CURRICULUM VITAE

**Albert J. Sinusas, M.D., FACC, FAHA**

**Yale University School of Medicine**

**Section of Cardiovascular Medicine, DANA-3**

**P.O. Box 208017**

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**Born:** September 14, 1957; Huntington, New York

**Education:** M.D., University of Vermont, College of Medicine 8/79 ‑ 6/83

 B.S., Cum Laude Biology, Rensselaer Polytechnic Institute 9/75 ‑ 5/79

**Career:**

7/83‑6/84 Internship, Medicine, University of Oklahoma, Health Science Ctr., Oklahoma City, OK

7/84‑6/86 Residency, Medicine, University of Oklahoma, Health Science Ctr., Oklahoma City, OK

7/86‑6/89 Fellowship, Cardiology, University of Virginia, Health Science Ctr., Charlottesville, VA

7/89‑12/89 Instructor, Cardiology, University of Virginia, Health Science Ctr., Charlottesville, VA

1/90‑6/95 Assistant Professor Medicine & Diagnostic Radiology, Yale University, New Haven, CT

1/90-12/05 Associate Director, Cardiovascular Nuclear Imaging & Stress Laboratory, Yale University, New Haven, CT

8/91- Director, Animal Research Laboratories, Section of Cardiovascular Med., Yale University,

 New Haven, CT

7/95-6/05 Associate Professor Medicine & Diagnostic Radiology, Yale University, New Haven, CT

12/98- Authorized User Yale New Haven Hospital (NRC License 06-00819-03)

7/05- Professor Medicine & Radiology, Yale University, New Haven, CT

1/06-6/13 Director, Cardiovascular Nuclear Imaging & Stress Laboratory, Yale University,

New Haven, CT

4/06-7/12 Radiation Safety Officer (RSO), Nuclear Cardiology Laboratory, Guilford, CT

 (NRC License 06-31070-01)

9/08- Director, Advanced Cardiovascular Imaging, Yale University, New Haven, CT

9/10- Director, Yale Translational Research Imaging Center (Y-TRIC), Yale University, New Haven, CT

10/12-6/15 Board of Directors, YNHH Heart & Vascular Center

7/14- Chief Scientific Officer, Cardiovascular Devices & Imaging (CVDI), LLC

7/14- MicroVide, LLC, limited partner

12/14- Chair Yale University Radioactive Drug Research Committee (RDRC)

6/16- Chair, Yale Radioactive Safety Committee (RSC)

9/18- Chair, Yale Radioactive Investigation Drug Committee (RIDC)

1/20- Professor of Biomedical Engineering, Yale University, New Haven, CT

**Board Certification:**

 National Board of Medical Examiners, Diplomat, 7/2/84

 American Board of Internal Medicine, Internal Medicine, 9/10/86 (permanent)

 American Board of Internal Medicine, Cardiovascular Diseases, 11/8/89 (permanent)

 Certification Board Nuclear Cardiology (CBNC), 12/1/97, 2007-2018, 2018-2028

 Certification Board Cardiovascular Computed Tomography (CBCCT), 2009-2019, 2019-2029

**Medical Licensing:**

 State of Connecticut: 1/26/90- present, License #: 030554

 Commonwealth of Virginia: 11/86 ‑ 9/90

 State of Oklahoma: 8/84 ‑ 8/86

**Academic Honors/Awards:**

 2014 - Robert Wilkinson Annual Lectureship for Nuclear Medicine,

Duke University, Durham, NC, March 27, 2014

 2008 - Hermann Blumgart Award, Society of Nuclear Medicine,

 2006 - M.A. Privatim (honorary Master's degree) from Yale University

2002-2019 -Best Doctors in America 2001-2002, 2005-2006, 2007-2008, 2009-2010, 2010-2011,

2011-2012, 2012-2013, 2014-2015, 2018-2019

 2002 - Top Doctors for Women, Cardiovascular Medicine, Connecticut Magazine

1991 - Cardiovascular Young Investigator Competition, Society of Nuclear Medicine, 3rd place

 1990 - Cardiovascular Young Investigator Competition, Society of Nuclear Medicine, 2nd place

 1988 - National Research Service Award; National Heart, Lung, and Blood Institute (7/88 ‑ 6/90)

 Proposal title: Evaluation of Ischemic Dysfunction with Tc99m MIBI

 Sponsor: George A. Beller, M.D.

 1983 - University of Vermont Century Club Award for Undergraduate Research

**Professional Memberships**:

 Founding Member, American Society of Nuclear Cardiology

 Fellow, American College of Cardiology (FACC)

 Fellow, American Heart Association (FAHA)

 Fellow, American College of Physicians (FACP)

 Member, Society of Nuclear Medicine

 Member, The American Physiological Society

 Member, Society of Cardiovascular Magnetic Resonance

 Member, American Society of Echocardiography

 Member, World Molecular Imaging Society

 Member, Society of Cardiovascular Computed Tomography

**Professional Service:**

**National**

1. National Institutes of Health, Center of Scientific Review

 CSR: Stimulating Access to Research in Residency (StARR) ZHL1 CSR-I (O1) 8/2020

 NHLBI: Clinical Translational Imaging Sciences [CTIS]

 Permanent Standing Member – 7/1/2018-6/30/2019

 Chair – 7/1/2018 – 6/30/2019

NHLBI: Medical Imaging Study Section [MEDI]

 Permanent Standing Member – 7/1/2014-6/30/2018

 Chair – 7/1/2017 – 6/30/2018

NHLBI: Clinical & Integrative Cardiovascular Sciences [CICS]:

 Permanent Standing Member – 8/31/05-6/30/07

 Ad Hoc Reviewer – 3/2004, 11/2004, 3/2005, 2/2009, 4/2009, 6/2009, 6/2012, 10/2012

NHLBI: Spec. Emphasis, ZRG1 F15-x (20), Surgical Sciences, Biomed. Imaging & Bioengineering Chairperson: 7/2013

NIBIB, Special Emphasis, ZEB1 OSR-D(J1)S, Review T32 and R25 grants: 10/2012

CSR: Shared Instrumentation Imaging Grants – ZRG1 SBIB-R: 6/2005

 NIBIB, Special Emphasis Panel – ZRG1 SBIB-F: 7/2004

 NHLBI: Clinical Cardiovascular Sciences (CCVS) –

 7/2000, 12/2000, 4/2001, 7/2001, 4/2002, 11/2002, 11/2003

 NHLBI: Experimental Cardiovascular Sciences Study Section [ECS]: 3/2003

 Council ZRG1 F10 20 (post-doctoral) – 2/2002

 Council ZRG1 F10 29 (pre-doctoral) – 2/2002

1. Board of Directors, Intersocietal Accreditation Commission (IAC) – Nuclear/PET: 1/15-2/21
2. Associate Editor, Computers in Biology and Medicine – 2/2020 - present
3. Associate Editor, Nanomedicine: Nanotechnology, Biology, and Medicine – 1/2015 – 12/2019
4. Associate Editor, Journal of Nuclear Medicine – 1/2011- 12/31/2016
5. Society of Nuclear Medicine & Molecular Imaging

Board of Directors, Cardiovascular Council, 1993–1995, 2001-2003, 2003-2005, 2006-2010, 2011-2013, 2020-2022

 President, Cardiovascular Council, 2005-2006

 Board of Directors, Center for Molecular Imaging Innovation and Translation, 2017-2020

Patient Advocacy Advisory Board, 2011-2014

Chairperson, Cardiovascular Molecular Imaging Outreach Program, 2010-2013

Board of Directors, Molecular Imaging Center of Excellence (MICoE), 2006-2008

Chairperson, Cardiology Working Group of SNM Committee on Outreach

 February 18, 2011 through June 2012

Bylaws Committee, 6/9/11-6/13/12

1. American Society of Nuclear Cardiology

Technology Committee – 2020 - 2022

Board of Directors - 2002-2006

Annual Meeting Program Committee – 2013, 2014, 2016, 2017, 2018, 2020

Quality Assurance Committee – 2006-2009

Education Committee 2003-2006

Research Grants Committee 2001-2004

Director, Cardiovascular Molecular Imaging Task Force 2002

Scientific Program Committee, Basic Scientists Sub-Committee 2002-2004

Government Relations Committee 2002-2004

Imaging Guidelines for Nuclear Cardiology Procedures:

Quality Assurance: Planar Perfusion Imaging

 National Committee Chairman 1996-1998

 National Committee 1999-2001

1. Journal of Nuclear Cardiology, Associate Editor, 6/93–12/03
2. American Heart Association, National

 Cardiovascular (Patho)Physiology 1 Study Committee, 7/1998-6/2003

1. American Heart Association, Heritage Affiliate

 Research Grant Peer Review Committee, Northeast One, 1998-2001

1. American Journal of Cardiac Imaging, Guest Editor, 1993

 Symposium: “Myocardial Reperfusion Imaging: Basic and Clinical”

**Journal Editorial Boards:**

1. Journal of American College of Cardiology, Cardiovascular Imaging – 2008 - present
2. Circulation: Cardiovascular Imaging – 2008 - present
3. Journal of Nuclear Medicine – 2005 - present
4. Journal of Nuclear Cardiology – 1993 - present

**Institutional (Yale University School of Medicine)**

1. Chair, Yale Radioactive Investigation Drug Committee (YU-RIDC): 9/18 - present
2. Chair, Yale University Radioactive Drug Research Committee (YU-RDRC): 12/14-present
3. Diagnostic Radiology Search Committee: 4/13 – 6/15
4. Dean’s Faculty Allotment Committee: 7/08 – 6/11
5. PET Center Steering Committee: 1/07- present
6. Radiation Safety Committee (RSC): 9/05-9/07, 9/09 – present,

Chairman (2017- present)

1. Animal Users Group: 6/01- 06/15, (Chairman, 1/2010 – 6/2015)
2. Advisory Committee, Yale Magnetic Resonance Research Center (MRRC): 2/02 – present
3. Funds and Fellowships Committee: 9/03-12/06
4. Yale Animal Care and Use Committee (IACUC): 1/98-6/03, 7/15-present
5. Yale New Haven Hospital, Clinical Pathways Committee: - “MI with Cath”, 1995-1996

**Hospital (Yale New Haven Hospital (YNHH))**

1. Co-Chair – Clinical Investigations Sub-Committee, YNHH BOD H&VC – 3/13 – 6/15
2. Member, Growth/Strategic Sub-Committee, YNHH BOD H&VC – 2/13 – 6/15
3. Board of Directors – YNHH Heart & Vascular Center (BOD H&VC) - 10/12 – 6/15
4. Chest Pain Center Accreditation Committee – 3/09 - 6/13
5. Expansion of Stress Echocardiography - 1/09 – 6/12
6. CTA Credentialing Committee - 2007- present

**Grant History for last 30 years:**

**Active:**

1. 1R01 HL154345-01 MPI: Liu, C (contact)/Sinusas, AJ 08/01/2020-06/30/2025

NIH/NHLBI $806,926/yr

Title: Development of advanced cardiac SPECT imaging technologies

To develop advanced imaging technologies for static and dynamic SPECT imaging. To develop advanced imaging technologies for dual-isotope SPECT imaging that include motion correction and application of deep learning.

Role: Multi PI/PD Effort 13%

1. R01 HL145786-01 MPI: Meng, LJ (contact)/Sinusas, A/Liu, C/Metzler, S 09/16/2019-9/15/2023

NIH/NHLBI $990,046/yr

Title: SPECT Imaging of Peripheral Vascular Disease

The project involves modeling and construction of the Dynamic Extremity SPECT (DE-SPECT) system that incorporates 3-D HEXIETC CZT detector technology with adaptive sampling strategies for imaging of the lower extremities for application in peripheral vascular disease (PVD).

Role: Multi PI/PD Effort 5%

1. R01 HL121226-06 MPI: Duncan, J (contact)/O’Donnell, M./Sinusas AJ 2/18/2014 – 2/28/2023

NIH/NHLBI $795,348/yr

Title: q4DE: A Biomarker for Image-Guided, Post-MI Hydrogel Therapy

This grant will develop and validate an integrated image analysis approach that will accurately, robustly and reproducibly quantify regional LV strain from 3D rest and stress echocardiographic images for image guided delivery of theranostic hydrogels post MI to reduce post-MI remodeling.

Role: Multi PI/PD Effort 11%

1. R01HL137365-03 (Sinusas, A (contact)/Duncan, J/Burdick, J) 2/15/2017 – 11/30/2021

NIH/NHLBI $793,000/yr

Title: Image Guided Delivery of Bioresponsive Hydrogels

The goal of this project is to optimize the intramyocardial delivery of bio-responsive hydrogels to the heart that degrade in the presence of matrix metalloproteinases (MMPs) and locally release tissue inhibitors of MMPs (TIMPS) for reduction of post myocardial infarction remodeling in a porcine model. This involves the use of hybrid SPECT/CT MMP-targeted imaging to guided catheter-based delivery.

Role: MPI Effort 12%

1. T32 Training Grant (Sinusas, AJ(contact)/Duncan, JS) 9/21/2010 - 8/31/2021 (NCE)

 NIH-NRSA 5T32HL098069-10 $216,552/yr

 Title: “Training in Multi-Modality Molecular and Translational Cardiovascular Imaging”

 A multi-disciplinary post-doctoral training program in which the research conducted will be vital for the advancement and management of cardiovascular diseases and provide advancement in imaging technologies and translational cardiovascular research.

Role: Co-PI No effort

1. 1R01DK124420-01 PI: Tietjen, G 04/01/2020-03/31/2025

NIH/NHLBI $363,830/yr

Title: Mechanisms and Ex Vivo Repair of Cold-Storage Injury in Human Kidney Allografts

In this grant, we will: 1) Define the mechanisms that drive this fibrinogen stress response during cold-storage; and 2) Develop pre-transplant therapeutic strategies to ameliorate this pathology during ex vivo organ perfusion.

Role: Co-Investigator Effort 4%

1. R01 HL089765-10 (PI: Slomka, P - Cedars Sinai) 07/01/2020-06/30/2024

NIH/NHLBI $38,772/yr

Title: Quantitative Prediction of Disease and Outcomes from Next Generation SPECT and CT

The overall aim of this project is to improve current methods by integration of MPS, CT and MPS flow, and clinical data with state-of-the art machine learning approaches for diagnosis, prediction of mortality and prediction of benefit of therapy beyond what is possible by visual analysis and mental integration by physicians.

Role: Co-Investigator (Yale Subcontract) Effort 3%

1. 1R01 MH117064-03 PI: Sestan, N 9/1/2018 -8/31/2021

Title: Technology for functional study of cells and circuits in large postmortem brains ex vivo

Goal: Apply dynamic imaging for evaluation of structure and function in brain.

Role: Co-Investigator Effort 3%

1. DOD Grant No. 12712285 PI: Qyang, Y 07/01/2019 -6/30/2022 $397,584/yr

Title: Human Tissue Engineered Pulsatile Conduits for Treatment of Single Ventricle Congenital Heart Defect

This proposal is aimed at producing a tissue engineered pulsatile conduit (TEPC) for the Fontan procedure, which is used as a clinical intervention for children born with single ventricle congenital heart defect (SVCHD).

Role: Co-Investigator Effort 2%

1. CT Bioscience Innovation Fund (Liu, Y-H.) 2/1/2017 – 1/31/2021 (NCE)

CT Innovations $500,000

Title: Development and Integration of Novel SPECT and PET Quantitative Analysis Tools for Sympathetic and Molecular Nuclear Cardiac Imaging

The goals of this project are to develop a universal web-based system for cardiac image quantitative analyses via the cloud computing technology and to extend the cardiac quantitative analyses (NCIA) developed at Yale to include brain imaging evaluations like those already developed at the Yale Clinical Neural Imaging Center (CNIC).

Role: Collaborator Effort 1%

1. AHA 18CDA34110361 PI: Baldassarre, L (Mentor - Sinusas) 7/1/2018 – 6/30/2021

Title: Advanced Cardiovascular Magnetic Resonance for Detection of Programmed Cell Death Protein-1 Deficient Myocarditis

 Application of MR imaging for the assessment of cardiotoxicity induced by check-point inhibitors.

Role: Mentor No Effort

1. R01 CA206180-04 PI: Duncan, J/ Lin,M) Multi PI/PD 8/1/2016 – 7/31/2021

Title: Quantitative Multimodal Image Guidance for Improved Liver Cancer Treatment

This grant is aimed at enhancing delivery of minimally invasive catheter-based treatments for liver cancer using platforms that embolize tumor vasculature, deliver chemotherapy, and assess their efficacy.

Role: Co-Investigator Effort 3%

1. R01 HL108107-06 (Packard, A/Sinusas A Yale Subcontract) 9/1/2017 –6/30/2021

Subaward through The Children’s Hospital $88,452/yr

Title: A Novel F-18 PET Myocardial Perfusion Radiopharmaceutical based on Rhodamine Dyes

The goal of this project is to develop an 18F-labeled radiopharmaceutical for myocardial perfusion imaging (MPI) using positron emission tomography (PET). The project will: 1) carry out a first-in-human study with 18F-Rho6G in 20 patients to obtain preliminary data about the safety, biodistribution, dosimetry, and image quality of this agent, 2) synthesize and evaluate other xanthene derivatives as potential alternative radiotracers for MPI, 3) measure the extraction fraction of 18F-Rho6G or the best alternative radiotracer, 4) evaluating 18F-labeled cyanines or near-IR dyes known to accumulate in mitochondria.

Role: PI Yale Subcontract Effort 4%

**Previously Funded:**

1. NIH R01 HL123949-05 (Liu, C) 05/15/2014-04/30/2020 (NCE) $243,236/year

 Title: “Low-dose SPECT/CT for imaging chemotherapy-induced microvascular cardiotoxicity”

 The goal of this project is to provide an early index of disruption of the microcirculation and

vascular reserve and improve detection of cancer therapy induced cardiotoxicity,

 Role: Co-Investigator Effort: 15%

1. NIH R01 HL 121226-04 (Duncan, JS) 2/18/2014 – 1/31/2019 (NCE) $393,901/year

 Title: “Integrated RF and B-mode Deformation Analysis for 4D Stress Echocardiography”

 The goal of the project is to create a complete, integrated strategy for 3D stress echocardiography using state-of-the-art imaging and image analysis approaches to derive spatially dense Lagrangian strain/strain rate from 4D (i.e. 3D+t) echocardiography (4DE), acquired using a transthoracic echocardiographic probe to obtain both radio frequency (RF) and B-mode images. Strains will be derived using methods that integrate 3D, RF-speckle-tracking-derived midwall displacements and 3D shape-based endo- and epi-cardial surface displacements found from B-mode image data.

 Role: Investigator Effort: 14%

1. NIH R01 HL135103-02 PI: Stacy, MR 1/13/2017- 3/31/2021 $250,000/year

Title: “Radiotracer-Based Imaging for Quantitative Assessment of Angiosome Perfusion Following Lower Extremity Revascularization”

This study will apply conventional and CZT SPECT/CT imaging to evaluate the relationship between microvascular perfusion and viability in diabetic patients with critical limb ischemia by non-invasively quantifying changes in perfusion in 3D vascular territories (angiosomes), of feet.

Role: Co-Investigator Effort: 5%

1. LCZ696BUSNC17T (Sinusas, A.) 2/13/2017 – 6/30/2018 $236,613

Novartis

Title: MMP targeted imaging in early detection and future prediction of chemotherapy induced cardiotoxicity

The goals of this project are to assess early cardiotoxicity with application of MMP targeting imaging in conjunction with circulating biomarkers of cardiac stress/injury and myocardial strain in a chronic rat model of doxorubicin induced cardiotoxicity and to evaluate the efficacy of established and novel adjunctive therapy in reducing cardiotoxicity in an established rat model.

Role: Principal Investigator Effort 5%

1. NIH 1R01HL122560-04 (Peters, D) 11/2014 – 10/31/2018 $250,000/year

Title: Detection of Atrial Remodeling by MRI: Validation and Emerging Significance

The goal is to identify patients at risk for development of atrial fibrosis, which may contribute to new onset AF. The project will develop cardiac MR techniques, and applies them in an animal model of mitral regurgitation, to correlate regional strain with regional atrial fibrosis development and progression, and then to translate these methods in a patient group, at risk for new onset AF.

Role: Investigator Effort: 5%

1. NIH 1R01 HL116455-04 (Annex, B UVA; Sinusas, AJ Yale PI) 4/1/14-3/31/18 $187,310/year

 (Subaward through University of Virginia Federal Award)

 Title: “A Bioengineering Approach to Gene Therapy for Peripheral Arterial Disease”

 The goal of this grant is the creation of a large animal model of hindlimb ischemia for evaluation of gene therapy via AAV9 vectors and to provide support for development of a novel SPECT reporter system for evaluation of gene expression in murine and pig models of hindlimb ischemia.

 Role: Yale PI subcontract Effort: 5%

1. NIH R01 HL113352-05 (Sinusas, AJ(contact)/Akar, JG) 2/1/2013 - 7/31/2018 (NCE) $450,348/year

Title: “Molecular Imaging Predicts Atrial Remodeling and Fibrillation Vulnerability”

The project will non-invasively identify the substrate that predisposes to atrial fibrillation (AF) before the development of irreversible change in order to provide early preventative intervention. The focus is on MMP targeted SPECT/CT imaging.

 Role: Co-PI Effort 15%

1. R56HL136715-01 (Chun, H) 9/25/2017 – 8/31/2018 $351,127

NIH/NHLBI

Title: Molecular Mechanisms of Neonatal Pulmonary Hemorrhage

The goal of this project is to test the relevant role of the ERK5-ANGPT2 pathway in promoting stabilization of the pulmonary vasculature in the pivotal newborn period. The ultimate goal will be to develop new therapeutic strategies for neonatal pulmonary hemorrhage.

Role: Co-Investigator Effort 2%

1. NIH R01 HL112992-04 (Sadeghi, M) 2/1/2013-1/31/2018 (NCE) $250,000/year

Title: “Macrophage Elastase and Its Imaging in Vascular Inflammation and Remodeling”

The main goals of the proposal are to develop novel tracers for imaging macrophage elastase activation, investigate expression of macrophage elastase on inflammatory cells and validate macrophage elastase-targeted imaging for imaging vessel wall inflammation and remodeling in atherosclerosis and aneurysm.

 Role: Co-Investigator Effort: 5%

1. PPG (Simons, M) 3/1/2012 – 1/31/2018 (NCE) $140,000/year

 Core B: SURGICAL AND IMAGING CORES (Core PI: Sinusas)

 Title: “Molecular control of collateral development”

In this PPG we propose a comprehensive approach to investigate the molecular basis of arterio-genesis and to develop new intellectual framework for therapeutic advances in this field. To this end, we will investigate a novel signaling pathway that seems to be critical to arteriogenesis (Project 1), study contributions of nitric oxide and the extracellular matrix (Project 2), and determine the role of shear stress and other mechanical factors in initiating arteriogenesis in adult tissues (Project 3). Associated with this program project there are 4 additional cores; administrative, bioreactor, cell isolation and mouse genotyping, and imaging/surgery.

Role: Principal Investigator, Imaging/Surgery Core Effort: 5%

1. 1R01HL114703-05 (Sadeghi, MM) 8/23/2012-6/30/2017 250,000/year

 Title: “Imaging Protease Activation in Calcific Aortic Valve Disease”

 The main goal is to detect valvular biology leading to calcific aortic valve d Effort: 5%isease.

 Role: Co-Investigator Effort: 5%

1. OCR5557.40 (Young) 2/10/2016 – 2/5/2018

MIFCOR, Inc. (Connecticut Innovations) $334,520

Title: MIFCOR: MIF-2 Commercialization

The goals for this grant is to validate MIF-2 action in a large animal model of schemia/reperfusion injury.

Role: Investigator Effort: 15%

1. Novartis (Tirziu, D) 3/1/2016 – 10/30/2017 $447,423

Study No: LCZ696BUSNC06T

Title: Beneficial mechanisms of the dual angiotensin receptor - neprilysin inhibitor LCZ696 for the

treatment of heart failure

 The goal of this project is to evaluate the benefit and mechanism of action of LCZ696 for treatment of heart failure in rat model of post-MI remodeling.

Role: Investigator Effort: 3%

1. S10 OD021845-01 (Sinusas, AJ) 4/1/2016 – 3/30/2017 $600,000

Title: Ultra-high Performance MicroSPECT/CT System

This shared instrument proposal is for purchase of a hybrid multi collimator microSPECT/CT imaging system (MILabs MicroSPECT4CT), with a goal of high resolution, high sensitivity radionuclide targeted molecular imaging in small animals. The proposed state-of-the-art SPECT/CT imaging system will support the needs of multiple current NIH funded investigators at Yale University School of Medicine, from the Departments of Medicine, Diagnostic Radiology, Laboratory Medicine, and Pathology.

Role: PI No effort

1. Merck Corp. LKR137443/OCR6634 (Young LH, Sinusas AJ) 03/03/15- 03/02/17

Title: “Yale University Heart Failure and Imaging Studies in Rat Myocardial Infarction Model”

Goal to develop and apply multimodality imaging in evaluation of myocardial infarction and heart failure.

Role: Yale Co-PI

1. BIOMAGSCAR Yale-UCL (Martin, J) 3/1/12- 12/31/16 €483,830 (over 4 years)

EU Grant Agreement #: 278313

 Title: “Biodegradable magnetic stent for coronary artery luminal regeneration”

Role: Co-Investigator Effort: 5%

1. Am. Heart Assoc. 14GRNT19040010 (Liu, Y-H) 01/01/2014-12/31/2016 $60,000

 Title: “Detection, correction & quantification methods for molecularly targeted SPECT/CT imaging of the heart”

 This grant will develop and validate a new reconstruction approach for SPECT/CT imaging using a hybrid solid state SPECT 64-slice CT scanner.

 Role: Investigator Effort: none

1. Am. Heart Assoc. 14CRP20480404 (Stacy, M) 07/01/2014-6/30/2016 $77,000/year

 Title: “Noninvasive imaging for evaluation of microvascular perfusion and treatment outcomes in diabetic patients with CLI”

 This is a mentored clinical and population research award grant that will apply a new quantitative SPECT/CT imaging approach for evaluation of lower extremity perfusion in diabetic patients with critical limb ischemia.

Role: Mentor Effort: 1%

1. Am Heart Assoc. GIA 13GRNT1709037 (Liu, C) 07/01/2013-06/30/2016 $197,859

Title: Quantitative Dynamic SPECT Imaging of Cardiac Sympathetic Innervation

This grant will develop and validate quantitative SPECT imaging methods for dual-isotope dynamic I-123mIBG and Tl-201 to simultaneously quantify cardiac sympathetic innervation and myocardial blood flow.

Role: Investigator Effort: 1%

1. NIH-NIDDK 2U24DK059635-06 PI: Shulman, G. 9/16/11-6/30/16

Title: “Yale Mouse Metabolic Phenotyping Center”

This center was created to advance research in diabetes, providing novel experimental tools for pheno-typing mouse transgenic models of diabetes and related disorders using state-of-the-art methodology.

Role: Director, Imaging sub-core

1. Astellas PharmaGlobal (Sinusas, AJ) 7/1/2011-12/1/2014

Title: “Detecting Heart Disease Using First Pass Imaging with Gated SPECT Perfusion.”

The primary aims of this Phase IV clinical trial are two-fold: 1) to determine if stress first pass imaging in conjunction with gated SPECT will improve the sensitivity for detecting heart disease and 2) to determine if first pass imaging provides a more reproducible approach for evaluation of both rest and stress global LV function over gated SPECT perfusion imaging compared with 3D echocardiography.

1. NFL Charities (Sinusas, AJ) 7/1/2012- 6/30/2014 $100,000

Title: "Non-Invasive Quantitative Imaging of Muscle Growth and Vascularization in College Football Athletes"
 The study evaluates the effect of weight training on muscle growth and associated vascularization in linemen versus position players.

Role: Principal Investigator Effort: 3%

1. R21 HL103463 (Peters, DC) 6/15/11 - 5/31/14 $125,000

Title: “In Search of the Arrhythmogenic Grey Zone within Myocardial Scar Using Late Gadolinium

Enhancement Cardiovascular Magnetic Resonance”

 The major goal of this proposal is to improve late gadolinium enhancement imaging and analysis methods to identify arrythmogenic myocardial scar.

Role: Collaborator Effort: 3%

1. Yale CCI Scholar Award (Liu, C) 7/1/2011 - 12/30/2013 $25,000

 Title: “Quantitative SPECT Imaging of Myocardial Blood Flow”

 This grant is to study the feasibility of quantifying myocardial blood flow using dynamic

SPECT/CT in porcine models.

Role: Mentor and investigator

1. Lantheus Medical Imaging, Inc. (Sinusas, AJ) 4/1/2011 – 6/1/2013

 “A Phase 3: Open-Label Multicenter Study for the Assessment of Myocardial Perfusion using Positron Emission Tomography (PET) Imaging of Flurpiridaz F18 injection in Patients with Suspected or Known Coronary Artery Disease”

 To acquire data for the evaluation of Flurpiridaz F18 injection in PET myocardial perfusion imaging.

Role: PI

1. Siemens Healthcare (Liu, C) 10/1/2011 - 12/31/2013 $178,666

 Title: “Myocardial Blood Flow: Preclinical and Clinical Evaluation on the mCT” This grant is to develop algorithms for motion correction and 4D reconstruction algorithms, and to optimize myocardial blood flow quantification on Siemens mCT using canine models and human subjects.

 Role: Co-Principal Investigator Effort: 1%

1. R21 HL098573 (Peters, DC) 8/24/11 - 6/30/12 $182,781

Title: “Late Gadolinium Enhancement Cardiovascular MR for the Detection of Pre-Existent Left Atrial Scar in Patients with Atrial Fibrillation”

The objective of this work is to detect the arrhythmic substrate which may cause atrial fibrillation, by improving the sensitivity of standard scar imaging methods, and studying patients with atrial fibrillation.

Role: Collaborator Effort: 5%

1. R01- HL085093-01 (Sadeghi, MM) 09/01/07-06/30/12 $250,000

 “Molecular Imaging of Vascular Remodeling”

The major goal of this project is to address the functional significance of αvβ3 and MMP activation in models of vascular remodeling using a non-invasive imaging approach.

Effort: 5% Role: Co-Investigator

1. NIH-NHLBI: 2R01 HL65662-05 7/2001-5/31/2011(NCE) $1,000,000 ($250,000/yr)

“Non-invasive Methods for Imaging Angiogenesis”

Principal Investigator: Albert J. Sinusas, M.D.

The major goal is to apply radiotracers targeted at the αvβ3 integrin in combination with CT angiography using hybrid microSPECT/X-ray CT imaging strategies for the *in vivo* evaluation of the interdependent roles of angiogenesis and arteriogenesis in limb salvage in peripheral arterial disease (PAD). The *in vivo* hybrid methodology will be tested by evaluating the role of the αvβ3 integrins and nitric oxide (NO) in the regulation of these processes in murine models.

Effort: 18% Role: PI

# NIH (subcontract): R08881 6/01/08-5/31/11 (NCE) $99,197

“Collagenase Inhibition in Heart Failure”

Principal Investigator: Francis G. Spinale, MD. PhD. (Medical University of South Carolina)

Effort: 5% Role: Co-investigator

1. BRP HL082640-01A1 (Duncan, JS) 9/01/06-6/30/11 $7.2M ($250,000/yr as Partner) “LV Strain Quantification from 4D Echocardiography”

In this BRP, four partners from two academic institutions and industry will develop and validate an integrated imaging/image analysis system that will accurately, robustly andreproducibly quantify regional LV strain and strain rate from four-dimensional (3 spatial dimensions and time) echocardiographic (4DE) image sequences.

Effort: 25% Role: Co-Investigator, Cardiology Partner

1. CT Department of Public Health (Sampath, S) 1/15/2011-1/15/2012

“Magnetic resonance imaging (MRI) assessment of peripheral artery disease at 3 tesla”

This project’s purpose is to identify non-invasive magnetic resonance imaging markers to assess peripheral artery disease (PAD) and perform initial testing in normal volunteers and porcine animal models of PAD.

Effort: 5% Role: Co-investigator

1. R01HL077810-01A2 8/1/06-6/30/11 (NCE) $250,000/yr

“Segmentation of Ultasound Images”

Principal Investigator: Hemant Tegare, PhD

Effort: 3% Role: Co-Investigator

1. NIH - NHLBI 5P01 HL70295-03 6/30/01-8/01/11 (Project 3, $250,000/yr)

"Chronic DTH and IFN-g in human graft arteriosclerosis" (PI: Jordon Pober, M.D., Ph.D.)

Project 3, Imaging DTH, IFN-gamma Response and GA in Human Arteries,"

Co-Investigator: Albert J. Sinusas, M.D., Project 3 (PI: Jeffrey Bender, M.D.)

Effort: 3%

1. NIH-NHLBI: R01 HL077357-01 (Min, W) 04/01/2007 – 03/31/2011

“TNF receptor-2 signaling in arteriogenesis/angiogenesis.”

The major goal of this project will be to characterize defects of angiogenesis and arteriogenesis in TNFR2-KO mice and dissect TNFR2 signaling in ECs, and define the role of EC-expressed TNF2 in inflammatory angiogenesis using transgenic mouse models.

Effort: 3% Role: Co-Investigator

1. R01 HL080176 12/1/05- 11/30/10 (NCE) $250,000/yr

 "Cardiovascular effects of endothelial-derived neuregulin"

 Principal Investigator: Kerry Russell, MD, PhD

Effort: 2% Role: Co-Investigator

1. NIH: 1R13HL096375-01 4/30/09 – 4/29/10 $15,000

“Multimodality Cardiovascular Molecular Imaging Symposium”

Principal Investigator: Albert J. Sinusas, M.D.

The proposed two-day symposium will bring together individuals from multiple scientific

disciplines; including chemistry, engineering, physics, molecular biology, cardiovascular

physiology, and imaging sciences with the goal of promoting the nascent field of

cardiovascular molecular imaging.

1. NIH-1S10RR025555-01 4/01/09 – 3/31/10 $500,000

“Hybrid Volumetric SPECT/CT Imaging System”

Principal Investigator: Albert J. Sinusas, M.D.

The state-of-the-art SPECT/CT imaging system will support the translational research of multiple current NIH funded investigators at Yale University School of Medicine, from Departs. Medicine, Diagnostic Radiology, Surgery, and Anesthesiology, and Depart. Biomedical Engineering Yale University. The imaging system will allow for the testing and validation of experimental molecular imaging agents and bioengineered blood vessels.

1. NIH-NHLBI: R01 HL078650-01 9/04-8/10 (NCE) $1,538,122 (>$350,000/yr)

“Imaging of MMP Activation and Myocardial Strains”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 18%

The major goal of this project is to develop and validate a quantitative non-invasive approach for serial evaluation of MMP activation following myocardial infarction and relate changes in MMP activation to changes in regional myocardial strain and microstructure.

1. Lantheus Medical Imaging, Inc. 5/2009 -5/2010 $194, 099.00

**(**Budget for Normal Volunteers)

"A Mulitcenter, A Single-Dose, Phase I, Dosimetry, Biodistribution, and Safety Trial of LMI1195 in Healthy Subjects and patient with Heart Failure"

Principal Investigator - Albert Sinusas, MD

1. American Society of Nuclear Cardiology 2009-2010 $30,000

Fellowship Award

“Determining MBF and reserve in cardiac transplant receipients by Rb-82 PET”

Principal Investigator: Ajay Srivastava, MD

Faculty Sponsor: Albert J. Sinusas, MD

1. R01 HL079104-01A2 6/1/2007–5/31/2009

“3-OST-1 Regulation of Antithrombin Isoform Partitioning”

Principal Investigator: Shworak, N (Dartmouth)

Role: co-investigator (PI - subcontract)

Effort: 3%

1. Bristol-Myers Squibb 9/15/05-12/30/10, $66,535

# “Noninvasive Imaging of Matrix Metalloproteinase in Chronic Rat Models of Myocardial Ischemic Injury: Implications for Early Prediction of LV Remodeling”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 1%

1. Boehringer Ingelheim Pharmaceuticals, Inc. 1/1/08-12/31/08

# “Effect of Telmisartan on MMP activation and LV Remodeling in Chronic Rat Models of Myocardial Infarction: Role of Noninvasive Imaging of Matrix Metalloproteinase and/or Angiotensin II type 1 receptor”

Principal Investigator: Albert J. Sinusas, M.D.

1. AHA SDG 7/2004 - 6/2008

“Imaging αvβ3 integrin in injured arteries”

Principal Investigator: Mehran M. Sadeghi, M.D.

Investigator: Albert J. Sinusas, M.D.

Effort: 3% (no cost)

1. JDRF – 5-2005-1259 10/01/05-3/30/07, $100,000

“Targeted Imaging of Angiogenesis and Angiogenesis and Angiogenic Therapy in Type 1 Diabetes”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 5%

1. GE Healthcare 7/1/05-6/30/07, $260,629

“Evaluation of ventricular remodeling in dogs using SPECT imaging after myocardial infarction”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 3%

1. NIH Fellowship, F32HL083651 7/2006-6/2007

“Quantification of transmural injury after myocardial infarction using strains from 3D echocardiography”

Fellow: Zakir Sahul, Ph.D.,M.D.

Sponsor: Albert J. Sinusas, M.D.

1. NIH - NHLBI 5RO1 HL65662-04 7/2001–6/2006, $976,000 ($244,000/year)

"Non-invasive methods for imaging myocardial angiogenesis"

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 25%

1. Amersham International 10/2002-10/2005, $336,000 ($112,000/year)

“Imaging of Vitronectin Receptor in Animal Models of Ischemia: Potential Targeted Marker of Myocardial Angiogenesis”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 3%

1. NIH - NIBIB 1R21 EB001774-01 9/2003-8/2005, $300,000 ($150,000/year)

"Small Animal imaging and hotspot quantification methods"

Principal Investigator: YiHwa Liu, Ph.D.

Co-Investigator: Albert J. Sinusas, M.D.

Effort: 5%

1. Hong Kong Research Grants Council HKUST6151/03E 9/2003 - 8/2006

 “Robust estimation of myocardial kinematics and material properties”

Principal Investigator: Pengcheng Shi, Ph.D. (Hong Kong University of Science and Technology)

Co-Investigator: Albert J. Sinusas, M.D.

Effort: 3% (no cost)

1. Brown-Coxe Fellowship 7/2005-6/2006

‘Non-invasive evaluation of nitric oxide mediated angiogenesis in murine model of hindlimb ischemia“

Fellow: Wawrzyniec Dobrucki, Ph.D.

Sponsor: Albert J. Sinusas, M.D.

1. AHA Fellowship 7/2005-6/2006

“Quantification of transmural injury after myocardial infarction using strains from 3D echocardiography”

Fellow: Zakir Sahul, Ph.D.,M.D.

Sponsor: Albert J. Sinusas, M.D.

1. NIH - National Center for Research Resources

Shared Instrumentation Grant, 1 S10 RR018039-01 4/2004– $500,000

“Dedicated Animal SPECT X-ray CT”

Principal Investigator: Albert J. Sinusas, M.D.

1. NIH – National Center for Research Resources

Shared Instrumentation Grant, 1 S10 RR16732-01, 3/2003– $180,000

“Ultrasound Imaging System”

Principal Investigator: Albert J. Sinusas, M.D.

1. NIH - NIBIB 8RO1 EB002068-11 2000-2005, $1,007,708 ($237,190/year)

"Dynamic Analysis of LV Deformation from 4D Images"

Principal Investigator: James S. Duncan, Ph.D.

Co-investigator: Albert J. Sinusas, M.D.

Effort: 15%

1. Cardiovascular Therapeutics 3/2004-6/2005 $154,883

“Pre-clinical Evaluation of a Selective Adenosine A2A Agonist (CVT-3146) for Stress Myocardial MR Perfusion Imaging”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 2%

1. AHA, Heritage Affiliate Grant-in-Aid 7/2001 - 6/2005

“Modeling the Effect of Pharmacological Stress on the Myocardial Perfusion and Tracer Patterns: Experimental Validation”

Principal Investigator: Purushothaman, Kailasnath PhD

Investigator: Albert J. Sinusas, M.D.

Effort: 3% (no cost)

1. ASNC Fellowship 8/2004-7/2005

“Targeted Imaging of Matrix Metalloproteinase Activity in Relationship to Regional Cardiac Deformation”

Fellow: James Song, M.D.

Sponsor: Albert J. Sinusas, M.D.

1. American Heart Association, National Grant-in-Aid, 1/2000-12/2003, $210,000 ($70,000/year)

"Development of non-invasive imaging strategies for evaluation of angiogenesis."

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 30%

1. CV Therapeutics 8/2001–12/2003, $50,000, ($25,000/year)

“Pre-clinical evaluation of a selective A2a agonist (CVT-3146) for stress myocardial SPECT perfusion imaging”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 3%

1. American Heart Association, Heritage Affiliate, 9850014T

Grant-in-Aid, 1998-2000, $88,000 ($44,000/year)

"Alterations of left ventricular deformation affects coronary flow."

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 30%

1. NIH - RO1 244803-01A3, 1996-2000, $1,007,708 ($237,190/year)

"Dynamic Analysis of LV Deformation from Images"

Principal Investigator: James S. Duncan, Ph.D.

Co-investigator: Albert J. Sinusas, M.D.

Effort: 10%

1. American Heart Association, Heritage Affiliate,

Grant-in-Aid, 1998-2000, $88,000 ($44,000/year)

"Noninvasive assessment of coronary stenosis severity using novel MR imaging techniques."

Principal Investigator: R. Todd Constable, Ph.D.

Co-Investigator: Albert J. Sinusas, M.D.

Effort: 5%

1. Nihon Mediphysics 1996-1999, $194,000 ($97,000/year)

“Dynamic SPECT BMIPP Imaging comparison with Perfusion and FDG Accumulation”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 20%

1. American Heart Association, Connecticut Affiliate

Fellowship - John Carr, M.D., 1997-1998, $13,800

"Ischemic LV deformation affects remote deformation and CFR.”

Sponsor: Albert J. Sinusas, M.D.

1. NIH DHHS, 2R44HL53086-02 1997-1998, $50,000

“Evaluation of LVEF using a proportional multiwire gamma camera and short-lived tantalium-178”

Principal Investigator: Proportional Technologies Inc.

Role: Site Co-Investigator

Effort: 5%

1. United States Surgical Corporation 1997-1998, $184,000

“Delivery system for transmyocardial revascularization by excimer laser

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 20%

1. Amersham International Plc. 1997-1998, $44,000

“Evaluation of Tc99m-HL91 imaging for the detection of regional ischemia”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 10%

1. American Heart Association, National, 94011600

Grant-in-Aid, 1994-1997, $120,000 ($40,000/year)

"Multimodality 3 - dimensional assessment of flow and functional reserve for determination of myocardial viability"

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 30%

1. Whitaker Foundation 1993-1997, $240,000 ($67,000/year)

“Development of advanced MRI techniques for in vivo cardiac analysis”

Principal Investigator: R. Todd Constable, Ph.D.

Collaborating Investigator: Albert J. Sinusas, M.D.

Effort: 5%

1. Whitaker Foundation 1994-1997, $240,000 ($67,000/year)

“Multiresolution analysis of 3D heart motion heterogeneity”

Principal Investigator: Hemant Tegare, Ph.D.

Collaborating Investigator: Albert J. Sinusas, M.D.

Effort: 5%

1. American Heart Association, Connecticut Affiliate,

Fellowship - Eliot Heller, M.D., 1994-1996, $50,000 ($25,000/year)

"Myocardial Viability determined using spatial and temporal parameters of LV motion."

Sponsor: Albert J. Sinusas, M.D.

1. Whitaker Foundation 1993-1996, $180,000 ($60,000/year)

"Methods for the assessment of myocardial viability by multimodality image analysis of flow and function from MR and SPECT"

Principal Investigator: Lawrence Staib, Ph.D

Co-Investigator: Albert J. Sinusas, M.D.

Effort: 15%

1. NIH - RO1 244803-01A3, 1992-1995, $967,000 ($228,000/year)

"4D Flow field analysis of regional LV function".

Principal Investigator: James S. Duncan, Ph.D.

Co-investigator: Albert J. Sinusas, M.D.

Effort: 15%

1. Picker International 1994-1995, $20,000

“Experimental Validation of Simultaneous Emission and Transmission Converging Tomography”

Principal Investigator: Albert J. Sinusas, M.D

Effort: 5%

1. Medco Research, Inc 1994, $30,000

“Assessment of myocardial viability with dynamic SPECT 123IPPA imaging”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 5%

1. Gensia Pharmaceutical 1993-1994, $44,800

“Comparison of dobutamine with arbutamine in Tl-201 imaging

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 10%

1. American Heart Association, Connecticut Affiliate,

Grant-in-Aid, 1992-1994, $60,000 ($30,000/year)

"Assessment of viability and vessel patency post reperfusion"

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 50%

1. Bristol Myers Squibb 1993-1994, $20,000

“Evaluation of Tc99m-nitroimidazole imaging for the detection of regional ischemia”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 5%

1. Squibb Diagnostics 1991-1992, $20,000

“Evaluation of serial Tc99m-teboroxime imaging for the early assessment of myocardial viability and vessel patency post coronary reperfusion”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 5%

1. Dupont DeNemours & Co. 1990-1992, $40,000

“Tc99m-sestamibi for the assessment of myocardial viability by simultaneous analysis of regional myocardial perfusion and function”

Principal Investigator: Albert J. Sinusas, M.D.

Effort: 40%

**Lectures, Courses:**

1. **Professional Society Sponsored Courses (Organizer, Chairman, Invited Lecturer)**
2. **Rambam Cardiology Zoom Roundtable,** May 21, 2020

Invited Discussant: Innovation in imaging

1. **Virtual American Society of Nuclear Cardiology Meeting,** May 19, 2020

Invited Lecturer:Novel technology for Molecular Imaging

1. **Rambam Cardiology Symposium,** February 17-18, 2020, New York, NY

Invited Lecturer: Imaging of matrix metalloproteinases and remodeling

1. **American Society of Nuclear Cardiology Annual Meeting,** September 12-15, 2019

Chicago, IL

Invited Lecturer: Presiding the Future Machine Learning and Big Data in Cardiac Imaging

1. **World Molecular Imaging Congress (WMIC) Annual Meeting,** September 3-8, 2019,

Montreal, Canada

Invited Lecturer: Imaging of matrix metalloproteinases and remodeling

1. **Society of Nuclear Medicine & Molecular Imaging (SNMMI) Annual Meeting,** June 22, 2019,

Anaheim, CA

Invited Lecturer: “Cardiovascular Theranostics: Current Status and Future Potential”

1. **International Conference of Nuclear Cardiology and Cardiac CT (ICNC),** May 14, 2019,

Lisbon, Portugal

Invited Lecturer: “SPECT perfusion: Is it good enough?”

1. **American College of Cardiology Conference (ACC),** March 18, 2019, New Orleans, LA

Invited Lecturer: “Non-Invasive Imaging and the Year in Review”

1. **Rambam Cardiology Symposium,** February 19-20, 2019, New York, NY

Invited Lecturer: “Quantitative flow and molecular imaging with hybrid SPECT/CT and PET/CT”

1. **Novartis Workshop,** “January 8, 2019, Boston, MA

Invited Lecturer: Multi-modality imaging in the evaluation of Entresto in pre-clinical models of

Myocardial infarction and chemotherapy induced cardiotoxicity”

1. **New England Congenital Cardiology Association (NECCA) Annual Meeting 2018**,

Westbrook, CT. October 13-14, 2018

Invited Lecturer: “State of the Art Congenital Coronary Imaging”

1. **Society of Nuclear Medicine & Molecular Imaging (SNMMI) Annual Meeting**,

Philadelphia, PA. June 23-26, 2018

Invited Lecturer: “Review of CZT SPECT Cases”

1. **American Society of Nuclear Cardiology Industry Forum,** Washington DC/Baltimore, MD

May 20-21, 2018

Invited Lecturer: “SPECT Myocardial Blood Flow: Is It Feasible?”

1. **Society of Nuclear Medicine & Molecular Imaging (SNMMI) Annual Meeting,**

Denver, CO, June 10-14, 2017

Invited Lecturer: “Targeting the Vulnerable Plaque with Multimodality Techniques“

Invited Lecturer: “Inflammation and Oxidative Stress”

Invited Lecturer: “Summary: Cardiac SPECT”

1. **American College of Cardiology Annual Meeting**

Washington DC, March 17-19, 2017

Invited Lecturer: “Imaging Myocardial Remodeling”

1. **Society of Nuclear Medicine & Molecular Imaging (SNMMI) Mid-Winter Meeting,**

Phoenix Arizona, January 15-21, 2017

Invited Lecturer: “Imaging angiogenesis and tissue vascularization”

1. **American Society of Nuclear Cardiology Annual Meeting**

Boca Raton, FL, September 22-25, 2017

Invited Lecturer: “Debate Clash of the Titans (CVMI White Horse)”

Invited Lecturer: “Imaging Molecular Mechanisms in Heart failure”

1. **Society of Nuclear Medicine & Molecular Imaging (SNMMI) Annual Meeting,**

San Diego, June 11-15, 2016

Organizer and Moderator: New Targets: Tracer and Techniques in Nuclear Cardiology

1. **Washington University School of Medicine, Hybrid Imaging Lecture for Residents/Fellows**

St. Louis, MO, May 5, 2016

Invited Lecturer: “Hybrid SPECT/CT imaging”

1. **American College of Cardiology Scientific Sessions**

Chicago, IL, April 4-6, 2016

Invited Lecturer: “Opportunities and Challenges for Cardiac Molecular Imaging

Invited Lecturer: “Molecular Imaging of Cardiac and Peripheral Angiogenesis”

Session Leader/Moderator: “Emerging Molecular Imaging Approaches in Cardiology”

Co-Chair Scientific Sesson#743: “Non-Invasive Imaging”

1. **American Pharmacists Association (APhA) 2016 Meeting,** Baltimore, MD, March 5, 2016

Invited Lecturer: “SPECT and PET Technologies for Cardiovascular Disease”

1. **Society of Nuclear Medicine Molecular Imaging (SNMMI) Annual Meeting,**

Baltimore, MD; June 6-11, 2015

Invited Lecturer:” New Developments in SPECT Software”

1. **International Conference of Nuclear Cardiology and Cardiac CT (ICNC)**

Madrid, Spain, May 3-5, 2015

Invited Lecturer: “Radionuclide Imaging - Quantitative perfusion SPECT”

1. **SNMMI/ASNC Cardiovascular Molecular Imaging Think Tank: Devising Strategies to**

**Bridge the Translational Divide**

Washington DC, April 16-17, 2015

Sub-Chair – Imaging in Arrhythmias

 Lecturer: “Arrhythmias Potential Molecular Imaging and Other Strategies to Address the Gaps”

1. **Society of Nuclear Medicine Molecular Imaging , New England Chapter Technologist Section (SNMMI-NECTS)**

Boston, MA, March 27, 2015

Invited Lecturer: "Hybrid Volumetric SPECT/CT Imaging with CZT-Based SPECT Technology"

1. **American College of Cardiology Scientific Sessions**

San Diego, CA, March 14-16, 2015

Invited Lecturer: “Sympathetic Activity and Cardiovascular Risk Assessment”

1. **CVC Session at SNMMI Mid-Winter meeting**

San Antonio, TX, January 24, 2015

Invited Lecturer: “An Overview of Molecular Imaging Approaches”

1. **Texas Children’s Coronary Anomalies Symposium 2014**

 Houston, TX, December 4-5, 2014

 Invited Lecturer: “Nuclear Imaging Approaches”

1. **PET Molecular Imaging Workshop**

 Charlottesville, VA October 2, 2014

 Invited Lecturer: “Nuclear Medicine”

1. **American Society of Nuclear Cardiology (ASNC) 2014**

 Boston, MA; September 18-21, 2014

 Invited Lecturer: “Molecular Imaging of Peripheral Arterial Disease and Angiogenesis”

1. **2014 WMIC Spotlight Session "Molecular Imaging: Spotlight on Cardiology**

 Seoul, Korea. September 18, 2014

 **Keynote Lecture:** “Molecular imaging of post-MI remodeling”

1. **Society of Nuclear Medicine Molecular Imaging (SNMMI) Annual Meeting,**

St. Louis, MO; June 7-10, 2014

Invited Lecturer: "Cardiac Response to Therapy"

Invited Lecturer: "New Targets"

1. **SNMMI MidWinter Meeting,** Palm Springs, CA, February 9, 2014

Invited Lecture: “Game Changer in Myocardial Perfusion Imaging”

1. **Japanese Society of Nuclear Medicine,** Fukuoka, Japan, November 9, 2013

**Keynote Lecture:** “Quantitative Molecular Imaging for Evaluation of Cardiovascular Disease”

1. **American Society of Nuclear Cardiology,** Chicago, IL, Sept. 27-29, 2013

Invited Lecture: “Assessment of Coronary Microvascular Function for Early Detection of Chemotherapy Cardiotoxicity”

1. **Society of Nuclear Medicine Molecular Imaging (SNMMI) Annual Meeting,**

Vancouver, Canada; June 8-12, 2013

Invited Lecturer: “Radiotracers to Image Post-MI Remodeling”

1. **International Conference on Nuclear Cardiology and Cardiac CT (ICNC) 11**,

Berlin, Germany, May 5-8, 2013

Invited Lecturer: “Multimodality Imaging of LV Remodeling: Molecular Targets of Theranostics”

1. **American Physiological Society (APS) Experimental Biology (EB) 2013**,

Boston, MA; April 20-24, 2013

Invited Lecturer: “Muli-modality Imaging of Remodeling Post-MI: Anatomical, Physiology and Molecular Targets”

1. **American College of Cardiology,** Annual Meeting, San Francisco, CA, March 9-11, 2013

Invited Lecture: “Advances in Nuclear Imaging Techniques for Heart Failure Patients”

1. **SNMMI MidWinter Meeting,** New Orleans, LA, January 25-27, 2013

CVC Session: Translational Cardiovascular Molecular Imaging (organizer)

Invited Lecture: "Molecular Targets on the Verge of Clinical Translation"

1. **IEEE Healthcare Innovation Conference,** Houston, TX, Nov. 7-9, 2012

 **Keynote Lecture: “**Engineering and Medicine: Multidisciplinary team for cardiovascular molecular and translational imaging”

1. **American Heart Association**, Annual Scientific Sessions, Los Angeles, CA, Nov. 3-7, 2012

 Invited Lecture: “Molecular imaging in CHF”

1. **American Society Echocardiography (ASE):** Cardiovascular Ultrasound Technology and Research Summit, Los Angeles, CA, Nov. 3, 2012

 Title: “Myocardial Deformation”; What work remains to be done to ensure interoperability? Which applications of strain imaging are main stream? Which applications should be and how do we move them forward?

1. **American Society of Nuclear Cardiology,** Baltimore MD, Sept. 6-9, 2012

 Invited Lecture: “SPECT Imaging in PAD”

1. **The Danish Cardiovascular Research Academy and Faculty of Health Sciences,**

University of Copenhagen PhD-course: Cardiovascular Imaging,

 Copenhagen, Denmark, September 19-21, 2012

 Invited Lecture: “Methodology and Current Status of Clinical Cardiovascular Molecular Imaging”

 Invited Lecture:

1. **Society of Nuclear Medicine (SNM) Annual Meeting**, Miami, FL, June 9-13, 2012

 Invited Lecture: “CZT Multipinhole Cameras: Clinical and Research Experience”

 Invited Lecture: “Molecular Imaging of the Heart for the Lay Person”

 Invited Lecture: “Molecular Imaging of Heart Failure Pathophysiology and Regenerative Therapy”

 Invited Lecture: “Is Assessment of Absolute Myocardial Perfusion with SPECT Ready for Prime Time?”

1. **Society of Nuclear Medicine; 3rd Multimodality Cardiovascular Molecular Imaging Symposium**, Bethesda, MD, April 19-21, 2012

 Program Chairman: Albert J. Sinusas

 Invited Lecture: “Introduction and Overview”

1. **American College of Cardiology (ACC) Annual Scientific Session**,

Chicago, IL, March 24-27, 2012

 Invited Lecture: Molecular Applications of SPECT Imaging: Atherosclerosis, Apoptosis and Beyond

1. **Society of Nuclear Medicine (SNM) Mid-Winter Meeting**, Orlando, FL, January 26-29, 2012

 Invited Lecture: “Translating Molecular Imaging into Clinical Practice”

1. **Radiological Society of North America**, Inc. (RSNA) 97th Scientific Assembly and Annual Meeting, Chicago, IL, November 27 – December 2, 2011

 Invited Lecture: “Emerging Techniques in Cardiovascular Molecular Imaging”

1. **Buenos Aires Multimodalities in Molecular Imaging of the Cardiovascular System Symposium 2011,** Buenos Aires, Argentian; September 16-17, 2011

 Program Organizer

 Invited Lecture: “Targeted Imaging of Angiogenesis”

1. Siemens Innovation Center, Mountain View, CA, Collaboration Discussion, September 12, 2011
2. **American Society of Nuclear Cardiology,** 16th Annual Scientific Session (ASNC)\_2011, Denver, Colorado; September 8-11, 2011

 Invited Lecture: “Coronary Hyperemia: What to Expect from Different Stressors and Isotopes”

 Invited Lecture: “Molecular Imaging of LV Remodeling”

 Invited Moderator: “ADVANCED: Imaging the Atherosclerotic Plaque: Integrating Anatomy, Physiology, and Molecular Targets”

1. **World Molecular Imaging Conference (WMIC),** San Diego Convention Center, September 7, 2011

 Invited Lecture (on imaging biomarkers):

1. **American Society of Echocardiography (ASE) Annual Scientific Sessions**\_2011,

 Montreal, Quebec, Canada - June 11-14, 2011

 Invited Lecture: “Fusion Imaging – Adding Benefit or Just More Gigabytes?”

1. **Society of Nuclear Medicine (SNM) Annual Meeting**\_2011, San Antonio, TX – June 5-9, 2011

 Invited Lecture: “Molecular Imaging and Heart Disease”

 Invited Lecture: “Update on Cardiac Angiogenesis and Remodeling”

 Invited Lecture: “Flow Quantification with SPECT: Can It Be Done?”

 Invited Lecture: “Pathophysiology and Imaging of LV Remodeling”

1. **International Conference of Nuclear Cardiology (ICNC) Annual Meeting**\_2011,

 Amsterdam, Netherlands – May 15-18, 2011

 Invited Lecture: “Understanding Cardiovascular Disease: From Animal Models to Practice”

1. **CVI Update in Nuclear Cardiology 2011**, Philadelphia, PA – May 12, 2011

 Invited Lecture: “Cardiovascular Molecular Imaging: Current and Future Applications”

 Case Presentations: “Assessment of Absolute Coronary Flow and Flow Reserve”

1. **Yale CME Full-Day Symposium** (6.5 AMA PRA Category I Credits), Co-Directors, Sinusas and Tandon on May 6, 2011 in TAC Auditorium entitled “Multi-Modality Cardiovascular Imaging in Heart Failure”

**Organizer, Chairperson**

1. **American College of Cardiology 2011 i2 Summit**, New Orleans, LA - April 2-5, 2011

 Invited Lecture: "Imaging to Assess Cardiac Remodeling"

 Invited Lecture: "The Molecular Front and MICRO Imaging Aspects of SPECT: A Look into What the Future Holds"

1. **Radiological Society of North America (RSNA) Annual Meeting**, Chicago, IL

November 28-December 3, 2010

Invited Lecture: “Emerging Techniques in Cardiovascular Molecular Imaging”

1. **3rd Advanced Cardiac Imaging Course for Interventional Cardiologists**, November 18, 2010

Royal College of Physicians, London, UK

Invited Lecture: New Developments in Scintillation Devices and Hybrid (CT/PET; CT/SPECT) Imaging”

1. **Society of Nuclear Medicine,** Bethesda, MD; July 21-22, 2010

Comparative Effectiveness in Molecular Imaging Workshop

Invited Participant: “Breakout Session I: Articulating Key CER Questions in Molecular Imaging”

1. **American Society of Nuclear Cardiology**, Philadelphia, Pennsylvania

September 23-26, 2010

Invited Participant: Moderator: “CORE: Tracers and Stress Modalities”

Invited Participant: Moderator: “Young Investigator Award Competition”

Invited Lecture: “Molecular Imaging-What’s in the Pipeline”

1. **Society of Nuclear Medicine Mid-Winter Meeting,** January 27-February 2, 2010

Invited Participant/Lecture: “Update on Imaging Proteolytic Activity and Angiogenesis in Heart Failure”

Invited Participant/Lecture: “Advancement of New Cardiovascular Probes: Challenges in Translation”

1. **NHLBI Working Group**, Bethesda, MD, September 16/17, 2009

 "Translation of Cardiovascular Molecular Imaging"

 Invited Participant/Lecture: “Radionuclide Imaging”

1. **Society of Nuclear Medicine Annual Meeting**, June 13-17, 2009, Toronto, Canada

**Session Organizer:** Bench to Bedside: Neuroreceptor Molecular Imaging of the Heart

Invited Lecture: “Beyond Infarction: Molecular Imaging Markers of Ventricular Remodeling”

1. **International Conference of Nuclear Cardiology 2009**

May 10-14, 2009, Barcelona, Spain

**Chair Session:** Small Animal Imaging

Invited Lecture: “New imaging targets: autonomic nervous system, cell death, LV remodeling”

Invited Lecture: “New probes for cardiac imaging:SPECT”

1. **NIH Symposium: Multimodality Cardiovascular Molecular Imaging**

April 30-May 1, 2009, Bethesda, MD

**Organizer, Chairperson**

Invited Lecture: “Radiotracer imaging of matrix metalloproteinases and post-MI remodeling”

1. **American College of Cardiology Annual Meeting** March 30-31, 2009, Orlando, FL

Invited Lecture: Cardiovascular molecular imaging: PET/CT

1. **RSNA, Roundtable Imaging Biomarkers Meeting,** March 16-17, 2009, Chicago, IL

Invited Participant

1. **Society of Nuclear Medicine Midwinter Conference,** February 6-9, 2009, Clearwater, FL

Invited Lecture: “Clinical applications of molecular cardiovascular imaging: Where is it going and when will it get there”

1. **American Heart Association,** November 10, 2008, New Orleans, LA

**Chair Session**

Invited Lecture: “Molecular Imaging in Evaluation of LV Remodeling”

1. **Integrated Cardiovascular Imaging,** September 17-19, 2008, Cesena, Italy

Invited Lecture: “Molecular Imaging in Evaluation of Post-MI LV Remodeling”

1. **American Society of Nuclear Cardiology Annual Meeting,** September 11-14, 2008, Boston, MA

Invited Lecture: “Molecular Imaging in Evaluation of Post-MI LV Remodeling”

1. **Congress of the International Federation of Societies for Histochemistry and**

**Cytochemistry.** August 25-27, 2008, Gdansk, Poland

Invited Lecture: “Imaging of myocardial angiogenesis”

1. **American Society of Nuclear Cardiology Invitational Conference,** June 28-30, 2008, Annapolis, MD

Invited Lecture:

1. **American Roentgen Ray Society (ARRS),** Washington, DC, 4/14/08

Invited Lecture-Debate: Is Coronary CTA ready for Prime Time? Cons

1. **American College of Cardiology (ACC),** Chicago, IL, 4/1/08

Invited Lecture: Multimodality Myocardial Function Assessment

“Matching the Technique to the Patient”

1. **Society of Nuclear Medicine, Molecular Imaging Summit**, Newport Beach, CA, 2/17-19/08

Invited Lecture: “Cardiovascular Molecular Imaging: Promoting Utilization and Outreach”

1. **Society of Nuclear Medicine (Mid-winter Meeting**), Newport Beach, CA, 2/16/08

Invited Lecture: “Molecular Cardiovascular Imaging: Where is it going and when will it get there?”

1. **AMI/RSNA/SNM/SMI Pre-conference Symposium**, Providence, RI, 9/7-8/07

Imaging in Molecular Medicine

Invited Lecture: “Molecular Imaging in Heart Failure: LV Remodeling”

1. **SNM Annual Meeting, Washington**, DC, 6/2-6/2007

Invited Lecture: “Integration of Cardiac Imaging Techniques and Future Directions”

Invited Lecture: “Role of Targeted Molecular Imaging for Prediction of Post-MI LV Remodeling”

1. **SNM Mid-Winter Meeting**, 2/16/07-2/18/07, San Antonio, TX

Invited Lecture: “Imaging of Post-MI remodeling”

1. **Academy of Molecular Imaging (AMI),** Miami, FL, 1/19/07-1/21/07

Invited Lecture: “Non-invasive evaluation of myocardial infarction”

1. **AHA Scientific Sessions**, 11/11-11/14/06, Chicago, IL

Invited Lecture: “Imaging cardiac remodeling”

Invited Lecture: Imaging angiogenesis in small animals

1. **ASNC 9/8/06-9/10/06** Montreal, Canada

Invited Lecture: Imaging angiogenesis

1. **SNM Molecular Imaging Summit**, Miami, FL, 7/28-7/30/06

Invited Lecture: Cardiovascular molecular imaging

1. **Society of Nuclear Medicine (SNM) – Annual Meeting**, San Diego, CA, 6/3-6/7/06

Invited Lecture: “Tracers for Targeting of Ventricular Remodeling”

1. **Academy of Molecular Imaging (AMI)** – Orlando, FL, 3/25-29/06

**Featured Lecture:** “Cardiovascular translational research”

Invited Lecture: “Role of Targeted Molecular Imaging for Prediction of Post-Infarct LV remodeling”

Invited Lecture: “Clinical Issues for Cardiac Patients Referred for Nuclear Stress Imaging”

1. **American College of Cardiology (ACC)** – Atlanta, GA 3/11-3/14/06

Invited Lecture: “Evaluation of Gene Therapy: Targeted Imaging of Angiogenesis”

1. **Society of Nuclear Medicine (SNM) – Mid-Winter Meeting**, Tempe, AZ, 2/11/06

Invited Lecture: “Imaging of Post-Infarct LV Remodeling with MMP Targeted Tracers”

1. **Institute for Pure and Applied Mathematics (IPAM), UCLA**, Los Angelos, CA, 2/6/06

Heart Modeling: Image acquisition, segmentation, modeling and analysis

Invited Lecture: “Multi-Modality Non-Invasive Evaluation of Post-MI LV Remodeling”

1. **Society of Cardiovascular Magnetic Resonance (SCMR),** Miami, FL, 1/20/06

Invited Lecture: “PET/SPECT vs MR molecular imaging”

1. **American Society of Nuclear Cardiology**, Seattle, WA 10/05

Lecture: “Cardiomyopathic Diseases Role of Targeted Imaging”

1. **American Society of Gene Therapy**, 8th Annual Meeting, St. Louis, MO, 6/1-6/5/05

Lecture: “Imaging of Angiogenesis and Gene Therapy In Vivo”

1. **International Conference of Nuclear Cardiology (ICNC7),** 5/8/05-5/11/05

Lisbon, Portugal

**Program Co-Chairman**

Lecture: “Imaging Angiogenesis: conventional and novel approaches”

Lecture: “Promises and Challenges of Molecular Imaging”

Lecture: “Imaging of LV remodeling”

1. **American College of Cardiology**, Orlando, Florida, 3/6/05-3/9/05

Lecture: “Imaging of Gene Expression and Angiogenesis”

1. **Academy of Molecular Imaging**, Orlando, Florida, 3/20/05-3/23/05

Chairman, Coronary Artery Disease: Future Directions

Lecture: “Imaging of Angiogenesis”

1. **Society of Nuclear Medicine, Mid-Winter Meeting**, 1/28/05-1/29/05, Tampa, Florida

Lecture: “Cardiovascular Imaging Update: Radiopharmacy”

1. **Biological Therapeutics Consulting Group (BTCG) 3rd Annual Symposium,**

“Therapeutic Angiogenesis and Myogenesis”, New Orleans, LA, 11/6/04

Lecture: “Radiolabel Imaging of Myocardial Angiogenesis”

1. **American Society of Nuclear Cardiology, 9th Annual Meeting**, 9/30/04-10/3/04

New York City, NY

**Program Chairman**, Special Program - Investigator Track

“Evaluation and management of Ischemia and Heart Failure: Role of Cardiovascular Molecular Imaging”

Lecture: “Imaging of remodeling with targeted MMP tracers”

1. **European Association of Nuclear Medicine (EANM), Annual Meeting** 9/4-9/8/04

Helsinki, Finland

Lecture: “angiogenesis imaging, beyond perfusion”

1. **American Society of Nuclear Cardiology, 7th International Nuclear Cardiology Invitational**

**Conference**; Park City, UT, 7/21/02-7/24/02

**Chairman**, Radiochemistry Panel,

1. **Society of Nuclear Medicine, Annual Meeting**, 6/19-6/23/04, Philadelphia, PA

**Organizer and Chairman**, Young Investigator Competition

Lecture: “Imaging Angiogenesis”

Lecture: “Advances in Cardiovascular Molecular Imaging”

Lecture: “Cardiac Imaging in Small Animals”

1. **Symposium on Cardiovascular Molecular Imaging**, 5/3-5/4/04

NIH, Bethesda, MD

**Symposium Organizer and Chairman**

Lecture: “Targeted imaging of Angiogenesis”

1. **Northeast ASNC Affiliated Working Group Meeting** 4/2/04, Mystic, CT

Lecture: “Molecular Imaging with Nuclear Cardiology”

1. **25th High Country Nuclear Medicine Conference**, 2/27-3/3/2004, Vale, Colorado

Lecture: “Targeted imaging of Angiogenesis”

1. **Society of Nuclear Medicine, Mid-Winter Meeting**, 2/7-2/8/04, Anaheim, CA

Lecture: “Imaging of post-infarction remodeling with MMP targeted tracers”

1. **American Society of Nuclear Cardiology Annual Meeting** 9/11-9/14/03, Indianapolis, IN

Lecture: “Essentials for research: How do I get started”

Lecture: “Molecular Imaging of the angiogenesis process”

1. **Society of Nuclear Medicine, Annual Meeting** 6/22/03-6/25/03

**Organizer**, Continuing Education Program: “Quantitative Analysis”

Moderator, Cardiovascular Young Investigator Award Symposium

Moderator, Cardiovascular Clinical Sciences, Diagnostic Techniques

1. **American Society of Nuclear Cardiology**, Florence, Italy

International Conference Nuclear Cardiology(ICNC) 4/27/03-4/30/03, Program Committee

**Chairman**, Small Animal Imaging 4/28/03

Lecture: “Promises and challenges of molecular imaging” 4/28/03

Lecture: “Imaging of myocardial angiogenesis” 4/28/03

1. **I Curso Internacional de Imagen Cardiovascular**, Mexico City, Mexico 3/5/03-3/7/03

“Evaluacion no-invasiva del flujo de reserve coronario”, 3/5/03

“Nuevos radionuclidos en SPECT: utilidad de los marcadores de acidos grasos”, 3/7/03

1. **St.-Gerlach Vascular Biology Workshop**, Maastricht, Netherlands, 1/31/03

**Keynote Lecture**, “Imaging of Myocardial Angiogenesis”

Chairman: Stem cells in cardiovascular medicine

1. **Society of Nuclear Medicine, Mid-Winter Meeting**, 1/25/03

**Symposium Organizer**, Cardiovascular Molecular Imaging

Lecture: “Targeted imaging of Myocardial Angiogenesis”

1. **American Society of Nuclear Cardiology**, **New England Working Groups**; 11/02

Lecture: “Non-invasive evaluation of myocardial angiogenesis”

1. **Working Group Nuclear Cardiology, European Society of Cardiology**, Camogli, Italy, 10/25/02

Lecture: “Imaging of Angiogenesis”

1. **American Society of Nuclear Cardiology, 6th International Nuclear Cardiology**

**Invitational Conference;** Lake Tahoe, CA 7/21/02-7/24/02

**Chairman**, Angiogenesis Panel,

Lecture: “Targeted Imaging of Myocardial Angiogenesis”

1. **American College of Cardiology, Annual Scientific Session,** 3/02

Invited lecture: “Tc99m perfusion agents: New and new uses for old”

1. **American Society of Nuclear Cardiology, Delaware Working Group**, 11/01

Invited lecture: “New Non-invasive approaches for detection of ischemia”

1. **American College of Cardiology, Annual Scientific Session,** 3/02, Orlando, FL

**Symposium Chairman**, Advances in evaluation of regional myocardial function

1. **American Society of Nuclear Cardiology, 5th Annual Scientific Session**, 9/23/00

**Organizer**, Scientific Forum on Angiogenesis

Lecture: “Direct myocardial revascularization”

1. **American Society of Nuclear Cardiology,**

**Fourth International Conference Nuclear Cardiology**; 4/99 Athens, Greece

Categorical Course; “Technical Advances in Nuclear Cardiology”

Lecture: “Ischemia Imaging Agents”

Categorical Course; “Fundamentals of Cardiology”

Moderate: “Coronary Blood Flow”

1. **American Society of Nuclear Cardiology,**

**Fourth International Nuclear Cardiology Workshop**, 7/98, Wintergreen, Virginia

Invited Committee Member, “Panel II - New tracers and new approaches”

1. **Society of Nuclear Medicine 45th Annual Meeting**, 6/7/98, Toronto, Canada

Cardiovascular Council Categorical Course, “Myocardial Perfusion Imaging”

**Program Organizer**: Albert J. Sinusas, M.D.

1. **American Society of Nuclear Cardiology: Northeast Working Groups**

“Pharmacological Stress Imaging in 1998: Changing Concepts”

1/17/98, New York City, NY

Lecture: “Mechanisms of Tracers in Relationship to Blood Flow”

1. **Society of Nuclear Medicine, 44th Annual Meeting**, 6/1/97, San Antonio, TX

Cardiovascular Council Categorical Course

**Chairman**, “Tracers and Technologies”

1. **American Society of Nuclear Cardiology:**

**Third International Nuclear Cardiology Workshop**, 7/13-7/16/96, Wintergreen, VA

“New tracers: What is being developed and what will be the future clinical application?”

Lecture: Imaging with Tc99m-tetrofosmin

1. **Society of Nuclear Medicine, 43rd Annual Meeting**,

**Cardiovascular Council Categorical Course**, Chairman

“Cardiac Nuclear Medicine: State-of-the-Art” , 6/2/96, Denver, CO

1. **Society of Nuclear Medicine : Continuing Education Lecture**

6/6/96, Denver, CO

Lecture: “Nuclear Cardiology: Imaging Guidelines”

1. **American Society of Nuclear Cardiology,**

**Second International Nuclear Cardiology Workshop**, 7/10-7/13/94, Wintergreen, VA

Lecture: “Value of Nuclear Cardiology Techniques for Assessing Ventricular Function”

1. **American College of Cardiology, Georgia Chapter;**

10/91, continuing education lecture

1. **FASEB**, 4/90, Invited lecture

**Institutional Sponsored Courses (Invited Lecturer)**

1. Greenville Imaging Conference, Clemson University, March 16, 2019, Greenville, SC

Invited Lecturer: “Cardiovascular Imaging”

1. UCLA Cardiovascular Distinguished Seminar Series, January 14, 2019. UCLA, Los Angeles, CA

Invited Lecturer - “Multi-Modality and Molecular Imaging of Cardiac Remodeling,”

1. Cedars-Sinai Medical Center, University of California, Los Angeles, CA, **Biomedical Imaging Research Grand Rounds** July 12, 2018

Invited Lecturer – “Multi-Modality and Molecular Imaging of Cardiac Injury and Remodeling”

1. Nationwide Children’s Hospital, Columbus, OH, February 13, 2017

Invited Lecturer: “Cardiovascular Molecular Imaging: New Technology, Targets and Applications”

1. I-95 Infiltrative Cardiomyopathy Conference, Yale School of Medicine Conference, New Haven Lawn Club, New Haven, CT, May 21, 2016

Invited Lecturer: “Use of MIBG to Predict Arrhythmic Risk"

1. Biomedical Imaging Course - BENG 444, Yale University School of Medicine, April 25, 2016

Invited Lecturer

1. Yale University School of Medicine – Myocardial Biology Seminar, April 18, 2016
2. Program of Applied Translational Research, 60 Temple Street, 6th Flr., Suite 6C, January 20, 2016

Invited Speaker: “Yale Translational Research Imaging Center (Y-TRIC): Advanced Multimodality and Molecular Imaging”

1. University of Pennsylvania, Philadelphia, PA, **Cardiology Grand Rounds,** December 17, 2015

Invited Lecturer: "Multi-Modality and Molecular Imaging of Cardiac Remodeling”

1. BioImaging Sciences Retreat - Bi-annual Retreat for Yale Diagnostic Radiology Research, Heritage Inn, Southbury, CT, October 29, 2015

Invited Speaker: Unsolved Problems in Cardiology/Cardiac Imaging—Accessible to the Radiology Research Committee

1. Emory University, Atlanta, GA, **Heart & Vascular Grand Rounds,** September 21, 2015

Invited Lecture: “Multimodality and Molecular Imaging of Cardiac Remodeling”

1. Yale University/University College of London

**2015 London Cardiovascular Device Innovation Summit**

London, UK, August 28, 2015

Invited Lecturer**:** “Advanced Imaging Techniques in Device Design and Targeted Biologic Therapies: The Role of Imaging in the Balance of Injury, Inflammation and Healing”

1. Massachusetts General Hospital, Harvard Medical School. Boston, MA, **Cardiology Grand Rounds**

Invited Lecture: “Multimodality Imaging of Cardiac Remodeling,” April 29, 2015

1. St. Vincent’s Medical Center, Bridgeport, CT, **Cardiology Grand Rounds**, March 23, 2015

Invited Lecture: “Multi-Modality and Molecular Imaging of Cardiac Remodeling.”

1. Columbia University Medical Center, New York, NY, **Cardiology Grand Rounds**, March 10, 2015

Invited Lecture: “Multi-Modality and Molecular Imaging of Cardiac Remodeling.”

1. Univ. of Connecticut, Depart. of Biomedical Engineering, Farmington, CT, May 13, 2014

Invited Lecture: “Engineering in Medicine: Multidisciplinary Team for Cardiovascular Molecular and Translational Imaging”

1. Duke University, Durham, NC, **Radiology Grand Rounds**, March 27, 2014

Invited Lectureship: **Robert Wilkinson Annual Lecture for Nuclear Medicine**

“Quantitative Molecular Imaging for Evaluation of Cardiovascular Disease”

1. **Yale-UCL Cardiovascular Device Innovation Summit**, London, UK, January 9-10, 2014

Invited Lecture: “Imaging in Device Evaluation”

1. Yale University – CHF Symposium, New Haven, CT, December 6, 2013

Invited Lecture: “Imaging in Heart Failure”

1. Yale University, Drug Discovery and Translational Medicine Symposium, West Haven, CT

April 13, 2013

Invited Lecture: “Translational Nanomedicine: Nanoparticles for Cardiovascular Molecular and Translational Imaging”

1. Yale-UCL Cardiovascular Device Innovation Summit, London, UK, January 17-18, 2013

Invited Lecture: “Multimodality Imaging: Anatomy, Physiology, and Molecular Targets”

1. Stanford University School of Medicine, CME Radiology Grand Rounds, Stanford, CA,

February 16, 2012

**Radiology Grand Rounds** Lecture: “Multimodality Imaging of Post-MI Remodeling”

1. Imaging at Illinois @ Beckman Institute, University of Illinois, Urbana, IL, June 1, 2012

Invited Lecture: “Multimodality Imaging in Remodeling Post-MI: Anatomy Physiology and Molecular Targets.

1. Whitaker Cardiovascular Institute @ Boston University School of Medicine, Boston, MA, April 3, 2012

Invited Lecture: “Multimodality Imaging of Post-MI Remodeling”

1. Montefiore Medical Center Albert Einstein College of Medicine, Bronx, NY - April 26, 2011

Nuclear Medicine Grand Rounds

Invited Lecture: “ Emerging Techniques in Cardiovascular Molecular Imaging”

Cardiology Grand Rounds

Invited Lecture: “Multimodality Evaluation of Post-Infarct Remodeling”

1. Yale & UCL Symposium, Yale University, May 8-10. 2009, New Haven, CT

Invited Lecture: “Imaging Angiogenesis”

1. New England Chapter Society of Nuclear Medicine, April 18, 2009, Cromwell, CT

Invited Lecture: “Molecular Imaging

1. University of Maryland, Baltimore, MD, February 26, 2009

**Cardiology Grand Rounds:** “Multimodality imaging in evaluation of post-MI LV Remodeling”

1. Columbia University, New York, NY, December 9, 2008

**Cardiology Grand Rounds:** “Molecular imaging in evaluation of post-MI remodeling”

1. Yale University, October 22, 2008

Undergraduate Bioengineering Lecture, “Multi-modality Cardiovascular Imaging”

1. University of Pittsburgh, October 6-7, 2008

**Cardiology Grand Rounds:** “Evolving application of radionuclide techniques in evaluation and management of ischemic heart disease”

1. University of Buffalo, Buffalo, NY, 2/26/08

**Cardiology Grand Rounds:** “Molecular Imaging in Evaluation of Post-MI LV Remodeling”

1. Yale University, New Haven, CT, 1/25/08

**Cardiology Grand Rounds:** “Molecular Imaging in Evaluation of Post-MI LV Remodeling”

1. Washington University, St. Louis, MO, 1/22/08

Nuclear Medicine, Invited Lecture: “Imaging Acute Chest Pain”

1. Washington University, St. Louis, MO, 1/21/08

CCIR Research Seminar, Mallinckrodt Institute of Radiology

Invited Lecture: “Molecular Imaging in Evaluation of Post-MI LV Remodeling”

1. Yale University, New Haven, CT 9/23-25/07

Cambridge-Yale Cardiovascular Research Program

Invited Lecture: “Targeted imaging of angiogenesis”

1. Vanderbilt University, Institute of Imaging Sciences, Nashville, TN 6/27-29/07

Frontiers of Biomedical Imaging Science

Invited Lecture: “Imaging of Cardiac Physiology, Metabolism and Molecular Signals”

1. Yale University, New Haven, CT 6/14/07

Co-Director CME Course: Non-invasive Evaluation of Ischemic Heart Disease: Anatomy, Perfusion, and Beyond

Invited Lecture: “SPECT/SPECT-CT with Attenuation Correction”

Invited Lecture: “Molecular Imaging of the Ischemic Heart”

1. Washington University, St. Louis, MO, 2/22/07

Invited Lecture: “Imaging of angiogenesis and arteriogenesis”

1. MGH, Harvard, Boston, MA 10/18/06

**Cardiology Grand Rounds:** “Imaging of Post-Infarct LV Remodeling with MMP Targeted Tracers”

1. Yale University, New Haven, CT, 5/15/06

Medicine Research Seminar: “Role of MicroSPECT/CT for Targeted Molecular Imaging”

1. Yale University, New Haven, CT, 2/16/06

**Medical Grand Rounds:** “Multi-Modality Non-Invasive Evaluation of Post-MI LV Remodeling: From Bench to Bedside”

1. University of Ottawa Heart Institute, Ottawa, Canada 11/21/05

Frontiers in Heart Failure Research Distinguished Visitors Seminar Series

Lecture: “Role of targeted molecular imaging for prediction of post-MI remodeling”

1. Yale University 11/18/05

**Cardiology Grand Rounds:** “Imaging of Post-Infarct LV Remodeling with MMP Targeted Tracers”

1. Yale University VBT/IPCT Joint Retreat, 11/5/05

Invited Lecture: “Application of microSPECT/CT for imaging of angiogenesis and arteriogenesis”

1. University of Virginia, Charlottesville, VA, 10/21/05

Invited Lecture: “Imaging of Post-Infarct LV Remodeling with MMP Targeted Tracers”

1. Joint Summit on Markers in Cardiology, Louisville, KY, 10/20/05

Jewish Hospital Heart and Lung Institute

Invited Lecture: “Molecular Imaging: Applications in Diagnostic Cardiology”

1. Brigham and Women’s Hospital, Boston, MA, 10/18/05

**Radiology Grand Rounds:** “Imaging of Post-Infarct LV Remodeling with MMP Targeted

Tracers”

Invited Lecture: “Evaluation of LV Function”

1. Molecular Imaging Program Stanford (MIPS), Palo Alto, CA, 9/12/05

Invited Lecture: “Targeted imaging of ischemia-induced angiogenesis and post-MI

remodeling”

1. Brigham and Women’s Hospitial, Boston, MA, 2/10/05

Invited Lecture: “Targeted imaging of angiogenesis”

1. Yale University VBT Seminar Series, 5/17/04

Invited Lecture: “Imaging of post-infarction remodeling with MMP targeted tracers”

1. Yale University Dean’s Workshop, Bioimaging: MRI as a template 5/7/04

Invited Lecture: “Cardiac MR Imaging”

1. Yale VBT/IPCT Joint Retreat, 12/6/03

“Targeted radiotracer imaging of angiogenesis”

Dartmouth-Hitchcock Medical Center, Hanover, NH, 4/17/03

1. **Cardiology Grand Rounds**: “Imaging of Myocardial Angiogenesis”

Cleveland Clinic, Cleveland Ohio, 2/19/03

1. **Cardiology Grand Rounds**: “Targeted Imaging of Myocardial Angiogenesis”

Medical University of South Carolina, Charleston, SC, 10/03/02

1. **Cardiology Grand Rounds**: “Targeted imaging of myocardial Angiogenesis”

Wayne State Medical School, Detroit Michigan, 12/9/99

Invited Lecture: “Non-invasive evaluation of myocardial metabolism”

Invited Lecture: “Novel approaches for evaluation of regional LV strain”

1. Carle Foundation Hospital, 2/27/98, Urbana, IL,

Invited lecture, “Noninvasive Detection of CAD”

1. University of Utah, 12/11/96, Salt Lake City, UT

Invited lecture, “New approaches for the noninvasive assessment of myocardial ischemia”

1. Heart Imaging Center, 5/23/95, Rumson NJ

Invited lecture, “Cardiac SPECT Imaging”

1. St. Luke's-Roosevelt Hospital Center, Columbia University, N.Y.

Third Annual Cardiac SPECT Symposium & Workshop,

Newport RI, 10/29/94,

“New Tc99m Compounds”, “Workshop, Tl-201 Perfusion Imaging”

1. Emory University, Georgia, 5/94, Atlanta, GA,

Invited lecture, “Quantitative Thallium and Technetium Myocardial SPECT”

**Bibliography:**

# *Complete List of Published work in MyBibliography:* <http://www.ncbi.nlm.nih.gov/sites/myncbi/albert.sinusas.1/bibliograpahy/40652107/public/?sort=date&direction=descending>

# Peer-reviewed original articles:

1. **Sinusas AJ,** Hardin NJ, Clements JP, Wackers FJ: Pathoanatomic correlates of regional left ventricular wall motion assessed by equilibrium angioradiography: A post‑mortem correlation. Am J Cardiol, 1984, 54:975‑981.
2. **Sinusas AJ,** Beller GA, Smith WH, Vinson E, Brookeman V, Watson DD: Quantitative Planar Imaging with Technetium‑99m Labeled Methoxy‑Isobutyl Isonitrile: Comparison of uptake patterns with Thallium‑201. J Nucl Med, 1989, 30:1456‑1464.
3. **Sinusas AJ,** Watson DD, Cannon JM, Beller GA: Effect of Ischemia on Myocardial Uptake of Tc‑99m Labeled Methoxy‑isobutyl Isonitrile and Thallium‑201. J Am Coll Cardiol, 1989, 14:1785‑93.
4. **Sinusas AJ,** Trautman KA, Bergin JD, Watson DD, Ruiz M, Smith WH, Beller GA: Quantification of "Area at Risk" During Coronary Occlusion and Degree of Myocardial Salvage After Reperfusion with Technetium‑99m Methoxy Isobutyl Isonitrile. Circulation, 1990, 82:1424-1437.
5. Edwards NC, **Sinusas AJ,** Bergin JD, Watson DD, Ruiz M, Beller GA: Influence of Subendocardial Ischemia on Transmural Myocardial Function. Am J. Physiol, 1992, 262:H568-H576
6. **Sinusas AJ,** Shi QX, Vitols PJ, Fetterman RC, Maniawski P, Zaret BL, Wackers FJ: Impact of regional ventricular function geometry and dobutamine stress on quantitative Tc -99m-Sestamibi defect size. Circulation, 1993, 88:2224-2234
7. Haronian HJ, Remetz RS, **Sinusas AJ,** Baron JM, Miller HI, Cleman MW, Zaret BL, Wackers FJTh: Myocardial risk area defined by technetium 99m-Sestamibi imaging during presentaeous transluminal coronary angioplasty in comparison to coronary angiography. J Am Coll Cardiol, 1993, 22:1033-43
8. Jain D, Wackers FJTh, Mattera J, McMahan M, **Sinusas AJ,** Zaret BL: Biokinetics of 99mTc-tetrofosmin a new myocardial perfusion imaging agent: implications for a one day imaging protocol. J Nucl Med, 1993, 34:1254-59
9. **Sinusas AJ,** Shi QX, Saltzberg MT, Vitols PJ, Jain D, Wackers FJTh, Zaret BL: Tc-99m tetrofosmin to assess myocardial blood flow: Experimental validation in an intact canine model of ischemia. J Nucl Med, 1994, 35:664-671
10. Constable RT, Rath KM, **Sinusas AJ,** Gore JC: Development and evaluation of tracking algorithms for cardiac wall motion analysis using phase velocity MR imaging. Mag Res Med, 1994, 32:33-42
11. Raiker K, **Sinusas AJ**, Wackers, FJ, Zaret BL. One-year prognosis of patients with normal planar or single-photon emission computed tomographic technetium 99m-labeled sestamibi exercise imaging J Nucl Cardiol, 1994, 1:449-56
12. **Sinusas AJ**, Bergin JD, Edwards NC, Watson DD, Ruiz M, Smith WH, Beller GA: Redistribution of 99mTc-Sestamibi and 201Tl in presence of a severe coronary artery stenosis. Circulation, 1994, 89:2332-2341
13. Haines DE, Verow AF, **Sinusas AJ,** Whayne JG, DiMarco JP: Intracoronary ethanol ablation in swine: Characterization of myocardial injury in target and remote vascular beds. J Cardiovasc Electrophysiol, 1994, 5:41-49
14. Haronian HL, **Sinusas AJ,** Remetz MS, Brennan JL, Cabin HS, Zaret BL, Wackers FJTh: Effects of altered left ventricular geometry on quantitative technetium 99m sestamibi defect size in humans: Perfusion imaging during coronary angioplasty. J Nucl Card 1:150-8, 1994
15. Shi QX, **Sinusas AJ,**  Dione DP, Singer MJ, Young LH, Heller EN, Rinker BD, Wackers FJTh, Zaret BL: Technetium-99m nitroimidazole (BMS181321) a positive imaging agent for detection of myocardial ischemia. J Nucl Med, 1995, 36:1078-1086
16. Ng CK, **Sinusas AJ,** Zaret BL, Soufer R. Kinetic analysis of technetium-99m labeled nitromidazole (BMS181321) as a tracer of myocardial hypoxia. Circulation, 1995, 92:1261-1268
17. Liu YH, **Sinusas AJ**, Shi CQX, Shen MYH, Dione D, Heller EH, Wackers FJTh. Quantitation of tc99m-sestamibi SPECT based upon mean counts improves accuracy for assessment of relative blood flow: experimental validation in a canine model. J Nucl Cardiol, 1996, 3:312-20
18. Meyer FG, Constable RT, **Sinusas AJ,** Duncan JS. Tracking myocardial deformation using spatially-constrained velocities. IEEE Transactions on Medical Imaging, 1996, 15:453-465
19. McNulty PH, **Sinusas AJ,** Shi CQX, Dione D, Young LH, Cline GC, Shulman GI. Glucose metabolism distal to a critical coronary stenosis in a canine model of low flow myocardial ischemia. J Clin Invest, 1996, 98:62-69
20. Sieblink HMJ, Natale D, **Sinusas AJ**, Wackers FJTh. Quantitative comparison of single-isotope and dual-isotope stress-rest single-photn emission computed tomographic imaging for reversibility of defects. J Nucl Cardiol, 1996, 3:483-93
21. Naruse H, Daher E, **Sinusas AJ**, Jain D, Natale D, Mattera J, Makuch R, Wackers FJTh. Quantitative Comparison of Planar and SPECT Normal Data Files of Thallium-201, Tc99m Sestamibi, Tc99m Tetrofosmin and Tc99m Furifosmin. J Nucl Med, 1996, 37:1783-1788
22. Young LH, Renfu Y, Russel R, Hu X, Caplan M, Ren J, Shulman GI, **Sinusas AJ**. Low Flow Ischemia Leads to Translocation of Canine Heart GLUT-4 and GLUT-1 Glucose Transporters to the Sarcolemma In Vivo. Circulation, 1997, 95:415-422
23. Kocheril AG, Bokhari SAJ, Batsford WP, **Sinusas AJ**. Long QTc in Torsades de Pointes in Human Immunodeficiency Virus Disease. PACE, 1997, 20:2810-2816
24. Heller EN, DeMan P, Liu Y-H, Dione DP, Zubal IG, Wackers FJTh, **Sinusas AJ**. Extra-cardiac activity complicates quantitative cardiac SPECT imaging using a simultaneous transmission-emission approach. J Nucl Med, 1997, 38:1882-1890
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13. **Sinusas AJ**. Role of intact biological models for evaluation of radiotracers. Nuclear Cardiology: State-of-the-Art and Future Directions, Second Edition, Editors: Zaret BL, Beller GA., Mosby-Year Book, Inc., Philadelphia, PA 1998 pg 37-55
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16. **Sinusas AJ**. The Potential for Myocardial Imaging with Hypoxia Markers. Seminars in Nuclear Medicine: Current Status of Cardiovascular Nuclear Medicine – II. Guest Editors: Wexler JP, Travin MI. W. B. Saunders Co., Philadelphia, PA. 29:330-338 1999
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20. Kailasnath P, **Sinusas AJ**. Comparison of thallium-201 with technetium-99m-labeled myocardial perfusion agents: technical, physiological, and clinical issues. J Nucl Cardiol 8:482-498, 2001
21. Gullberg GT, DiBella EVR, **Sinusas AJ**. Estimation of coronary flow reserve: Can SPECT compete with other modalities? J Nucl Cardiol 5:620-5, 2001
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# Sinusas AJ. New Molecular Approaches for Imaging of Angiogenesis and Hypoxia. Clinical Nuclear Cardiology: State-of-the-Art and Future Directions. Third Edition Editors: Zaret BL, Beller GA. Elsevier, Chapter 39, pages 631-648, 2004

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3. [Chung G, **Sinusas AJ**.](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=17430681&query_hl=1&itool=pubmed_docsum) Imaging of matrix metalloproteinase activation and left ventricular remodeling. Curr Cardiol Rep. 9:136-42, 2007
4. [Dobrucki LW, **Sinusas AJ**.](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=17240135&query_hl=1&itool=pubmed_docsum) Imaging of Angiogenesis. Chapter 22. *Cardiovascular Molecular Imaging*, Gropler RJ, Glover DK, **Sinusas AJ**, Taegtmeyer H. (Eds), Informa Healthcare, New York, NY, 2007
5. [Dobrucki LW, **Sinusas AJ**.](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=17240135&query_hl=1&itool=pubmed_docsum) Imaging of Angiogenesis. Chapter 26. Part V: Emerging Role of Molecular Imaging, *Cardiac PET and PET/CT Imaging*, DiCarli MF, Lipton MJ. (Eds), Springer, New York, NY, 2007
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12. **Sinusas AJ**. Future Prospects of Cardiac Imaging, Chapter 6. *Cardiovascular Imaging*.Yi-Hwa Liu, PhD and Frans J. Th. Wackers, MD (Eds), Manson Publishing, London, UK (in press 2009)
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41. **Sinusas AJ**, Peters DC. Diffusion Tensor CMR: A Novel Approach for Evaluation of Myocardial Regeneration. JACC Basic Transl Sci. 2018 Feb;3(1):110-113. doi: 10.1016/j.jacbts.2018.01.008. eCollection 2018 Feb. PubMed PMID: 30062197; PubMed Central PMCID: PMC6058948.
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# Books:

# Gropler RJ, Glover DK, Sinusas AJ, Taegtmeyer H. (Eds), *Cardiovascular Molecular Imaging*, Informa Healthcare, New York, NY (2007)

* 1. Ed. Liu Y-H, **Sinusas AJ**. *Hybrid Imaging in Cardiovascular Medicine*, CRC press, Taylor and Francis Group, LLC Imaging in Medical Diagnosis and Therapy. Series Ed.Karellas A, Thomadsen BR. Copyright 2018

**Abstract Presentations - Original Research**

National Meetings: (1) American College of Cardiology,

 (2) The Connecticut Chapter of the American College of Cardiology

Conference, Monroe CT

(3) American Heart Association,

(4) Society of Nuclear Medicine,

(5) American Society of Nuclear Cardiology

(6) Society of Cardiovascular Magnetic Resonance

(7) International Society of Magnetic Resonance in Medicine

(8) Academy of Molecular Imaging

(9) The **Society of Cardiovascular Computed Tomography**

1990-2020: >220 scientific abstracts

(first author - 29 abstracts; second author - 27 abstracts; senior author - >150 abstracts)

**Patents**

* 1. U.S. Patent Application, entitled “Hybrid OCT/Scintigraphy Intravascular Device”, Inventors: Albert J. Sinusas, Quing Zhu, Mehran Sadeghi. European patent EP1534128
1. U.S. Patent Application, entitled “A Stochastic Approach for Quantification of “Hot-Spot” Cardiac Imaging”, Inventors: YiHwa Liu, Albert J. Sinusas, Frans J. Th. Wackers (patent pending).
2. International Patent Application, entitled “Integrin-targeted imaging of inflammation in vascular remodeling”, PCT/US12/37546 Inventors: Mehran M. Sadeghi, Albert J. Sinusas, (WO 2012155055 A9)
3. United States patent application No. 14/357555 filed May 9, 2014 , entitled “Evaluation of presence of and vulnerability to atrial fibrillation and other indications using matrix metalloproteinase-based imaging”, Inventors: Albert J. Sinusas, Joseph Akar, Richard Cesati (WO 2013070471)
4. European patent application No. 12847031.7 filed October 31, 2012 entitled "Evaluation of Presence of and Vulnerability to Atrial Fibrillation and Other Indications Using Matrix Metalloproteinase-based Imaging" Inventors: Albert J. Sinusas, Joseph Akar, Richard Cesati (EP2775906A1, US20150023873)
5. Provisional U.S. Patent Application, entitled “Compositions and applications of nanoconfined probes for enhanced non-invasive imaging”, filed 11/24/2012, Inventors: Tarek Fahmy, Dongin Kim, Albert J. Sinusas (patent pending).
6. Provisional U.S. Patent Application, entitled “Integrated RF and B-mode deformation analysis for 4D stress echocardiography”, filed 3/6/2013, Inventors: James S. Duncan, Matthew O’Donnell, Colin Compas, Albert J. Sinusas, Lawrence Staib, Xiaojie Huang, Donald Dione (patent pending).
7. Provisional U.S. Patent Application, entitled “Ferromagnetic particles bound to polymeric implants”, filed 4/1/2015, Inventors: Tarek Fahmy, Albert J. Sinusas, Dongin Kim (patent pending).
8. Provisional U.S. Patent Application, entitled “Iron platinum particles for adherence of cells on medical implants”, filed 4/1/2015, Inventors: Tarek Fahmy, Albert J. Sinusas, Jung Seok Lee, Dongin Kim, Anthony Mathur, John Martin (patent pending).
9. U.S. Patent, entitled “Real-time molecular imaging and minimally-invasive detection in interventional cardiology, US 2017/0049518 A1, filed 8/17/16, published 2/23/17, Inventors: Albert J. Sinusas, Farhad Daghighian.

**Post-Doctoral Fellows Trained Last 20 Years:**

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| --- | --- | --- | --- | --- | --- | --- |
| Past/Current | Trainee | Training Period | Prior Degree | Degree Year | PriorInstitution | Current Title |
| Past | Edouard Daher | 1994-1996 | MD |  |  | Eastlake Cardiovascular AssociatesSt. Clair Shores, MI |
| Past | Eliot Heller | 1994-1996 | MD |  | Albert Einstein College of Medicine of Yeshiva Univ. | Cardiologist, St. Peter’s University Hospital, New Brunswick, NJ |
| Past | Michael Shen | 1995-1997 | MD |  |  | Cardiologist, Sunrise, FLCleveland Clinic, Weston,FL |
| Past | E. Vallejo | 1999-2001 | MD | 1999 |  | Assistant Professor, Instituto Nacional De Cardiologia; Mexico city |
| Past | Xenophon Papademetris | 2000-2002 | PhD | 2000 | Yale University | Associate Professor of Diagnostic Radiology and Biomedical Engineering (Yale University) |
| Past | Farid Jadbabaie | 2002-2003 | MD | 1990 | Tehran University(Iran) | Assistant Professor of Medicine (Cardiology); Director of Echocardio-graphy Laboratory, VA Connecticut Healthcare System |
| Past | Haili Su | 2003-2004 | MD | 2003 |  | Assistant Professor, Forth Military Medical University, China |
| Past | Jing Hua | 2003-2004 | MD | 2003 |  | Research Fellow, Harvard Medical School; Association for Research in Vision &Ophthalmology Children’s Hospital, Boston, MS |
| Past | Wawrzyniec Dobrucki | 2003-2010 | PhD | 2003 | Ohio University | Assistant ProfessorBioengineeringUniversity of Illinois |
| Past | James Song | 2004-2005 | MD | 2004 | Univ. of California, San Francisco | Radiologist, VA Palo Alto Hospital, Boston, MA |
| Past | Shimin Li | 2004-2006 | PhD | 2003 | Univ. of Science and Technology of China | Principle Scientist  TeraRecon, Inc.(Computer Software)Boston, MA |
| Past | Matthew Brennan | 2005-2007 | MD | 2001 | Ross University | Cardiothoracic Surgery, Cardiology, Anesthesia, Yale University, School of Medicine |
| Past | Zakir Sahul | 2005-2007 | PhD, MD | 19962000 | PhD-Stanford Univ.MD – Mayo Clinic | Cardiovascular Disease, Michigan Heart & Vascular Institute |
| Past | Choukri Mekkaoui | 2005-2009 | PhD | 2004 | Ecoles Normale Superieure, France | Instructor, RadiologyMassachusetts General HospitalHarvard Medical School |
| Past | Howard Haronian |  | MD | 1987 | Cornell University | Cardiology Specialist Westerly-Cardiovascular Care CenterWesterly, RI |
| Past | Ping Yan | 2007-2009 | PhD | 2007 | Yale University | Assistant Professor, Columbia University |
| Past | William Ryder | Jan-Aug2007 | PhD | 2006 | Institute of Cancer Research (Univ of London) | Medical Physicist;Portsmouth Hospital NHS Trust |
| Past | Yifeng Jiang | 2007-2011 | PhD | 2007 | The Chinese University of Hong Kong | Research AssociateUniversity of HoustonHouston, TX |
| Past | Jung W. Suh | 2008-2010 | PhD | 2007 | Virginia Tech | Senior Medical Imaging ScientistHeartflow, Inc. |
| Past | Ben Lin | 2009-2012 | MD/PhD | 2009 | California Institute of Technology | Assistant Professor Yale University |
| Past  | Dongin Kim | 4/2011-2014 | PhD | 2009 | University of Utah | Assistant ProfessorTexas A&M Health Science Center |
| Past | Mitchel Stacy | 5/2011-2014 | PhD | 2011 | University of Toledo | Assist Prof of Radiology & SurgeryThe Ohio State Univ College of MedPrincipal InvestigatorThe Research Institute at Nationwide Children’s HospitalColumbus, OH |
| Past | Mark Maxfield | 8/2011-2012 | MD | 2009 | Columbia University | UMass Memorial Med CenterWorcester, MA |
| Past | Prashanta Pal | 2011-2013 | PhD | 2011 | Univ of Massachusetts Medical School | Senior Research ScientistDept of MedicineCenter for Mindfulness |
| Past | Chung ChanYale Univ. School of Med | 2011-2013 | PhD | 2009 | Univ of SydneyAustralia | Toshiba PET Group, ChicagoSenior Scientist |
| Past | Kristin MillerYale Univ. School of Med | 7/2012-2014 | PhD | 2012 | Univ. of Pennsylvania | Assistant Professor, Biomedical Engineering Department,Tulane University |
| Past | Alda Bregasi | 2012-2014 | MD | 2005 | University of Milan | Dept of CardiologyYale University |
| Past | Vahid Tavakoli | 5/12013-2014 | PhD | 2012 | University of Louisville | Internal Medicine Residency Program (2nd year) Richmond Univ Med,Staten Island, NY |
| Past | Stephanie Thorn | 9/2013-2015 | PhD | 2013 | University of Ottawa | Yale University – Research Scientist |
| Past | James Bennett | 4/1/2014-2015 | PhD | 2014 | Virginia Tech | President, Clement Technology LLCTucson, AZ |
| Past | Imran Alkhalil | 8/2014-2015 | MD | 2009 | Univ of Damascus Faculty of Medicine, Syrian Arab Republic | Cardiovascular Fellowship Program University of Virginia |
| Past | Nsini Umoh | 8/1/2014-2015 | PhD | 2014 | Howard University | Postdoctoral in Biomedical Research at Federal Government Lab San Antonio, Texas |
| Past | John Stendahl | 7/1/2014-2016 | PhDMD | 20052011 | Northwestern University Univ. of Minnesota | Fellowship Program, General CardiologyYale University |
| Past | Nabil Boutagy | 8/1/2015-8/31/2018 | PhD | July2014 | Virginia Tech | Yale Postdoc Associate, Department of Pharmacology |
| Past | Melissa Eberle | 8/31/2015-Jun 2017 | PhD | 2015 | Univ of CaliforniaRiverside | Applications SpecialistThorlabs Imaging SystemsSterling, VA |
| Past | Eva Perez | 6/1/2016-5/31/2017 | PhD | 2016 | Univ of South Carolina | Postdoctoral Research AssociateWeill Cornell MedicineNew York, NY |
| Past | Attila Feher | 7/1/2016-6/30/2018 | PhDMD | 20122007 | Univ of Debrecen , Debrecen, Hungary | Fellowship Program, General CardiologyYale University  |
| Past | Saad Sikanderkhel | 10/1/20176/30/2018 | MD | 2006 | Khyber Medical CollegePeshawar, Pakistan, | University of TennesseeChattanooaga, TN |
| Current | Parnaz Boodagh | 3/1/2018 -  | PhD  | 2017 | Univ of Colorado | Yale Postdoc FellowNIH-T32 Training Grant |
| Current | Shin Rong Lee | 7/1/2018- | MDPhD | 20162016 | John Hopkins University | Yale Postdoc FellowNIH-T32 Training Grant |
| Current | Zhao Liu | 9/1/2018 | PhD | 2017 | Case Western Reserve Univ | Yale Postdoc FellowNIH-T32 Training Grant |
| Current | RicardoAvendano | 1/14/2019 – 1/13/2020 | MD | 2014 | Univ Dr. Jose Matias Delgado Escuela de Medicina, El Salvador | Yale Postdoc FellowNIH-T32 Training Grant |
| Current | Dan Midgett | 3/1/2019-2/28/2020 | PhD | 2018 | John Hopkins University | Yale Postdoc FellowNIH-T32 Training Grant |
| Current | Inga Melvinsdottir | 7/1/2019 | MD | 2015 | University of Iceland | Yale Postdoc FellowNIH-T32 Training Grant |