl Zuhlke, Karthikeyan Ganeshan and **Jagat Narula.** Jaypee Bros. 2023 (in preparation).
29. *Advances in Statin Therapy in Cardiovascular Disease.* *Eds.* HK Chopra, Navin C. Nanda, **Jagat Narula,** GS Wander, CN Manjunath, Praveen Chandra, Vivek Kumar, CK Ponde, AK Pancholia. Jaypee Bros., New Delhi 2021.
30. *Fuster & Hurst’s the Heart.* 15th Edition. *Eds.* Valentin Fuster, **Jagat Narula**, Martin B. Leon, David J. Callans, John S. Rumsfeld, Athena Poppas. McGraw-Hill, Philadelphia, 2022.

***Special Issues of Journals (Guest Editor):***

1. Apoptosis: Apoptosis for Clinicians. *Ed.* **Jagat Narula,** S. Kharbanda.March2001.
2. *Cardiology Clinics:* Apoptosis in Cardiovascular Diseases. *Eds.* **Jagat Narula,** Viswa Dixit, Leslie Miller.Feb.2001.
3. Journalof Nuclear Cardiology (Supplement): *Noninvasive Imaging of Heart Failure*. Eds. **Jagat Narula,** Manuel Cerquiera, James Udelson, Sep2002.
4. *Medical Clinics of North America:* Newer Treatment Options in Heart Failure. *Eds.* Raghaven Baliga,Bertram Pitt, **Jagat Narula.** Jan2003.
5. *Cardiology Clinics. LV Assist Devices and artificial heart.* *Eds.* Louis E. Samuels, **Jagat Narula.** Mar 2003.
6. *Surgical Clinics of North America:* Surgical Options in Heart Failure. *Eds.* Stephen Westaby, **Jagat Narula.** Jan2004.
7. *Medical Clinics of North America:* PrimaryPrevention of Heart Failure. *Eds.* **Jagat Narula,** Clyde Yancy, James Young. May2004.
8. *World Health Organization Technical Report Series:* Rheumatic Fever. Edward L. Kaplan, **Jagat Narula,** Salah Zaher.Geneva2004.
9. [*Scarabelli TM, Knight R, Stephanou A, Townsend P, Chen-Scarabelli C, Lawrence K, Gottlieb R, Latchman D,* ***Narula J****.*](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=16503249&query_hl=1&itool=pubmed_docsum)Clinical implications of apoptosis in ischemic myocardium. *Curr Probl Cardio.* 2006;31:181-264.
10. *Journal of American College of Cardiology* (Supplement). Imaging Vulnerable Plaque; April 18, 2006; Vol. 47, No. 8. *Eds.* **Jagat Narula,** James T. Willerson.
11. *Current Opinions in Biotechnology.* Cardiovascular Molecular Imaging. *Eds.* Joseph Wu, **Jagat Narula.** Mar.2007.
12. *Cardiology Clinics.* Heart Failure 2008; Volume-I*. Eds.* James B. Young, **Jagat Narula***. Nov.* 2007*.*
13. *Cardiology Clinics.* Heart Failure 2008; Volume-II*. Eds.* James B. Young, **Jagat Narula***. Jan.* 2008*.*
14. *Heart Failure Reviews.* Apoptosis in Heart Failure. *Eds.* **Jagat Narula,** Richard N. Kitsis.May2008.
15. *Heart Failure Clinics.* Function Follows Form. *Volume Eds.* **Jagat Narula.** Elsevier, Jul 2008.
16. *Nature CV Medicine*; Cardiovascular Molecular Imaging for Clinicians, *Eds.* Vasken Dilsizian, Zahi Fayad, Valentin Fuster & **Jagat Narula.** Aug 2008.
17. *Mount Sinai Journal of Medicine:* High-Risk Atherosclerotic Plaques. *Eds.,* Valentin Fuster, Zahi Fayad, **Jagat Narula**; 2012.
18. *Cardiology Clinics*: Computed Tomography in 2012, *Eds.* Stephan Achenbach, Takeshi Kondo, **Jagat Narula.** 2012.
19. *Medical Clinics of North America*: Coronary Risk Factor Update, *Eds.* Valentin Fuster & **Jagat Narula.** 2012.
20. *Global Heart*: Point-of-Care Ultrasound in LMIC, *Eds.* Bret Nelson & **Jagat Narula.** December 2013.
21. *Global Heart*: Global Burden of Cardiovascular Disease, *Eds.* George Mensah, Andrew Moran, Gregory A. Roth & **Jagat Narula.** March 2014.
22. *Global Heart*: What Do Mummies Have to Tell About Atherosclerosis, *Eds.* Gregory Thomas, L. Samuel Wann & **Jagat Narula.** June 2014.
23. *Circulation Research*: *Advances in Imaging,* *Eds.* **Jagat Narula** & Y. Chandrashekhar. June 2016.
24. *Global Heart*: Why are Global Chronic Diseases Ignored? *Eds.* Henry Greenberg & **Jagat Narula.** Dec 2016.
25. JACC Imaging: Editor’s Pages 2008-2017. **Jagat Narula.** Elsevier 2017.
26. *Global Heart*: Global Burden of Cardiovascular Disease, *Eds.* Andrew Moran, Gregory A. Roth & **Jagat Narula.** Dec 2018.

**Original Manuscripts:**

1. Khandelwal PD, Bhu N, Khandelwal S, **Narula J.** Effect of tobacco consumption on diabetic retinopathy. *J Ass Phys Ind* 1982;30:609-611.
2. **Narula J,** Wasir HS. High density lipoprotein cholesterol and antiatherogenic metabolism. *Ind Heart J* 1985;37:323.
3. **Narula J,** Kaul U, Dinda A, Chopra P, Bhatia ML. Should a Marfans aortic aneurysm dissect? *Ind Heart* J 1985;37:57-61.
4. Kaul U, Mohan JC, **Narula J,** Nath CS, Bhatia ML. Ajmaline-induced torsade de pointes. *Cardiology* 1985;72:140-143.
5. Wasir HS, **Narula J,** Vasistha S, Srivastava LM, Bhatia ML. Correlation of serum lipoproteins to the severity of angiographically defined coronary artery disease. *Ind Heart* J 1986;38:462-466.
6. Kaul U, Dev V, **Narula J,** Talwar KK, Bhatia ML. Unexpected coexistence of ventricular tachyarrhythmias with severe infra-hisian disease. *Natl Med J Ind* 1988;1:418-423.
7. Pothineni RB, **Narula J,** Bahl VK, Bhatia ML. Relation of coronary artery disease or left ventricular dysfunction to postangiocardiograhic left ventricular end-diastolic pressure. *Ind Heart J* 1988;40:152-154.
8. Kaul U, Reddy KS, **Narula J,** Nath CS, Mukhopadhyaya S, Rajani M, Bhatia ML. Angiographic recognition of coronary ostial stenosis in nonspecific aortoarteritis. *Cath Cardiovasc Diag* 1988;14:175-179.
9. **Narula J,** Talwar KK, Bharani AK, Mukhopadhyaya S, Rajani M, Bhatia ML. Pulmonary varix associated with mitral valve disease. *Cath Cardivasc Diag* 1988;13:411-413.
10. Kaul U, Dev V, **Narula J,** Talwar KK, Bhatia ML. Evaluation of patients with bundle branch block and unexpected syncope: a study based on complete electrophysiological testing and ajmaline stress test. *PACE* 1988;11:289-297.
11. Bahl VK, Dev V, **Narula J,** Bhatia ML. Coronaritis in nonspecific aortoarteritis. *Cardiology* 1988;10:677-679.
12. Wasir HS, Dev V, **Narula J,** Bhatia ML. Quantitative grading of exercise stress test for patients with coronary artery disease using multivariate discriminant analyses. Clin Cardiol 1988;11:105-111.
13. Dev V, **Narula J,** Tandon R, Shrivastava S. Partial anomalous pulmonary venous drainage with mitral stenosis and intact interatrial septum:a paradox of small shunt. *Clin Cardiol* 1988;11:780-784.
14. Talwar KK, Mohan JC, **Narula J,** Bhatia ML. Spatial quantitative vectorcardiography in aortic stenosis: correlation with hemodynamic findings. *Int J Cardiol* 1988;18:151-161.
15. Talwar KK, Chopra P, **Narula J,** Singh SK, Dev V, Shrivastava S, Bhatia ML. Myocardial involvement and its response immunosuppresssive therapy in nonspecific aorto-arteritis (Takayashu's disease): a study by endomyocardial biopsy. *Int J Cardiol* 1988;21:323-334.
16. Chopra P, **Narula J,** Sampathkumar A, Sachdeva S, Bhatia ML. Immunohistochemical characterization of Aschoff nodules and endomyocardial inflammatory infiltrates in left atrial appendages from patients with chronic rheumatic heart disease. *Int J Cardiol* 1988;20:99-105.
17. Bhatia R, **Narula J,** Reddy KS, Malaviya AN, Tandon R, Bhatia ML. Lymphocyte subsets in acute rheumatic fever and rheumatic heart disease. *Clin Cardiol* 1989;12:34-38.
18. Taneja V, Mehra NK, **Narula J,** Reddy KS, Tandon R, Vaidya MC, Bhatia ML. HLA DR/DQ antigens and reactivity to B cell alloantigen D8/17 in Indian patients with rheumatic heart disease. *Circulation* 1989;80:335-340.
19. Vasan RS, Seshadri S, **Narula J.** Atrial natriuretic peptide: an atavistic hormone? *Int J Cardiol* 1989;24:404.
20. Bajaj R, Kaul U, **Narula J.** Unmasking of sinus node dysfunction by ajmaline. *Int J Cardiol* 1989;23:402-404.
21. Talwar KK, **Narula J,** Dev V, Bhatia ML. Evaluation of spatial R max cardiac vector in exercise testing: pre-exercise versus post-exercise measurements. *Int J Cardiol* 1989;24:293-295.
22. Chopra P, **Narula J,** Tandon R. Aschoff nodule revisited. *Jap Heart J* 1989;30:479.
23. Vasan RS, **Narula J.** Atrial natriuretic peptide: Action yes, Role no! *Int J Cardiol* 1989;25:142.
24. Talwar KK, **Narula J,** Chopra P. Endomyocardial biopsies in differentiation of tropical endomyocardial fibrosis and tuberculous constrictive pericarditis. *Int J Cardiol* 1990;28:245-251.
25. Dave T, **Narula J,** Chopra P. Myocardial and endocardial involvement in tuberculous constrictive pericarditis: difficulty in biopsy distinction from endomyocardial fibrosis as a cause of restrictive heart disease. *Int J Cardiol* 1990;28:245-251.
26. Reddy KS, **Narula J,** Bhatia R, Taneja V, Jhingan B, Pothineni RB, Koicha M, Mehra NK, Vaidya MC, Malaviya AN, Tandon R, Bhatia ML. Immunologic and immunogenetic studies in rheumatic fever and rheumatic heart disease. *Ind J Pediatr* 1990;57:693-700.
27. Chopra P, **Narula J,** Talwar KK, Kumar V, Bhatia ML. Histomorphological spectrum of tropical endomyocardial fibrosis: an endomyocardial biopsy study. *Human Pathol* 1990;21:613-616.
28. **Narula J,** Khaw BA. One step forward with nonspecifically specific antibodies… *J Nucl Med* 1990;31:1064*.*
29. Yin O, **Narula J,** Nossif N, Khaw BA. Correlation of immunoreactivity and polymer formation to DTPA modification of a monoclonal antibody. *Nucl Med Biol* 1991;8:859-864.
30. Seshadri S, **Narula J,** Chopra P. Asymptomatic eosinophilic myocarditis. *Int J Cardiol* 1991;38:348-349.
31. Chopra P, **Narula J,** Tandon R. Ultrastructure of naturally occurring subcutaneous nodules in acute rheumatic fever. *Int J Cardiol* 1991;30:124-127.
32. Chopra P, **Narula J.** Scanning electron microscopic features of vegetations in acute rheumatic carditis. *Int J Cardiol* 1991;30:109-112.
33. **Narula J,** Southern JF, Abraham SA, Pieri P, Khaw BA. Myocarditis simulating myocardial infarction. *J Nucl Med* 1991;32:312-318.
34. Khaw BA, **Narula J.** On antimyosin scintigraphy in acute myocardial infarction: when, where and why? *J Nucl Med* 1991;32:867-870*.*
35. Khaw BA, **Narula J.** Antimyosin scintigraphy in cardiovascular disorders. *Trend Cardiovasc Dis* 1992;2:197-205.
36. Khaw BA, **Narula J,** Kanke M, Saito T, Strauss HW, Ditlow C, Chen F. Application of monoclonal antibodies in cardiovascular diseases: detection of atherosclerotic and thromboembolic lesions. *J Nucl Biol Med* 1992;113:35-40.
37. Khaw BA, **Narula J,** Nicol P, Pieri P, Guerrero LJ, Strauss HW. Myocardial salvage in reperfusion injury. *J Nucl Biol Med* 1992;113:113-117.
38. Isobe M, **Narula J,** Southern JF, Strauss HW, Khaw BA, Haber E. MHC class-II imaging in rejecting cardiac transplants. *Circulation* 1992;85:738-746.
39. **Narula J,** Chopra P, Talwar KK, Vasan RS, Reddy KS, Tandon R, Bhatia ML, Southern JF. Endomyocardial biopsies in acute rheumatic fever. *Circulation* 1993;88:2198-2205.
40. Kothari SS, **Narula J,** Tandon R, Shrivastava S. Cardiac compression with mitral stenosis: a hemodynamic challenge. *Int J Cardiol* 1993;39:216-8.
41. Torchilin VP, Trubetskoy VS, **Narula J,** Khaw BA, Klibanov AL, Slinkin MA. Chelating polymer modified monoclonal antibodies for radioimmunodiagnostics and radioimmuno-therapy. *J Controlled Release* 1993;24:111-118.
42. Trubetskoy VS, **Narula J,** Khaw BA, Torchilin VP. Chemically optimized antimyosin Fab conjugates with chelating polymers for 111-indium radioimmunoscintigraphy: the nature of protein-polymer single site covalent bond is highly important for biodistribution and infarct localization. *Biconjugate Chem* 1993;40:251-255.
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44. **Narula J,** Khaw BA, Dec GW, Palacios IF, Southern JF, Fallon JT, Strauss HW, Haber E, Yasuda T. Recognition of myocarditis masquerading as acute myocardial infarction.  *N Engl J Med* 1993;328:100-4.
45. **Narula J,** Strauss HW, Khaw BA. Antimyosin positivity in doxorubicin toxicity: earlier than the conventional evidence! *J Nucl Med* 1993;34:1507-1509*.*
46. Khaw BA, Strauss HW, **Narula J.** “Magic Bullets:” from muskets to smart bombs! *J Nucl Med* 1993;34:2264-2268*.*
47. Khaw BA, **Narula J.** Antibody imaging in the evaluation of cardiovascular diseases. *J Nucl Cardiol* 1994;1:456-475.
48. Vijaykumar M, **Narula J,** Reddy KS, Kaplan EL. Incidence of rheumatic fever and prevalence of rheumatic heart disease in India. *Int J Cardiol* 1994;43:221-228*.*
49. **Narula J,** Nicol PD, Pieri PL, Southern JF, O'Donnell SM, Guererro JL, Nossiff ND, Newell JB, Strauss HW, Khaw BA. Evaluation of myocardial infarct size before and after reperfusion by dual imaging with radiolabeled antimyosin antibody. *J Nucl Med* 1994;35:1076-1085.
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51. Khaw BA, Torchilin VP, Vural I and **Narula J.** Plug, Seal, Preserve: Repair of hypoxic sarcolemmal lesions with antimyosin immunoliposomes. *Nature Medicine* 1995;1:1195-1198.
52. **Narula J,** Petrov A, Bianchi C, Ditlow C, Dilley J, Pieslak I, Chen FW, Torchilin VP, Khaw BA. Noninvasive localization of experimental atherosclerotic lesions with mouse/human chimeric antibody Z2D3 specific for proliferating smooth muscle cell in human atheroma: imaging with conventional antibody and image enhancement with negative charge-modified antibody. *Circulation* 1995;92:474-484.
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54. **Narula J,** Southern JF, Dec GW, Palacios IF, Fallon JT, Strauss HW, Khaw BA, Yasuda T. Antimyosin uptake and myofibrillarlysis in dilated cardiomyopathy. *J Nucl Cardiol*, 1995;2:470-477. *(Best Clincal Nuclear Cardiology Paper Award 1995).*
55. DiSalvo TG, **Narula J,** Dec GW, Semigran MC. Dactinomycin as an adjunctive therapy for the recurrent heart transplant rejection. *J Heart Transplant* 1995;14:955-962.
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58. Khaw BA, **Narula J.** A noninvasive detection of myocyte necrosis in myocarditis and dilated cardiomyopathy with radiolabeled antimyosin. *Eur Heart J* 1996;16:119-123.
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**U.S. Patent Awards/Applications:**

US Patent #5780052; *European* Patent 96912764.6-2114

Awarded: Composition and methods useful for inhibiting

cell death and for delivering an agent into a cell

*Co-Inventors:* Ban-An Khaw, Vladimir Torchilin, Imran Vural

US Patent Application #60/039,111; Awarded

Signal enhancement of dispecific antibody-polymer probe

for immunoassay use; *Co-Inventor:* Ban-An Khaw

US Patent Application; Filed Feb 21, 2001

Characterization of microbial deposition and immune response

at basement membranes and methods relating thereto

*Co-Inventors:* E. William Rosenberg, Patricia Noah,

Robert B. Skinner, Jr., Timothy D. Mandrell

US Patent Application; Filed Jun 12, 2002

Intracellular Delivery of Therapeutic and imaging agents to

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