

CURRICULUM VITAE



EDUCATION:

University of Chicago Chicago, Illinois	1972-1976 B.A. Degree
University of Cincinnati Cincinnati, Ohio	1976-1980 M.D. Degree:
Internship & Residency - Medicine Indiana University Medical Center Indianapolis, Indiana	1980-1982
Fellow in Cardiology Indiana University Medical Center Indianapolis, Indiana	1982-1984
Chief Cardiology Fellow Indiana University Medical Center Indianapolis, Indiana	1984-1985
Chief Resident, Internal Medicine Indiana University Hospital Indianapolis, Indiana	1985-1986
Harvard Business School Managing Health Care Delivery	2011-2012

ACADEMIC APPOINTMENTS:

Assistant Professor of Medicine Indiana University School of Medicine	1986-1990
Visiting Assistant Professor of Pharmacology University of Vermont, Burlington, Vermont	1987-1994
Professor of Clinical Medicine Indiana University School of Medicine	2003-present
Clinical Director Krannert Institute of Cardiology Indiana University School of Medicine	2003-2017
Associate Dean for Clinical Research Indiana University School of Medicine	2012-2014

Associate Director Indiana Clinical and Translational Sciences Institute	2012-2014
Q. E. and Sally Russell Professor of Cardiology	2014-present

NON-ACADEMIC EMPLOYMENT:

Storer Schmidt and Associates (Cardiology Practice)	1990-2000
Lilly Research Laboratories	1999-2003
Biomedical Systems Chief Cardiologist	2013-2020
American College of Cardiology Chief Medical Officer	2021-present

HOSPITAL APPOINTMENTS/COMMITTEES:

Staff Physician, Methodist Hospital of Indiana	1990-2001
Medical Director and CEO, Methodist Research Institute, Inc.	1997-2001
Chief of Cardiology, Greene County General Hospital	1990-2001
Consulting Cardiologist, Eskenazi Hospital (Formerly Wishard Memorial Hospital)	1995-present
Consulting Cardiologist, Indianapolis Veterans Administration Hospital	2003-2019
Attending Physician, IU Health Methodist Hospital	2003-present
Attending Physician, IU West Hospital	2004-present
Associate Physician IU Health North Hospital	2005-present
Cardiology Service Chief IU Health Methodist Hospital	2007-2013
Chairman – Acute MI team IU Health Methodist Hospital	2003-present
Medical Director IU Health Methodist Chest Pain Center	2008-2017
Acting Chief, Department of Cardiology William N. Wishard Memorial Hospital	2004-2011
Medical Director – Cardiac Diagnostics IU Health West Hospital	2004-2010
Medical Director – Heart Station	2008-2013

IU Health Methodist Hospital

Pharmacy & Therapeutics Committee IU Health	2004-2014
Cardiovascular Sub-Section Vice-Chairman, IU Health North Medical Center	2004 -2011
Cardiovascular Program Representative IU Health Medical Staff Council	2007-2013
IU Health University Hospital Operations Team	2007-2013
IU Health Methodist Hospital Facility Based Management Team	2007-2013
Executive Committee, IU Health Cardiovascular Section	2010-2013
Cardiology Service Line Leader IU Health Physicians	2017-2021

OTHER APPOINTMENTS/ CONSULTANTSHIPS/ NATIONAL COMMITTEES:

Consultant, HCFA congestive heart failure Case manager demonstration project	1993-1995
American College of Cardiology, Committee on Electrocardiography, Electrophysiology, and Pacemakers,	1993-1996
Director, Minority Student Training Grant NHLBI	1997-2000
Medical Director Methodist Research Institute, Inc.	1997-2001
Chairman, Clinical Sub team, Cardiovascular Safety Committee, Health and Environmental Sciences Institute	2001-2003
American College of Cardiology, Advocacy Committee Working Group on Evaluation and Management Coding	2003-2009
Medical Director of Clinical Research Krannert Institute of Cardiology Indiana University School of Medicine	2003-2020
Advisory Board Cardiac Safety Research Consortium	2006-2009

Governor, Indiana Chapter American College of Cardiology	2008-2010
Nominating Committee American College of Cardiology	2008-2010
Chairman, American Heart Association/American College of Cardiology Mission Lifeline Statewide STEMI Network	2009-2013
Board of Trustees – Ex-Officio American College of Cardiology	2009-2012
American Board of Internal Medicine Liaison Committee on Recertification	2009-2012
Chair, American College of Cardiology Board of Governors	2010-2011
Secretary, American College of Cardiology	2010-2011
Pinnacle Network Committee American College of Cardiology	2010-2012
Executive Committee American College of Cardiology	2009-2012
Cardiovascular Leadership Institute American College of Cardiology	2010-2012
Partners in Quality Committee American College of Cardiology	2010-2012
Clinical Quality Committee Chair of Best Practices in Quality Subcommittee American College of Cardiology	2011-2014
Sports and Exercise Cardiology Council Co-Chair American College of Cardiology	2011-2014
American College of Cardiology Board of Trustees	2012-2017
AHA/ACC Task Force on Practice Guidelines	2012-2015
National Cardiovascular Data Registry Management Board	2012-2018
National Football League Cardiovascular Committee-Consultant	2012-2016
Compensation Committee American College of Cardiology	2013-2015

Anticoagulation Consortium	2013-2015
Chair American College of Cardiology Science and Quality Committee	2015-2018
CQC Science and Clinical Policy Subcommittee (SCP) Ex Officio American College of Cardiology	2015-2018
Publications and Editorial Coordination Committee Ex Officio American College of Cardiology	2015-2018
National Quality Forum Member	2016-2018
ACC Population Health Management Task Force Member	2016-2018
Vice President American College of Cardiology	2018-2019
President American College of Cardiology	2019-2020
Immediate-Past President American College of Cardiology	2020-2021
Nominating Committee, Chair American College of Cardiology	2020-2021
CEO Search Committee, Chair American College of Cardiology	2020
Board of Directors, Karuna Precision Wellness	2021- present

BOARD STATUS:

American Board of Internal Medicine #108497	September 1986
American Board of Internal Medicine (Cardiovascular Disease) #108497	November 1987
Meeting Maintenance of Certification Requirements	Current

LICENSURE:

Indiana #01031860

SOCIETY MEMBERSHIPS:

American College of Cardiology, Master
American Heart Association Basic Science Council

American Heart Association Council on Clinical Cardiology, Fellow

American College of Sports Medicine
European Society of Cardiology
Irish Cardiac Society (Honorary Member)
Honorary Member of the British Cardiovascular Society
Honorary Fellow of the Royal College of Physicians and Surgeons of Glasgow
Indiana State Medical Association
Indianapolis Medical Society

HONORS:

Otto B. Villwock Scholarship	1977-1978
NHLBI Clinical Investigator Award	1987-1990
Charles Fisch Teacher Award	2009
Indianapolis Best Doctors	2012-2021
IU Health Physicians 2016 Values Leadership Award	2016
Career Achievement Award, Indiana Chapter ACC	2016
Barksdale Lecturer University of Mississippi	2018
Exemplar of Professionalism: Honor Roll Indiana University School of Medicine	2019
Sagamore of the Wabash (Highest Civilian Award From the Governor of the State of Indiana)	2019
Distinguished Alumni Award Elyria Catholic High School	2021

TEACHING ACTIVITIES:

Laboratory Trainees:

Hodges, T.D., M.D., PhD Department of Pharmacology Indiana University School of Medicine Thesis Committee and Primary Advisor (Private Practice Internal Medicine, Indianapolis, IN)	1986-1989
Parikh, S.R., M.D. Post- doctoral fellow, Pediatric Cardiology, Riley Hospital for Children (Chief Pediatric Cardiology, Peyton Manning Children's Hospital)	1988-1991
Witcher, D.R., PhD Department of Pharmacology, Indiana University School of Medicine (Eli Lilly & Company, Biotherapeutic Research)	1990-1991

Chen, X, PhD Department of Pharmacology (Faculty, IU School of Medicine)	1992-1995
Titov, S., M.D. Post- doctoral fellow, Methodist Hospital (Research Associate Parexcel)	1997-1999
Hanish, S., M.D. Indiana University School of Medicine, Pre doctoral trainee (Associate Professor, University of Maryland)	1997-1998
Esquerra, F. Indiana University School of Medicine, Pre doctoral (Private Practice, Ft Wayne, IN)	2000-2001

Clinical Mentees (Current):

Julie Clary MD MBA (Faculty)
Suparna Clasen MD (Faculty)
Tanyanan Tanniwuttiwat MD (Faculty)
Mark Knauth (Resident)
Eric Kellett (Fellow)

Non-IU Courses:

Purdue University TLI 52100 Drug Development, now Biotechnology Innovation and Regulatory Science. Guest Lecturer.	2010-2021
--	-----------

PROFESSIONAL SERVICE:

Research and Editorial Boards National:

Associate Editor: Journal of Cardiovascular Electrophysiology, 1990-1992

Guest Editor: Journal of the American College of Cardiology

Journal Reviewer: Annals of Internal Medicine, Am J. of Physiology, Circulation Research, Chest, Journal of Critical Care, Journal of Cardiovascular Electrophysiology, American Heart Journal, American Journal of Cardiology, Journal of the American Society of Echocardiography, Journal of American College of Cardiology, Circulation Quality and Outcomes, Journal of American Medical Society of Sports Medicine, Medicine and Science in Sports and Exercise, Medicina.

Research Review, Adjudication and Data Safety Monitoring Boards:

Data Safety and Monitoring Board, GBBB Trial, 2004-2006

Data Safety and Monitoring Board, Identity & Identity II, 2007-2011 (Alzheimer's Disease)

Clinical Endpoints Committee, Cook, Inc., Endovascular Trials, 2008-Present

Data Safety Monitoring Board, LZAM-Solanezumab, (EXPEDITION 3), 2011-Present

American Academy of Orthopedic Science Quality Symposium, 2014-2015.

Data Safety Monitoring Board Pridopidine for Huntington Disease (PRIDE), 2014-2017

Data Safety Monitoring Board NIH Alzheimer's Research Collaborative "A4" Study 2014-present

Data Safety Monitoring Board "AMARANTH" Trial for Alzheimer's Disease, 2015- 2018

Data Safety Monitoring Board "DAYBREAK" Trial for Alzheimer's Disease, 2017- 2019

ACC Invited Expert Reviewer: Omega 3 Fatty Acids and Cardiovascular Disease (BWNE4700),
Baylor College of Medicine, Houston, TX. March, 2017

Data Safety Monitoring Board: SPARC-3708 (Parkinson's Disease) 2018-present

Data Safety Monitoring Board: Tafamadis (Amyloidosis) Global Trials 2018-2020.

Data Safety Monitoring Board: Cadent CAD 1883 (Parkinson's Disease) 2019-present.

Data Safety Monitoring Board: Relmada (Major Depressive Disorder) 2019-present.

Clinical Safety Adjudication Committee Ipsen/Falkon (Fibrodysplasia Ossificans Progressiva) 2021-present.

State and Regional:

American Heart Association, Indiana Affiliate, Research Review Committee 1987-1992

Co-Chairman, Research Committee, Methodist Heart and Lung Institute, 1992-2001

Member, Institutional Review Board, Methodist Hospital, 1992-1995

Vice Chairman, Institutional Review Board, Methodist Hospital, 1995-2001

Chairman, American Heart Association, Indiana Affiliate Research Review Committee,
1996-1997

Clarian Health Partners Research Team 1997-2001

Tissue Engineering Research Advisory Council (TERAC), 1998-2005

Indiana Consortium for Engineered Replacement Tissues, 2000-2005

Indiana State Medical Association, Specialty Committee, 2007-2010

Indiana Medicare Carrier Advisory Committee, 2007-2010

UNIVERSITY SERVICE:

Krannert Institute of Cardiology Director, Search and Screen Committee, 2003-2006

Indiana University Institutional Review Board Member (03), 2003-2008

Indiana University Institutional Review Board (03), Vice Chair, 2008-2010
Indiana University Institutional Review Board (03), Chair, 2010-2017
Indiana University Institutional Review Board Executive Committee, Chair, 2012 –2017
Indiana University/Indiana University Health, Xenotransplant Committee, Chair, 2011-2014
General Clinical Research Center Steering Committee, 2012-2020
Program Review Committee IU Center for Health Innovation and Implementation Science, 2022

SELECTED INVITED LECTURES:

University of Vermont, Department of Pharmacology, May, 1988
West Virginia University, Departments of Pharmacology, Physiology and
Medicine, March 1988
Universitat Konstanz, Konstanz West Germany. July 1988
FEBS course on Membrane Ion Transport, Budapest. May, 1989
NIH Sulfonylurea seminar, Bethesda, Maryland. March 1990
Gordon Research Conference, Oxnard, California. February 1991
Chairman, Electrocardiography for the Clinician, Indianapolis, Indiana.
October 1992, 1993, 1994
Chairman, Physiology and Pharmacology of the Vessel Wall, American
College of Cardiology, Anaheim, California. March 1993.
Sarcoplasmic Reticulum Function, New York Academy of Sciences, September 1996.
Richter Symposium, Indianapolis, Indiana. 1998
Cook Group Annual Meeting, Bloomington, Indiana. 1999
International Society for Heart Research, Louisville, Kentucky, 2000
International Life Sciences Institute, Washington, D.C. September 2001
Drug Information Association, Copenhagen, Denmark. June 2002
Krannert Institute of Cardiology Grand Rounds, Indianapolis. Indiana. 2002
Eli Lilly and Company M&M Rounds, Indianapolis, Indiana. June 2002
HEART2D Investigator's Meeting Vienna, Austria. October 2002
Institute for International Research Symposium on QT Prolongation and Safety
Pharmacology, Lisbon, Portugal. February 2003
Cardiology Update for Primary Care Physicians, Indianapolis, Indiana, September 2003
Barnett International Symposium, QT Prolongation, Philadelphia, Pennsylvania.
June 23-24, 2003
Barnett International Symposium, QT Prolongation, Philadelphia, Pennsylvania.
November 17-18, 2003
Institute for International Research Symposium on QT Prolongation, Amsterdam,
Netherlands. February 2004.
Cardiostim, Nice, France, June 2004
Cardiology Update for Primary Care Physicians, Indianapolis, IN. October 2004
Barnett International Symposium on QT Prolongation, Philadelphia, PA. December 2004
Drug Information Association: The Use of ECGs in Clinical Trials Program, Bethesda, MD.
April 2005
Cardiology Update for Primary Care Physicians, Indianapolis, IN. October 2005
Cardiology Update for Primary Care Physicians, Indianapolis, IN. October 2006
Duke Clinical Research Institute – ECG Data Reporting Think Tank, November 2006
Reid Memorial Hospital, Grand Rounds, Richmond, IN, October 2007
First International Interactive Long QT Symposium, September 2007

Indiana University, Department of Medicine, Grand Rounds, February 2008
Cardiology Update for Primary Care Physicians, Indianapolis, IN. April 2008

Krannert Institute of Cardiology Grand Rounds, Indianapolis, IN. January 2009
Gulf Cardiology Conference, Doha, Qatar. November 5-6, 2009
IU Geriatrics Conference, Wishard Hospital, Indianapolis, IN. May 5, 2010
VHA Chapter Meeting, Indianapolis, IN. November 5, 2010
2010 Fall Cardiovascular Consortium, Indianapolis, IN. November 9, 2010

Kentucky Chapter Meeting, American College of Cardiology, Louisville, KY. September 2010
Mississippi Chapter Meeting, American College of Cardiology, Natchez, MS. June 2010
California Chapter Meeting, American College of Cardiology, Beverly Hills, CA. October 2010
St. Mary's Hospital, Grand Rounds, Evansville, IN. December 2010
Alaska Heart Institute CV Symposium, Anchorage, AK. February 2011
Indiana Society for Cardiac and Pulmonary Rehabilitation, Indianapolis, IN. March 2011
Michigan Chapter Meeting, American College of Cardiology, Traverse City, MI. September 2011
Ohio Chapter Meeting, American College of Cardiology, Columbus, OH. October 2011
Grand Rounds, Krannert Institute of Cardiology, Indianapolis IN. November 2011
ACC Cardiovascular Care Summit, January, 2012.
Protecting the Heart of the American Athlete, Washington, DC. October, 2012
MUSE User Group 2012 Annual Meeting: ECGs in US Athletes, Columbus, OH. October 23, 2012
NCDR Annual Meeting, San Francisco, CA. March, 2013
Bethesda Conference Update, San Francisco, CA. March, 2013
Registries and Clinical Research Symposium, Indianapolis, IN. April, 2013
14th Annual Monterey Bay Regional Heart Symposium, Monterey Bay, CA. May, 2013
Alabama Chapter ACC 2013, 22nd Annual Scientific Meeting, Sandestin, FL. June 2013
Cardiac Safety Research Consortium, Washington, DC. July, 2013
Co-Chair, Sports Cardiology Summit, Chicago, IL. October, 2013
Cardiovascular Practice Summit, Las Vegas, NV. January, 2014
Grand Rounds, California Pacific Medical Center, San Francisco, CA. February, 2014
Anticoagulation Roundtable, Washington, DC. September, 2014.
3rd Annual Sports Cardiology Summit, Indianapolis, IN. September, 2014.
ACC Sports Cardiology Symposium, Co-Chair, Indianapolis, IN. October, 2014.
Grand Rounds, Deaconess Hospital, Evansville, IN. November, 2014
BIRS Guest Lecture, Purdue University, Lafayette, IN. December, 2014
Grand Rounds, Leigh Valley Medical Center, Allentown, PA., January, 2015.
ACC Cardiovascular Summit: Solutions for Thriving in a Time of Change. Orlando, FL.
January, 2015.

Co-Chair, International Session ACC Argentina Chapter, American College of Cardiology Annual Session, San Diego, CA. March 2015.

Sports Cardiology Intensive, American College of Cardiology Annual Session, San Diego, CA. March, 2015.

ACC Session 1010, American College of Cardiology Annual Session, San Diego, CA. March, 2015.

Prescription Drug User Fee Act (PDUFA) Public Meeting, FDA, White Oak Facility, Silver Springs, MD. Health Care Professionals Perspectives Panel, July, 2015.

Policy Forum on Approaches for Managing the Cost of PCSK9 Inhibitors and Other Specialty Drugs. Pew Charitable Trusts, Washington, DC. October, 2015.

Ken Stanley CV Conference, Indiana Heart Hospital, Community Physician Network, Indianapolis, IN. October, 2015.

Midwest Cardiovascular: Sudden Death in Athletes, Mishawaka, IN., November, 2015.

ACC Idaho Chapter, ABIM Maintenance of Certification, St. Luke's Hospital, Boise, ID. November, 2015.

ProHealth Care Cardiology Physicians, Brookfield, WI. January, 2016.

ACC Leadership Forum, Washington, DC. February, 2016.

ACC 2016 Cardiovascular Summit, Solutions for Thriving in a Time of Change, Las Vegas, NV.

February, 2016.
MMK Memorial Award Lecture Panel, Indiana University School of Law, Indianapolis, IN.
March, 2016.
Grand Rounds, Massachusetts General Hospital, Boston, MA. April, 2016.
Cardiovascular Consortium, Indianapolis, IN. April, 2016.
AOSSM “NFL & Beyond” Symposium, Denver, CO. May, 2016
ACC Sports Medicine Symposium, Houston, TX. June, 2016
ACC Organized Systems of Anticoagulation Care Summit, Washington, DC. October, 2016.

Cardiac Safety Research Consortium, FDA White Oak Campus, Silver Spring, MD, October, 2016.
2017 NFL Physicians Society Meeting, Echo in elite football players: What we have learned.
January, 2017
2017 National Football League Physician Society, Indianapolis, IN. March, 2017
ACC.17-66th Annual Scientific Session, Featured Clinical Research I -Panelist Washington, DC,
March 17-19, 2017
ACC China Leadership Program, Wuhan University People’s Hospital, Wuhan, China.
April 21, 2017
ACC Puerto Rico Chapter Meeting, Carolina, Puerto Rico. April 28-29, 2017
Academy of Psychosomatic Medicine, Palm Springs, CA. November 8-11, 2017
ACC Advancing Cardiovascular Care of the Oncology Patient, Washington, DC February 16-17 2018
Annual Saudi Heart Association Conference (SHA 29), Riyadh, Saudi Arabia March 1-3, 2018
ACC.18-67th Annual Scientific Session, Orlando, FL. March 10-12, 2018.
Singapore Cardiac Society Annual Meeting, Singapore, Singapore April 6-8, 2018
University of Mississippi 2018 Barksdale Memorial Lecture Visiting Professor, Jackson,MS
April 17, 2018
The 65th Annual Conference of the Israel Heart Society, Tel Aviv, Israel April 24-25, 2018
2018 Heart Rhythm Scientific Sessions, Boston, Massachusetts, May 9-12, 2018
Cuban Congress of Cardiology, Havana Cuba June 5-8, 2018
ACC Care of the Athletic Heart: Contemporary Concepts, Cases and Controversies, Salt Lake City,
UT, June 21-23, 2018
Visiting Professor Peruvian Society of Cardiology, Lima, Peru June 28-30, 2018
University of Washington Locke Visiting Professor, Seattle, WA November 2, 2018
ACC Washington Chapter Meeting, Seattle, WA, November 3, 2018
ACC Texas Chapter Annual Meeting, San Antonio, TX October 5-6, 2018
ACC Indiana Chapter Annual Meeting, Indianapolis, IN October 13, 2018
SAC Argentine Society of Cardiology, Argentina, October 18-20, 2018
AHA Scientific Sessions, Updated cholesterol guidelines offer more personalized risk assessment,
additional treatment options for people at the highest risk, Press Conference, Chicago, IL
November 11-13, 2018
ACC 21st Dr. Mariano M. Alimurung Memorial Lecture, Makati Medical Center, Manila, Philippines,
February 8, 2019
ACC 2019 Cardiovascular Summit, Managing the Risk of a Population: How Should I be
Accountable? Orlando, FL on February 14-16, 2019
University of Mississippi 2019 Barksdale Memorial Lecture Visiting Professor, Jackson,MS
April 16, 2019
British Cardiovascular Society, The BCS Annual Conference 2019, Manchester, UK, June 3-5, 2019
ACC Latin America Conference 2019, Columbian Congress of Cardiology, Cartagena, Colombia,
July 25-27, 2019
CSANZ Annual Scientific Meeting, “The Central Role of Cardiac Imaging-How can we ensure
Quality?”, Auckland, New Zealand, August 10, 2019
ESC Congress Paris, Paris, France, August 31-Sept 4, 2019
ACC Middle East Conference 2019, Dubai, United Arab Emirates, October 3-5, 2019
Great Wall International Congress of Cardiology, Beijing, China, October 10-13, 2019
Mexican Congress of Cardiology, Queretaro, Mexico, November 9-12, 2019
The Future of Genetic in Cardiovascular Disease, Italian Society of Cardiology 80th National
Congress – SIC, Rome, Italy, December 12-15, 2019

Heart and Vascular Cardiology- Cardiology Grand Rounds - Around the World in 365 Days with the ACC President: The 10 Most Important Developments in Cardiology This Year and Protecting the Heart of the Athlete, Tulane University, New Orleans, LA, February 5, 2020
ACC 2020 Cardiovascular Summit and Leadership Forum, Universal Principles of Leading Change Workshop, and Strategic Leadership Workshop, February 6-7, 2020
2020 Cardio-Oncology Course, Advancing the Cardiovascular Care of the Oncology Patient, Washington, DC, February 14-16, 2020 -keynote address.
ACC Mexican Society of Cardiology, Highlights of the ACC/WCC 2020 Meeting, Virtual, June 26, 2020
Hong Kong College of Cardiology, Cardiology-Oncology 2020: Opportunities and Challenges, July 4, 2020
CardioAcademic Course 2020, Exercise and Heart, October 8, 2020, Mexico City Virtual
ACC Kansas Chapter, Sports Cardiology Case-Based Discussion, October 9, 2020, Virtual
Puerto Rico Congress, ACC Response, Management and Recommendations to the Cardiology Community to the COVID-19 Pandemic, October 15, 2020, Virtual
ACC of Dominican Republic, The Practice of Medicine During and After the Pandemic, November 12, 2020 Virtual
2021 ACC Cardiovascular Summit and Leadership Forum, Panel: Pivoting Your Strategic Plan Post-COVID, February 13, 2021, Virtual
Co-Chair, Late breaking clinical trials IV. ACC21
Rheumatology Grand Rounds, Indiana University, April 2021
Rheumatology Grand Rounds, UCSF, June 2021
2nd Annual IUH/IUSM CV Institute Summit on High Value Cardiovascular Care: Opioid-Related Valvular Heart Disease, Plenary Session. August 30, 2021.
Krannert Institute of Cardiology Grand Rounds, October 2021.
Puerto Rico Chapter ACC, San Juan, PR, November 12, 2021.
King Faisal Specialty Hospital Grand Rounds, Riyadh, Saudi Arabia. November 18, 2021.
Alabama Chapter ACC, Birmingham AL, Jan 22, 2022.
Cardiovascular Summit, February, 2022.
IU Geriatrics "ECHO" patient management conference, March 9, 2022.

CURRENT RESEARCH INTERESTS:

Drug induced QT Prolongation.
Sports Cardiology.
Quality Improvement

RESEARCH SUPPORT:

ACTIVE

1R01HL153114-01 (Tisdale, J, P.I.) 8/1/2020-7/31/2025 0.24 calendar
NIH \$1,902,929

Novel approaches to Minimize Drug-Induced QT Prolongation.
Role: Co-Investigator

Pfizer, Inc. 1/1/2021 – 12/31/2022 \$241, 479
Role: Principal Investigator

Pilot Implementation of a Clinical Program for Identification of Patients at Higher Risk of Atrial Fibrillation Using an EHR Predictive Model

RECENT

CV013020 (Khemka, A, P.I.) 11/27/2018-11/27/2021
PPD Investigator Services LLC \$121,652

A Multicenter, Randomized, Double-Blind, Placebo- and Active-Controlled, Cross-over Phase 2 Study of Continuous 5-Hour Intravenous Infusions of BMS-986231 in Patients with Heart Failure and Impaired Systolic Function

Role: Co-Investigator

R01HL122245-01A1 (Stewart) 04/21/2015-03/31/2020 0.24 calendar
NIH/NHLBI \$463,034

Modernized Collaborative Care to Reduce the Excess CVD Risk of Depressed Patients

This trial will test the hypothesis that depressed patients need additional risk modification to avoid heart diseases.

Role: Co-Investigator

5UL1TR001108 (Shekhar, A, P.I.) 05/01/2013 – 04/30/2018 0.60 calendar months
NIH/NHLBI \$444,895

Indiana Clinical and Translational Sciences Institute – T Program

The goal of this grant is to provide multidisciplinary training for promising young scientists.

Role: Co-Investigator

ARMARON Trial NP-202 (Kovacs, R –P.I.) April, 2016 – March, 2018 \$175,000
Phase II study in anterior STEMI with LV dysfunction.

ARTICLES:

1. Rardon DP, **Kovacs RJ**, Bailey JC: Adenosine and protacyclin independent electrophysiological effects of dipyridamole in guinea pig papillary muscles and canine cardiac Purkinje fibers. *J Pharm Exp Thre*, 231:206-213, 1984.
2. Aumage JF, Baily JC, **Kovacs RJ**, Lovelace DE, Knoebel SB: A microprocessor-based stimulator and analysis system for laboratory electrophysiology. *Computers in Cardiology*, 421-424, 1984.
3. **Kovacs RJ**, Bailey JC: Effects of acetylcholine on action potential characteristics of atrial and ventricular myocardium after bilateral cervical vagotomy in the cat. *Cir Res* 56:613-620, 1985.
4. Inoue H, Mahomed Y, **Kovacs R**, Zipes D: Surgery for Wolff-Parkinson-White syndrome interrupts efferent vagal innervation to the left ventricle and to the atrioventricular node in the canine heart. *Cardiovasc Res* 22:163-170, 1988.
5. **Kovacs RJ**, Nelson MT, Simmerman HKB, Jones LR: Phospholamban forms Ca²⁺ selective channels in lipid bilayers. *J Biol Chem* 263: 18364-18368, 1988.
6. Hodges TD, Bailey JC, Fleming JW, **Kovacs RJ**: Selective parasympathectomy increases the quantity of inhibitory guanine nucleotide-binding proteins in canine cardiac ventricle. *Molecular Pharmacology* 36:72-77, 1989.
7. **Kovacs RJ**, Nelson MT: The ATP sensitive K⁺ channel of aortic smooth muscle incorporated into planar lipid bilayers. *Am J Physiol* 261:H604-H609, 1991.
8. Witcher DR, **Kovacs RJ**, Schulman H, Cefal DC, Jones LR: Unique phosphorylation site on the cardiac ryanodine receptor regulates calcium channel activity. *J Biol Chem* 266: 11144-11152,

- 1991.
9. Trippi JA, Lee KS, Kopp G, **Kovacs RJ**: Emergency Diagnosis on a Laptop. *Physicians and Computers* 12:10-17, 1995.
 10. Trippi JA, Lee KS, Kopp G, Nelson D, **Kovacs RJ**: Emergency echocardiography in telemedicine. *J Amer Col Card* 27:1748-1752, 1996.
 11. Rizzo MT, Leaver AH, Yu WM, **Kovacs RJ**: Arachidonic acid induces mobilization of calcium stores and c-jun gene expression: evidence that intracellular calcium release is associated with c-jun activation. *Prostaglandins, Leukotrienes and Essential Fatty Acids* 60(3), 187-198, 1999.
 12. Siddiqui, RA, Burtschi, DJ, **Kovacs, RJ**: Phosphatidic Acid induces calcium influx in neutrophils via verapamil-sensitive calcium channels *Journal of Cellular Biochemistry* 78: 297-304, 2000.
 13. Siddiqui RA, Jensi LJ, Neff K, Harvey K, **Kovacs RJ**: Stillwell W: Docosahexanoic acid induces apoptosis in Jurkat cells by a protein phosphatase-mediated process. *Biochimica et Biophysica Acta* 1499: 265-275, 2000.
 14. Siddiqui RA, Labarrere CA, **Kovacs RJ**: Prevention of cardiac hypertrophy and omega-3 fatty acids: potential cell signally targets. *Curr Org Chem* 4:1145-1156, 2000.
 15. Xiao H, Harvey K, Labarrere CA, **Kovacs RJ**: Platelet cryopreservation using a combination of epinephrine and dimethyl/sulfoxide as cryoprotectants. *Cryobiology* 41:97-105, 2000.
 16. Xiao H, Siddiqui RA, Al-Hassani MH, Sliva D, **Kovacs RJ**: Phospholipids released from activated platelets improve platelet aggregation and endothelial cell migration. *Platelets* 12:1-9, 2001.
 17. Xiao H, **Kovacs R**, Jackson V, Remick DG: Effects of platelet inhibitors on propyl gallate- induced platelet aggregation, protein tyrosine phosphorylation and platelet factor 3 activation, protein tyrosine phosphorylation, and platelet factor 3 activation. *Blood Coagul Fibrinolysis* 2004 (15(3)) 199-206.
 18. Siddiqui FA, Shaikh SR, **Kovacs R**, Stillwell, W, Zaloga, G. Inhibition of Phenylephrine- Induced Cardiac Hypertrophy by Docosahexaenoic Acid. *Journal of Cellular Biochemistry* 92:1141-1159, 2004.
 19. Jacob S, **Kovacs RJ**. Hypereosinophilic syndrome and effect of Imatinib mesylate. *Clinical Cardiology* 28:188, 2005.
 20. Dmitrienko AA, Sides GD, Winters KJ, **Kovacs RJ**, Rebhun DM, Bloom JC, Groh W, Eisenberg PR: Electrocardiogram reference ranges derived from a standardized clinical trial population. *Drug Information Journal*, Nov., 2005.
 21. Yimcharoen P, Fogel EL, **Kovacs RJ**, Rosenfeld SH, McLenry L, WSakints JL, Alzami WM, Sherman S, Lehman GA. Droperidol, when used for sedation during ERCP, may prolong the QT interval. *Gastrointestinal Endoscopy* 63(7):979-985, 2006.
 22. Tisdale JE, **Kovacs R**, Mi D, McCabe GP, Cariera BL, Sharma N, Rosman H. Accuracy of Uncorrected vs Corrected QT Interval for Prediction of Drug-Induced *Torsades de Pointes* Associated with Intravenous Haloperidol. *Pharmacotherapy*, Feb 2007.
 23. Beyerbach DM, **Kovacs RJ**, Dmitrienko AA, Rebhun DM, Zipes DP. Heart Rate Corrected QT Interval in Men Increases During Winter Months *Heart Rhythm* 4:3, 277-281, 2007.

24. Jin Y, Hall SD, Hilligoss JK, Miao J, Li L, **Kovacs RJ**, Hamman MA. Cytochrome P450 3A5 Genotype is Associated with Verapamil Response in Healthy Subjects. *Clinical Pharmacology and Therapeutics*, 82(5):579-85, 2007.
25. Barajas-Martinez HM, Hu D, Cordeiro JM, Wu Y, **Kovacs RJ**, Meltser H, Kui H, Elena B, Brugada R, Antzelevitch C, Dumaine R. Lidocaine-Induced Brugada Syndrome Phenotype Linked to a Novel Double Mutation in the Cardiac Sodium Channel. *Circulation Research*, 103(4):396-404, 2008.
26. Jacob S, Cherian P, Preusz C, **Kovacs R**. Heartbreaking Case of Acetaminophen Poisoning. *Circulation*, 118: e513-e514, 2008.
27. Tisdale JE, Overholser BR, Sowinski KM, Wroblewski HA, Amankwa K, Borzak S, Kingery JR, Coram R, Zipes DP, Flockhart DA, **Kovacs RJ**. Pharmacokinetics of Ibutilide in Patients with Heart Failure Due to Left Ventricular Systolic Dysfunction. *Pharmacotherapy* 28(12), 1461-70; 2008.
28. Das Mithilesh K, Michael Mark A, Suradi Hussam, Peng Jonathan, Sinha Anjan, Shen Changyu, Mahenthiran Jo, **Kovacs Richard J**. Usefulness of Fragmented QRS on a 12-Lead Electrocardiogram in Acute Coronary Syndrome for Predicting Mortality. *American Journal of Cardiology*, 104:12, 1631-1637; 2009.
29. Rock EP, Finkle J, Fingert HJ, Booth BP, Garnett CE, Grant S, Justice RL, **Kovacs RJ**, Kowey PR, Rodriguez I, Sanhai WR, Strnadova C, Targum SL, Tsong Y, Uhl K, Stockbridge N. Assessing proarrhythmic potential of drugs when optimal studies are infeasible. *American Heart Journal* 157:5, 827-836, 2010.
30. Bove AA, Cacchione JG, **Kovacs RJ**. President's Page: The FACCs of Quality. *JACC* 55:9; 922-925, 2010.
31. Benson Merrill D, Teague Shawn D, **Kovacs Richard**, Feigenbaum Harvey, Jung Jessun, and Kincaid John C. "Rate of Progression of Transthyretin Amyloidosis" *The American Journal of Cardiology* 108:285-289, 2011.
32. Tisdale J, **Kovacs RJ**, et al. "Enhanced Sensitivity to Drug-Induced QT Interval Lengthening in Patients with Heart Failure due to Left Ventricular Systolic Dysfunction." *Journal of Clinical Pharmacology* 2012. Online <http://jcp.sagepub.com/content/early/2011/11/01/0091270011416939>
33. Rolf P Kreutz, P. Nystrom, Yvonne Kreutz, Jia Miao, Zeruesenay Desta, Jeffrey Breall, Lang Li, ChienWei Chiang, **Richard Kovacs**, David A Flockhart, Yan Jin. "Influence of paraoxonase-1 Q192R and cytochrome P450 2C19 polymorphisms on clopidogrel response" *Dove Press online* 2012 http://www.dovepress.com/articles.php?article_id=9301&l=Es4XV8SKlmkMgOVLcr9Z6cdt172740
34. Justin VanHorn, Jeffrey D Altenburg, Kevin A Harvey, Zhidong Xu, **Richard J Kovacs**, Rafat Siddiqui. "Attenuation of niacin-induced prostaglandin D2 generation by omega-3 fatty acids in THP-1 macrophages and Langerhans dendritic cells" *Dove Press Journal: Journal of Inflammation Research* 13 March 2012.
35. Tisdale, James E., Wroblewski, Heather, Overholser, Brian R., Kingery, Joanna R., Trujillo, Tate N., **Kovacs, Richard J**. "Prevalence of QT Interval Prolongation in Patients Admitted to Cardiac Care Units and Frequency of Subsequent Administration of QT Interval-Prolonging Drugs: A Prospective Observational Study in a Large Urban Academic Medical Center in the US. *Adis*. 2012.
36. Kreutz, RP, Nystrom, P., Kreutz, Y, Miao, J., Desta, Z, Breall, J.A., Li, L., Chiang, C., **Kovacs, R**, Flockhart, D.A., Jin, Y., "Influence of paraoxonase-1 Q192R, and cytochrome P450 2C19 polymorphisms on clopidogrel response", *Clin Pharmacol*. 2012; 4:13-20. Doi:10.2147/CPAA.S27822.

Epub 2012, Feb 20.

37. Wroblewski, Heather A., **Kovacs, Richard J.**, Overholser, Brian, and Tisdale, James. "High Risk of QT Interval Prolongation and Torsades de Pointes Associated with Intravenous Quinidine Used for Treatment of Resistant Malaria or Babesiosis", *Antimicrobial Agents and Chemotherapy*. 2012, 56 (8):4495. DOI:10.1128/AAC.06396-11. Updated information and services can be found at: <http://aac.asm.org/content/56/8/4495>
38. Tisdale, James E., Overholser, Brian R., Wroblewski, Heather A., Sowinski, Kevin M., Kwadwo, Amankwa, Borzak, Steven, Kingery, Joanna R., Coram, Rita, Zipes, Douglas P., Flockhart, David A., and **Kovacs, Richard J.** "Enhanced Sensitivity to Drug-Induced QT Interval Lengthening in Patients With Heart Failure Due to Left Ventricular Systolic Dysfunction" *The Journal of Clinical Pharmacology*, September, 2012. Online version can be found at: <http://jcp.sagepub.com/content/52/9/1296>.
39. Basir B, Safadi B, **Kovacs RJ**, Tahir B.. A Rare Case of Transient Inferior ST Segment Elevation. *Heart Views*. 2013 July;14(3):117-20. doi:10.4103/1995-705X. 125928. PMID: 24696756
40. Kreutz, R.P., Nystrom, P., Kreutz, Y., Miao, J., **Kovacs, R.**, Desta, Z., Flockhart, D.A., Jin, Y., "Inhibition of platelet aggregation by prostaglandin E1 (PGE1) in diabetic patients during therapy with clopidogrel and aspirin". *Platelets*: 2013;24(2): 145-50. Doi: 10.3109/09537104.2012.661107. Epub 2012, Mar 2. PMID: 22385219 PMCID: PMC4028123
41. Tisdale, James E., Jaynes, Heather A., Kingery, Joanna R., Mourad, Noha A., Trujillo, Tate N., Overholser, Brian R., **Kovacs, Richard J.** "Development and Validation of a Risk Score to Predict QT Interval Prolongation in Hospitalized Patients", *Circ Cardiovasc Qual Outcomes*. 2013; 6: 479-487. DOI: 10.1161/CIRCOUTCOMES.113.000152. *Circ Cardiovasc Qual Outcomes* is available at <http://circoutcomes.ahajournals.org> PMID: 23716032 PMCID: PMC3788679
42. O'Gara, PT, Kushner FG., Ascheim DD., Casey DE Jr. Chung MK., eLemos JA., Ettinger SM., Fang JC, Fesmire FM, Franklin, BA, Granger CB, Krumholz HM, Linderbau MA, Morrow DA, Newby LK, Ornato JP, Ou, N, Radford MJ, Tamis-Hollary JE, Tommasco CL, Tracy CM, Woo YJ, Zhao DX, Anderson JL, Jacobs AK, Halperin JL, Albert NM, Brindis RG, Creager MA, DeMets D, Guyton RA, Hochman JS, **Kovacs RJ**, Kushner FG, Ohman EM, Stevenson WG, Yancy CW; 2013 ACCF/AHA guideline for the management of ST-elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines". *Circulation*. 2013 Jan 29; 127(4):e362-425. doi:0.1161/CIR.0b01382742cf6. Epub 2012, Dec 17.
43. American College of Emergency Physicians; Society for Cardiovascular Angiography and Interventions, O'Gara, PT, Kushner, FG, Ascheim, DD, Casey, DE Jr, Chung, ME, de Lemos, JA, Ettinger, SM, Fang, JC, Fesmire, FM, Franklin, BA, Granger, CB Krumholz, HM, Linderbau, JA, Morrow, DA, Newby, LK, Ornato, JP, Ou, N, Radford, MJ, Tamis-Holland, JE, Tommaso, CL, Tracy, CM, Woo, YJ, Zhao, DX, Anderson, JL, Jacobs, AK, Halperin, JL, Albert, NM, Brindis, RG, Creager, MA, DeMets, D, Guyton, RA, Hochman, JS, **Kovacs, RJ**, Kushner, FG, Ohman, EM, Stevenson, WG, Yancy, CW. 2013 "ACCF/AHA guideline for the management of ST-Elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines". *J Am Coll Cardio*. 2013 Jan 29; 61(4):e78-140. doi: 10.1016/j.jacc.2012.11.019 Epub 2012 Dec 17.
44. Kreutz, Rolf P., Owens, Janelle, Jin, Yan, Nystrom, Perry, Zeruesenay, Desta, Kreutz, Yvonne, Breall, Jeffrey A., Li, Lang, Chiang, ChienWei, **Kovacs, Richard J.**, Flockhart, David A. "Cytochrome P450 3A4*22, PPAR-a, and ARNT polymorphisms and clopidogrel response", *Clinical Pharmacology: Advances and Applications*, 2013;5 185-192.

45. Chappell JC, **Kovacs R**, Haber H, Wright R, Mitchell MI, Detke M, Pangallo B. "Evaluation of the Effects of duloxetine and escitalopram on 24-hour heart rate variability: a mechanistic study using heart rate variability as a pharmacodynamic measure". *J Clin Psychopharmacol*. 2013 Apr; 33(2):236-9. doi: 10.1097/JCP.0b013e31828567b6. PMID: 23422380
46. Anderson JL, Halperin JL, Albert NM, Bozhurt B, Brindis RG, Curtis LH, DeMets D, Guyton RA, Hochman JS, **Kovacs RJ**, Ohman EM, Pressler SJ, Sellke FW, Shen WK. "Management of patients with peripheral Artery Disease (compilation of 2005 and 2011 ACCF/AHA guideline recommendations): a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines". *Circulation* 2013 Apr 2; 127(13): 1425-43. doi:10.1161/CIR.0b013e31828b82aa. Epub 2013 Mar 1.
47. Anderson, JL, Halperin, JL, Albert NM, Bozkurt B, Brindis RG, Curtis LH, DeMets D, Guyton RA, Hochman JS, **Kovacs, RJ**, Ohman EM, Pressler SJ, Sellke FW, Shen WK, Wann LS, Curtis, AB, Ellenbogen KA, Estes, NA 3rd, Ezekowitz MD, Jackman WM, January CT, Lowe JE, Page RL, Slotwiner DJ, Stevenson WG, Tracy CM, Fuster V, Ryden LE, Cannom DS, Crijns HJ, Curtis AB, Ellenbogen KA, Le Heuzey JY, Kay GN, Olsson SB, Prystowsky EN, Tamargo JL, Wann S. "Management of patients with atrial fibrillation (compilation of 2006 ACCF/AHA/ESC and 2011 ACCF/AHA/HRS recommendations): a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines". *J Am Coll Cardiol*. 2013 May 7; 61(18): 1935-44. doi: 10.1016/j.jacc.2013.02.001. Epub 2013 Apr 1.
48. Basir B, Safadi B, **Kovacs RJ**, Tahir B.. A Rare Case of Transient Inferior ST Segment Elevation. *Heart Views*. 2013 July;14(3):117-20. doi:10.4103/1995-705X. 125928. PMID: 24696756
49. Christine Lawless, Brian Olshansky, Reginald L. Washington, Aaron L. Baggish, Curt J. Daniels, Silvana M. Lawrence, Renee M. Sullivan, **Richard J. Kovacs**, Alfred A. Bove. "Sports and Exercise Cardiology in the United States: Cardiovascular specialists as members of the athlete healthcare team". *J Am Coll Cardiol*. 2014 February 12.
50. Tisdale, JE, Jaynes, HA, Kingery, JR, Overholser, BR, Mourad, NA, Trujillo, TN, **Kovacs, RJ**. "Effectiveness of a Clinical Decision Support System for Reducing the Risk of QT Interval Prolongation in Hospitalized Patients". *Circ Cardiovasc Qual Outcomes*. 2014 May 6; 7: 381-390.
51. Jacobs AK, Anderson JL, Halperin JL, ACC/AHA TASK FORCE MEMBERS, Anderson JL, Halperin, JL, Albert NM, Bozkurt B, Brindis RG, Curtis LH, DeMets D, Fleisher LA, Gidding S, Hochman JS, **Kovacs RJ**, Ohman EM, Pressler SJ, Sellke FW, Shen WK, Wijeyesundera DN. The evolution and future of ACC/AHA clinical practice guidelines: a 30 year journey: a report of the American College of Cardiology/American Heart Association Task Force on practice guidelines. *Circulation*. 2014 Sep 30;130(14):1208-17. Doi: 10.1161/CIR. 000000000000090. Epub 2014 Aug 4. No abstract available. PMID: 25092464
52. Christine Lawless, Chad Asplund, Irfan Asif, Ron Courson, Michael Emery, Anthon Fuisz, **Richard J. Kovacs**, Silvana Lawrence, Benjamin Levine, Mark S. Link, Matthew W. Martinez, G. Paul Matherne, Brian Olshansky, William O. Roberts, Lisa Salberg, Victoria Vetter, Robert A. Vogel, Jim Whitehead. "Protecting the Heart of the American Athlete", Proceedings of the American College of Cardiology Sports and Exercise Cardiology Think Tank October 18, 2012, Washington, DC. *J Am Coll Cardiol*. 2014, October.
53. **Richard J. Kovacs**, Giuliana Maldonado, Analia Azaro, Maria S. Fernandez, Federico L. Romero, Juan M. Sepulveda-Sanchez, Mary Corretti, Michael Carducci, Melda Dolan, Ivelina Guerogueieva, Ann L. Cleverly, N. Sokalingum Pillay, Jose Baselga, Michael M. Lahn. "Cardiac Safety of TGF- β Receptor I Kinase Inhibitor LY2157299 Monohydrate in Cancer Patients in a First-in-Human Dose Study". *Cardiovasc Toxicol*. 2014 December 9. Doi 10.1007/s12012-014-9297-4. Springerlink.com.

54. Tisdale, James, Allen, Matthew, Overholser, Brian, Wroblewski, Heather, **Kovacs, Richard**. "Influence of Zoledronic Acid on Atrial Electrophysiological Parameters and Electrocardiographic Measurements". *Journal of Cardiovascular Electrophysiology* 2015 June 26(6) 671-7 PMID: 25684326 PMCID: PMC4464904 DOI: 10.1111/jce.12641
55. **Richard J. Kovacs**, Greg C. Flaker, Sherry J. Saxonhouse, John U. Doherty, Kim K. Birtcher, Adam Cuker, Bruce L. Davidson, Robert P. Giugliano, Christopher B. Granger, Amir K. Jaffer, Bella H. Mehta, Edith Nutescu, Kim A. Williams."Practical Management of Anticoagulation in Patients with Atrial Fibrillation". *J Am Coll Cardio* 2015.01.049.2015, April. DOI: 10.1016/j.jacc.2015.01.049 PMID: 25835447
56. **Richard J. Kovacs**, Aaron Baggish. "Cardiovascular Adaptation in Athletes." *Trends in Cardiovascular Medicine*, April, 2015.
57. **Richard J. Kovacs**, Joseph P. Drozda. "The Changing Face of Team Care, and a Challenge for the Future." *J Am Coll Cardio*. 2015, May 19; 65(19) 2137-9. DOI: 10.1016/j.jacc.2015.03.556 PMID: 25975477
58. **Kovacs, Richard J.**: Using Practice-Based Evidence to Reduce Disparities in Care: A Virtuous Cycle Turns. *JACC* Vol. 66, NO 11, September, 2015: 1234-5. DOI: 10.1016/j.jacc.2015.07.046 PMID: 26361153
59. Barry J. Maron, Douglas P. Zipes, **Richard J. Kovacs**, "Eligibility and Disqualification Recommendations for Competitive Athletes with Cardiovascular Abnormalities: Preamble, Principles, and General Considerations". A Scientific Statement from the American Heart Association and American College of Cardiology. *Circulation*. 2015; 132:e256-261. DOI: 10.1161/CIR.0000000000000236.
60. Benjamin D. Levin, Aaron L. Baggish, **Richard J. Kovacs**, Mark S. Link, Martin S. Maron, Jere H. Mitchell. "Eligibility and Disqualification Recommendations for Competitive Athletes With Cardiovascular Abnormalities: Task Force 1: Classification of Sports: Dynamic, Static, and Impact". A Scientific Statement from the American Heart Association and American College of Cardiology. *Circulation*. 2015; 132: e262-e266. DOI: 10.1161/CIR.0000000000000237. PMID: 26621643
61. Barry J. Maron, Benjamin D. Levine, Reginald L. Washington, Aaron L. Baggish, **Richard J. Kovacs**, Martin S. Maron. "Eligibility and Disqualification Recommendations for Competitive Athletes With Cardiovascular Abnormalities: Task Force 2: Preparation Screening for Cardiovascular Disease in Competitive Athletes". A Scientific Statement from the American Heart Association and American College of Cardiology. *Circulation*. 2015; 132:e267-e272. DOI:10.1161/CIR.0000000000000238. PMID: 26527714
62. George F. Van Hare, Michael J. Ackerman, Juli-anne K. Evangelista, **Richard J. Kovacs**, Robert J. Myerburg, Keri M. Shafer, Carole A. Warnes, Reginald L. Washington. "Eligibility and Disqualification Recommendations for Competitive Athletes with Cardiovascular Abnormalities: Task Force 4: Congenital Heart Disease". A Scientific Statement from the American Heart Association and American College of Cardiology. *Circulation*. 2015; 132:e281-e291. DOI: 10.1161/CIR.0000000000000240. Epub 2015 Nov 2. Review. PubMed PMID: 26621645.
63. Alan C Braverman, Kevin M. Harris, **Richard J. Kovacs**, Barry J. Maron. "Eligibility and Disqualification Recommendations for Competitive Athletes With Cardiovascular Abnormalities: Task Force 7: Aortic Disease, Including Marfan Syndrome". A Scientific Statement from the American Heart Association and American College of Cardiology. *Circulation*. 2015; 132: e303-e309. DOI: 10.1161/CIR.0000000000000243. PMID: 26621648

64. Paul D. Thompson, Robert J. Myerburg, Benjamin D. Levin, James E. Udelson, **Richard J. Kovacs**. “Eligibility and Disqualification Recommendations for Competitive Athletes with Cardiovascular Abnormalities: Task Force 8: Coronary Artery Disease”. A Scientific Statement from the American Heart Association and American College of Cardiology. *Circulation*. 2015; 132:e310-e314. DOI: 10.1161/CIR.0000000000000244. PMID: 26621649
65. Douglas P. Zipes, Mark S. Link, Michael J. Ackerman, **Richard J. Kovacs**, Robert J. Myerburg, Mark Estes III. “Eligibility and Disqualification Recommendations for Competitive Athletes With Cardiovascular Abnormalities: Task Force 9: Arrhythmias and Conduction Defects.” A Scientific Statement from the American Heart Association and American College of Cardiology. *Circulation*. 2015; 132:e315-e325. DOI: 10.1161/CIR0000000000000245.
66. Michael J. Ackerman, Douglas P. Zipes, **Richard J. Kovacs**, Barry J. Maron. “Eligibility and Disqualification Recommendations for Competitive Athletes with Cardiovascular Abnormalities: Task Force 10: The Cardiac Channelopathies”. A Scientific Statement from the American Heart Association and American College of Cardiology. *Circulation*. 2015; 132:e326-e329. DOI: 10.1161/CIR0000000000000246.
67. Gluckman TJ, **Kovacs RJ**, Stone NJ, Damalas D, Mullen JB, Oetgen WJ. The ASCVD Risk Estimator App: From Concept to the Current State. *J Am Coll Cardiol*. 2016 Jan 26;67(3):350-2. Doi 10.1016/j.jacc.2015.10.068. No abstract available. PMID: 26796407
68. James E. Tisdale, Heather A. Jaynes, Brian R. Overholser, Kevin M. Sowinski, David A. Flockhart, **Richard J. Kovacs**. “Influence of Oral Progesterone Administration on Drug-Induced QT Interval Lengthening.” *JACC: Clinical Electrophysiology*. On-line, April 6, 2016.
69. **Richard J. Kovacs**, Rolf Kreutz. “Simultaneous Administration of High Dose Atorvastatin and Clopidogrel Does Not Interfere With Platelet Inhibition during Percutaneous Coronary Intervention”. *Clinical Pharmacology: Advances and Applications*. Dove Medical Press. June, 2016.
70. Anisiia Doytchinova, Jonathan L. Hassel, Yuan Yuan, Hongbo Lin, Dechun Yin, David Adams, Susan Straka, Keith Wright, Kimberly Smith, David Wagner, Changyu Shen, Vicenta Salanova, Chad Meshberger, Lan S. Chen, John C. Kincaid, Arthur C. Coffey, Gang Wu, Yan Li, **Richard J. Kovacs**, Thomas H. Everett, Ronald Victor, Yong-Mei Cha, Shien-Fong Lin, Peng-Sheng Chen. “Simultaneous noninvasive recording of skin sympathetic nerve activity and electrocardiogram”. *Heart Rhythm Society* 2016 0:-1-9. Published on-line:<http://dx.doi.org/10.1016/j.hrthm.2016.09.019>.
71. Baggish, AL, **Kovacs, RJ**. “Participation cardiovascular screening: clinical partnership is the only certainty. *Br J Sports Med* 2016; 0:1-2. October, 2016.
72. Korre M, Porto LG, Farioli A, Yang J, Christiani DC, Christophi CA, Lombardi DA, **Kovacs RJ**, Mastouri R, Abbasi S, Steigner M, Mofatt S, Smith D, Kales SN. Effect of Body Mass Index on Left Ventricular Mass in Career Male Firefighters. *AM J Cardiol*. 2016 Dec 1;118(11):1769-1773. Doi:10.1016/j.amjcard.2016.08.058.Epub 2016 Aug 31. PMID: 27687051
73. Marvin A. Konstam, MD, Joseph A. Hill, MD, PHD, **Richard J. Kovacs, MD**, Robert A. Harrington, MD, James A. Arrighi, MD, Amit Khera, MD, MSC, for the Academic Cardiology Section Leadership Council of the American College of Cardiology: “ The Academic Medical System: Reinvention to Survive the Revolution in Health Care, . *J AM Coll Cardiol* 69:0735, 2017. PMID: 28279297

74. Jum-Suk Ko, Shuai Guio, Jonathan Hassel, Patricia Celestino-Soper, Ty Lynnes, James Tisdale, James Zheng, Stanley Taylor, Tatiana Faroud, Michael Murray, **Richard Kovacs**, Xiaochun Li, Shien-Fong Lin, Zhenhui Chen, Matteo Vatta, Peng-Sheng Chen, and Michael Rubart; "Ondansetron Blocks Wildtype and p.F503L Variant Small Conductance Calcium Activated Potassium Channels". *AJP-Heart and Circulatory Physiology* as a Research Article. <https://doi.org/10.1152/ajpheart.00479.2017>. April 20 2018. Ahead of Print PMID: 29677462
75. Tisdale JE, Jaynes HA, Overholser BR, Sowinski KM, **Kovacs RJ**. Progesterone pretreatment reduces the incidence of drug-induced Torsades de Pointes in atrioventricular node-ablated isolated perfused rabbit hearts: *J Cardiovasc Electrophysiol*. 2019 Apr 21. doi: 10.1111/jce.13942. PMID: 31006943
76. Mariella Särestöniemi, Carlos Pomalaza Ruez, Timo Kumpuniemi, Matti Hämäläinen, **Richard Kovacs**, Jari Iinatti, Measurement Data Based Study on the Intra-body Propagation in the Presence of the Sternotomy Wires and Aortic Valve Implant 2019 March 20, doi: 10.1109/TAP.2019.2906492, [IEEE Transactions on Antennas and Propagation](https://doi.org/10.1109/TAP.2019.2906492)
77. Muensterman, E. T., H. A. Jaynes, K. M. Sowinski, B. R. Overholser, C. Shen, **R. J. Kovacs**, and J. E. Tisdale. "Effect of Transdermal Testosterone and Oral Progesterone on Drug-Induced QT Interval Lengthening in Older Men: A Randomized, Double-Blind, Placebo-Controlled Crossover-Design Study." *Circulation* 140, no. 13 (Sep 24 2019): 1127-29. <https://doi.org/10.1161/CIRCULATIONAHA.119.041395>. <https://www.ncbi.nlm.nih.gov/pubmed/31545681>.
78. Moraes, G., and **R. J. Kovacs**. "Building Bridges between Acc and Women's Cardiovascular Health around the World." *J Am Coll Cardiol* 74, no. 8 (Aug 27 2019): 1156-58. <https://doi.org/10.1016/j.jacc.2019.07.033>. <https://www.ncbi.nlm.nih.gov/pubmed/31439223>
79. Maddox, T. M., T. J. Gluckman, J. Doherty, and **R. J. Kovacs**. "Solution Sets to Generate Actionable Knowledge for Cardiovascular Care." *J Am Coll Cardiol* 73, no. 25 (Jul 2 2019): 3349-51. <https://doi.org/10.1016/j.jacc.2019.05.018>. <https://www.ncbi.nlm.nih.gov/pubmed/31248557>
80. Tisdale, J. E., H. A. Jaynes, B. R. Overholser, K. M. Sowinski, and **R. J. Kovacs**. "Progesterone Pretreatment Reduces the Incidence of Drug-Induced Torsades De Pointes in Atrioventricular Node-Ablated Isolated Perfused Rabbit Hearts." *J Cardiovasc Electrophysiol* 30, no. 6 (Jun 2019): 941-49. <https://doi.org/10.1111/jce.13942>. <https://www.ncbi.nlm.nih.gov/pubmed/31006943>
81. Oakes, T. M., **R. Kovacs**, N. Rosen, E. Doty, P. Kemmer, S. K. Aurora, and A. Camporeale. "Evaluation of Cardiovascular Outcomes in Adult Patients with Episodic or Chronic Migraine Treated with Galcanezumab: Data from Three Phase 3, Randomized, Double-Blind, Placebo-Controlled Evolve-1, Evolve-2, and Regain Studies." *Headache* 60, no. 1 (Jan 2020): 110-23. <https://doi.org/10.1111/head.13684>. <https://www.ncbi.nlm.nih.gov/pubmed/31721185>
82. **Kovacs, R. J.**, J. H. Gilbert, and W. J. Oetgen. "Call to Action: Opioid Crisis Impacting More Than Just Patients." *J Am Coll Cardiol* 75, no. 3 (Jan 28 2020): 341-43. <https://doi.org/10.1016/j.jacc.2019.12.010>. <https://www.ncbi.nlm.nih.gov/pubmed/31932063>
83. **Kovacs, R. J.** "Finding Refuge in the ACC Family in Unprecedented Times." *J Am Coll Cardiol* 75, no. 18 (May 12 2020): 2376-78. <https://doi.org/10.1016/j.jacc.2020.04.001>. <https://www.ncbi.nlm.nih.gov/pubmed/32381168>.
84. **Kovacs, R. J.**, and O. Rodriguez-Vila. "The Challenges of Inequitable Care: A Look at Puerto Rico Versus U.S. States." *J Am Coll Cardiol* 75, no. 15 (Apr 21 2020): 1857-59. <https://doi.org/10.1016/j.jacc.2020.03.007>. <https://www.ncbi.nlm.nih.gov/pubmed/32299597>

85. Tisdale, J. E., H. A. Jaynes, B. R. Overholser, K. M. Sowinski, M. D. Fisch, J. E. Rodgers, A. Aldemerdash... **Kovacs R.J.** "Enhanced Response to Drug-Induced QT Interval Lengthening in Patients with Heart Failure with Preserved Ejection Fraction." *J Card Fail* 26, no. 9 (Sep 2020): 781-85. <https://doi.org/10.1016/j.cardfail.2020.06.008>. <https://www.ncbi.nlm.nih.gov/pubmed/32592895>.
86. Funk, M. C., S. R. Beach, J. R. Bostwick, C. Celano, M. Hasnain, A. Pandurangi, A. C. Khandai..**Kovacs R.J.** "QTc Prolongation and Psychotropic Medications." *Am J Psychiatry* 177, no. 3 (Mar 1 2020): 273-74. <https://doi.org/10.1176/appi.ajp.2019.1760501>. <https://www.ncbi.nlm.nih.gov/pubmed/32114782>.
87. Bozkurt, B., **R. Kovacs**, and B. Harrington. "Joint HFSA/ACC/AHA Statement Addresses Concerns Re: Using Raas Antagonists in Covid-19." *J Card Fail* 26, no. 5 (May 2020): 370. <https://doi.org/10.1016/j.cardfail.2020.04.013>. <https://www.ncbi.nlm.nih.gov/pubmed/32439095>.
88. Francis, M. M., T. A. Hummer, E. Liffick, J. L. Vohs, N. F. Mehdiyoun, A. C. Visco, Z. Yang, **R. Kovacs et al.** "Effects of Fingolimod, a Sphingosine-1-Phosphate (S1p) Receptor Agonist, on White Matter Microstructure, Cognition and Symptoms in Schizophrenia." *Brain Imaging Behav* (Sep 7 2020). <https://doi.org/10.1007/s11682-020-00375-7>. <https://www.ncbi.nlm.nih.gov/pubmed/32893328>.
89. Brauer M, Casadei B, Harrington RA, **Kovacs R**, Sliwa K, Expert Group the WAP. Taking a Stand Against Air Pollution – The Impact on Cardiovascular Disease: A Joint Opinion from the World Heart Federation, American College of Cardiology, American Heart Association, and the European Society of Cardiology. *Global Heart*. 2021;16(1):8. DOI: <http://doi.org/10.5334/gh.948>
90. **Kovacs RJ.** Proarrhythmia and Oncotherapy: So much to be done! *JACC: CardioOncology*. 3(1) 98-100.
91. Wilson, S.M., Phookan, S., and **Kovacs RJ.** Right Ventricular Infarction Presenting with Refractory Hypoxia Due to Shunting Across a Patent Foramen Ovale. 2021 *JACC: Case Reports*.
92. Poppas, A., E. H. Chung, and **R. Kovacs.** Covid-19 and the Athlete: Gaining Ground but Not yet at the Finish. *J Am Coll Cardiol* 77, no. 10 (Mar 16 2021): 1368-71. <https://doi.org/10.1016/j.jacc.2021.02.002>. <https://www.ncbi.nlm.nih.gov/pubmed/33706880>
93. Tomaselli Muensterman, E., H. A. Jaynes, K. M. Sowinski, B. R. Overholser, C. Shen, **R. J. Kovacs**, and J. E. Tisdale. "Transdermal Testosterone Attenuates Drug-Induced Lengthening of Both Early and Late Ventricular Repolarization in Older Men." *Clin Pharmacol Ther* 109, no. 6 (Jun 2021): 1499-504. <https://doi.org/10.1002/cpt.2072>. <https://www.ncbi.nlm.nih.gov/pubmed/33020898>
94. Kutkut, I., D. Uceda, A. Kumar, J. Wong, X. Li, K. C. Wright, S. Straka, **R.J. Kovacs, et al.** "Skin Sympathetic Nerve Activity as a Biomarker for Neurologic Recovery During Therapeutic Hypothermia for Cardiac Arrest." *Heart Rhythm* 18, no. 7 (Jul 2021): 1162-70.
95. Carpenter, J. S., J. E. Tisdale, C. X. Chen, **R. Kovacs**, J. C. Larson, K. A. Guthrie, K. E. Ensrud, K. M. Newton, and A. Z. LaCroix. "A Menopause Strategies-Finding Lasting Answers for Symptoms and Health (Msflash) Investigation of Self-Reported Menopausal Palpitation Distress." *J Womens Health (Larchmt)* 30, no. 4 (Apr 2021): 533-38. <https://doi.org/10.1089/jwh.2020.8586>. <https://www.ncbi.nlm.nih.gov/pubmed/33217253>.
96. Daniels, C. J., S. Rajpal, J. T. Greenshields, G. L. Rosenthal, E. H. Chung, M. Terrin, J. Jeudy, **R.J. Kovacs, et al.** "Prevalence of Clinical and Subclinical Myocarditis in Competitive Athletes with Recent Sars-Cov-2 Infection: Results from the Big Ten Covid-19 Cardiac Registry." *JAMA Cardiol*

(May 27 2021). <https://doi.org/10.1001/jamacardio.2021.2065>.
<https://www.ncbi.nlm.nih.gov/pubmed/34042947>.

97. Boyle, AJ, Schultz, C, Selvanayagam, JB, Moir, S, Kovacs RJ et al. "Calcium/Calmodulin-Dependent Protein Kinase II Delta Inhibition and Ventricular Remodeling after Myocardial Infarction: A Randomized Clinical Trial" *JAMA Cardiology* 2021 Jul 1;6(7): 762-768.
<https://doi.org/10.1001/jamacardio.2021.0676>
98. Desmarais, J, Rosenbaum, JT, Costenbader, KH, Ginzler EM, Fett, N, Goodman, S, O'Dell, J, Pineau, CA, Schmajuk, G, Werth, VP, Link, MS and **Kovacs, RJ** "American College of Rheumatology White Paper on Antimalarial Cardiac Toxicity" *Arthritis Rheumatol* 2021 Dec;73(12) 2151-2160. <https://doi.org/10.1002/art.41934>.

ABSTRACTS:

1. **Kovacs RJ**, and Bailey JC: Exaggerated cardiac electrophysiological effects of acetylcholine following bilateral cervical vagotomy in the cat. *Circulation* 68:154, 1983.
2. **Kovacs RJ**, Steinmetz JR, and Bailey JC: Effects of acetylcholine on cat Purkinje fiber action potential duration after bilateral cervical vagotomy. *Fed Proc* 43:635, 1984.
3. **Kovacs RJ**, Green FJ, Bailey JC, and Watanabe AM: Muscarinic receptor binding characteristics following chronic bilateral cervical vagotomy in the cat. *The Pharmacologist* 26:213, 1984.
4. **Kovacs RJ**, Bailey JC, Watanabe AM: Electrophysiologic responses to acetylcholine and muscarinic receptor binding following cardiac parasympathectomy. *J Am Coll Cardiol* 5:466, 1985.
5. **Kovacs RJ**, Watanabe AM, Bailey JC: Cardiac parasympathectomy alters cellular electrophysiologic responses to isoproterenol and beta receptor number. *Clin Res* 33:520A, 1985.
6. **Kovacs RJ**, Kammerling JM, Zipes DP, and Bailey JC: Alteration of choline acetyltransferase activity by surgical parasympathectomy and transmural myocardial infarction. *Circulation* 72:246, 1985.
7. **Kovacs RJ**, Bailey JC, Watanabe AM: Cardiac parasympathectomy alters cellular electrophysiologic responses to isoproterenol and beta receptor number independent of heart rate. Presented as part of the Young Investigators Program at the meeting of the AHA Councils on Basic Science and Circulation, Keystone, Colorado, 1986.
8. Forrest TL, **Kovacs RJ**, Bailey JC: Epicardial application of phenol induces regional myocardial sensitivity to acetylcholine. *Clin Res* 34:629A, 1986.
9. **Kovacs RJ**, Nelson MT, and Jones LR: "Salt-free" cardiac sarcolemmal vesicles: a new preparation suited for fusion and planar lipid bilayers. *Circulation* 76, IV-111, 1987.
10. Hodges TD, Bailey JC, Fleming JW, **Kovacs RJ**: Muscarinic receptor binding characteristics in sarcolemma following selective cardiac parasympathectomy. *Clin Res* 284A, 1988.
11. Hodges TD, **Kovacs RJ**, Bailey JC, Fleming JW: Solubilization reveals direct correlation between increased density of pertussis toxin substrates and increased GTPase activity in sarcolemma following cardiac parasympathectomy. *Clin Res* 541A, 1988.
12. **Kovacs RJ**, Nelson MT, Jones LR: Purified phospholamban forms divalent cation-permeable

- channels in planar lipid bilayers. *Circulation*, 78:II-25, 1988.
13. Jones LR, **Kovacs RJ**, Simmerman HKB, Wegener AD: Phospholamban: cAMP- and Ca/Calmodulin-dependent phosphorylation in regulation of Ca transport. *Pediatric Pulmonary (Supp. II)*, S12.2, 1988.
 14. Hodges, T, Bailey J, **Kovacs R**: “Up-regulation” of GTP binding proteins following cardiac parasympathectomy – quantitation by immunoblot method. *J Am Coll Cardiol* 13:143A, 1989.
 15. **Kovacs RJ**, Jones LR, Wegener AD: Smooth muscle phospholamban forms ion channels in lipid bilayers. *Biophys J* 55:15a, 1989.
 16. Scott BT, **Kovacs RJ**, Jones LR: Some properties of phospholamban synthesized in vitro from synthetic RNA. *Biophys J* 55:16a, 1989.
 17. **Kovacs RJ**, Simmerman HKB, Jones LR: Single channel conductance of the membrane spanning portion of cardiac phospholamban. Presented as part of The Young Investigators Program at the meeting of the AHA Scientific Conference on Membrane Events and Intracellular Signaling in the Cardiovascular System. Waikoloa, Hawaii, 1989.
 18. **Kovacs RJ**, Jones LR: Divalent cation conduction and block in the phospholamban channel. *Circulation* 80:II-519 1989.
 19. **Kovacs RJ**, Nelson MT: ATP-sensitive K⁺ channels in canine aortic smooth muscle membranes. *Circulation* 80: II-519, 1989.
 20. **Kovacs RJ**, Brayden TE, Huang Y, and Nelson MT: Block of cromakalim action and arterial smooth muscle ATP-sensitive K⁺ channels by tetrapentylammonium ions. *Circulation*: 82 III:341 1990.
 21. Parikh SR, Hodges TD, **Kovacs RJ**: G-protein ion channel interactions in developing and denervated heart. *J Am Coll Cardiol* 17:354A 1991.
 22. Witcher DR, **Kovacs RJ**, Schulman H, Jones LR: Unique phosphorylation site on the cardiac ryanodine receptor regulates Ca²⁺ channel activity. *Biophys J*. 59:43a 1991.
 23. Hodges TD, Robertson DW, and **Kovacs RJ**: Biochemical properties of an (¹²⁵I)-Labeled analogue of glyburide in vascular smooth muscle. *Clin Res* 39:368a 1991.
 24. Hodges TD and **Kovacs RJ**: Increased inhibition of adenylate cyclase in sarcolemma following selective cardiac parasympathectomy. *Clin Res* 39:368a 1991.
 25. **Kovacs RJ**, Longenecker KL, Kachel DL, Martin WJ II: Amiodarone blocks single cardiac calcium channels in lipid bilayers. *Clin Res* 39:193a 1991.
 26. Hodges TD, Robertson DR, and **Kovacs RJ**: Nucleotide modulation of iodoglyburide binding in canine aortic smooth muscle. *Clin Res* 40:345a 1992.
 27. **Kovacs RJ**, Hodges TD: Nucleotide modulation of glibenclamide binding and ATP-sensitive potassium channel blockade in vascular smooth muscle. *J. Am Coll Cardiol* 21:422A 1993.
 28. Trippi J, **Kovacs R**, Kopp G, Nelson D: Trans-telephonic echocardiographic interpretation and reporting using a laptop computer. *Clinical Res* 42:327A 1994.

29. Trippi J, **Kovacs R**, Kopp G, Nelson D: Trans-telephonic transmission of emergency echocardiograms to a laptop computer. *Circulation* Vol 90, No 4, Part 2, I608, 1994.
30. Titov S, Cefali D, Jones LR, **Kovacs RJ**: Single-channel characteristics of sarcoplasmic reticulum calcium release channels from normal and failed human myocardium. *J Amer Col Card*, Abstract 770-4, Page 283A. February 1995.
31. Hanish S, Titov S, **Kovacs RJ**: Aprotinin produces ion channels in lipid bilayers. *J Amer Col Card*, Abstract 947-113, Page 176A. February 1995.
32. Faulk WP, Torry RJ, Labarrere CA, Nelson DR, **Kovacs RJ**: Blood Troponin-T concentrations correlate with coronary artery disease and abnormal hemostasis, fibrinolysis and endothelial activation. *J Amer Col Card*, Abstract 808-3, Page 402A. 1997.
33. Faulk WP, Torry RJ, Labarrere CA, Nelson DR, **Kovacs RJ**: Coronary artery disease, endothelial activation and perturbed hemostasis in transplanted hearts are predicted by elevated concentrations of troponin-T. *J of Heart and Lung Transplantation* 16(1) 67. 1997.
34. Siddiqui R, **Kovacs RJ**: Phosphatidic acid induces calcium influx in neutrophils via verapamil-sensitive calcium channels. *The FASEB Journal*, Volume 13, Number 7, Page A1418. 1999.
35. Titov S, Pettner J, **Kovacs RJ**: Regulation of cardiac ryanodine receptor by triadin and junctin in vitro. *J. Mol Cell Cardiology* 32(5): A77. 2000.
36. Siddiqui RA, Jensi LJ, Wiesehan JD, Harvey KA, **Kovacs RJ**, Stillwell W. Docosahexanoic acid induces cell cycle arrest and apoptosis in Jurkat cells. *Molecular Biology of the Cell* 11:446a, 2000.
37. Siddiqui RA, Jensi LJ, Wiesehan JD, **Kovacs RJ**, Stillwater W. Prevention of cytotoxic effects of docosahexanoic acid by phosphatidic acid. *Molecular Biology of the Cell* 11:253a, 2000.
38. Siddiqui RA, Jensi LJ, Wiesehan JD, Hunter MV, **Kovacs RJ**, Stillwell W. Prevention of docosahexanoic acid-induced cytotoxicity by phosphatidic acid in Jurkat leukemic cells: the role of protein phosphatase-1. *Biophysica Acta* 1541: 188-200, 2001.
39. Wernicke JF, Faries D, Gao H, **Kovacs R**, Breitung R, Michelson D: Cardiovascular Effects of Atomoxetine. Poster presented at the American Academy of Child & Adolescent Psychiatry (AACAP). San Francisco, CA, 2002.
40. Harris CJ, Dmitrienko A, Debery MA, Carter LA, **Kovacs R**, Cyr AC, Francis JL, Goldberg MJ: Testing single dose Moxifloxacin and Ibutilide as positive controls for detecting QTc prolongation in healthy subjects. *Journal of Clinical Pharmacology* 2004.
41. Williams CD, Sheth S, Calley C, **Kovacs R**: High incidence of prolonged QTc in asthmatics. *Journal of American College of Cardiology* 43: 137A, 2004.
42. Cariera BL, **Kovacs RJ**, Deming MI, McCabe GP, Lisek C, Tisdale JE: Accuracy of Uncorrected vs Corrected QT Interval for Prediction of Drug-Induced Torsades de Pointes. *Circulation* 110:17 III-580, 2004.
43. Barajas-Martinez HM, Hu D, Brugada R, Cordeiro JM, Wu Y, **Kovacs RJ**, Meltser H, Kui H, Burashnikov E, Antzelevitch C, and Dumaine R. Lidocaine-induced Brugada Syndrome phenotype linked to a novel double mutation in the cardiac sodium channel. *Heart Rhythm* 2:5, 2005.

44. Nystrom P, Desta Z, Jakubowski J, Li L, Hilligoss J, Tisdale JE, Kreutz Y, Mioa J, Flockhart DA, **Kovacs R**, and Jin Y. Response to clopidogrel in patients with coronary artery disease is associated with CYP2C19 but not CYP2B6 genotype. *Clin Pharmacology & Therapeutics* 83:Supp 1, S3, March 2008.
45. Wroblewski HA, Tisdale JE, Overholser BR, Kinger JR, and **Kovacs RJ**. Adverse Drug Events Resulting in Admission to a Cardiac Care Unit. *JACC Vol. 55:10, A50*, March 2010.
46. Wroblewski HA, Tisdale JE, Kinger JR, Overholser BR and **Kovacs RJ**. Prevalence of QTc Interval Prolongation in Patients Admitted to Cardiac Critical Care Units and Frequency of Subsequent Administration of QT Interval Prolonging Drugs. *JACC Vol. 55:10, A1*, March 2010.
47. Tisdale J, Wroblewski HA, Kingery JR, Trujillo TN, Overholser BR, **Kovacs RJ**. A Risk Score to Predict QT Interval Prolongation in Hospitalized Patients. ACC Poster, ACC Annual Scientific Session, March 2011.
48. **Kovacs, RJ**, Turker, Isik. A Novel a-1 Syntrophin Mutation Identified in Cardiomyopathy Patient Can Cause QT-Prolongation by Affecting KCNQ1. Heart Rhythm Society Meeting, Denver, Colorado, October, 2012.
49. **Kovacs, RJ**, Tisdale, James E., Overholser, Brian, Allen, Matthew R., Zoledronic Acid Effects on Atrial Electrophysiology, ACC Poster, ACC 2013 Annual Scientific Session, March, 2013.
50. **Kovacs, R**, Lincoln, A, Vogel, R, Tucker, A, Dunn, R, Castle, L, Aortic Size in National Football League Scouting Combine Participants. Presented at the Annual American Heart Association Scientific Sessions, November, 2013, Abstract No. 16812.
51. **Kovacs, R**, Lincoln, A, Vogel, R, Tucker, A, Dunn, R, Castle, L, Aortic Size in National Football League Scouting Combine Participants. 2014 American College of Sports Medicine (ACSM), Abstract No. 4154.
52. **Kovacs, R**, Lincoln, A, Vogel, R, Tucker, A, Dunn, R, Castle, L, Characteristics of Screening Echocardiograms in an Elite American Football Player Population. 2015 Annual Meeting, World Congress on Exercise is Medicine and World Congress on the Basic Science of Exercise Fatigue of the American College of Sports Medicine, May, 2015, Abstract No. 3566.
53. Jum-Suk Ko, Jonathan Hassel, Patricia Celestino-Soper, Ty C. Lynnes, James E. Tisdale, James Zheng, Stanley Taylor, Tatiano Foroud, Michael Murray, **Richard Kovacs**, Matteo Vatta, Zhenhui Chen, Peng-Sheng Chen, Michael Rubart-von der Lohe. The Role of Small Conductance Ca Activated K Current in the Genesis of Drug-Induced Long QT Syndrome. *Heart Rhythm* 2015;12: S489.
54. Andrew Tucker, Andrew Lincoln, Reginald Dunn, **Richard Kovacs**, Robert Vogel, Lon Castle. Echocardiogram Assessment of Coronary Ostia in Elite American Football Players. AMSSM Annual Meeting, April, 2015.
55. Muhammad W. Choudhry, **Richard Kovacs**, Holly Cook. A Novel Process to Reduce Mortality Associated with In-Hospital STEMI; *Circ Cardiovasc Outcomes*. 2015; 8:A258.
56. James Tisdale, Heather Jaynes, Brian Overholser, Kevin M. Sowinski, David Flockhart, **Richard Kovacs**. Influence of Progesterone Administration on Drug-Induced Torsades De Pointes in AV Node-Ablated Isolated Perfused Rabbit Hearts. *J Am Coll Cardiol*. 2016; 67(13_S):747-747. doi: 10.1016/S0735-1097(16)30748-3.
57. Mark J. Shen, Arthur Coffey, Susan Straka, David Adams, David B. Wagner, **Richard Kovacs**, Changyu Shen, Lan S. Chen, Shien-Fong Lin, Peng Sheng Chen. Skin Nerve Activities and Cardiac

- Arrhythmias in Patients Recovering from Open Heart Surgery. *J Am Coll Cardiol.* 2016; 67(13_S):827-827. doi: 10.1016/S0735-1097(16)30828-2.
58. Mark J. Shen, Arthur C. Coffey, Susan Straka, David E. Adams, David B. Wagner, **Richard J. Kovacs**, Shangyu Shen, Lan S. Chen, Thomas H. Everett, Shien-Fong Lin, Peng Sheng Chen. Correlation of Intrinsic Cardiac Nerve Activity and Skin Nerve Activity is Associated with Arrhythmia Burden in Patients Recovering From Open Heart Surgery. *HRS*, Vol. 13, No. 5, May Supplement 2016.
59. Khemka A, **Kovacs R**, Tu W, Hayden R, Masud A, Eckert G, Tierney W, Gradus-Pizlo I. Understanding the Health Burden of Mitral Regurgitation Through Clinical Data Repositories. Presented at Heart Failure Society of America. Orlando, FL 2016.
60. Shen MJ, Coffey AC, Straka S, Adams DE, Wagner DB, **Kovacs RJ**, Shen C, Chen LS, Lin SF, Chen PS. Simultaneous Recordings of Intrinsic Cardiac Nerve Activities and Skin Sympathetic Nerve Activities From Human Patients During the Postoperative Period. *Heart Rhythm.* 2017 Nov;14(11):1587-1593. Doi: 10.1016/j.hrthm.2017.06.030. Epub 2017 Jun 23. PubMed PMID: 28648667; PubMed Central PMCID: PMC5671888.
61. Murayama R1, Kimura-Asami M1,2, Togo-Ohno M1,2, Yamasaki-Kato Y1,3, Naruse TK3,4, Yamamoto T5, Hayashi T3,4, Ai T4,6, Spoonamore KG6, Kovacs RJ6, Vatta M7, Iizuka M1, Saito M1, Wani S1, Hiraoka Y8,9, Kimura A10,11, Kuroyanagi H12,13,14,15. Phosphorylation of the RSRSP stretch is critical for splicing regulation by RNA-Binding Motif Protein 20 (RBM20) through nuclear localization. *Sci Rep.* 2018 Jun 12;8(1):8970. doi: 10.1038/s41598-018-26624-w. PMID: 29895960.
62. James E. Tisdale, Heather A. Jaynes, Brian R. Overholser, Kevin M. Sowinski, Mark D. Fisch, Jo E. Rodgers, Ahmed Aldemerdash, Chia-Chi Hsu, Nan Wang, Elena Muensterman Tomaselli, Vijay Rao, **Richard J Kovacs**. Enhanced Response to Drug-Induced QT Interval Lengthening in Patients with Heart Failure with Preserved Ejection Fraction. *AHA Scientific Sessions 2018*, November 2018.
63. Elena T Muensterman, Kevin M Sowinski, Heather A Jaynes, Brian R Overholser, **Richard J Kovacs**, and James E Tisdale. Transdermal Testosterone Administration Attenuates Drug-Induced QT Interval Lengthening in Older Men. *Circulation* 2018 November 5; 138:A15197.
64. James E. Tisdale, Heather A Jaynes, Brian R Overholser, Kevin M Sowinski, Mark D Fisch, Jo E Rodgers, Ahmed Aldemerdash, Chia-Chi Hsu, Nan Wang, Elena Muensterman Tomaselli, Vijay Rao, and **Richard J Kovacs**. Enhanced Response to Drug-Induced QT Interval Lengthening in Patients With Heart Failure With Preserved Ejection Fraction. *Circulation* 2018 November 5; 138:A15850.
65. Emery MS, **Kovacs RJ**. Sudden Cardiac Death in Athletes. *JACC Heart Fail.* 2018 Jan; 6(1): 30-40. doi: 10.1016/j.jchf.2017.07.014. Review. PubMed PMID: 29284578.
66. Valentine CM, **Kovacs RJ**, Itchhaporia D. The American College of Cardiology: Strategically Aligning for the Next 5 Years. *J Am Coll Cardiol.* 2018 Sep 11;72(11):1310-1312. doi: 10.1016/j.jacc.2018.08.001. PubMed PMID: 30190009.
67. Ko JS, Guo S, Hassel J, Celestino-Soper P, Lynnes TC, Tisdale JE, Zheng JJ, Taylor SE, Foroud T, Murray MD, **Kovacs RJ**, Li X, Lin SF, Chen Z, Vatta M, Chen PS, Rubart M. Ondansetron blocks wild-type and p.F503L variant small-conductance Ca(2+)-activated K(+) channels. *Am J Physiol Heart Circ Physiol.* 2018 Aug 1;315(2): H375-H388. doi: 10.1152/ajpheart.00479.2017. Epub 2018 Apr 20. PubMed PMID: 29677462; PubMed Central PMCID: PMC6139629.
68. Asad Torabi, Omar Nahhas, Reginald Dunn, Matthew Martinez, Andrew Tucker, Andrew Lincoln, **Richard Kovacs**, Michael Emery. "ECG Interpretation in Athletes: Lessons from a "Real World"

- Experience in American Style Football Players”. Journal of the American College of Cardiology Mar 2019, 73 (9 Supplement 1) 445; DOI: 10.1016/S0735-1097(19)31053-8
69. Omar Nahhas, Asad Torabi, Reginald Dunn, Matthew Martinez, Andrew Tucker, Andrew Lincoln, **Richard Kovacs**, Michael Emery. “Global Longitudinal Strain Patterns and Athlete ECG Classification in American Style Football Players” Journal of the American College of Cardiology Mar 2019, 73 (9 Supplement 1) 1575; DOI: 10.1016/S0735-1097(19)32181-3
70. Asad Torabi, Hossein Ouranos, **Richard Kovacs**. “Late-Onset Hypertrophic Cardiomyopathy” Journal of the American College of Cardiology Mar 2019, 73 (9 Supplement 1) 2373; DOI: 10.1016/S0735-1097(19)32979-1
71. Stewart, J.C., Gupta, S.K., Nurnberger, J.I., Considine, R.V., Gao, S., Kovacs, R.J., MacDonald, K.L., Patel, J.S., Vraney, E.A., Berntson, J., Polanka, B.M., Hsueh, L., Shell, A.L., Rollman, B.L., & Callahan, C.M. Effect of Modernized Collaborative Care for Depression on Depressive Symptoms and Cardiovascular Disease Risk: Primary Results of the eIMPACT Randomized Controlled Trial. Paper presented at the 78th annual meeting of the American Psychosomatic Society in Long Beach, CA, (2020, March)

BOOK CHAPTERS:

1. Bailey JC, **Kovacs RJ**, Rardon DP: Anatomical, Biochemical and Electrophysiologic Evidence for Parasympathetic Innervation of the Ventricle. In: Mechanisms and Treatment of the Cardiac Arrhythmias: Relevance of Basic Studies to Clinical Management. Reiser HJ, Horowitz LN (eds). Urban and Schwarzenberg. Baltimore, pp. 57-63, 1985.
2. Randall W (ed): Nervous control of cardiovascular function. J of Electrophysiologic Techniques 3:250, 1986.
3. **Kovacs RJ**, Bailey JC, and Zipes DP: Mechanisms of Cardiac Arrhythmias. In: Cardiology. Parmley, Chatterjee (eds). J.B. Lippincott, Philadelphia, pp. 1-14, 1987.
4. **Kovacs RJ**, Rardon DP: Channel Activity of Purified SR Proteins Incorporated into Lipid Bilayers. In: Cardiac Electrophysiology. D.P. Zipes, J. Jalife (eds). W.B. Saunders Comp. Philadelphia, pp. 76-84. 1990.
5. **Kovacs RJ**, Bailey JC and Zipes DP: Mechanisms of Cardiac Arrhythmias. In: Cardiology – An Illustrated Text/Reference. K. Chatterjee, M. Cheitlin, J. Karliner, W. Parmley, E. Rapaport, M. Scheinman (eds). J.B. Lippincott, Philadelphia, 1991.
6. **Kovacs RJ**: K⁺ Channel Openers in Hypertension: A Clinician’s Viewpoint. In: K⁺ Channels in Cardiovascular Medicine. NB Staden, D Escande (eds). Springer-Verlag (1993).
7. Dmitrienko AA, Sides GD, Winters KT, **Kovacs RJ**, Bloom JL, and Eisenberg PR. Electrocardiogram Reference Ranges for Lilly Clinical Trials. Eli Lilly (2002).
8. **Kovacs RJ**, Classic Risk Factors for Torsade, In: Torsades, James Tisdale (ed). Elsevier 2021

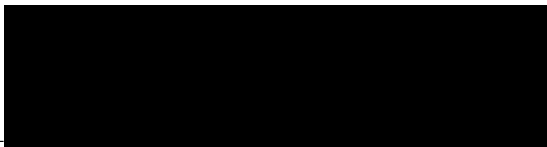
MISCELLANEOUS/MEDIA/WEB:

1. **Kovacs RJ** (ed): A 42-year-old man with fever and pulmonary infiltrates – Clinico Pathologic Conference. Indiana Medicine, February 1986, 177-182.

2. **Kovacs RJ** (ed): A 33-year-old man with shortness of breath and chest pain – Clinico Pathologic Conference. *Indiana Medicine*, July 1986, 610-616.
3. **Kovacs RJ** (ed): A 32-year-old man with nausea, vomiting and metastatic adenocarcinoma- Clinico Pathologic Conference. *Indiana Medicine*, November 1986, 981-988.
4. **Kovacs RJ**, (ed): A 70 -year-old man with shortness of breath and an apical lung mass – Clinico Pathologic Conference. *Indiana Medicine*, December 1986, 1060-1065.
5. Khan B, **Kovacs RJ**. Antibiotics and Acquired Long QT Syndrome: Advice for the prescriber- International Society for Holter and Noninvasive Electrocardiology International Symposium, October 2007.
6. WIBC Live Radio Broadcast, February 2007
7. WIBC Live Radio Broadcast, February 2008.
8. **Kovacs, RJ**. Time is now for health care reform, *Indianapolis Business Journal*, August 10-16, 2009.
9. NPR, “Sound Medicine”, Prevention of heart attacks April, 2009.
10. CVN (Cardiovascular Network) Interview, March 2010.
11. WTHR Interview, NFL Scouting Combine, February, 2011.
12. CVN (Cardiovascular Network) Interview, April 2011.
13. WHMB Interview (Indianapolis, IN), April 2011.
14. Cardiology Today Interview, August 2011.
15. Cardiosource (ACC. PINNACLE NETWORK), Hammering It Home: Essential Tools for Improving Quality and Practice Performance, June 2011
16. Lawless, Christine E., **Kovacs, Richard J.:** From the Sports Cardiologists: Another Perspective on the Preparticipation Cardiac Screen. Co-Chairs (2011-2014) of the American College of Cardiology Council on Sports and Exercise Cardiology, *NATA News*, November, 2012
17. *Indianapolis Monthly Magazine*, Interview on Sports Cardiology, January 2013.
18. NPR, “Sound Medicine” Novel Oral Anticoagulants” June 2013.
19. Fox News, Interview (Indianapolis, IN) Athletic Sudden Cardiac Death. September 2013.
20. Anticoagulation Consortium Roundtable: Gaps in Care, *Cardiology Magazine*, September, 2013.
21. Meeting MOC Requirements using NCDR data Webinar, December, 2013.
22. Fox News Interview (Indianapolis, IN), STEMI Systems of Care, December, 2013.
23. Fox News Interview (Indianapolis, IN), NFL Combine and IU Health Involvement, February, 2014.
24. Fox News Interview (Indianapolis, IN) Heart Condition Ends Purdue Basketball Player’s Career, March, 2014.

25. Lafayette Journal (Lafayette, IN), Career Ends for Purdue Basketball Player, March, 2014.
26. WIBC-93.1 FM Interview, (Indianapolis, IN), ACC Navigator Program and IU Health, March, 2014.
27. Cardiology Today Interview, Sudden Cardiac Arrest in Young Athletes, April, 2014.
28. Fox News/WTHR/RTV6/WISHTV, Live Press Conference, Indianapolis Fire Department Heart Study, May, 2014.
29. CardioSource World News Interview, review of ACC Anticoagulation Consortium Roundtable Article, Journal of American College of Cardiology, March, 2015.
30. WTHR, June, 2015 AED's in Indianapolis Public Schools.
31. WXIN, June, 2015 Importance of CPR, AED Awareness in honor of National CPR/AED Week.
32. WebMD, June, 2015 New Anticoagulants: NOACs versus warfarin.
33. **Kovacs RJ.** Myocardial Adaptation to High-Intensity Training in Previously Untrained Men. PracticeUpdate website. Available at: <http://www.practiceupdate.com/c/24061/1/2>. Accessed June 9, 2015.
34. **Kovacs RJ,** Clary JM. FDA Approves Praluent to Treat Certain Patients with High Cholesterol. Practice Update website. Available at: <http://www.practiceupdate.com/c/27782/1/2>. Accessed August 25, 2015.
35. Oetgen WJ, Casale PN, Chazal RA, Drozda JP, Jr, Gray HH, Hendel RC, **Kovacs RJ,** Newburger JW, O'Gara PT, Shor RA, Waites TF, Warnes CA, Williams KA. ACC's Medical Professionalism MOC module. Available at: http://education.acc.org/Lifelong-Learning-and-MOC/Certified-Learning/SAPs/2015/MEDPROFMOC.aspx?w_nav=LC&_ga=1.21412667.1818951763.1442574304 . Accessed September 24, 2015.
36. **Kovacs R.** Effect of Supplemental Oxygen Exposure on Myocardial Injury in ST-Elevation Myocardial Infarction. Practice Update website. Available at: <http://www.practiceupdate.com/content/supplemental-oxygen-exposure-and-myocardial-injury-in-stemi/34161/65/2/1>. Accessed March 15, 2016.
37. **Kovacs R.:** Coronary Artery Evaluation by Screening Echocardiogram in Intercollegiate Athletes. MSSE-D-16-00694. Medicine and Science in Sports and Medicine. July, 2016.
38. Webinar: Surviving MI AN ACC Quality Initiative, Building the Case for Pharmacy, April 26, 2016.
39. **Kovacs R.** Right and Left Ventricular Function and Mass in Male Elite Master Athletes: A Controlled Contrast Enhanced CMR Study. PracticeUpdate website. Available at: <http://www.practieupdate.com/content/right-and-left-ventricular-function-andmass-in-male-elite-master-athletes/38038/65/2/1>. April 2016.
40. WRTV-6. February 2017 Study: Which sports activities help people live longer?
41. U.S. News & World Report, January 2017 "How to Avoid a Second Heart Attack."

42. “Clinical Quality: How Do I Get Scored?,” the fourth episode of the podcast series “Practice Made Perfect,” has just been published on ACC.org: http://www.acc.org/latest-in-cardiology/articles/2018/06/15/08/38/practicemadepfect_scoring.
43. Contributing Editors: Mary Norine Walsh, Richard J. Kovacs, Raymond E. Dusman; Letters to the Editor Indy Star: Indiana’s legal smoking age should be 21
<https://www.indystar.com/story/opinion/readers/2018/02/15/letters-thoughts-and-prayers-wont-end-gun-violence/336812002/>
44. Contributing Editors: Psych News Commentary: Margo C. Funk, M.D., M.A. and Richard J. Kovacs, M.D., FACC: Psych News Commentary: QTc prolongation and Psychotropic Medications: Key Clinical Considerations 2020
45. Viewpoint: Indiana Lawmakers Should Consider Legislation for Future Pandemics. Dr. Don Westerhausen and Dr. Richard Kovacs.
<https://www.southbendtribune.com/story/opinion/2021/07/05/understanding-role-expertise-and-science-developing-and-executing-public-policies-during-public-heal/7829285002/>
46. Indianapolis Business Journal: Opinion Piece on Legislation for Future Pandemics. Dr. Don Westerhausen and Dr. Richard Kovacs.
<https://www.ibj.com/articles/lawmakers-should-reconsider-policy-change-for-future-pandemics>
47. WRTV TV Indianapolis: Sudden Cardiac Death in Athletes. Governor Holcomb signs new law.
<https://www.wrtv.com/news/working-for-you/protecting-student-athletes-from-sudden-cardiac-arrest>
48. FOX59/CBS4 Indianapolis: Sudden Cardiac arrest in Athletes.
<https://fox59.com/news/hoosier-mom-fights-for-student-athletes-safety-after-losing-son/>
49. Sirius XM Radio: Doctor Radio’s Heartbeat Show with Dr. Greg Ribakove. Athlete heart issues. August 30, 2021.
50. WRTV TV: Covid and the heart: comments on the VA study. March 9, 2021.
<https://www.youtube.com/watch?v=OLWlzvv-JSU>


Ri

February 16, 2022

Date